



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

SIGNALLING CATALOGUE

COMPONENTS AND STANDARD PRACTICES

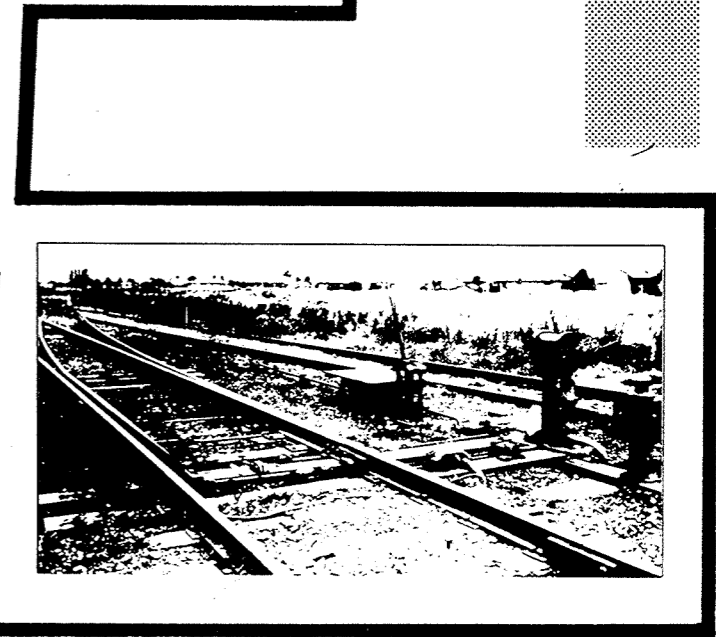
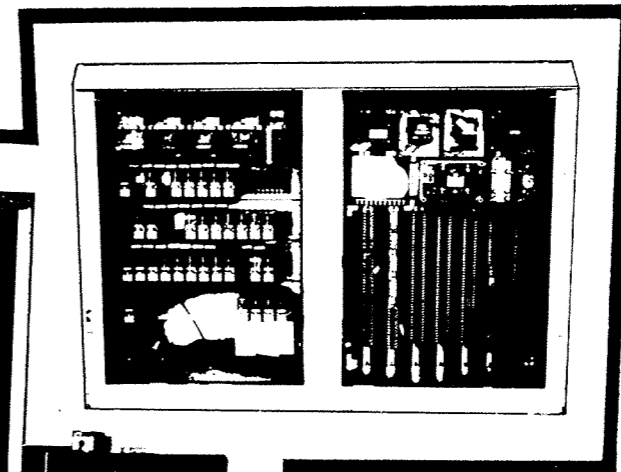
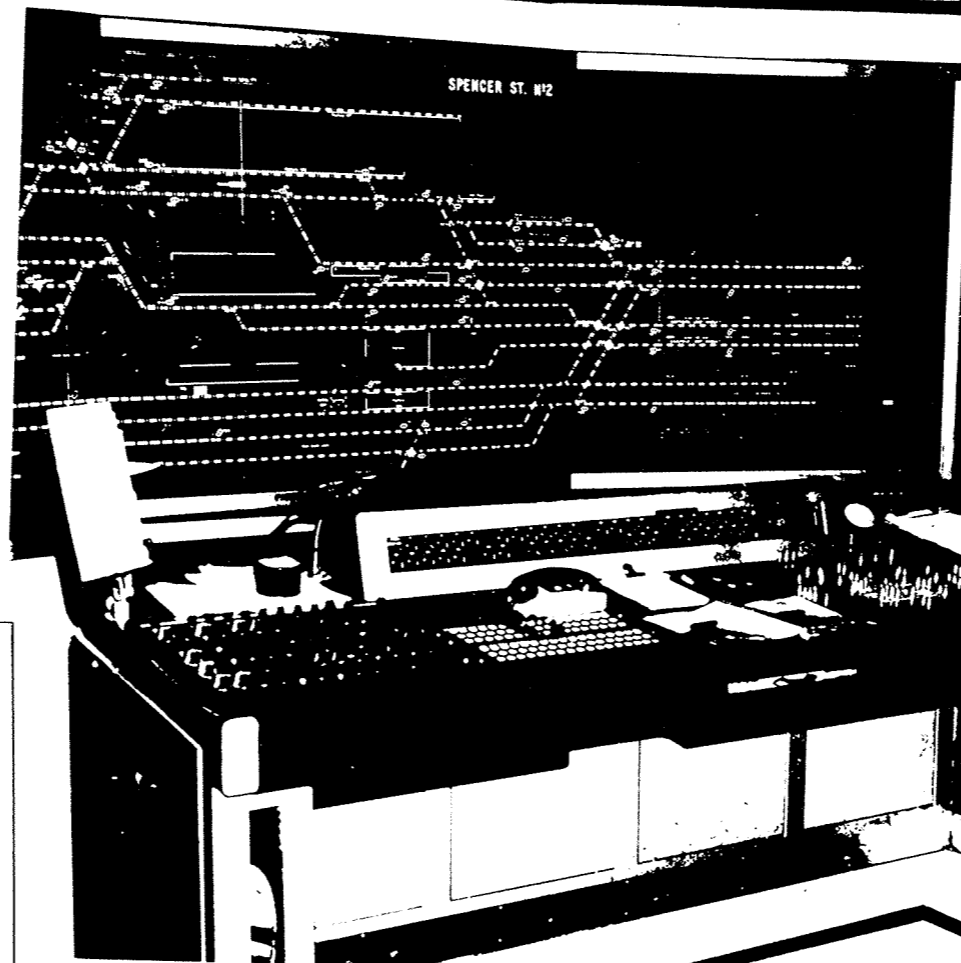
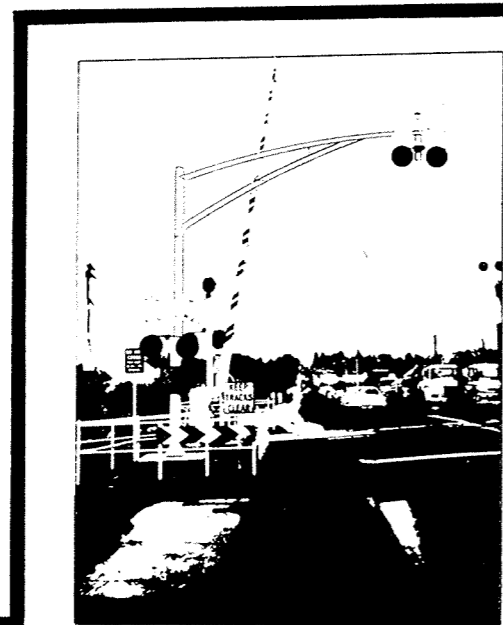
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signalling catalogue

Components & Standard Practices



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9.	A.M.P. Crimping Tool Pce.No.47995.		
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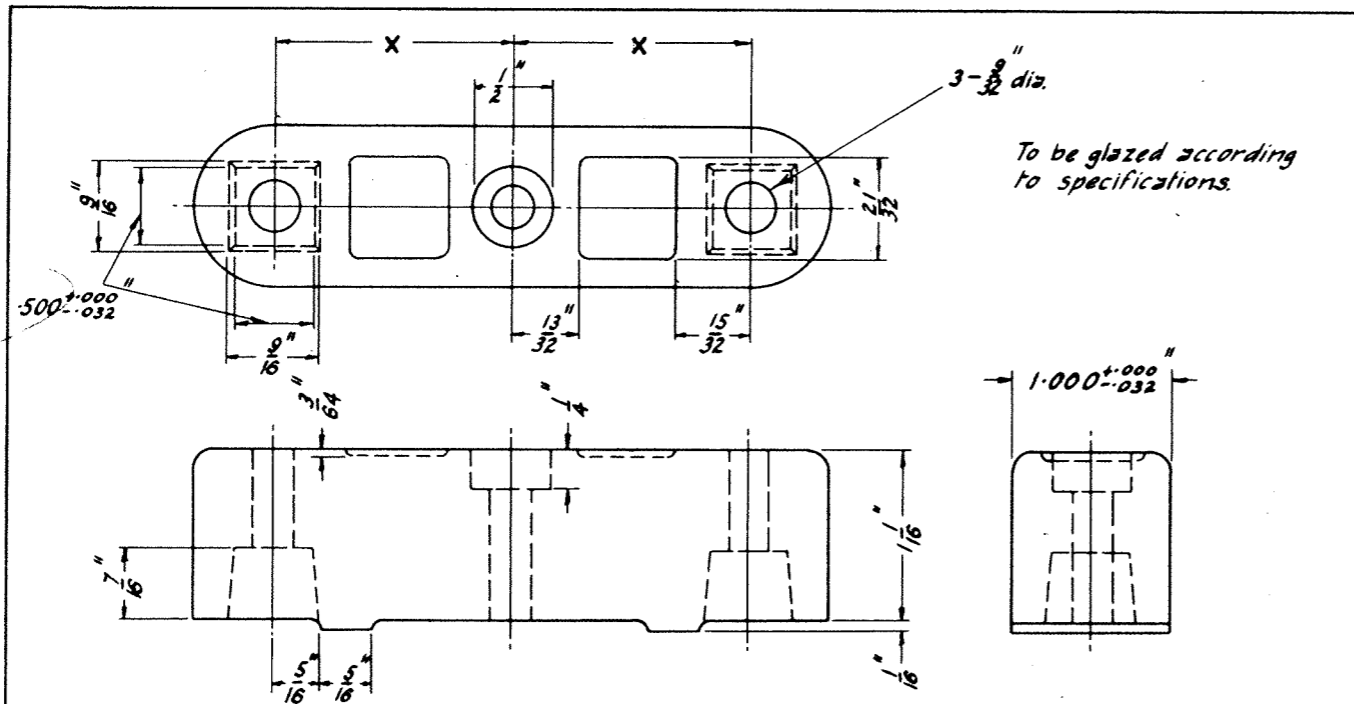


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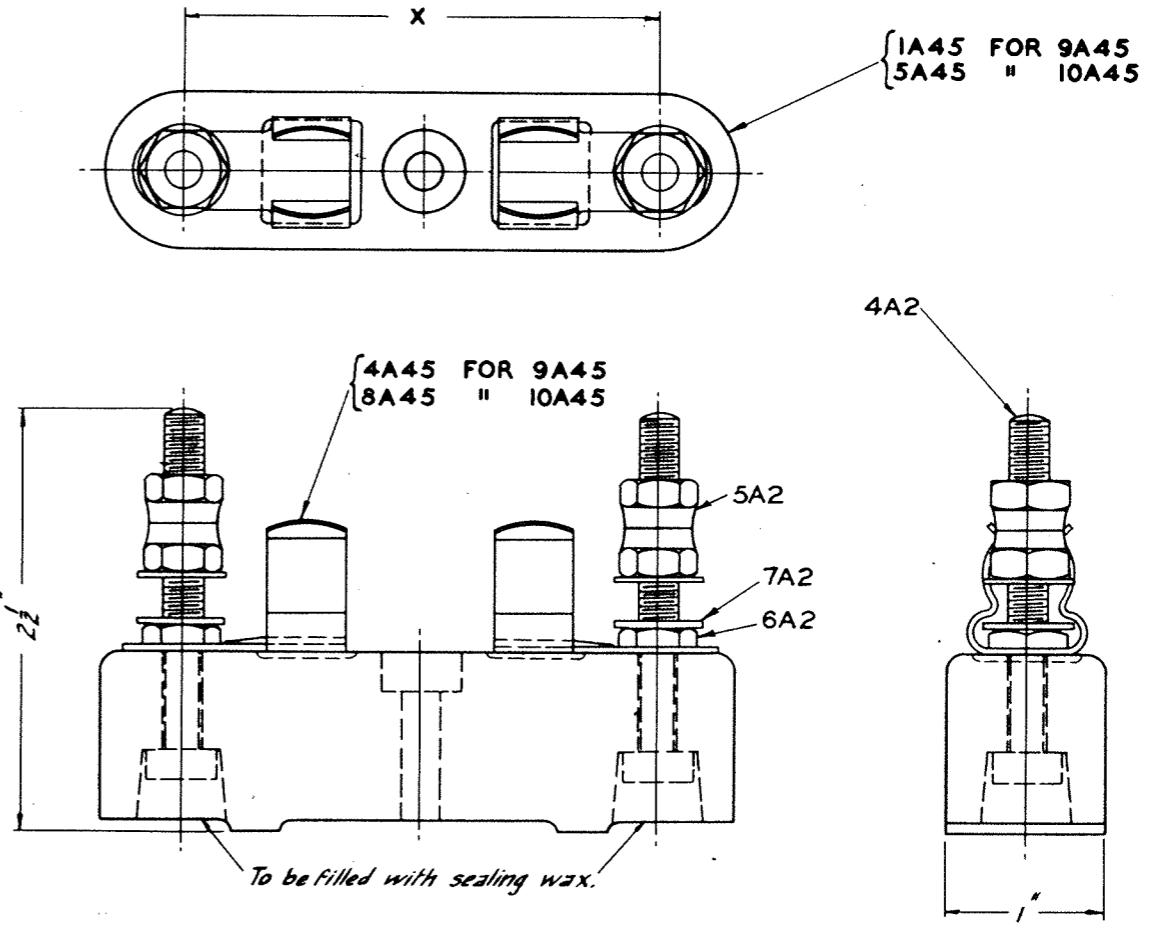
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To be glazed according to specifications.

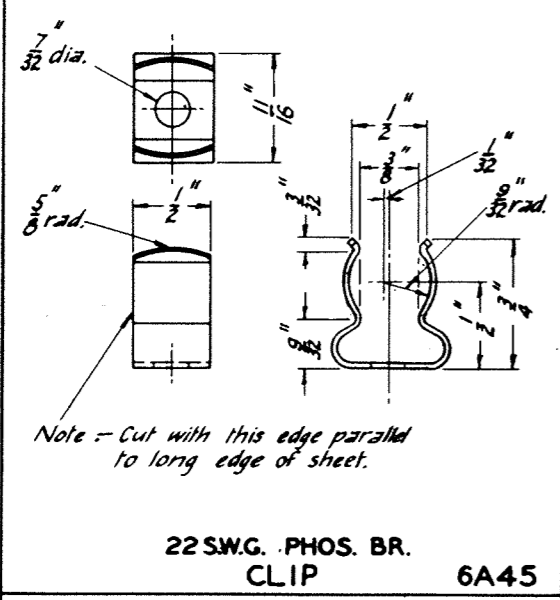
PORCELAIN BASE
 X = $1\frac{7}{8}$ " - 5A45
 X = $1\frac{1}{2}$ " - 1A45



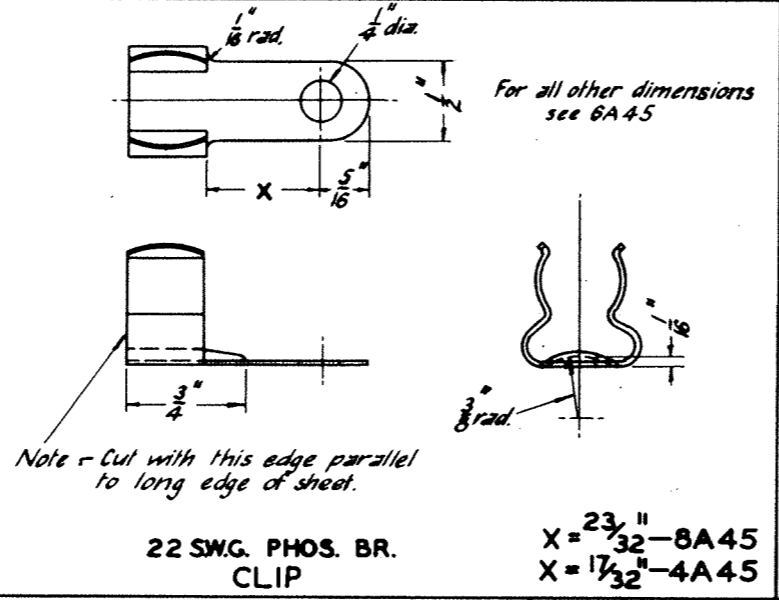
LIGHTNING ARRESTER — 10A45
 FUSE BLOCK — 9A45

PART NO.	NAME	M'TL.	QUANTITY	
			9A45	10A45
4A2	Terminal	Brass	2	2
5A2	Terminal Nut	"	4	4
6A2	Clamp Nut	"	2	2
7A2	Washer	"	4	4
1A45	Base	Porcelain	1	-
5A45	"	"	-	1
4A45	Clip	Phos. Br.	2	-
8A45	"	"	-	2

X = $3\frac{3}{4}$ " - 10A45
 X = 3" - 9A45



22 SW.G. PHOS. BR. CLIP 6A45

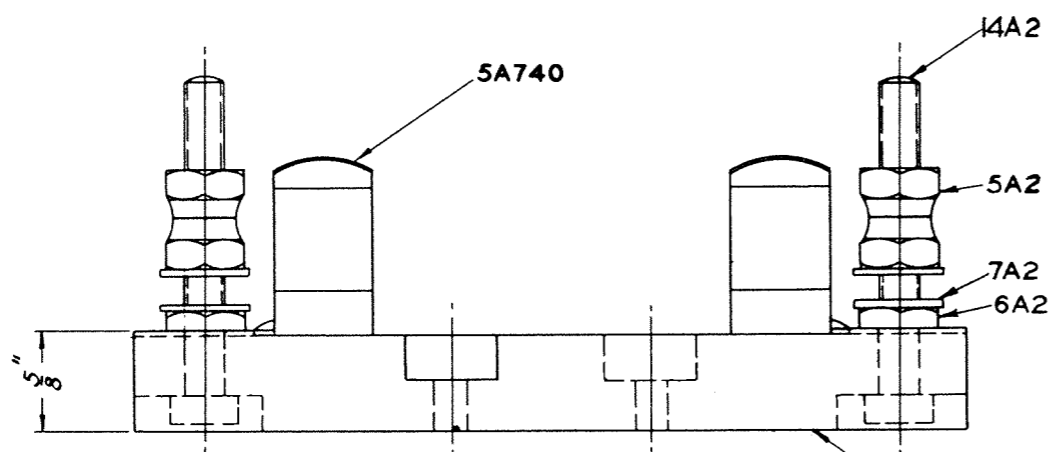
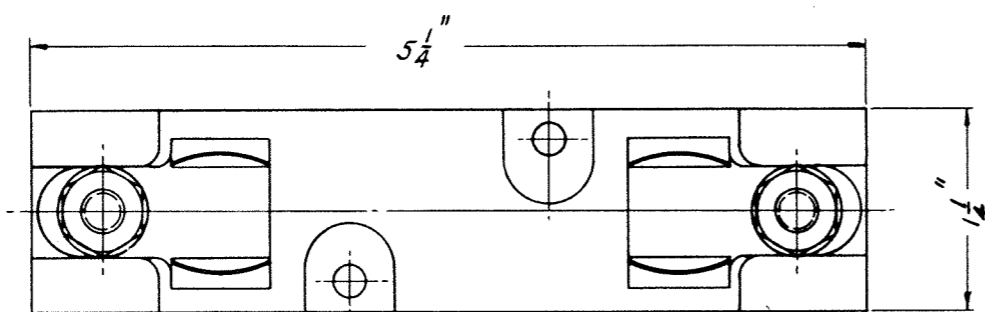


22 SW.G. PHOS. BR. CLIP
 X = $\frac{23}{32}$ " - 8A45
 X = $\frac{17}{32}$ " - 4A45

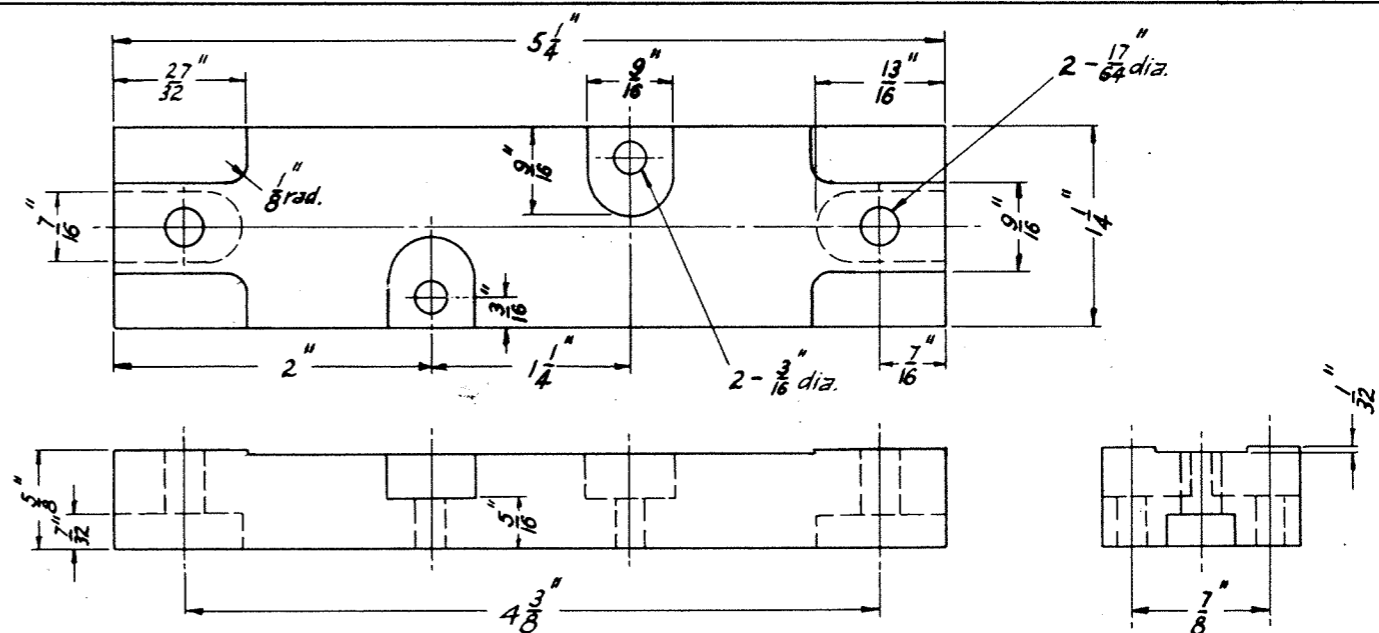
36290
 K14-2

Redrawn & Revised. Originally Dated 25-1-51. Part Nos 3 & 7A45 Cancelled.	Tolerances — except where otherwise stated Decimal Dimensions — ± 0.05 " Fractional Dimensions — $\pm 1/64$ " 3° Angle Projection.	VICTORIAN RAILWAYS PORCELAIN BASES FOR FUSES & LIGHTNING ARRESTERS <small>28-7-64</small>		Sig. & Tel. Engineer. <small>RJC</small>	Drawn by <small>R.M.H.</small>	Traced by <small>R.M.H.</small>	
		A45					
		1309					



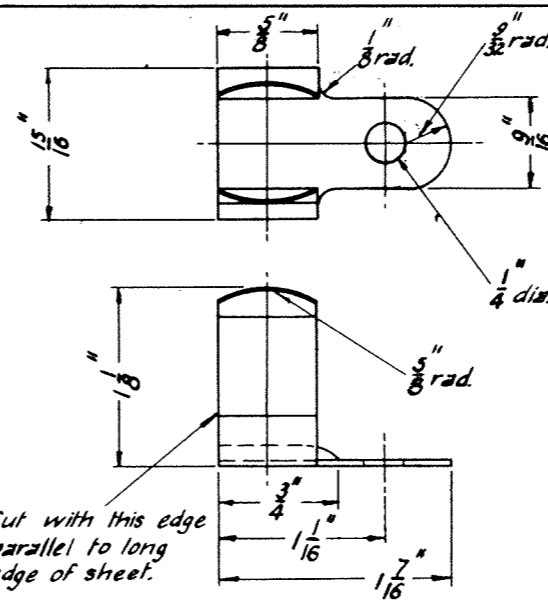


PART N°	NAME	MAT.	QTY.
14A2	Terminal.	Brass	2
5A2	Terminal Nut	"	4
6A2	Clamp Nut	"	2
7A2	Washer	"	4
2A740	Base	P/F.	1
5A740	Clip	Phos. Br.	2



Monsanto A68
or equivalent.
PHENOL FORMALDEHYDE
BASE

2A740



20 SW.G. PHOS. BR.
CLIP

5A740

Alf. 1329. 1-5-68.

LIGHTNING ARRESTER BLOCK

1A740

Redrawn & Revised.
5A740 redesigned
3 & 4A740 cancelled
Original Dated
19-1-48.

3rd Angle Projection.

VICTORIAN RAILWAYS
LIGHTNING ARRESTER
BLOCK
NEON TYPE

Sig. & Tel. Engineer: [Signature]
Drawn by R.M.H. [Signature]
Traced by R.M.H. [Signature]

A740

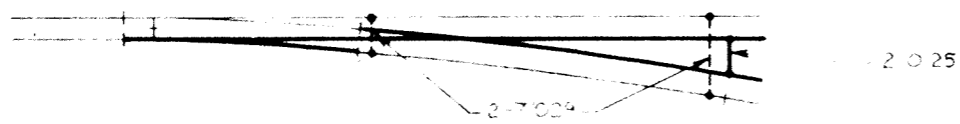
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1748

33813

J29-2





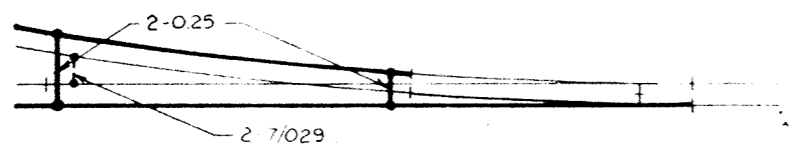
TURNOUT

1F141



UNEQUAL DELTA & DOUBLE COMPOUND

7F141



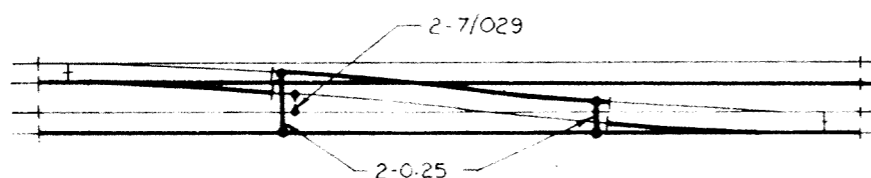
TURNOUT

2F141



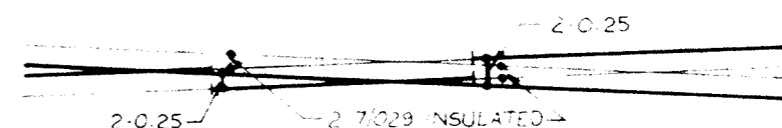
DOUBLE COMPOUND

8F141



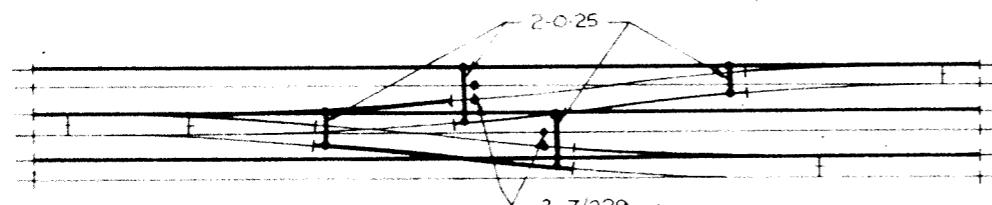
CROSSOVER

3F141



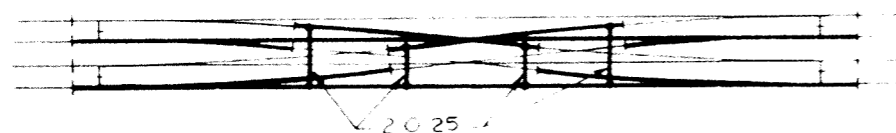
DIAMOND CROSSING

9F141



MODIFIED THREE THROW

4F141



EQUAL DELTA

5F141



EQUAL DELTA & SINGLE COMPOUND

6F141

METRIC EQUIVALENTS

0.25 (91/059)	—	6 1/178
37/064	—	37/178
7/064	—	7/170
7/029	—	7/067

GENERAL NOTES. Sizes of power bonds shown are to be adhered to unless otherwise specified. All spur lengths of rail having one or more bonded joints to be bonded at extremity to main rail with 2-0.25 cable or 2-7/029 insulated as per example 9F141 unless otherwise specified.

A Redrawn & revised previous drawing dated 15-10-19.

REFERENCE: TYPICAL TRACK BONDING OF POINTS SEE K13

VR TRACK BONDING
TYPICAL ARRANGEMENTS
AT POINTS AND CROSSINGS
SCALE 1:480

S&C Engineer	Designed	Drawn KB	F141
SD/ICE	C&C	ISS/NO	

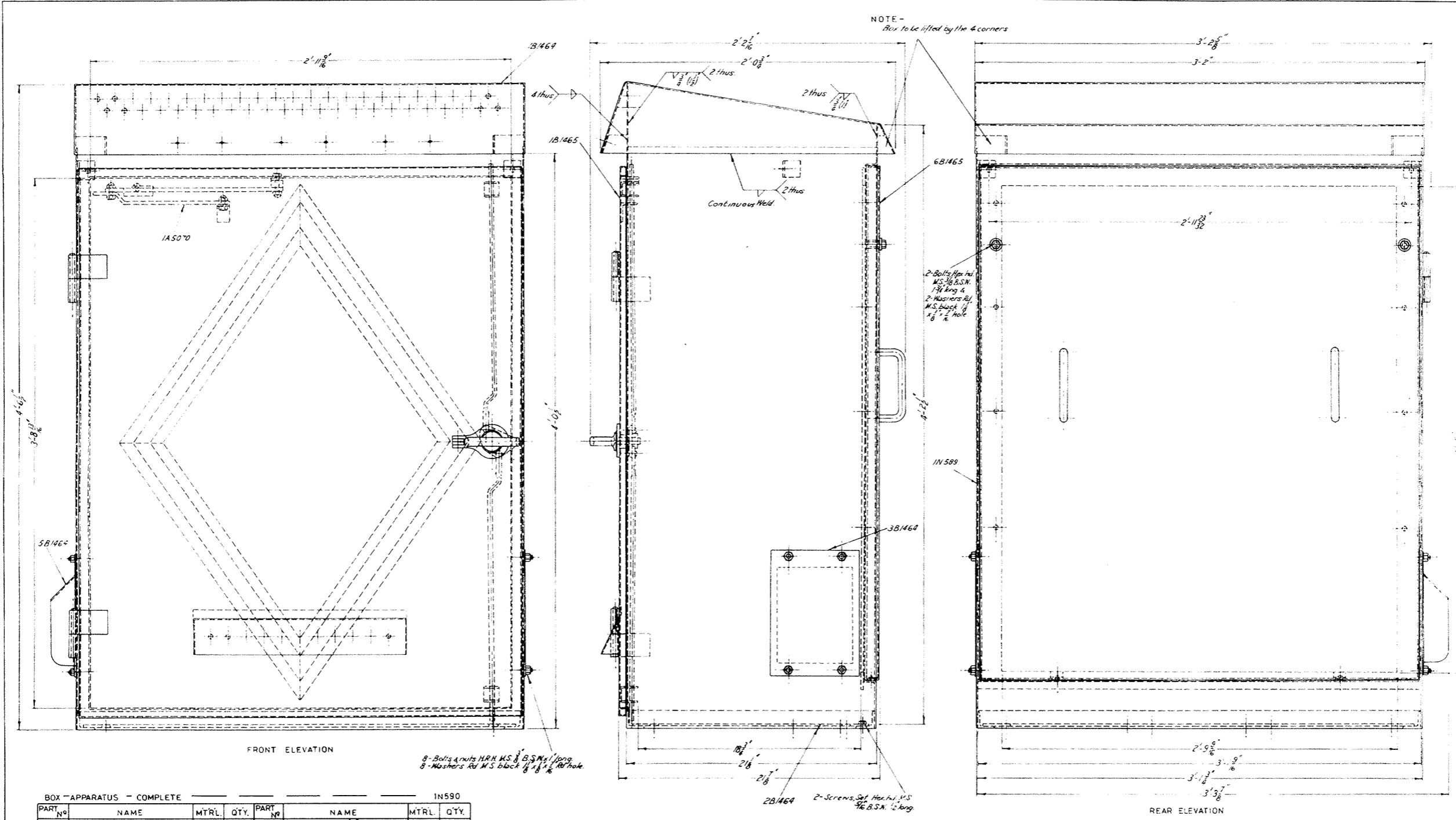


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
B 3 6

Sheet N°
1

Rev.
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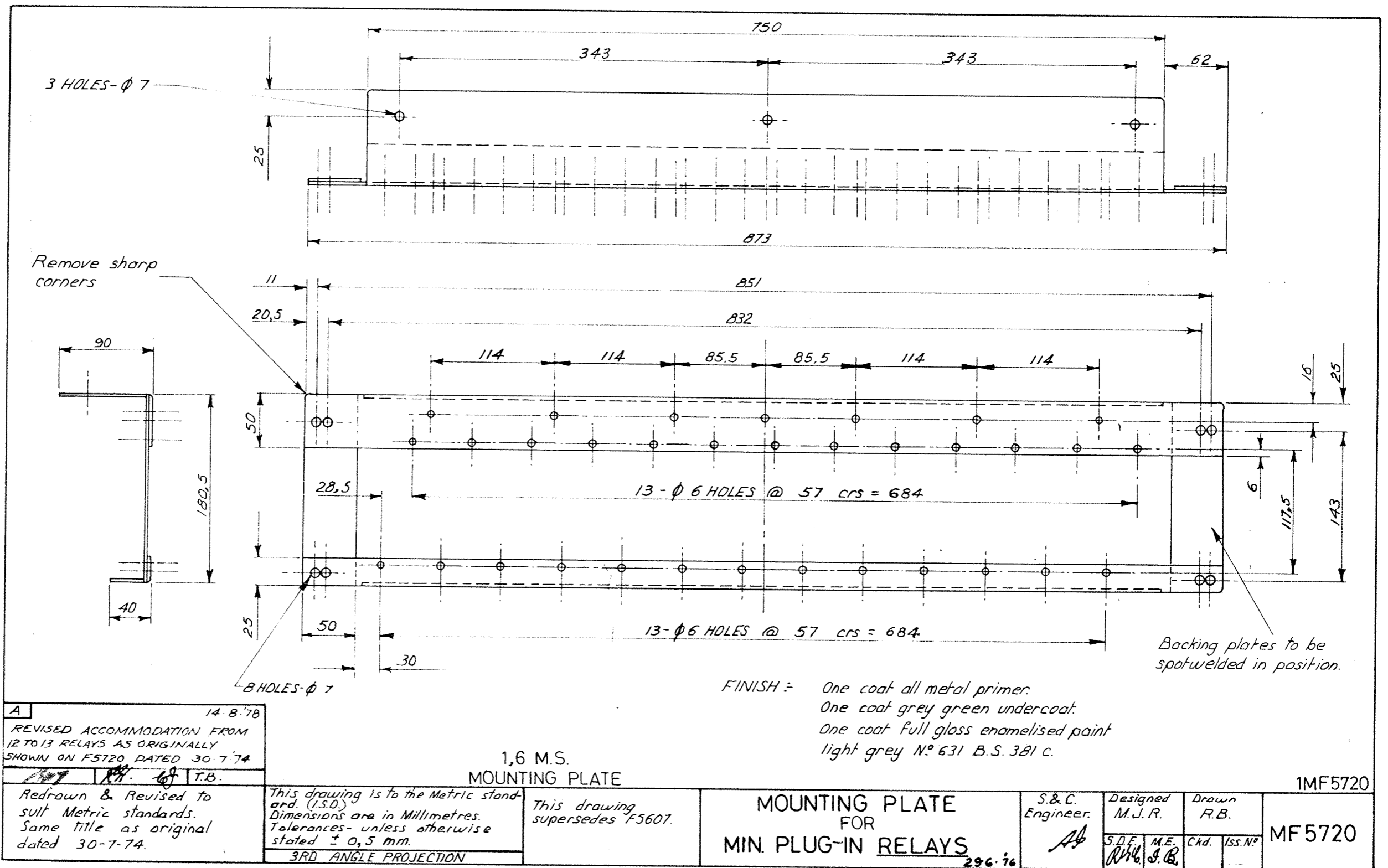
BOX - APPARATUS - COMPLETE

PART No	NAME	MTRL	QTY	PART No	NAME	MTRL	QTY
IN589	Body	M.S.	1	Stock	Ball & nut H.R.N. 3/8" B.S.N. 1 long	M.S.	8
1B1465	Door	"	1	"	Bolt hex. hd 3/8" B.S.N. x 1 1/4 long	"	2
6B1465	Back	"	1	"	Screws Set hex. hd 3/8" B.S.N. 1 long	"	2
1B1464	Roof	"	1	"	Mashers Rd 1 1/4" x 1/2" hole	M.S. black	10
2B1464	Bottom Inlet Blank	"	1				
3B1464	End Inlet Blank	"	1				
5B1464	End Inlet Cover	"	1				
1A5070	Door Stop	"	1				



54018

C1-60



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
B 4 0

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1 0

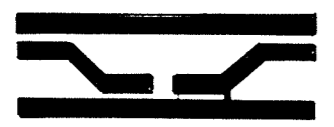
Rev.
A



GENERAL ARRANGEMENT OF APPARATUS IN 2H1092 BOX



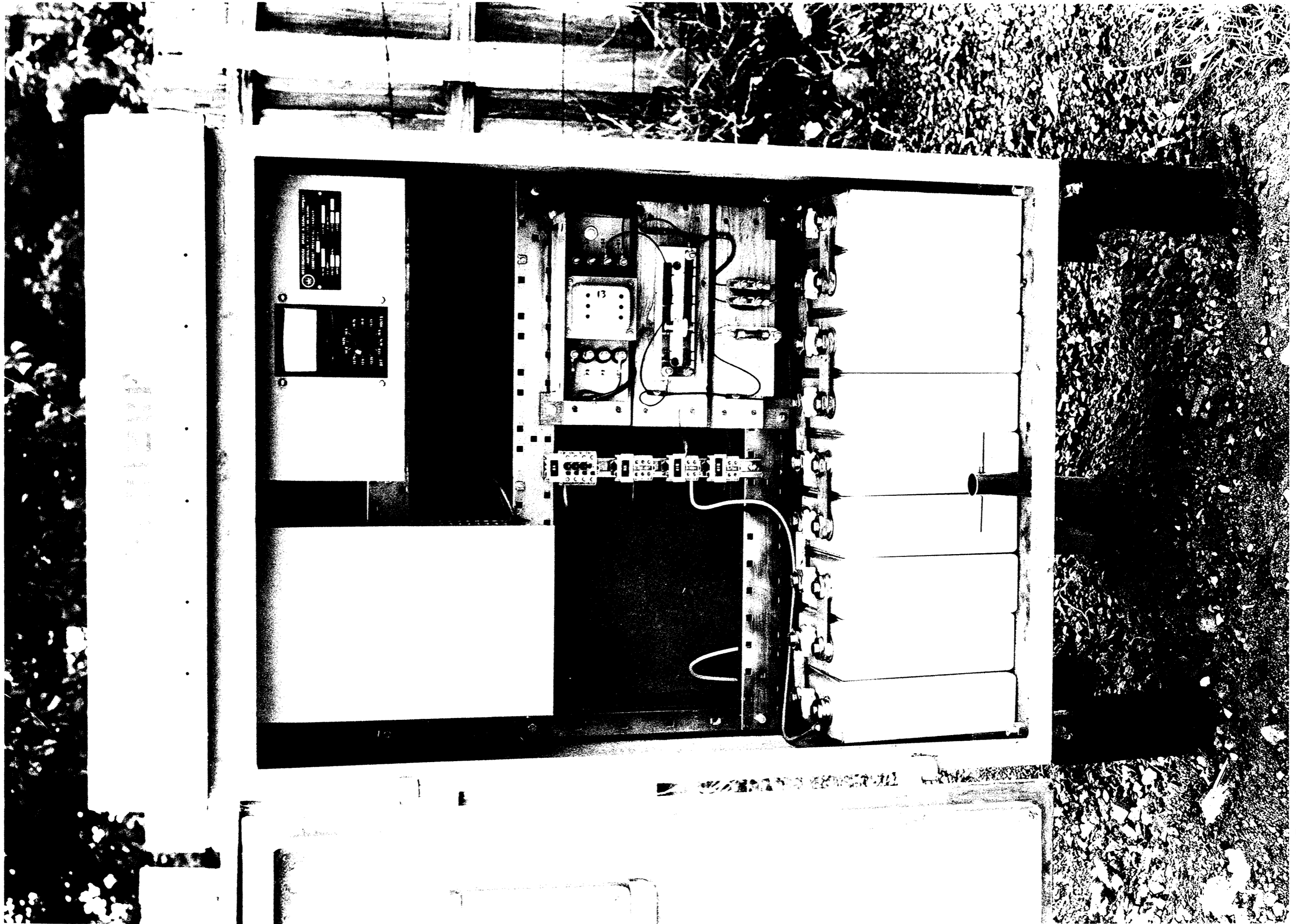
SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES



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TYPICAL ARRANGEMENT OF BATTERY BOX AT F/L OR B/B LOCATION.

Jan 80



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category

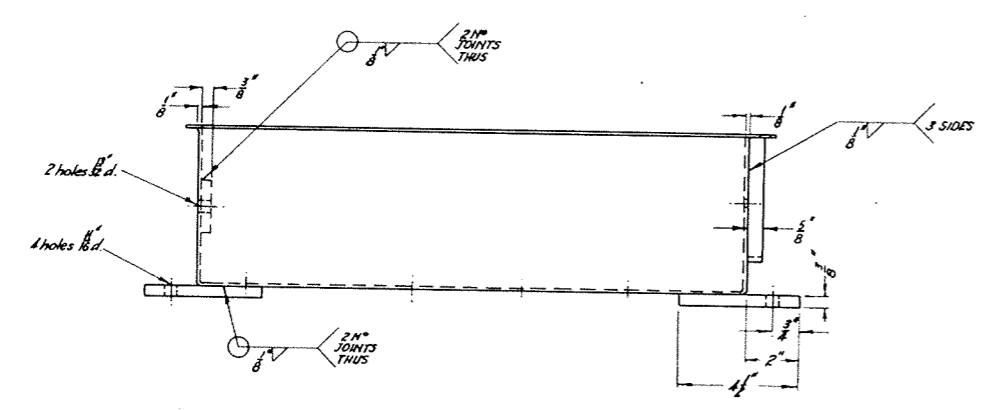
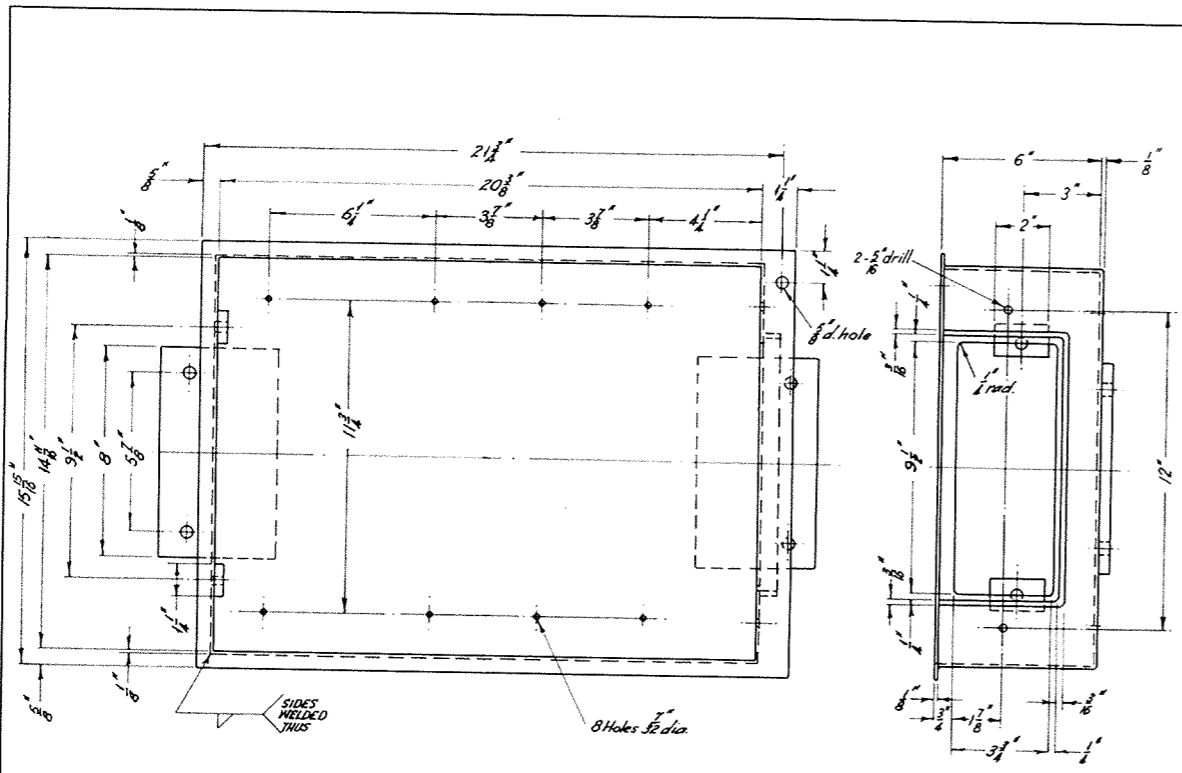
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Sheet N°

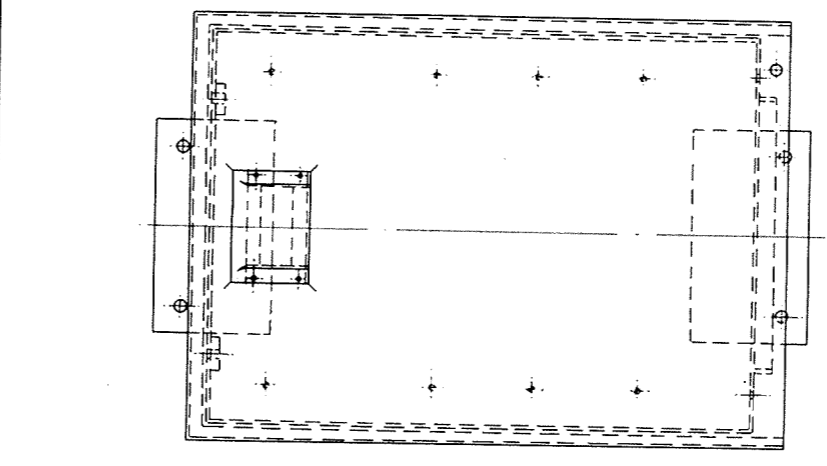
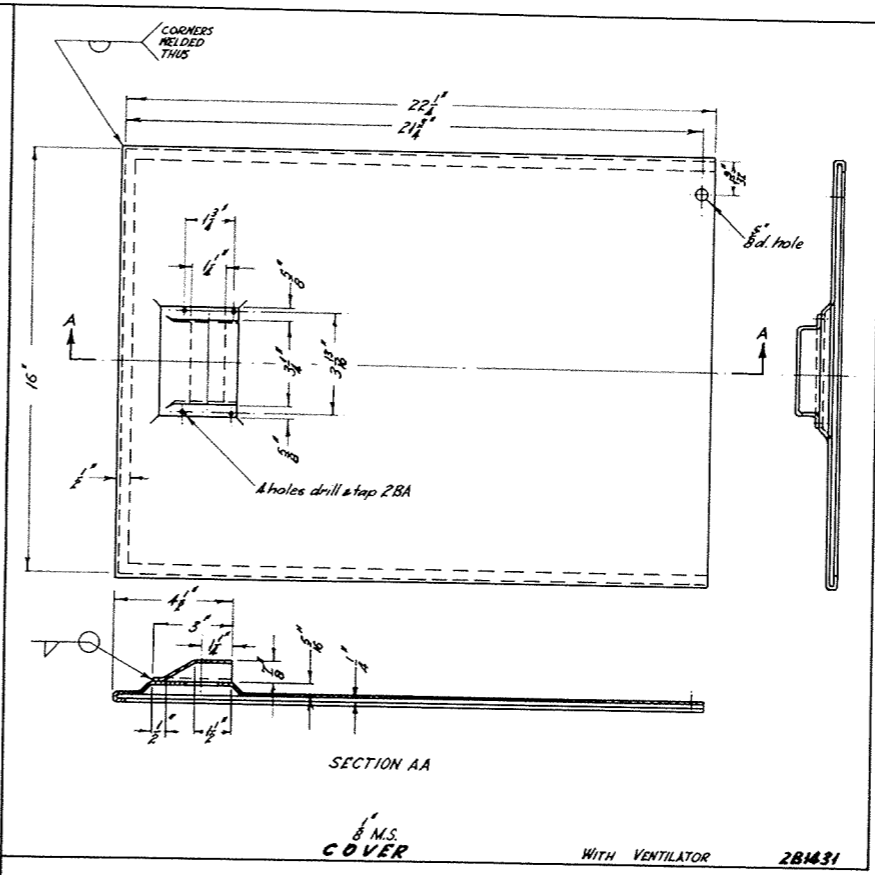
1	2
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Rev.

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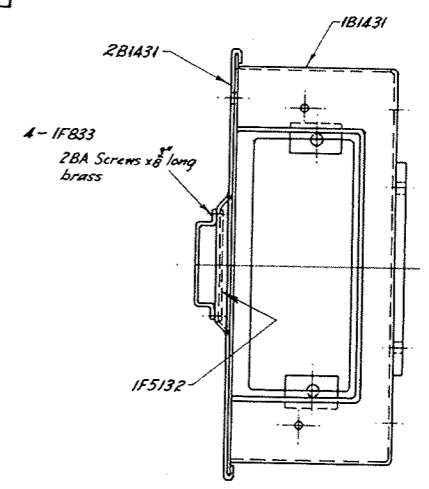


M.S. CASE
 1B1431
 A.I.T. No 1495, 13-10-71
 A.I.T. No 1036, 12-9-61



M.S. COVER
 2B1431
 FINISH - GALVANITE (DMET PVT. LTD.)
 TRACK FEED BOX
 A.I.T. No 1495, 13-10-71
 A.I.T. No 1036, 12-9-61

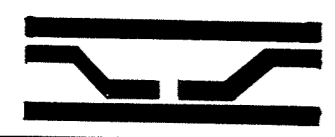
PART NO	NAME	MTL	QTY
1B1431	CASE	M.S.	1
2B1431	COVER	M.S.	1
1F5132	PLATE - Comp. with 3F5132	G.I.	1
1F833	2BA Ch. Hd. Screws x 3/8 long	Brass	4



VICTORIAN RAILWAYS		COMPLETE WITH 2B1431	
BOX FOR TRACK FEEDS & TERMINAL JUNCTIONS		SIG & TEL ENGINEER	DRAWN BY L.C.E.
		TRACED BY L.C.E.	
FABRICATED TYPE		10-4-61	
B1431		4B1431	

6-7-79/A.I.T. No 1829
 Note: - For Panel Assemblies see H531-A2 Terminals. A1168-F5126 "West" RSA Terminals. A6021-Stockable Terminals.
 A.I.T. No 1117 1-10-62.

Tolerances except where otherwise stated -
 On decimal dimensions ±.005"
 On fractional dimensions ±.01"
 3RD ANGLE PROJECTION



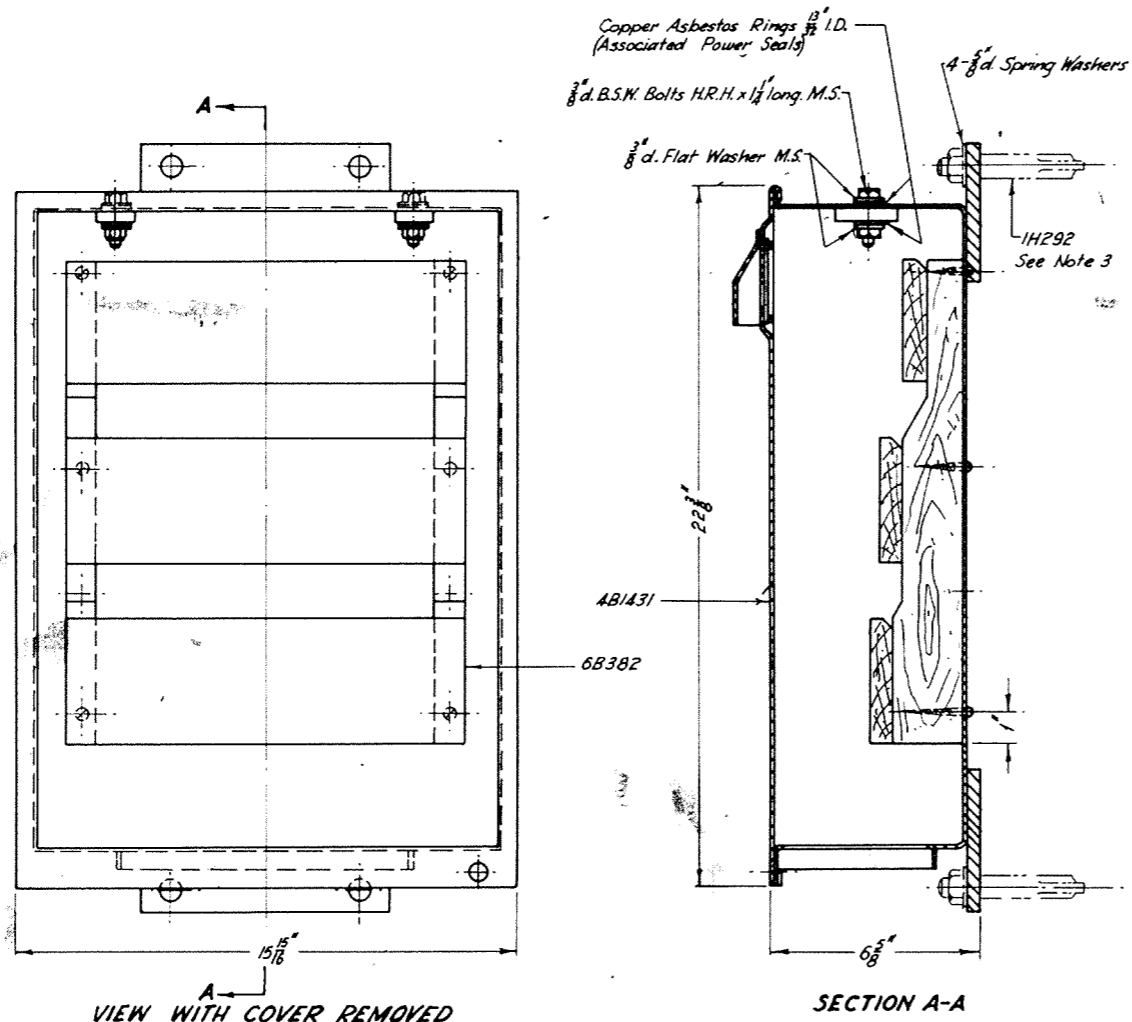
SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category
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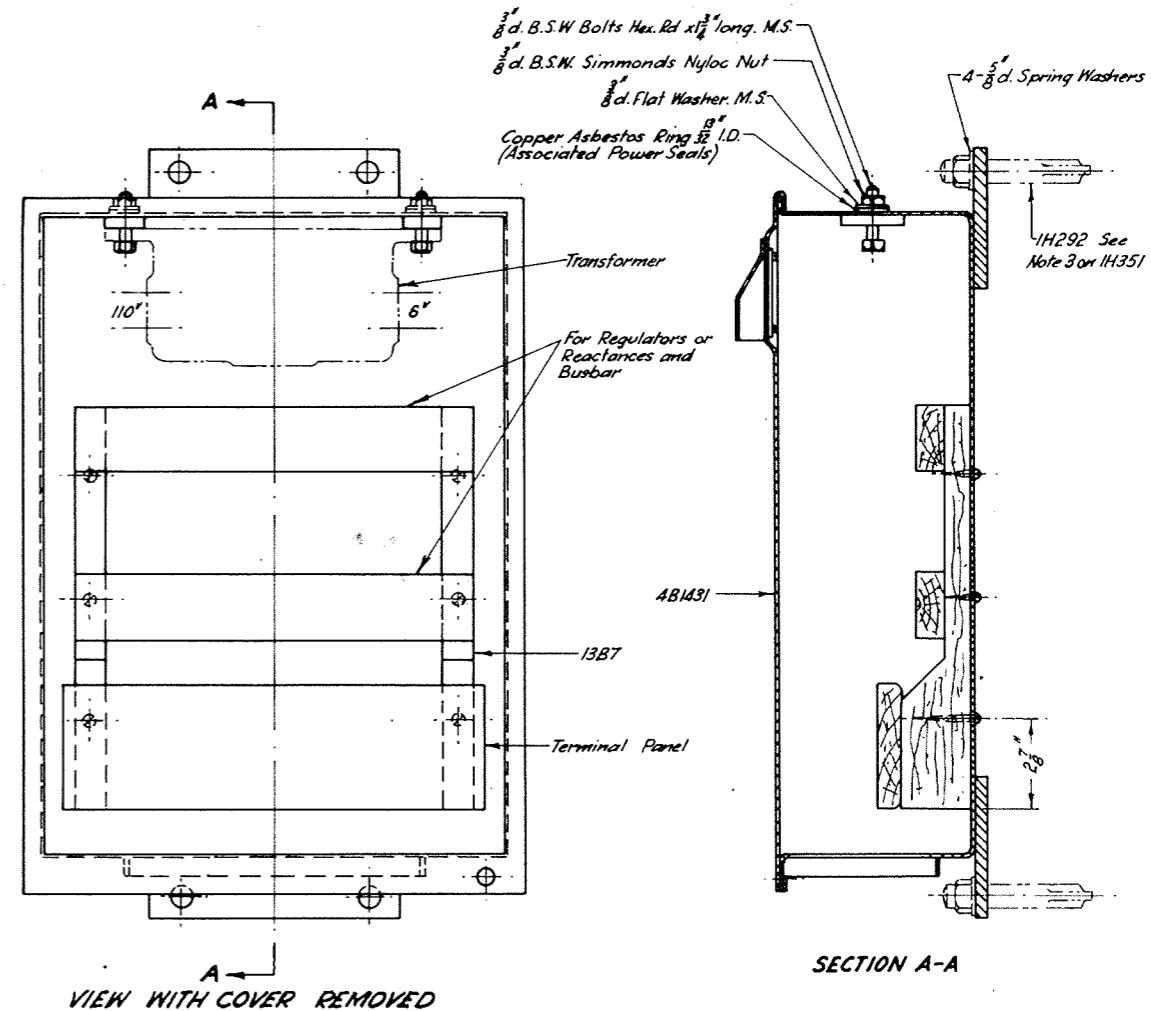


VIEW WITH COVER REMOVED
TERMINAL JUNCTION BOX - COMPLETE - 1H531

PART N ^o	NAME	MTL	QTY
4B1431	Track Feed Box	M.S.	1
6B382	Panel	Wood	1
Stock	3/8 d. B.S.W. Bolt H.R.H. x 1 1/2" long.	M.S.	2
"	3/8 d. Flat Washer.	M.S.	4
"	Copper Asbestos Rings 1 3/8" I.D.	-	4
"	N ^o 10 Gauge Rd. Hd. Woodscrews 2" long.	M.S.	2
"	N ^o 10 Gauge Rd. Hd. Woodscrews 1 1/2" long.	M.S.	2
"	N ^o 10 Gauge Rd. Hd. Woodscrews 1" long.	M.S.	2

- NOTES:-
1. Terminals, A2 to be ordered separately as required.
 2. Reclaimed Track Feed Box (1B5 - Case, 8B5 - Cover) may be used.
 3. Hook Bolts 1H292 or Special U Bolts (fig F2228) & Spring Washers to be ordered separately as required.

1H531

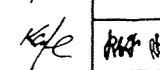



VIEW WITH COVER REMOVED
TRACK FEED BOX - COMPLETE - 2H531

PART N ^o	NAME	MTL	QTY
4B1431	Track Feed Box	M.S.	1
13B7	Panel Support	Wood	1
Stock	3/8 d. B.S.W. Bolts Hex. Rd. x 1 1/2" long.	M.S.	2
"	3/8 d. Flat Washer	M.S.	2
"	Copper Asbestos Rings 1 3/8" I.D.	-	2
"	N ^o 10 Gauge Rd. Hd. Woodscrews 2" long.	M.S.	2
"	N ^o 10 Gauge Rd. Hd. Woodscrews 1" long.	M.S.	4
"	3/8 d. B.S.W. Simmonds Nyloc Nut	-	2

- NOTE:-
- The following are to be ordered separately as required:-
Regulator Panel - 5B125
Reactance Unit
(Maximum capacity of Box - 4 Regulator Panels or 3 Reactance Units.)
Fuses - JT70, Resistances - F1956
110"-6" Transformer.
Negative Bus-bar (Terminal Block IF1527 and Connectors IF134 to suit)
Terminals A2

2H531

For Metal Panel Assembly See A1768	Redrawn & Revised Original under same N ^o & fitted Junction Terminal Box & Track Feed Box Assemblies for Insulated Wires Dated 12-11-29	VICTORIAN RAILWAYS	SIG & TEL ENGINEER	DRAWN BY L.C.E.	TRACED BY L.C.E.
	3 rd ANGLE PROJECTION	Scale: 3" = 12"			
BOX			TRACK FEED & TERMINAL JUNCTION		
			H531		

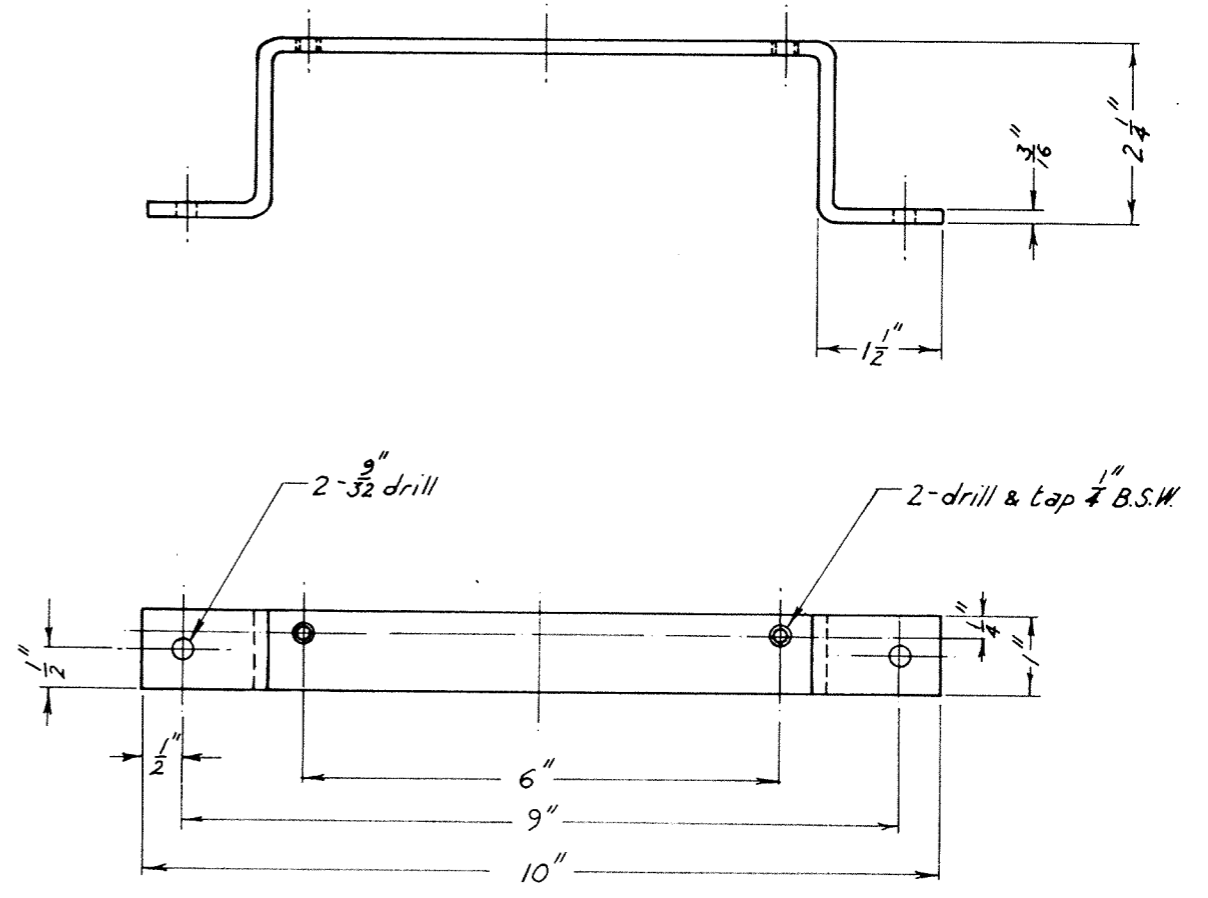
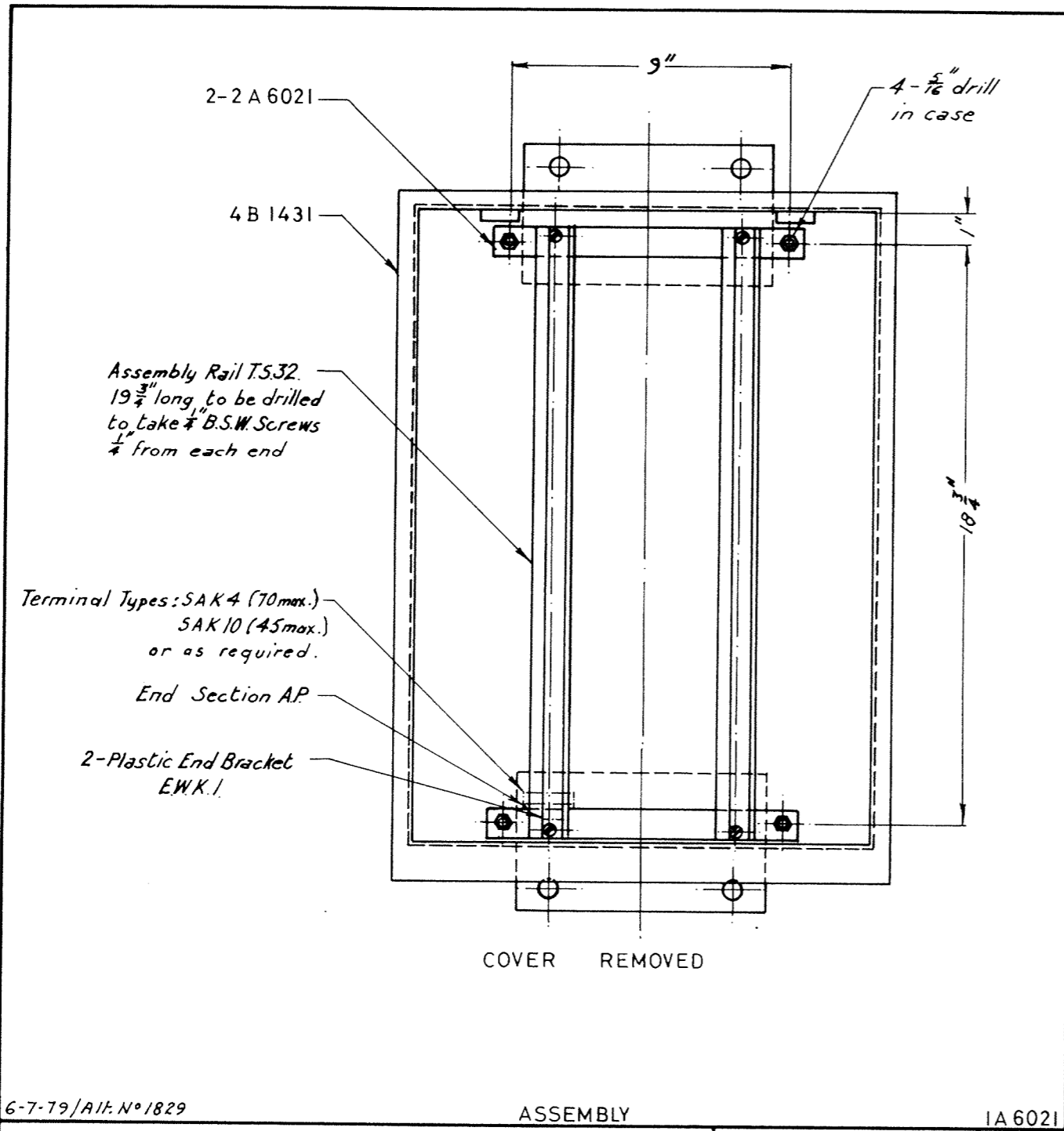


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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Supply with: - 2-Bolts & Nuts Hex. Rd. Hex. M.S.
 1/4" B.S.W. x 5/8" long, Washers Rd. M.S. Black Finish: - Hot Dip Galvanised.
 3/4" x 1/16" x 5/16" Rd. Hole.
 2-Screws Rd. M.S. 1/4" B.S.W. x 5/16" long.

6-7-79/AIF. N° 1829

ASSEMBLY

1A 6021

M.S.
BRACKET

2A 6021

See:-
 H531 for A2 Terminals.
 A 1768 for F5126 "West'house"
 RSA Terminals.

TOLERANCES:- Except
 where otherwise
 stated:- Decimal
 dimensions ± .005"
 Fractional dimensions
 ± 1/64."
 3RD ANGLE PROJECTION

VICTORIAN RAILWAYS
JUNCTION BOX
 FITTED FOR USE WITH
 STACKABLE TERMINALS

S.&C. Engineer.	Designed B. V.	Drawn B. V.
<i>B.M.</i>	S.D.E. <i>B.V.</i>	M.E. <i>S.B.</i>
	CKd	Iss.No.

A 6021

6-3-74

53562
 H 12-1

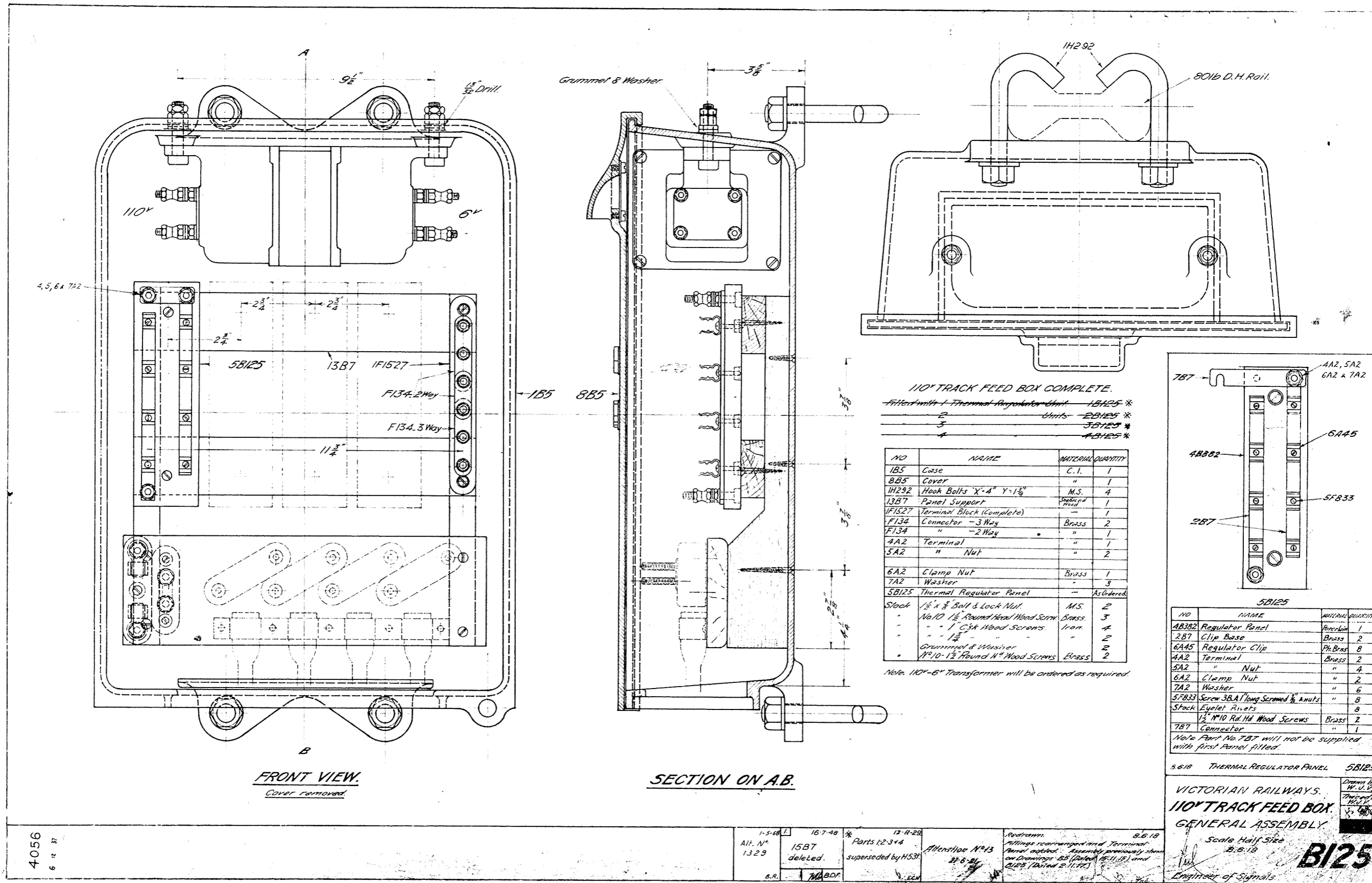


SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

Category
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 1 5

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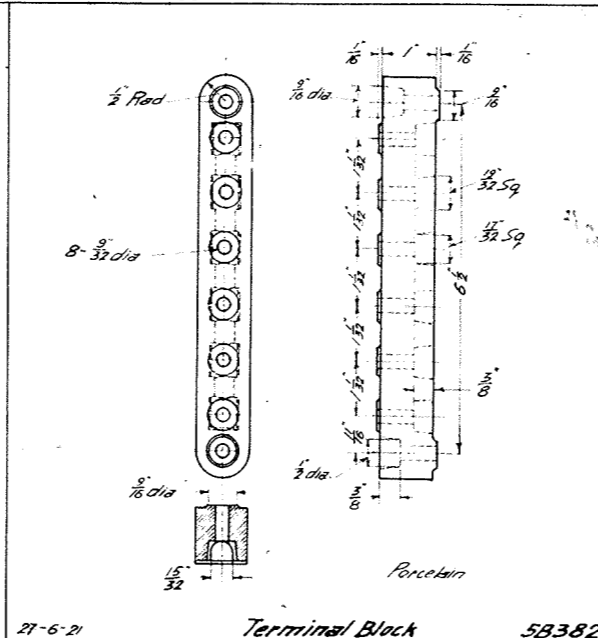
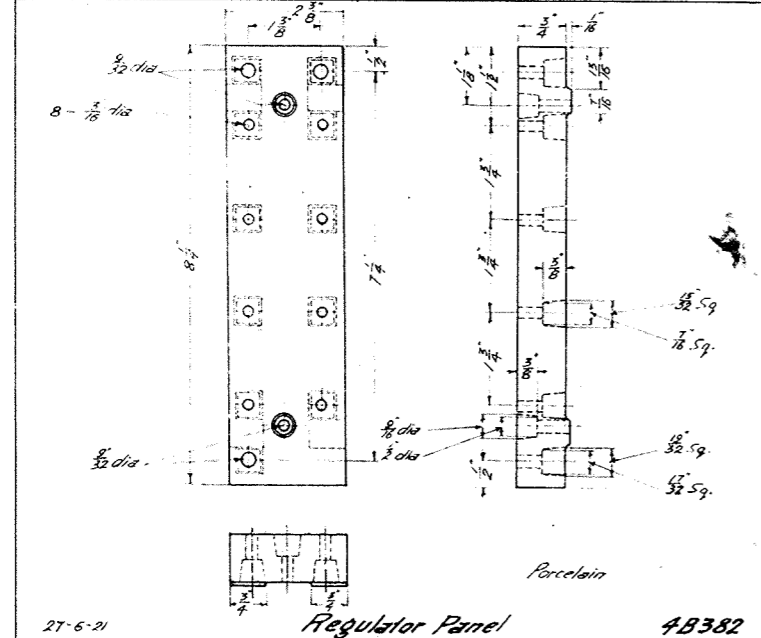
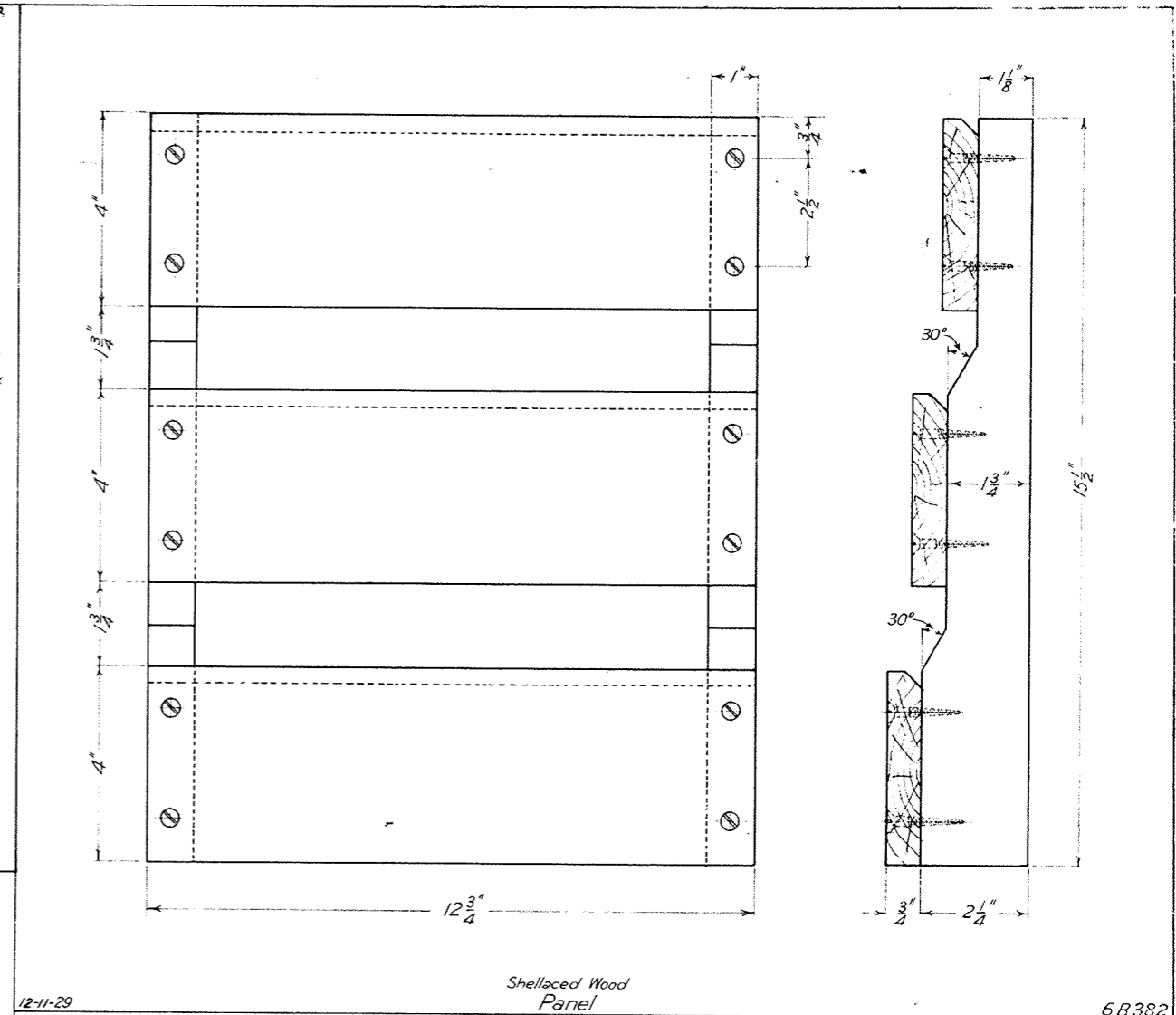
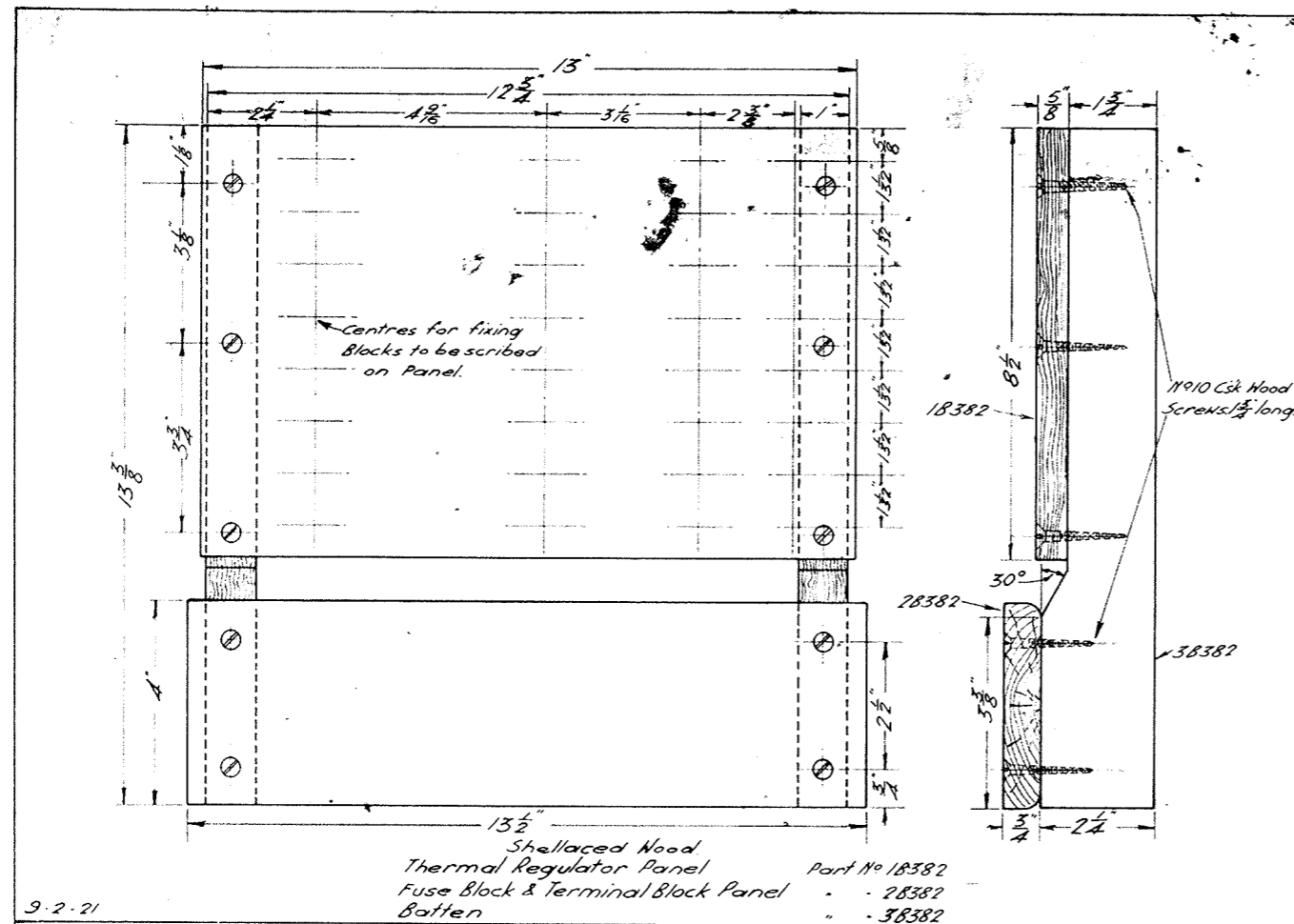
4-056
6 12 37

1-5-68 L. 16-7-48 * Parts 12314
Alt. N° 1329 deleted. superseded by H531
Attention N° 13
21-6-41

SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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B 4 0 1 6





R 4230 6 12 37 J F 2	2	12-11-29	1	27-6-21	VICTORIAN RAILWAYS 110" TRACK FEED BOX DETAILS	Indinger Top Signals	Drawn by F.H.	Traced by E.H.
		Part No 6B382 added		Parts No 4B382 & 5B382 added				

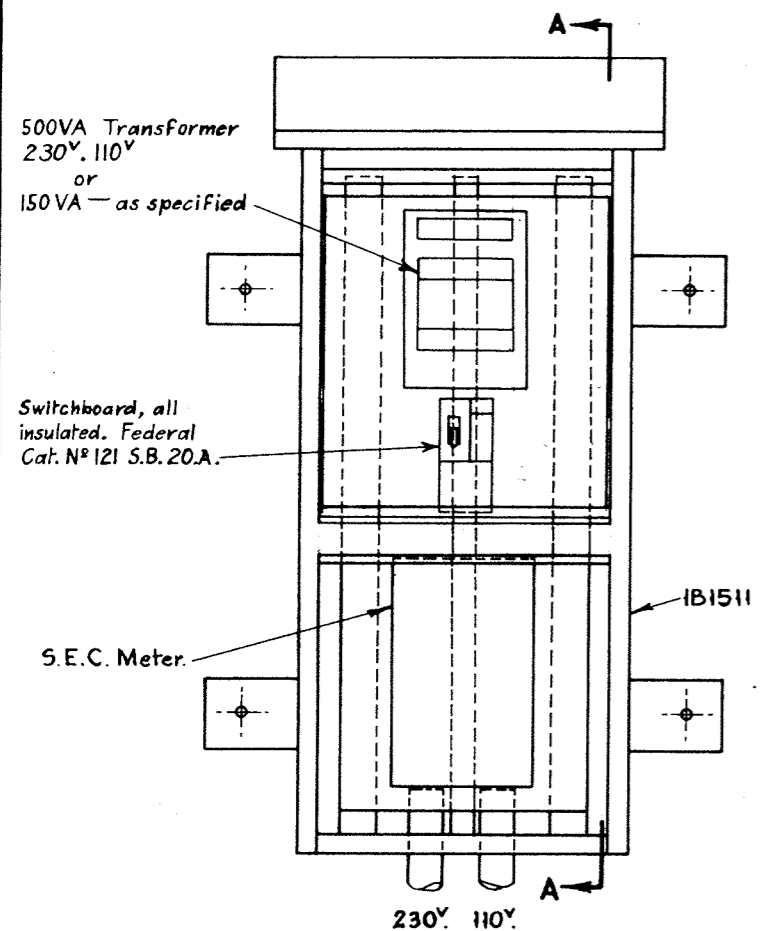


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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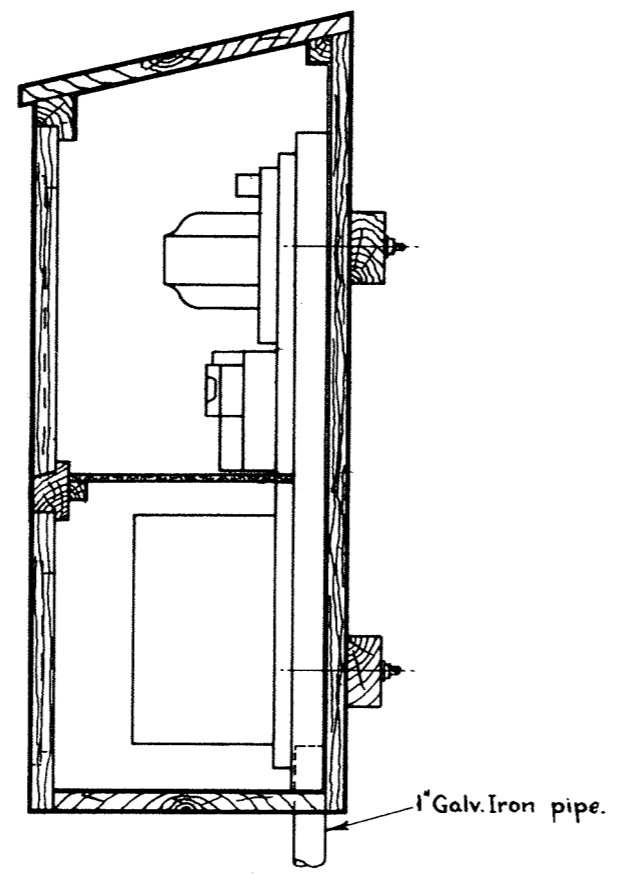
Sheet No
1 7

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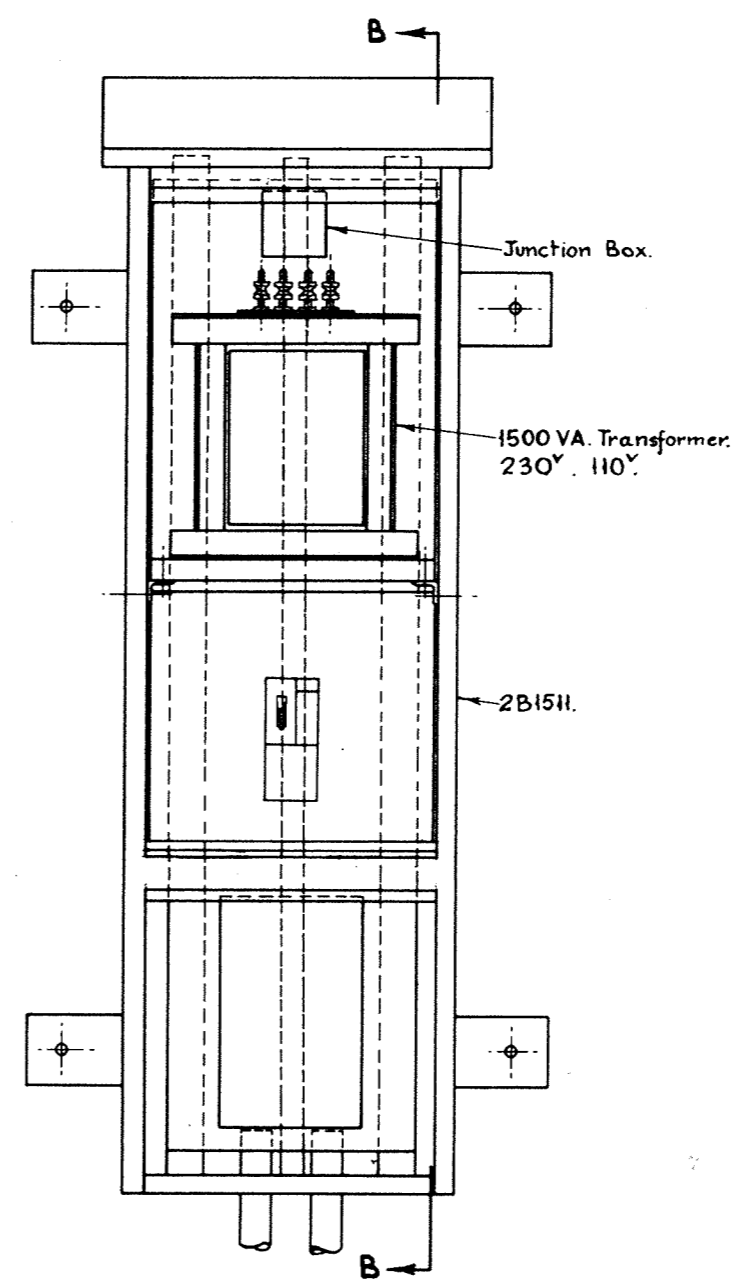


ELEVATION - DOORS REMOVED

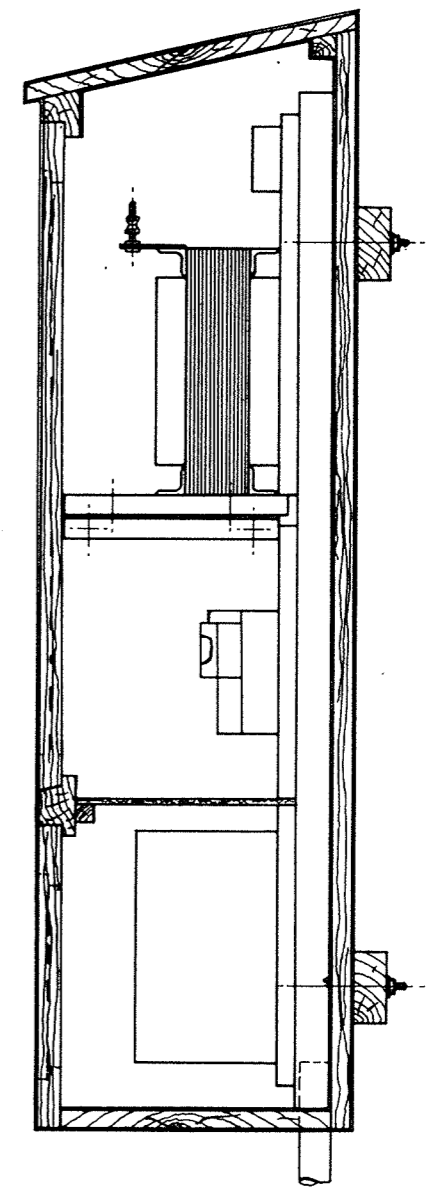
Note: Transformer compartment door padlock VR7P.
Meter compartment door padlock VR9P.



SECTION A-A



ELEVATION - DOORS REMOVED



SECTION B-B

For all other particulars see IH869.

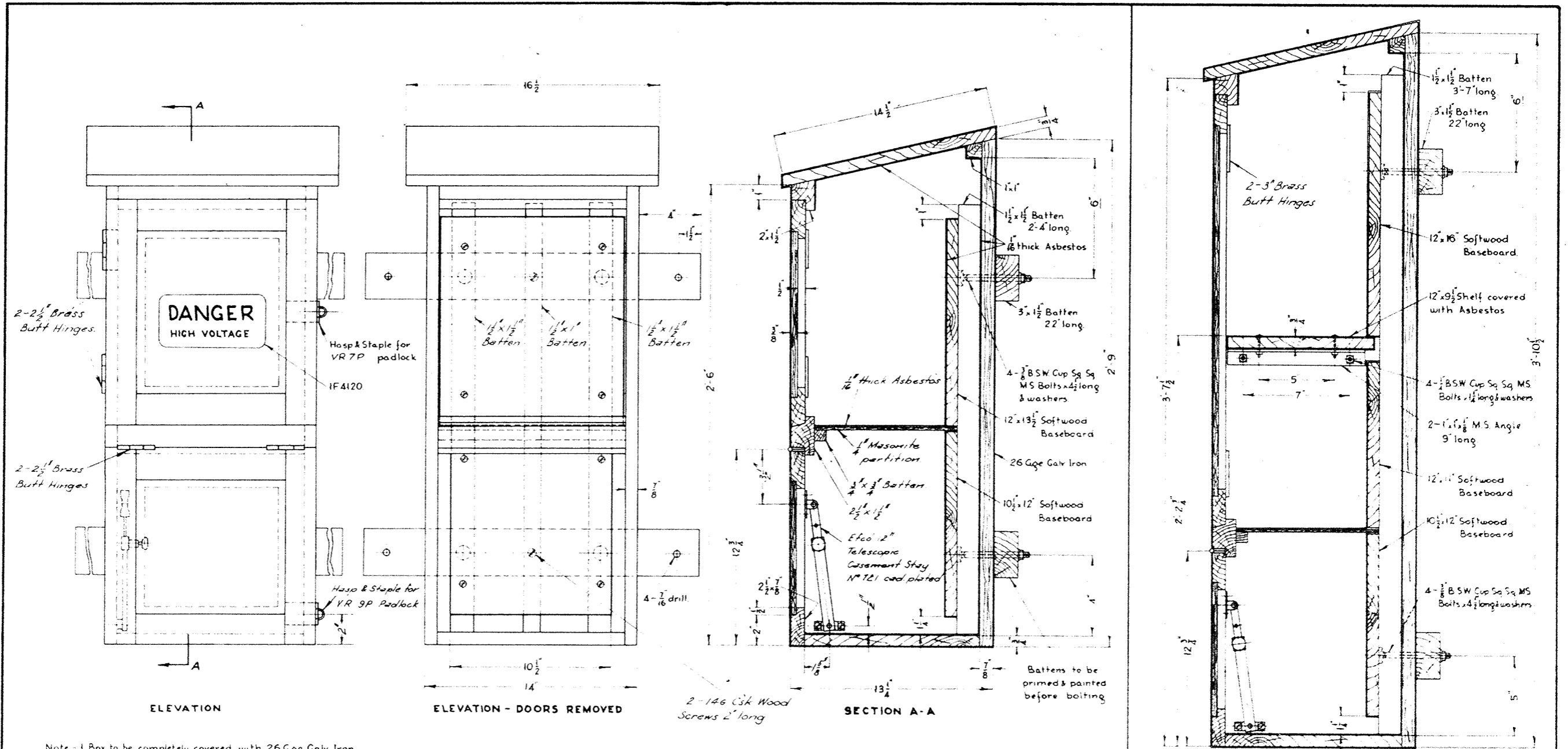
J30-4

IH869			2H869	
18-12-70 <i>Alteration N° 1441</i> N.J.R.	16-3-61 <i>Alteration N° 307</i> N.R.	22-9-64 <i>Alteration N° 1189</i> D.H.	For small type S.E.C. Meter Box See F4401.	Redrawn & Revised Original title - S.E.C. Meter Box Fitted with transformer & switchboard. Dated 17-6-49.
VICTORIAN RAILWAYS			8	Sig. & Tel. Engineer. 866.
BOX FOR S.E.C. METER			Drawn by R.A.L.	Traced by R.A.L.
TYPICAL ASSEMBLY of APPARATUS			H869	
Scale - 2" = 1ft.			24-5-63.	



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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- Note - 1 Box to be completely covered with 26 Gage Galv Iron.
 2 Inside Top Back Sides & Bottom of Box, and surface of Baseboards to be covered with $\frac{1}{16}$ thick Asbestos sheet.
 3. Painting - All inside surfaces not covered with Asbestos to be White. Outside Grey.

A/H 1441/18-12-70
 A/H 1307/15-8-67

A/H 1441/18-12-70
 A/H 1307/15-8-67

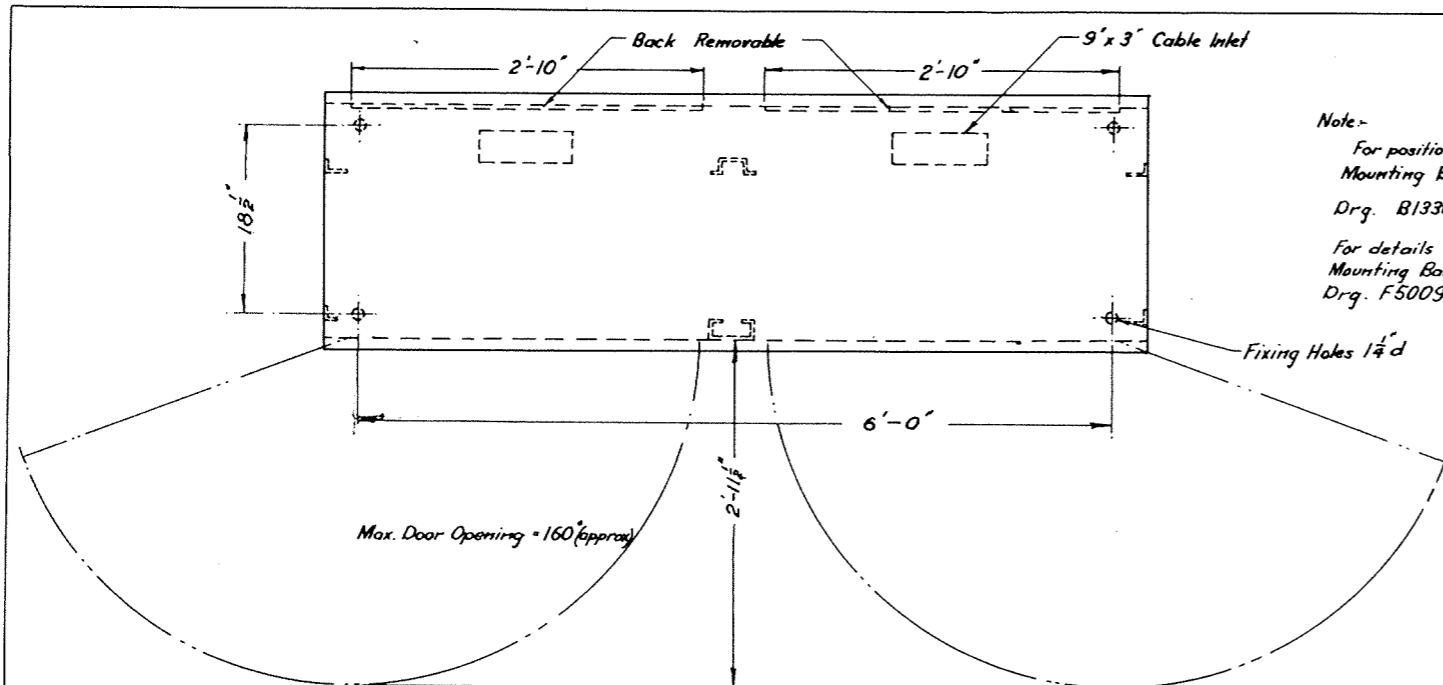
42452
 J203

BOX		1B1511	BOX	2B1511
For Typical Assembly of Apparatus. See H869		Redrawn & Renumbered Original number F3931 Same title dated 21.6.49.	VICTORIAN RAILWAYS BOX FOR SEC. METER	Sig. & Tel. Engineer. <i>R.B.B.</i> Drawn by R.A.L. Traced by R.A.L. B1511
			24.5.63.	

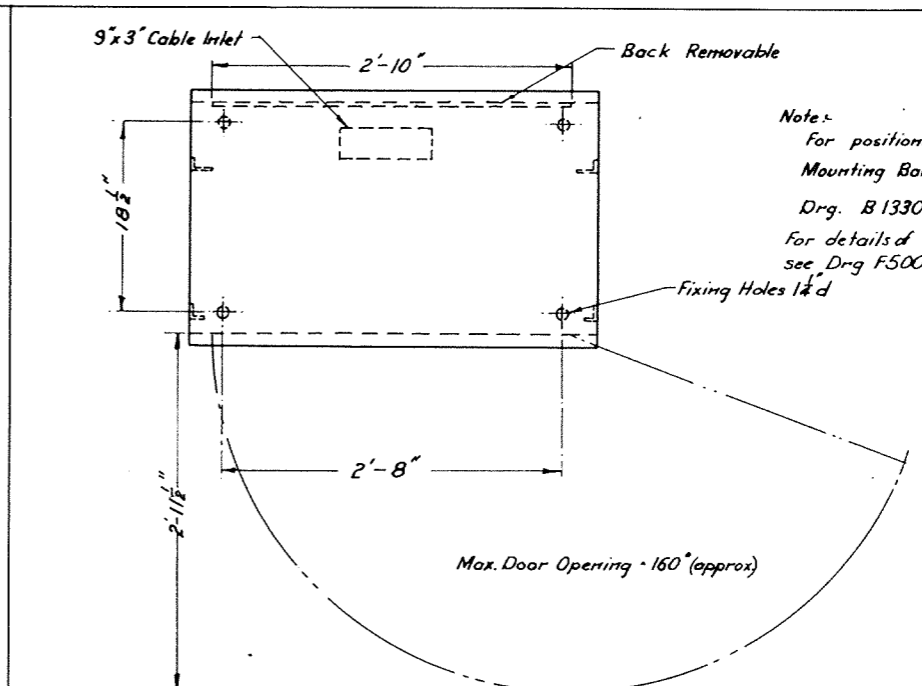


**SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES**

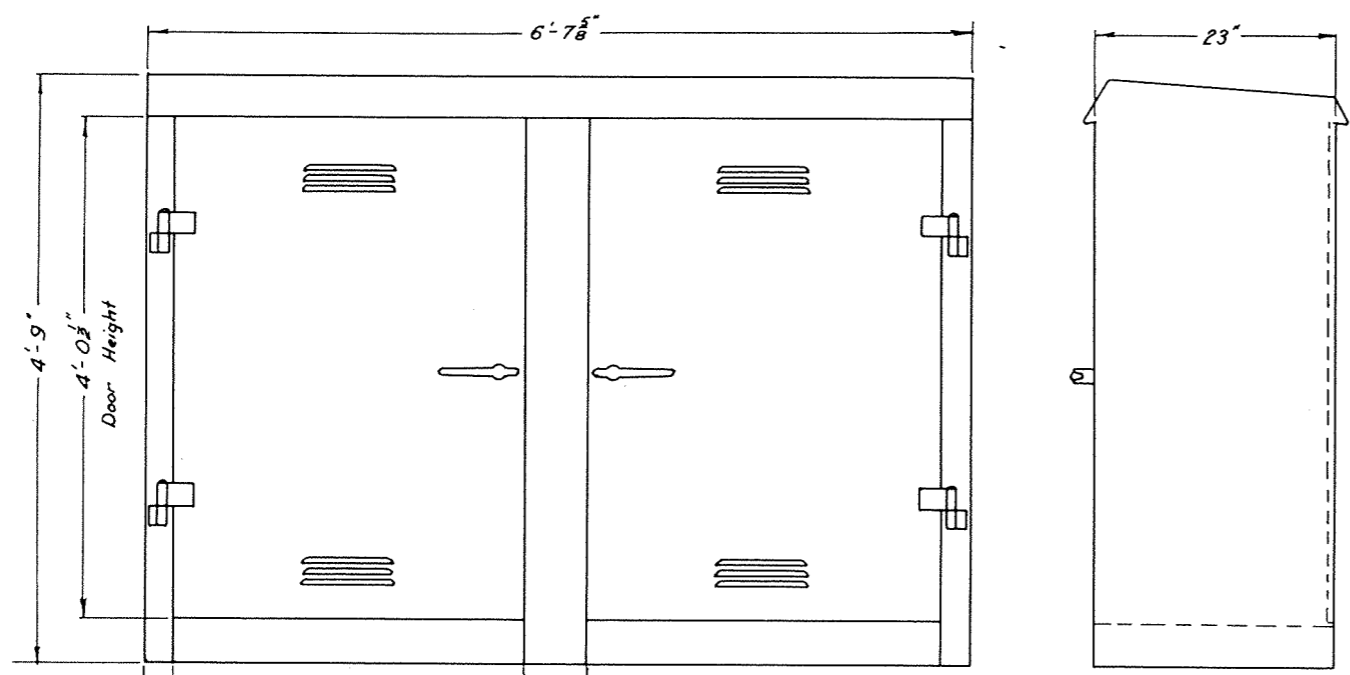
Category	Sheet No	Rev
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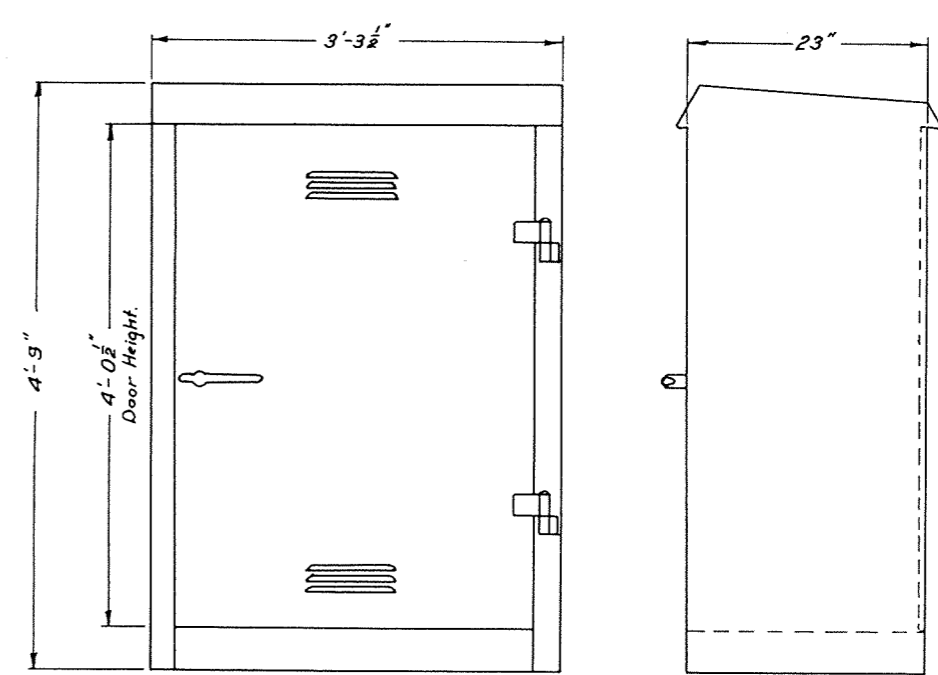
Note:-
For positioning of
Mounting Bars see
Drg. B1330.
For details of
Mounting Bars see
Drg. F5009



Note:-
For positioning of
Mounting Bars see
Drg. B1330
For details of Mounting Bars
see Drg F5009



M^cK.&H. RELAY Box P.C. N^o M14061 - Without fittings 4H1092
M^cK.&H. RELAY Box P.C. N^o M14037 - With fittings 2H1092



M^cK.&H. RELAY Box P.C. N^o M11698 - Without fittings 3H1092
M^cK.&H. RELAY Box P.C. N^o M14036 - With fittings 1H1092

For Trunking Layout
See Drg. F5113
For Inlet fitting
(4NS69) See Drg. F5144

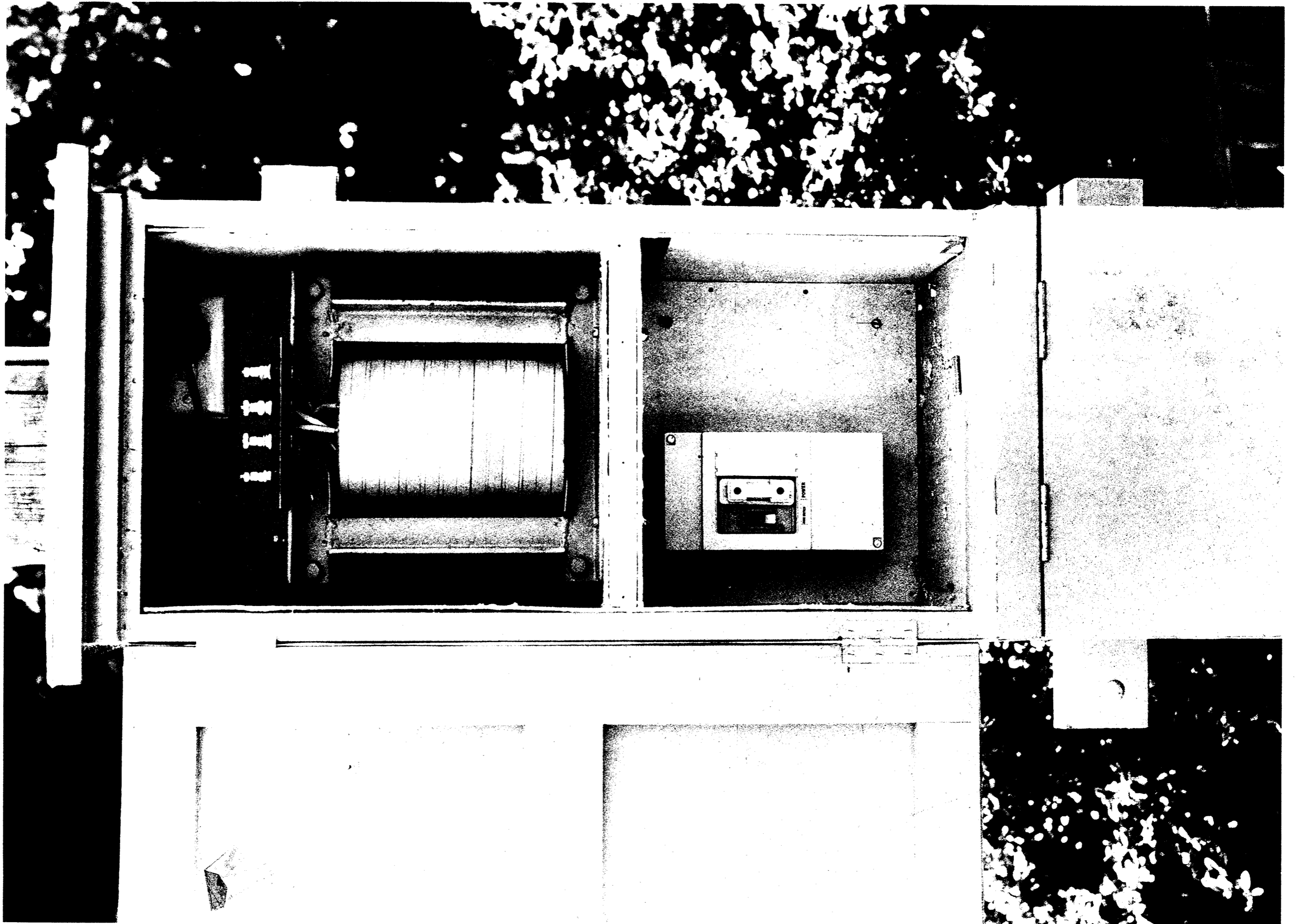
VICTORIAN RAILWAYS
RELAY & BATTERY BOXES
(M^cK.&H. TYPE)
GENERAL DIMENSIONS
30-8-60

DESIGN & TEL ENGINEER	DRAWN BY L.C.E.	TRACED BY L.C.E.
H1092		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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STANDARD TRANSFORMER & METER BOX

Jan 80

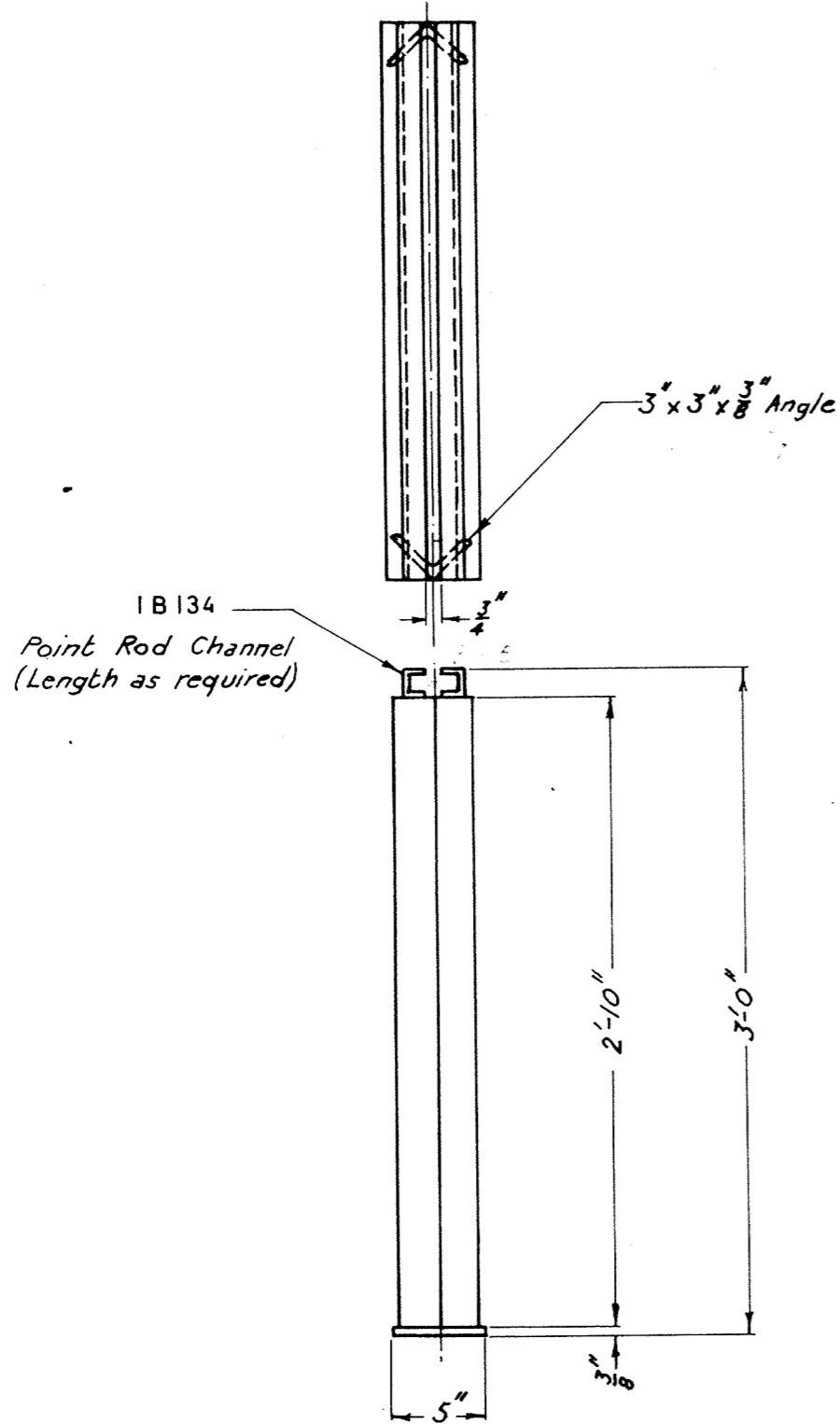


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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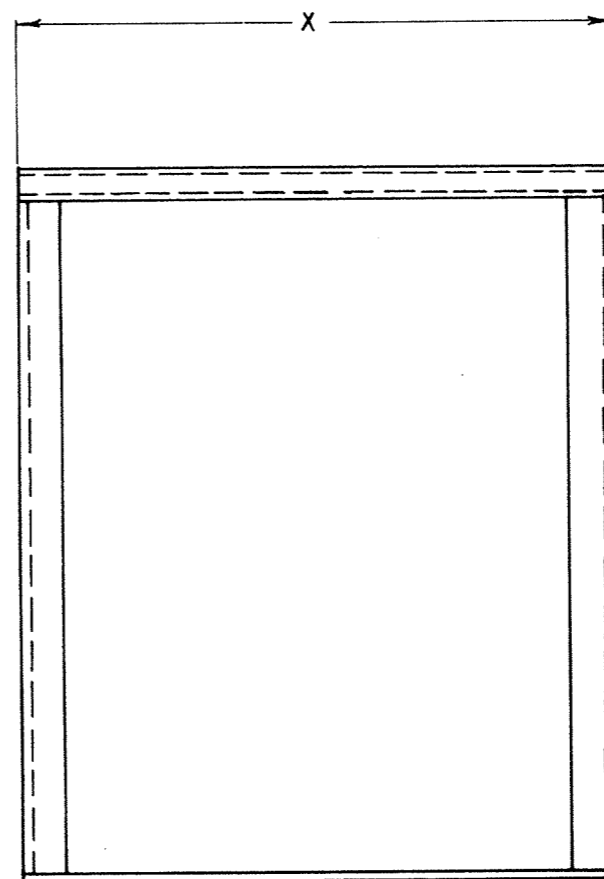


NOTE:- The following bolts & washers to be ordered separately.

For use with N 590 & K180 Boxes & 2A5993
 2-Bolt & Nut Hex. Rd. Hex. M.S. $\frac{5}{8}$ " B.S.W. x 3" Long &
 4-Washers Rd. M.S. Black $1\frac{1}{2}$ " x $\frac{3}{32}$ " x $1\frac{1}{16}$ " Rd. hole.

For use with M&K.&H. Single & Double Width Boxes & 2A5993
 2-Bolt & Nut Hex. Rd. Hex. M.S. $\frac{3}{4}$ " B.S.W. x $7\frac{1}{4}$ " Long &
 4-Washers Rd. M.S. Black $1\frac{3}{4}$ " x $\frac{1}{8}$ " x $1\frac{3}{16}$ " Rd. hole.

For use with M 4 Box & 1A5993.
 3-Bolt & Nut Hex. Rd. Hex. $\frac{1}{2}$ " B.S.W. x 3" Long &
 6-Washers Rd. M.S. Black $1\frac{1}{4}$ " x $\frac{3}{32}$ " x $\frac{9}{16}$ " Rd. hole.



FINISH:- 1 Coat Bituminous Paint.

M.S. Welded Construction
 FOUNDATION

X as required.....3A5993
 X = 23"2A5993
 X = 2'-6"1A5993

Alt. No. 1626/18-1-74

S. & Co. Engineer.	Designed B. V.	Drawn B. V.	A 5993
	SDE M. E.	Ckd. Iss. N.	
VICTORIAN RAILWAYS FOUNDATION for APPARATUS BOX			7-1-74
A	18-1-76	PART 3A5993 ADDED	M. J. R.
A5993			



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
 B 4 0

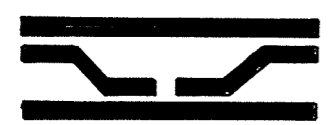
Sheet No
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STEEL FOUNDATION A5993 FOR N590 BOX

Jan 80



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

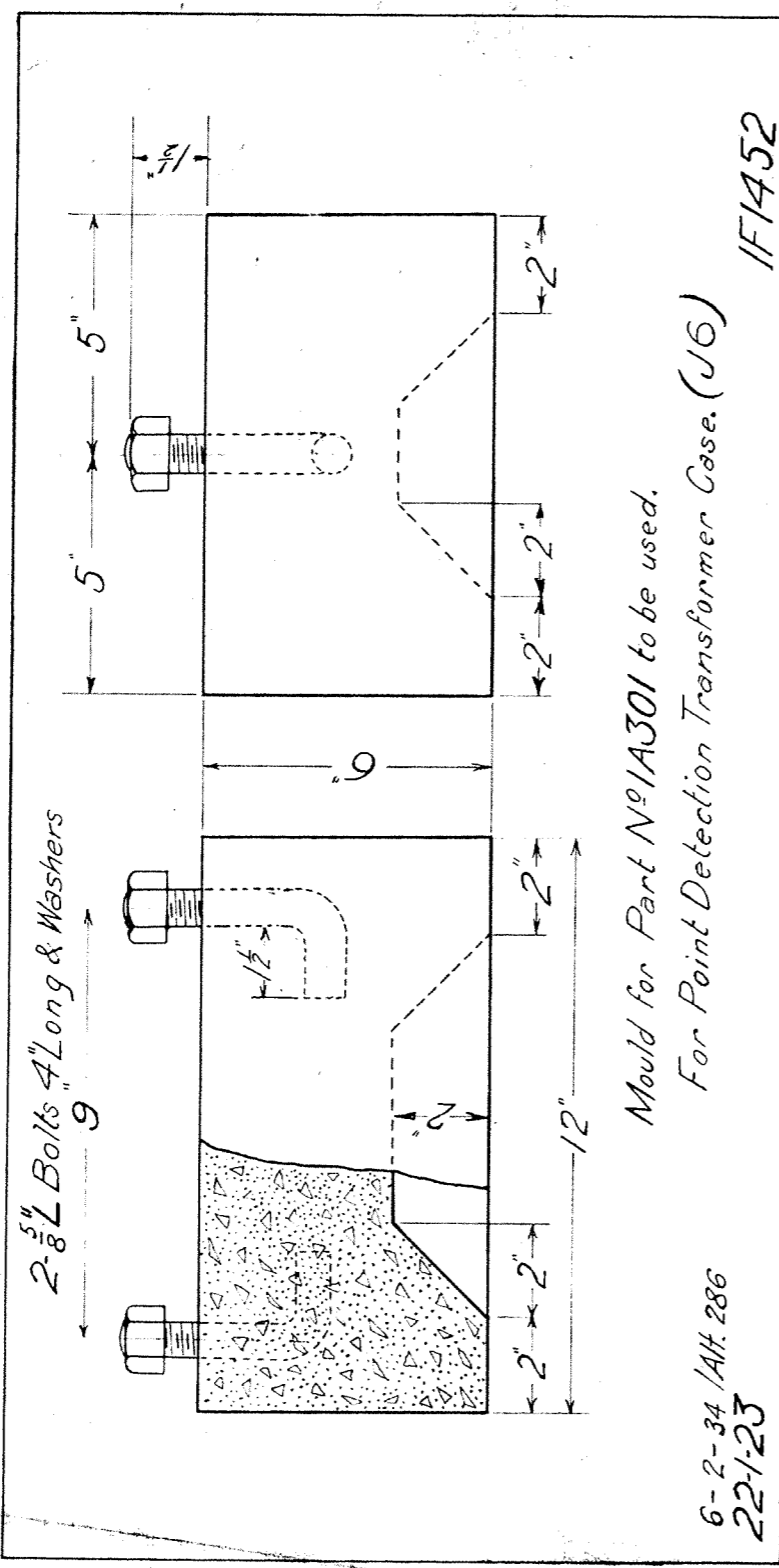
Category
B 4 0

Sheet N°
2 2

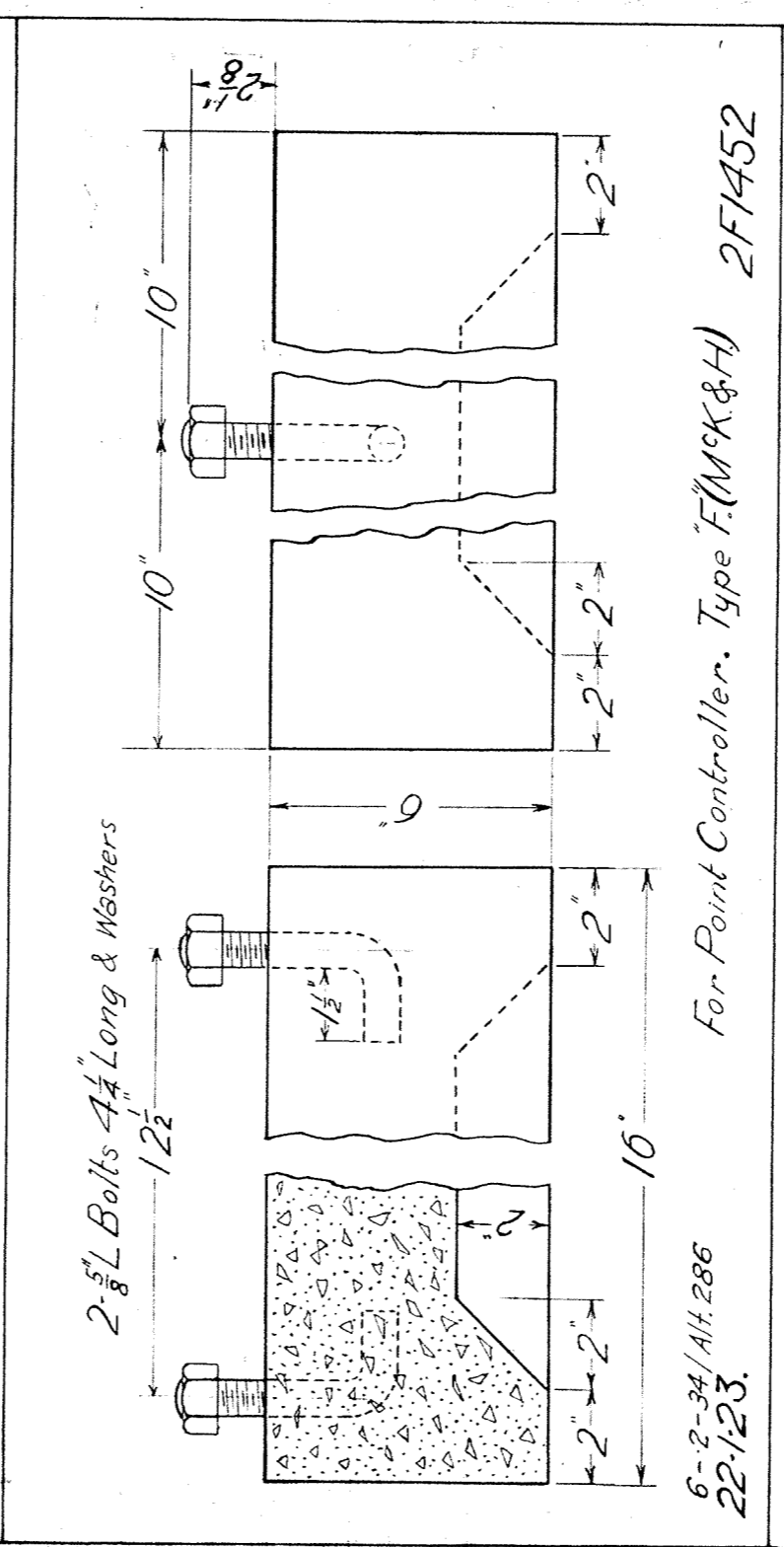
Rev.

RECORD PLAN
R 884
 NEW SERIES
 DATE 15/1/37

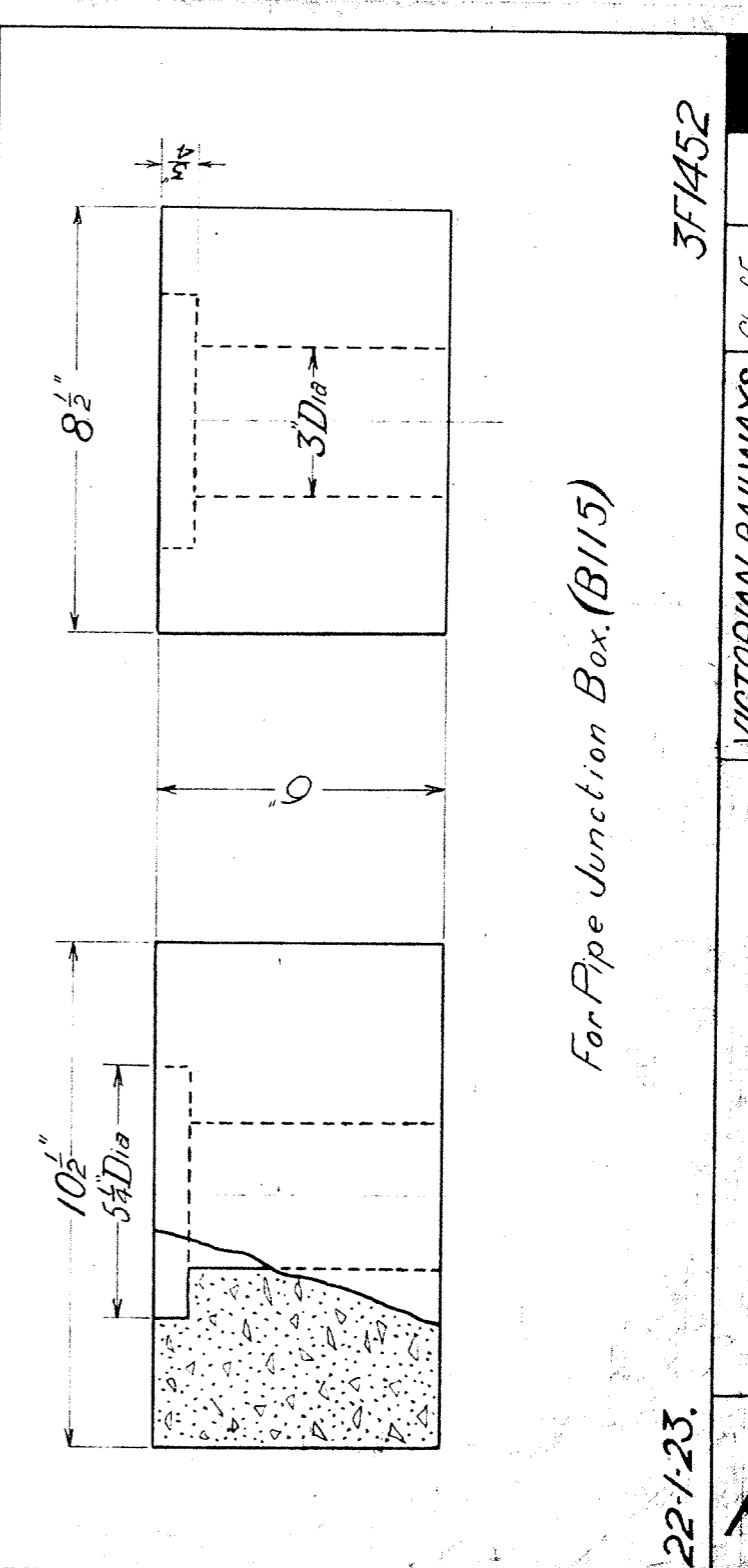
21.40



6-2-34 / Alt. 286
 22-1-23



6-2-34 / Alt. 286
 22-1-23



22-1-23.



SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

Category
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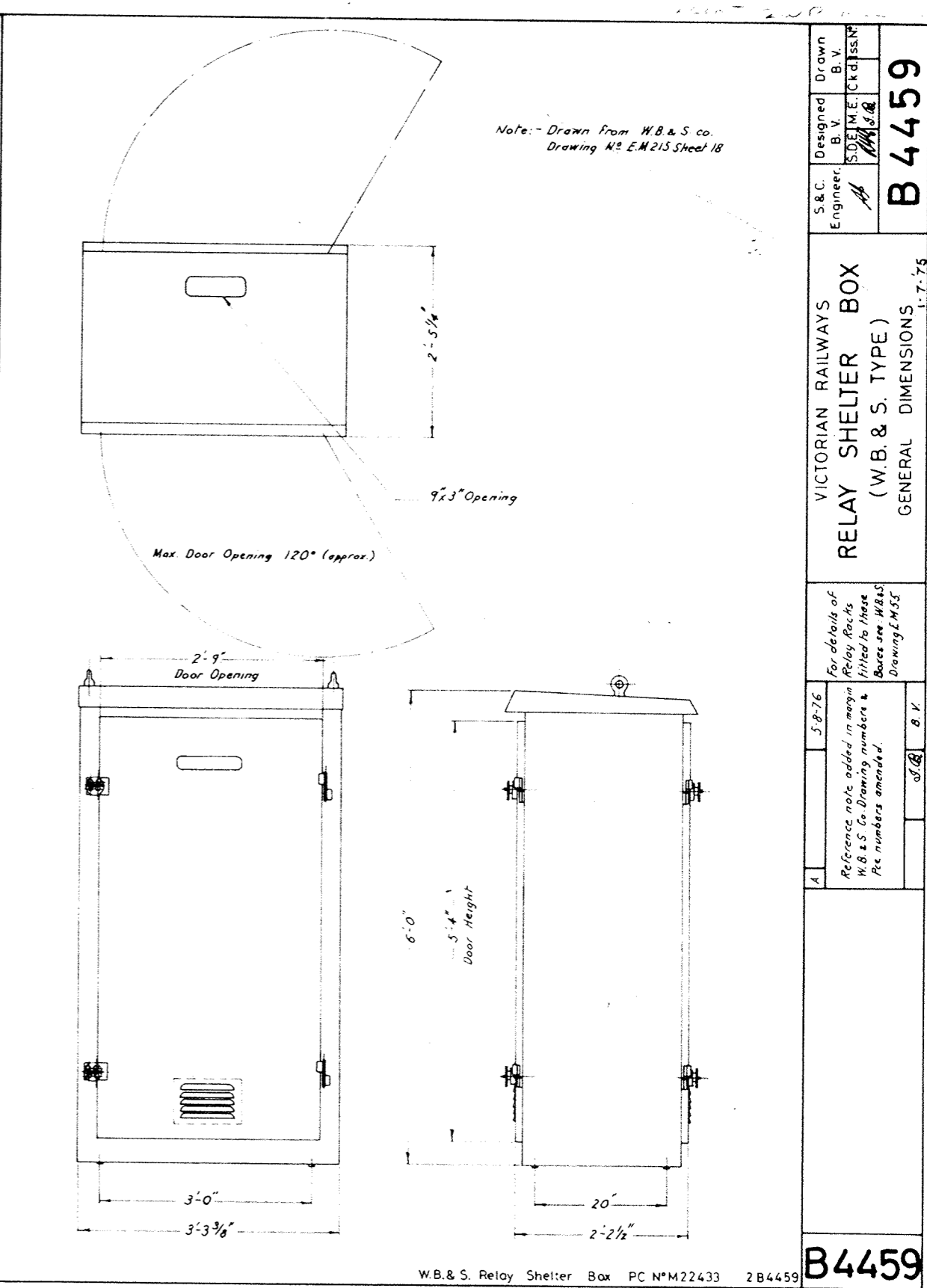
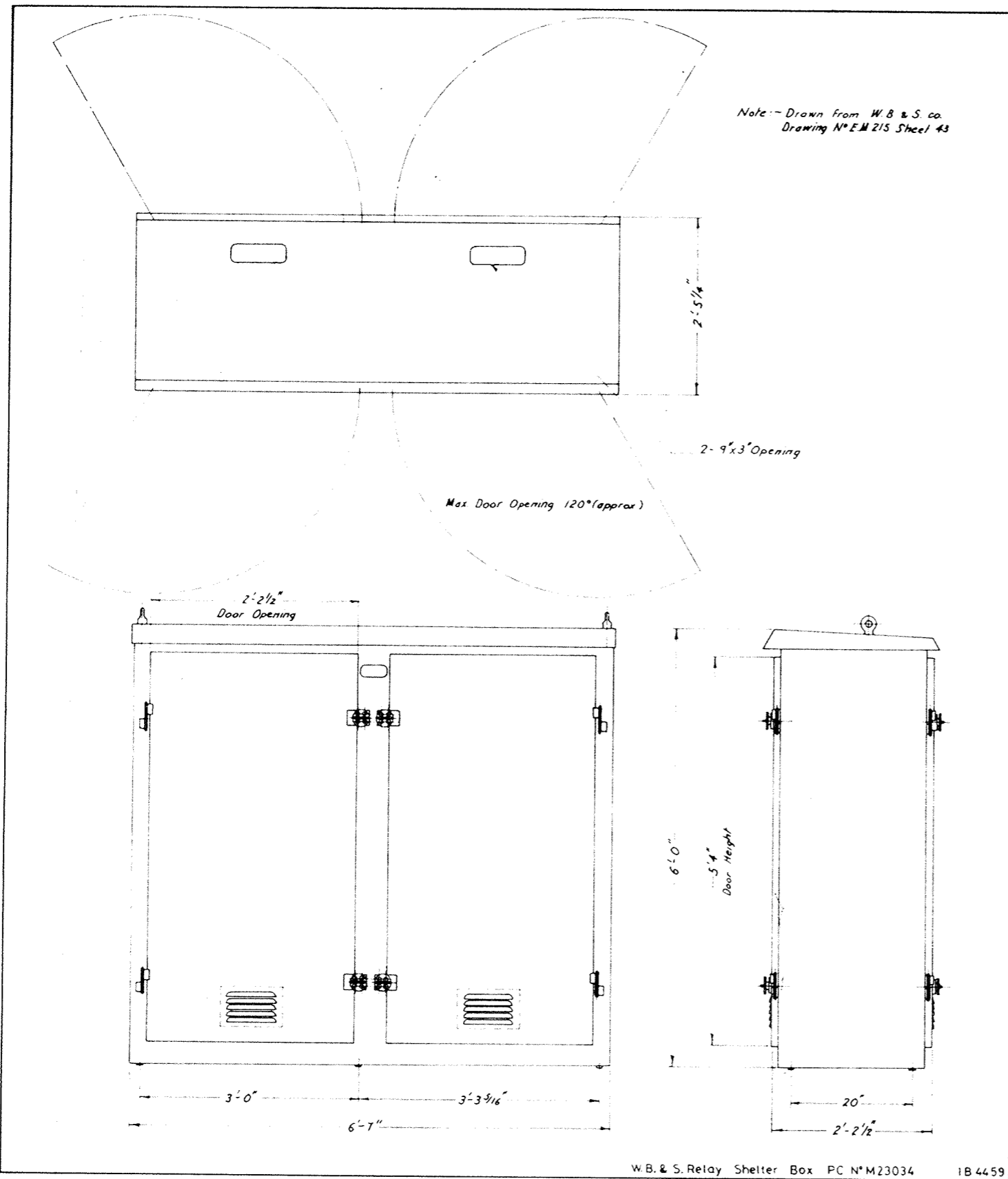
Sheet No
 2 3

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VICTORIAN RAILWAYS.
 CONCRETE
 FOUNDATIONS
 Chief Engr.
 Signalling
 22-1-23.
 Drawn by Traced by
 G.W.S. G.W.S. W.A.
F1452

4-69-23

55535
H/A-3.



S & C. Engineer.		Designed B. V.		Drawn B. V.	
S.D.E. M.E. [Signature]		S.D.E. M.E. [Signature]		S.D.E. M.E. [Signature]	
VICTORIAN RAILWAYS					
RELAY SHELTER BOX					
(W.B. & S. TYPE)					
GENERAL DIMENSIONS 1-7-75					
For details of Relay Boxes see W.B. & S. Drawing L.M. 35					
Reference note added in margin W.B. & S. Co. Drawing numbers & Rev. numbers amended.					
B 4459					



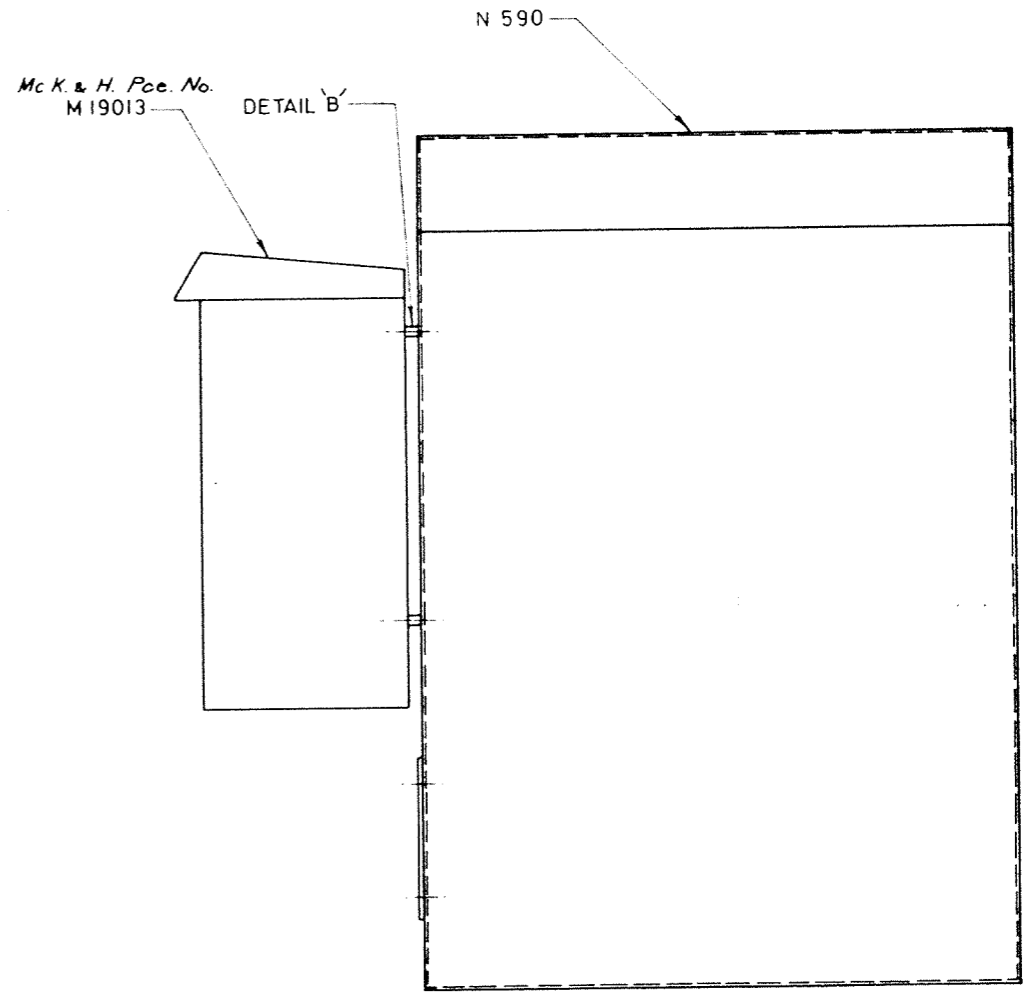
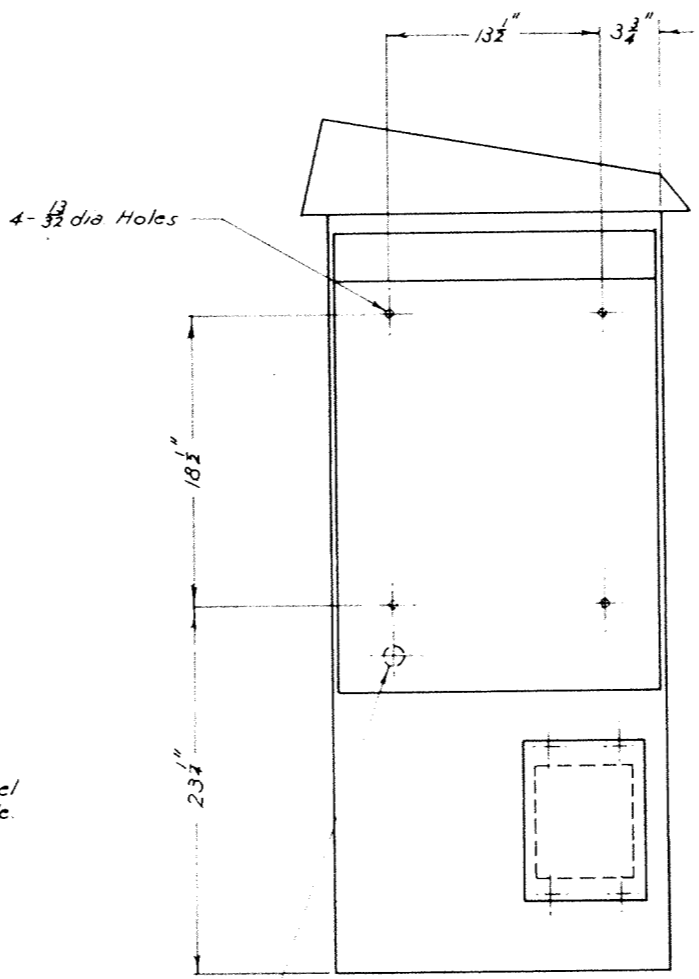
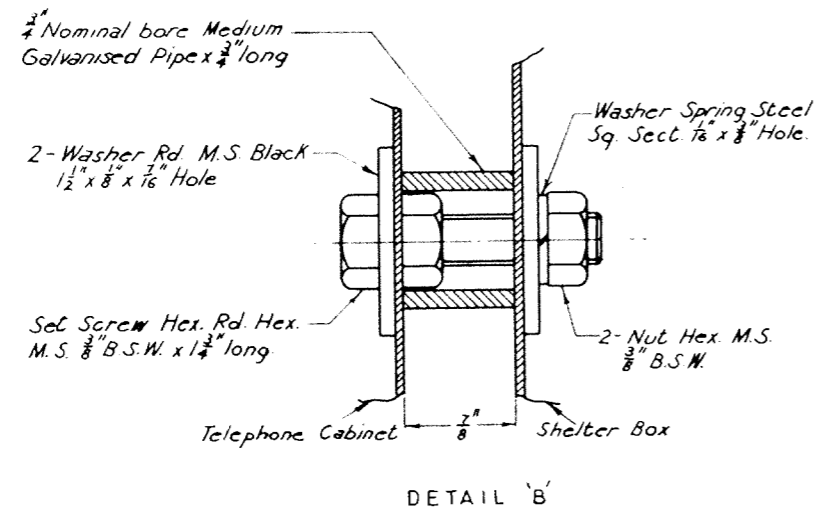
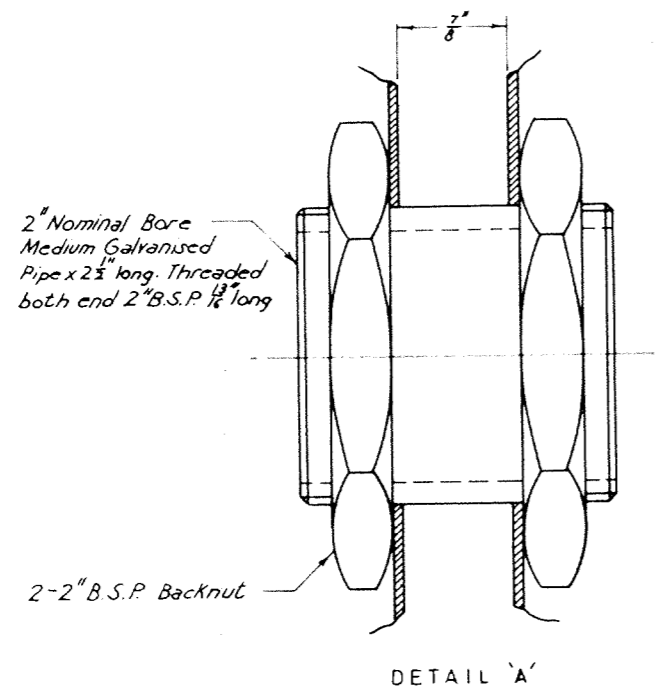
SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

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Sheet N°
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[]



Notes: - 2 3/8" dia. wire entry hole for 2" nominal bore
G.I. Pipe to be determined on site to
suit local conditions. For method of attaching
to boxes see DETAIL 'A'

51710
H 6-3

Note
To be used
at High
Tension
Locations

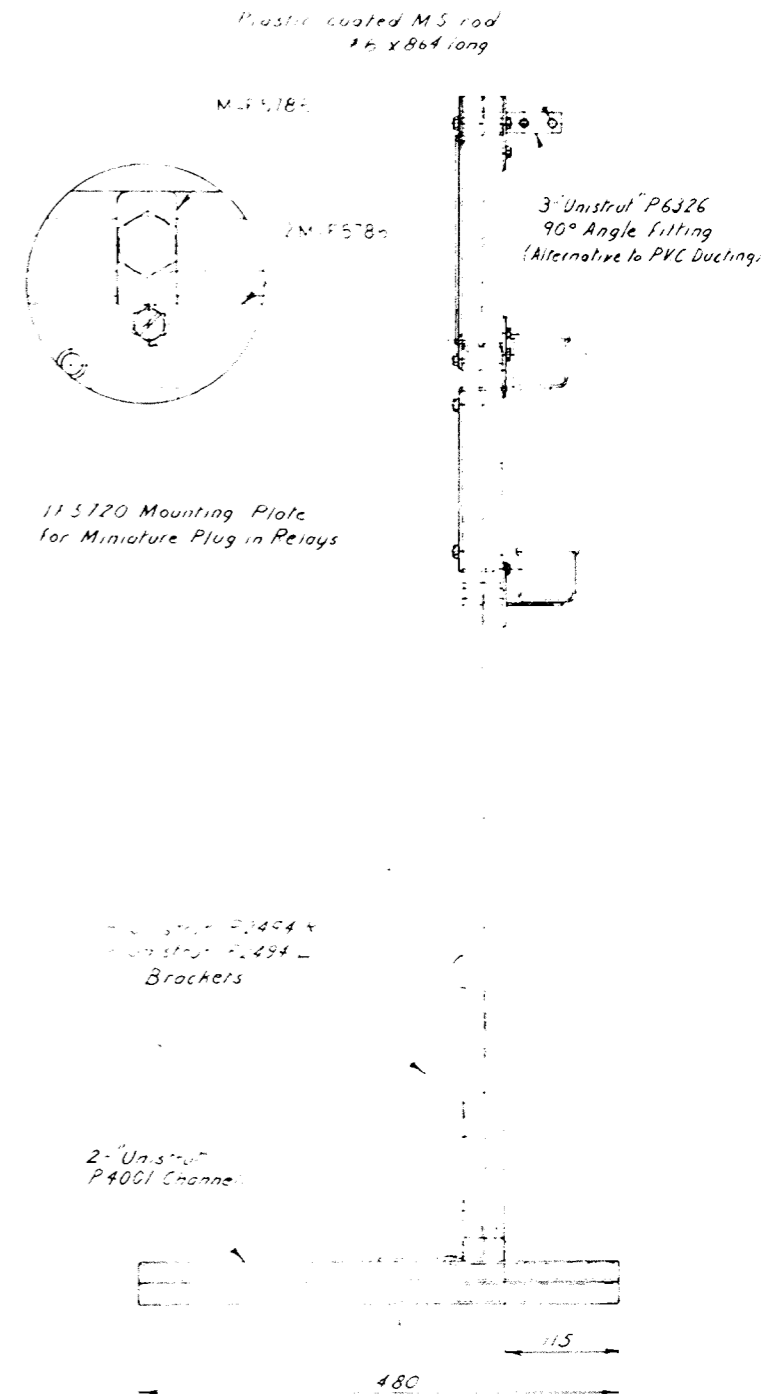
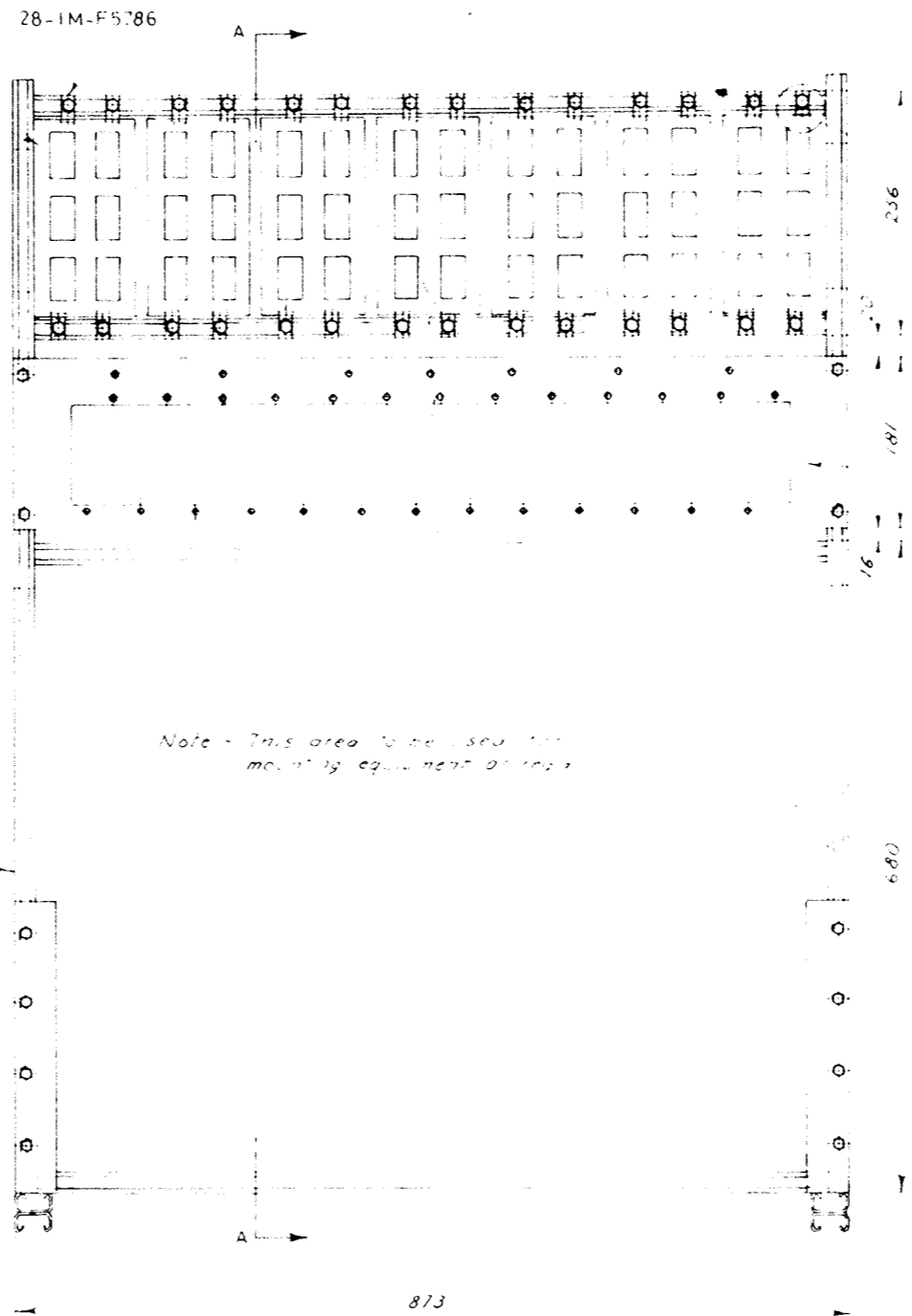
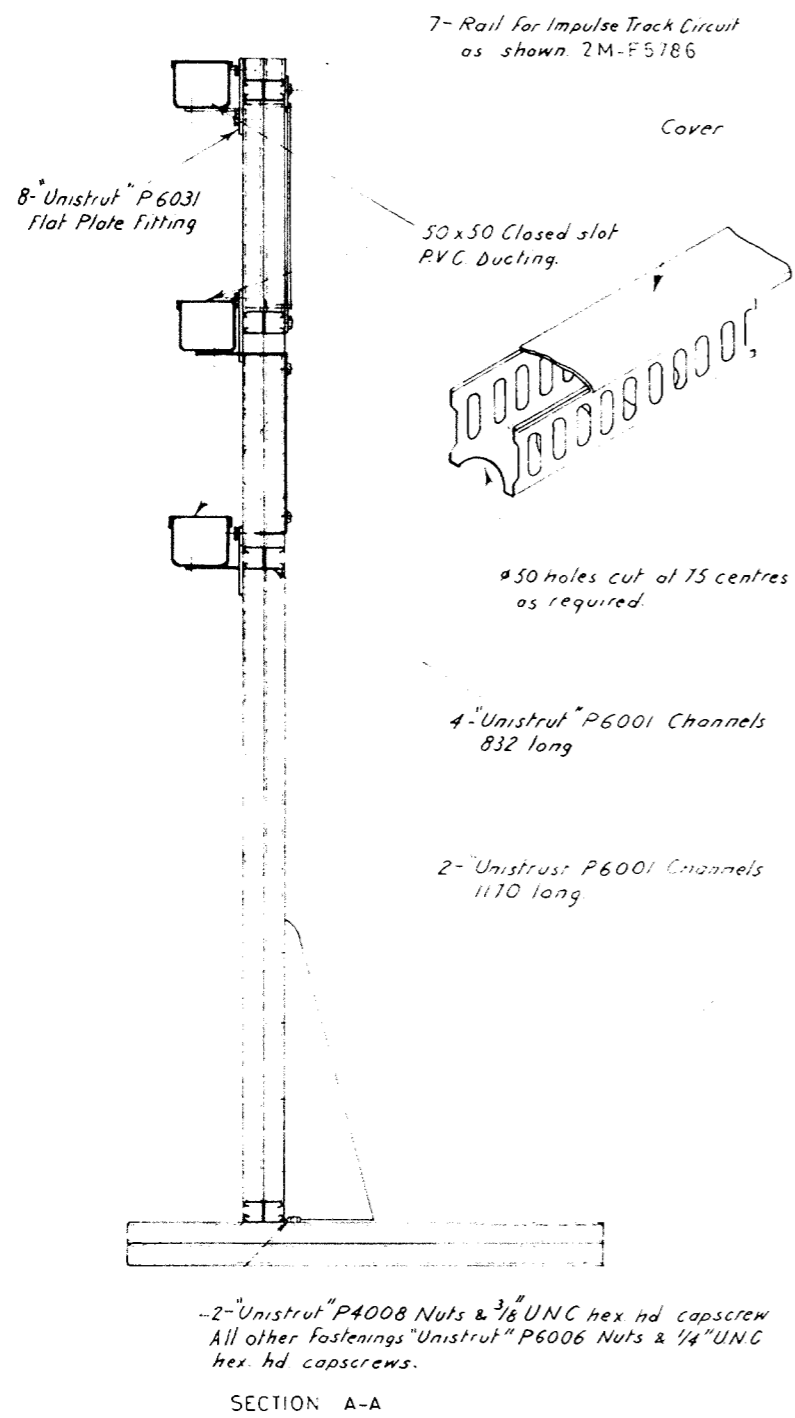
VICTORIAN RAILWAYS
N 590 APPARATUS BOX
FITTED WITH McK.&H. CABINET
DETAILS & ASSEMBLY
25-8-72

S&C Engineer.	Designed B. V.	Drawn B. V.
<i>A.B.</i>	S.O.E. M.E. <i>S.O.</i>	Ckd. Iss. No. <i>S.B.</i>
H 1964		



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

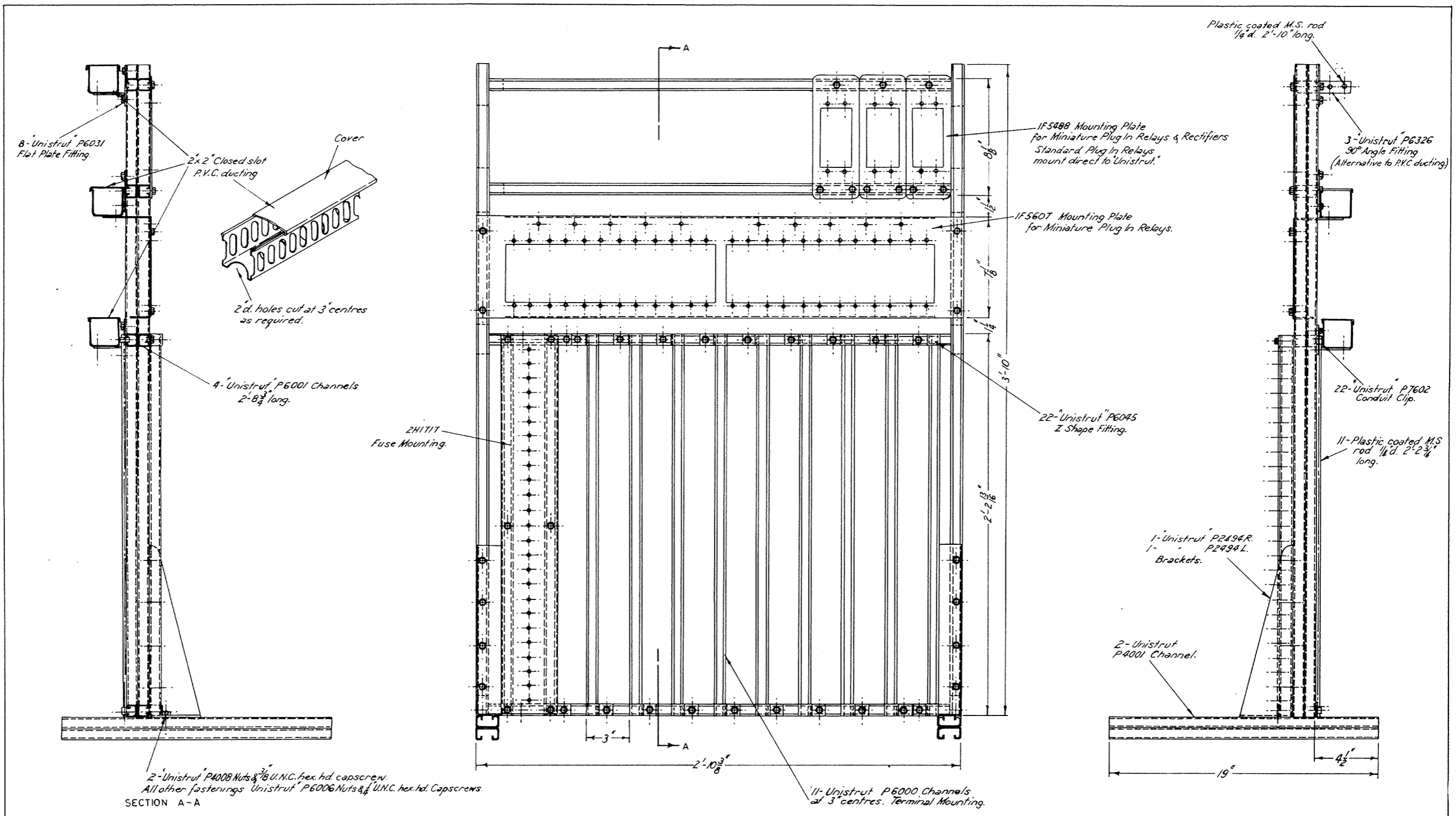
Category	Sheet No	Rev
B 4 0	4	



56523
H17-1

VICTORIAN RAILWAYS RACK FOR MOUNTING RELAY & IMPULSE TRACK CIRCUIT EQUIPMENT IN APPARATUS BOX		S&C Engineer	Designed B. V.	Drawn B. V.
SCALE 1:5		87-1-76	S.D.E. M.E. Ckd. Iss. No.	M-H2310





2 - Unistrut P4008 Nuts & 3/8" U.N.C. hex hd. capscrow.
 All other fastenings Unistrut P6006 Nuts & 1/4" U.N.C. hex hd. Capscrows.
 SECTION A-A

11 - Unistrut P6000 Channels at 3" centres. Terminal Mounting.

A 5-6-73
 For rack fitted with stockable terminals & fuses see B3374.
 J.B. M.R.N.

This rack is designed for use in N.590 & M. Kenzie & Holland Single Width Apparatus Boxes. Shown as a Typical Assembly only & the accommodation may be varied as required.

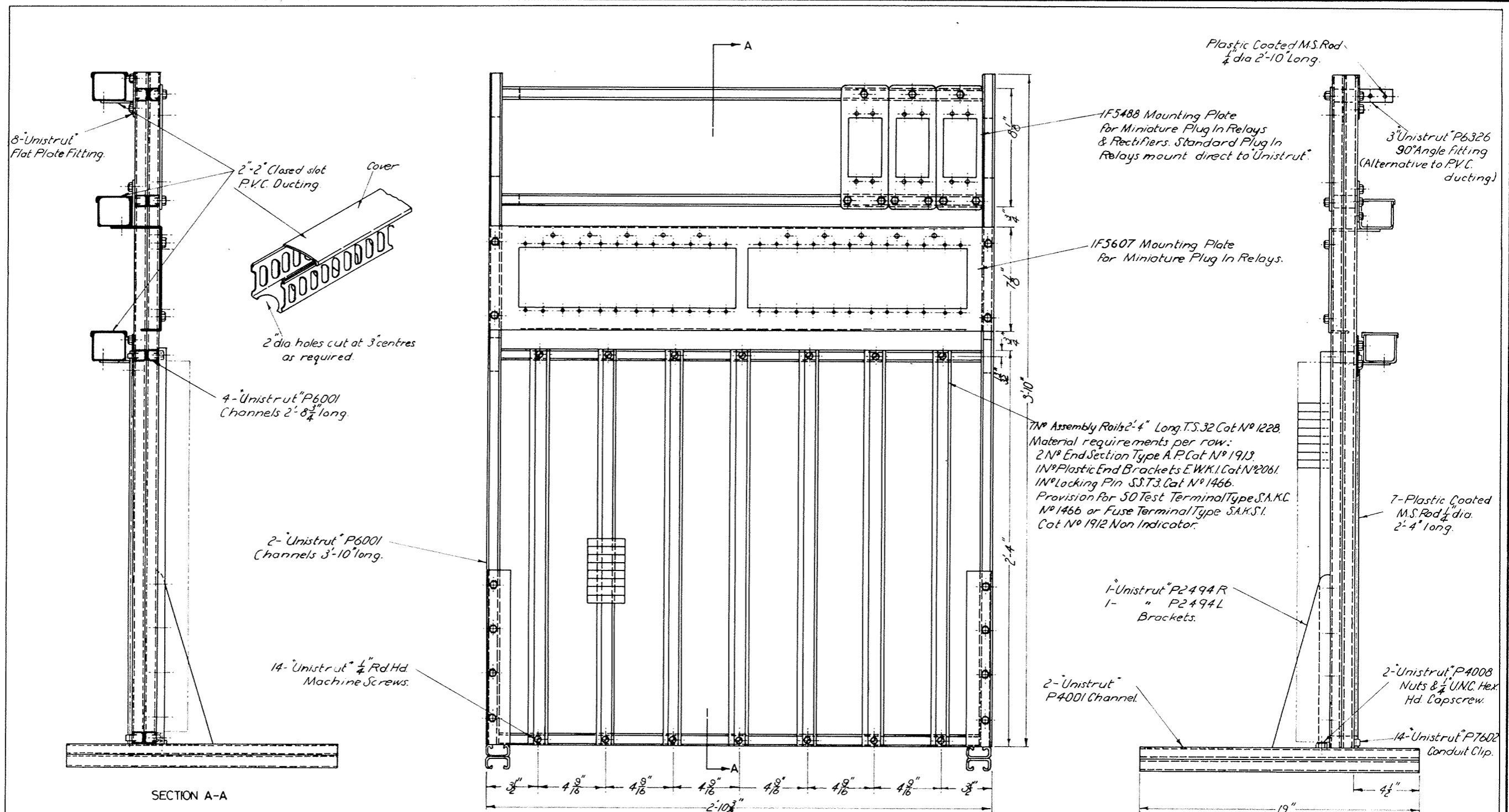
VICTORIAN RAILWAYS
 RELAY & EQUIPMENT RACK
 FOR
 APPARATUS BOXES
 Scale: 3" = 1'-0" 16-3-71

Sig. & Tel. Engineer: KEL	Drawn by: E.R.J.	Traced by: E.R.J.
B 2878		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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B 4 0	6	A



52767
H 9-4

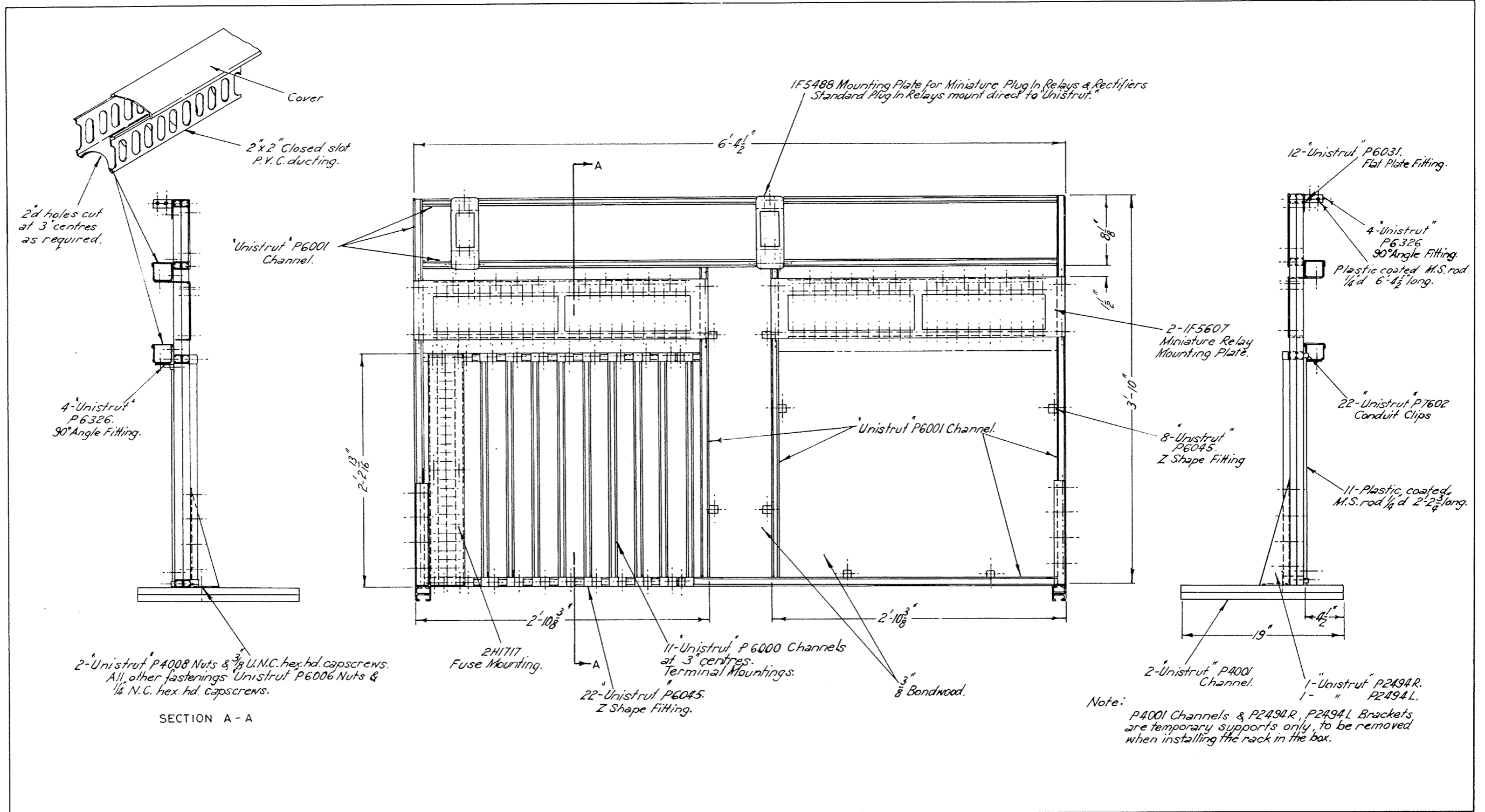
ALL N° 1629 1-2-74

For rack fitted with Fuse mounting plates and A2 terminals & terminals. see B2878.	Modified for use with stackable Fuses & terminals.	This rack is designed for use in NS90 & McKenzie & Holland Single width Apparatus Boxes shown as a typical assembly only & the accommodation may be varied as required.	VICTORIAN RAILWAYS		S&C Engineer	Designed M.R.M.	Drawn M.R.M.
			RELAY & EQUIPMENT RACK FOR APPARATUS BOX 11-6-73		S&C	SDE, M.E.	Ckd. J.S.N.
					B3394		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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B 4 0	7	



Note:
 P4001 Channels & P2494R, P2494L Brackets are temporary supports only, to be removed when installing the rack in the box.

50085
 H5-1

A | 5-6-78
 For rack fitted with stockable terminals & fuses see H2111
 M.R.M.

This rack is designed for use in the McKenzie & Holland Double Width Apparatus Box. Shown as a Typical Assembly only & the accommodation may be varied as required.

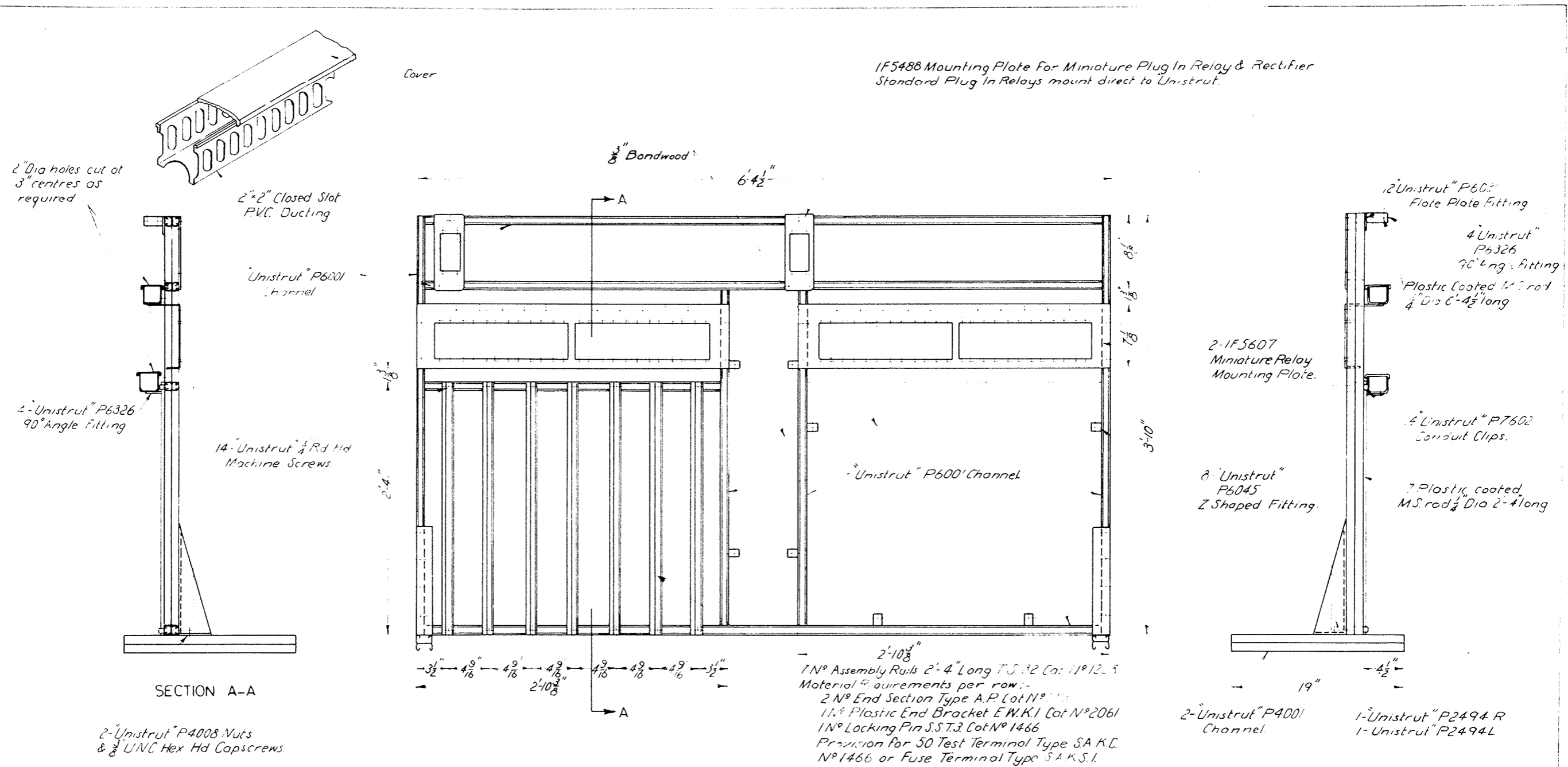
VICTORIAN RAILWAYS
 RELAY & EQUIPMENT RACK
 FOR
 APPARATUS BOXES
 Scale 1/2" = 1'-0" 16-3-71

Sig. & Tel. Engineer.	Drawn by E.R.J.	Traced by E.R.J.
H 1712		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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IF5488 Mounting Plate for Miniature Plug In Relay & Rectifier
Standard Plug In Relays mount direct to Unistrut.

2 Dia holes cut at 3 inch centres as required

2"x2" Closed Slot PVC Ducting

Unistrut P6001 Channel

2 Unistrut P6326 90 degree Angle Fitting

14 Unistrut 1/4 Rd Hd Machine Screws

SECTION A-A

2 Unistrut P4008 Nuts & 3/8 UNC Hex Hd Capscrews

NOTE - All fastenings Unistrut P6006 Nuts & 1/4 UNC Hex Hd Capscrews except where specified

2'-10 3/8"
7 No Assembly Rails 2'-4" Long T.S. 32 Cot No 112-5
Material Requirements per row:-
2 No End Section Type A.P. Cot No 112-5
1 No Plastic End Bracket E.W.K.I Cot No 2061
1 No Locking Pin S.S.T.3 Cot No 1466
Provision for 50 Test Terminal Type SA K.C. No 1466 or Fuse Terminal Type S.A.K.S.I. Cot No 1912 Non Indicator.

NOTE - P4001 Channels & P2494R, P2494L Brackets are temporary support only, to be removed when installing the rack in the box

52768
H 9-4

This rack is designed for use in the M. Kenzie & Co. Double Width Apparatus Box. See drawing for details. Assembly of rack in the box may be varied as required.

For rack fitted with fuse mounting plates and A2 terminals. See H1712

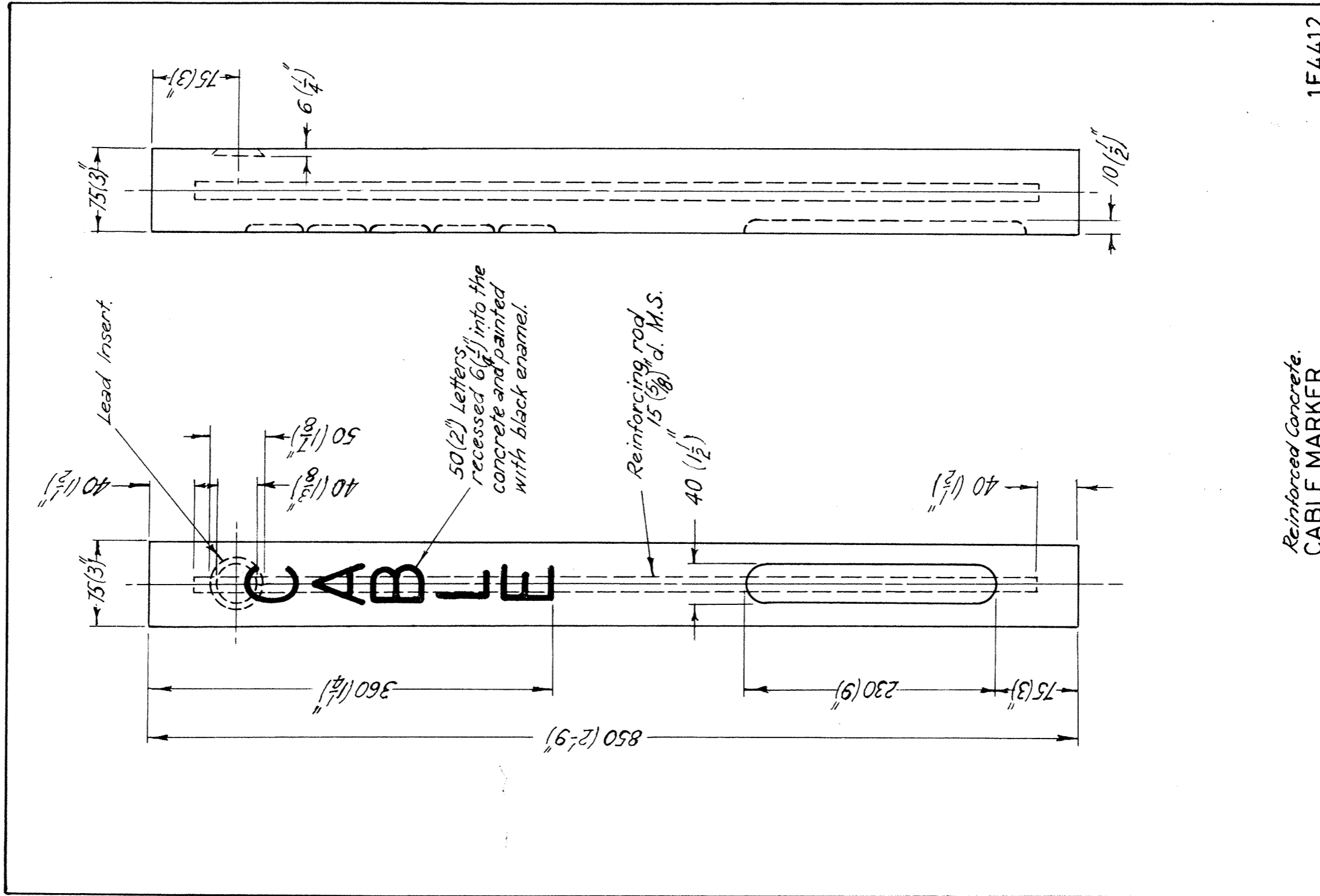
Modified for use with stockable fuses & terminals.

VICTORIAN RAILWAYS
RELAY & EQUIPMENT RACK
FOR DOUBLE WIDTH
APPARATUS BOX

S&C Engineer	Designed MRM	Drawn M.R.M.
	SDE ME	CDC S.N.
H 2111		



C 2-12
36538



Redrawn & revised % metric conversion Original under same title dated 28.4.53.	V.R. CABLE MARKER	S&C. Engineer	S.D.E. Iss.Nº	1F4412
				7-2-70 M.E. J.A.W.
3rd ANGLE PROJECTION	Designed E.R.J.	Drawn E.R.J.	F4412	
				F4412

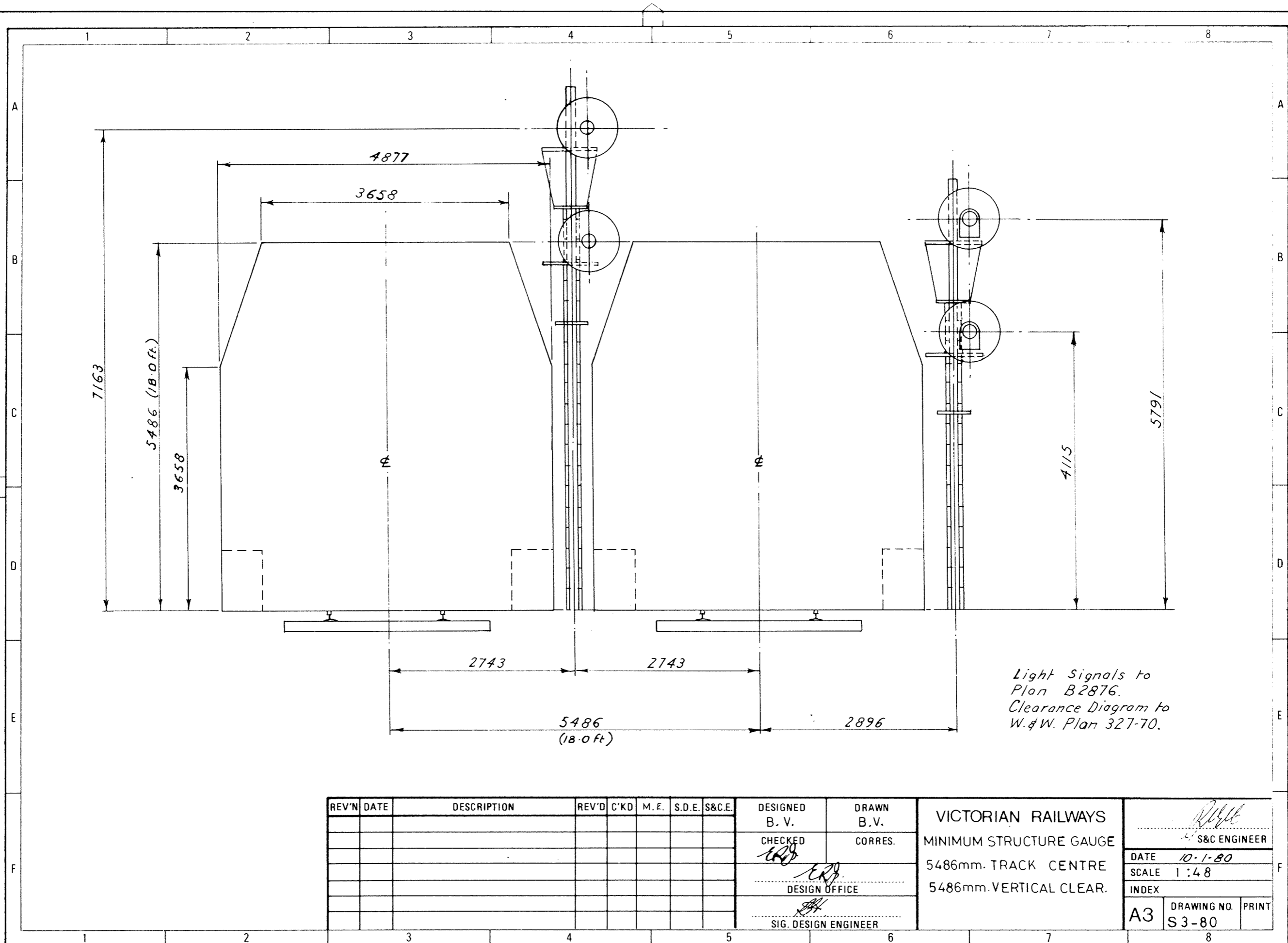



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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□



REV'N	DATE	DESCRIPTION	REV'D	C'KD	M.E.	S.D.E.	S&C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS MINIMUM STRUCTURE GAUGE 5486mm. TRACK CENTRE 5486mm. VERTICAL CLEAR.	 S&C ENGINEER	
								B. V.	B. V.		DATE	10-1-80
								CHECKED	CORRES.		SCALE	1:48
								DESIGN OFFICE			INDEX	
								SIG. DESIGN ENGINEER		DRAWING NO.	S3-80	
										PRINT		

2447

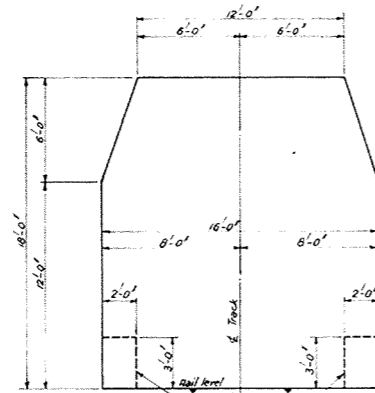


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
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Sheet No
1

Rev.

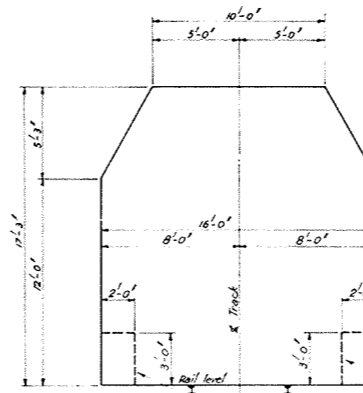


MINIMUM STRUCTURE GAUGE FOR 18-0 VERTICAL CLEARANCE.

- NOTE:—The minimum clearance outline of this diagram is to apply on the following lines:
1. DYNON - MILDURA and BANITYA lines.
 2. DYNON - SERVICETON
 3. DYNON - DENILIBUIM via Seymour, Toolamba and Echuca.
 4. DYNON - ALBURY as shown thus on map.

Additional clearance will be required on curved track and adjacent to crossing work as specified by the Chief Civil Engineer.

These areas may be infringed subject to the approval of the C.C.E.

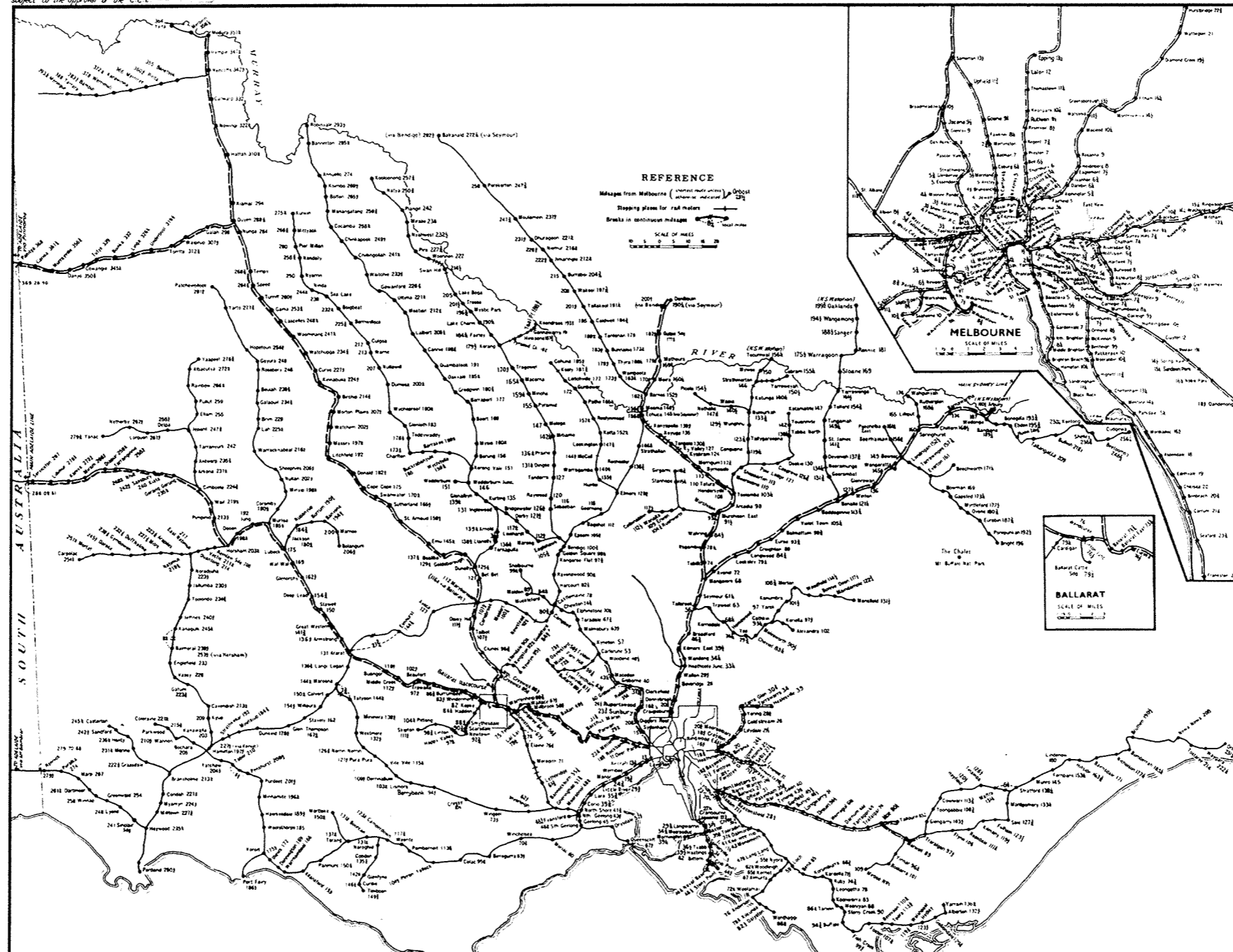


MINIMUM STRUCTURE GAUGE FOR 17-3 VERTICAL CLEARANCE.

- NOTE:—The minimum clearance outline of this diagram is to apply on all existing and possible future electrified lines as shown thus on map.

Additional clearance will be required on curved track and adjacent to crossing work as specified by the Chief Civil Engineer.

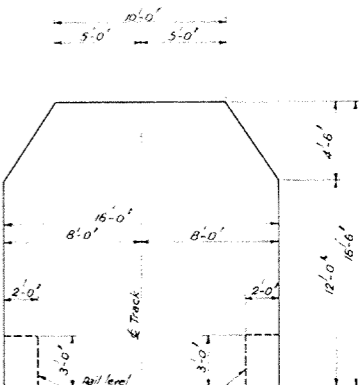
These areas may be infringed subject to the approval of the C.C.E.



MINIMUM STRUCTURE GAUGE FOR 16-6 VERTICAL CLEARANCE.

- NOTE:—The minimum clearance outline of this diagram is to apply on all existing lines where 16-0 or 17-3 vertical clearance has not been specified.

Additional clearance will be required on curved track and adjacent to crossing work as specified by the Chief Civil Engineer.



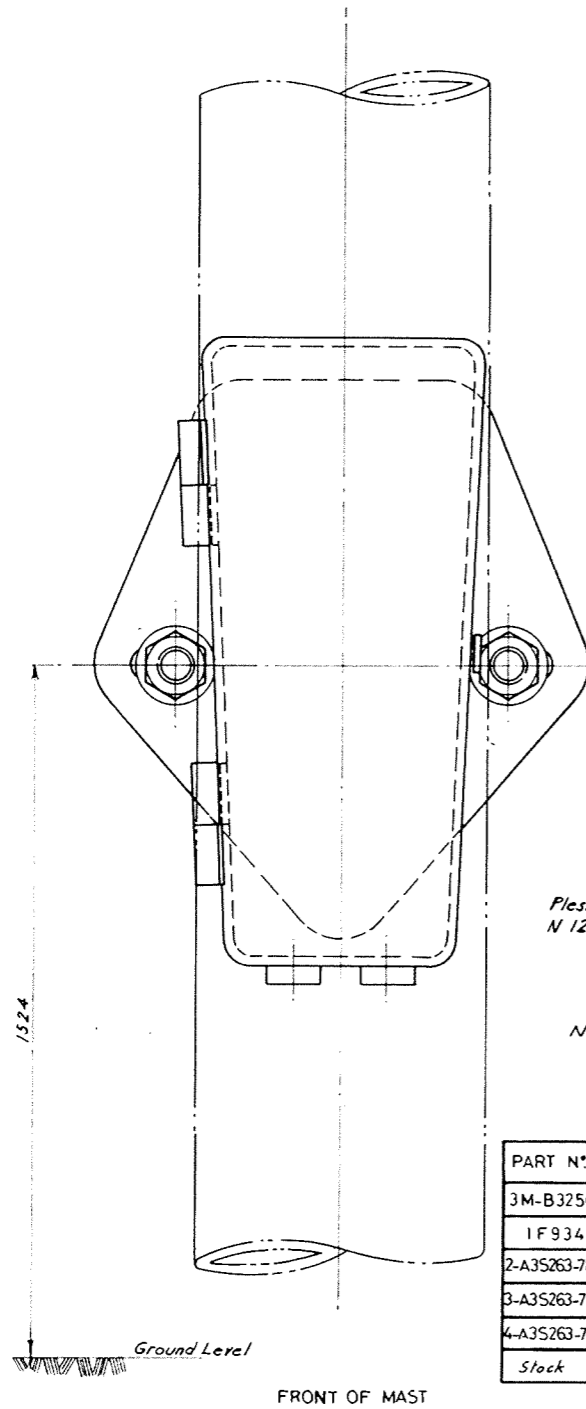
These areas may be infringed subject to approval of the Chief Civil Engineer.

V.R.
MINIMUM STRUCTURE GAUGE
 FOR
 STRUCTURES CONSTRUCTED OVER
 AND ADJACENT TO TRACKS.
 8.8.0 14.5.70
 Chief Civil Engineer
 Drawn Checked
 Eng. Structures Design
 DRAWER No. 13-1
 PLAN No. 327/70

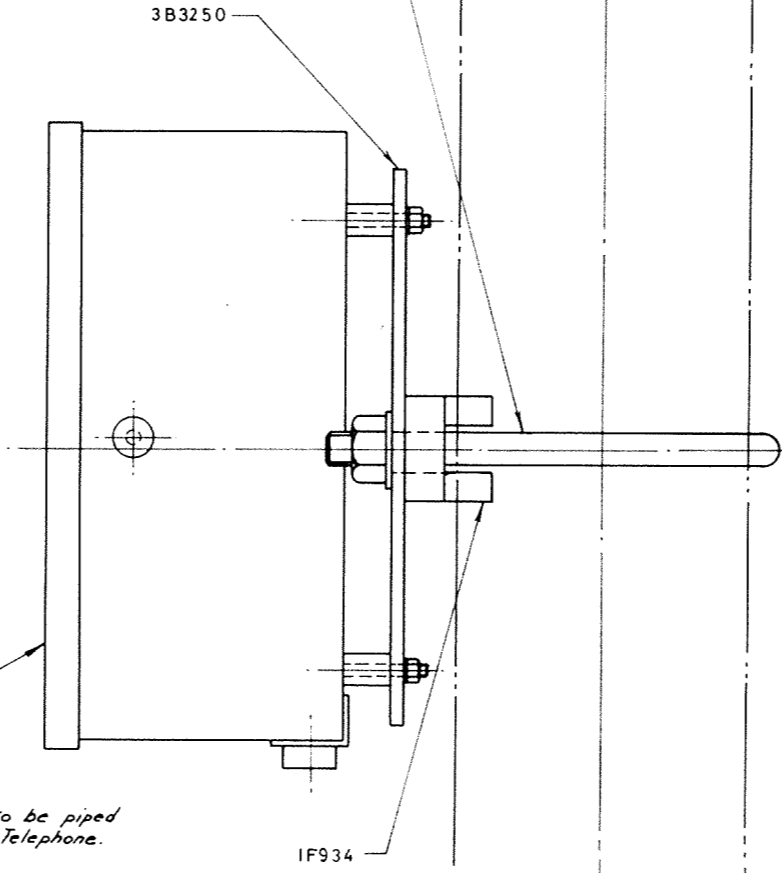


**SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES**

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4-A3S263-78 For 48,3 O.D. Pipe Mast (40 1/2" I.D.)
 3-A3S263-78 For 139,7 O.D. Pipe Mast (125 5" I.D.)
 2-A3S263-78 For 165,1 O.D. Pipe Mast (150 6" I.D.)

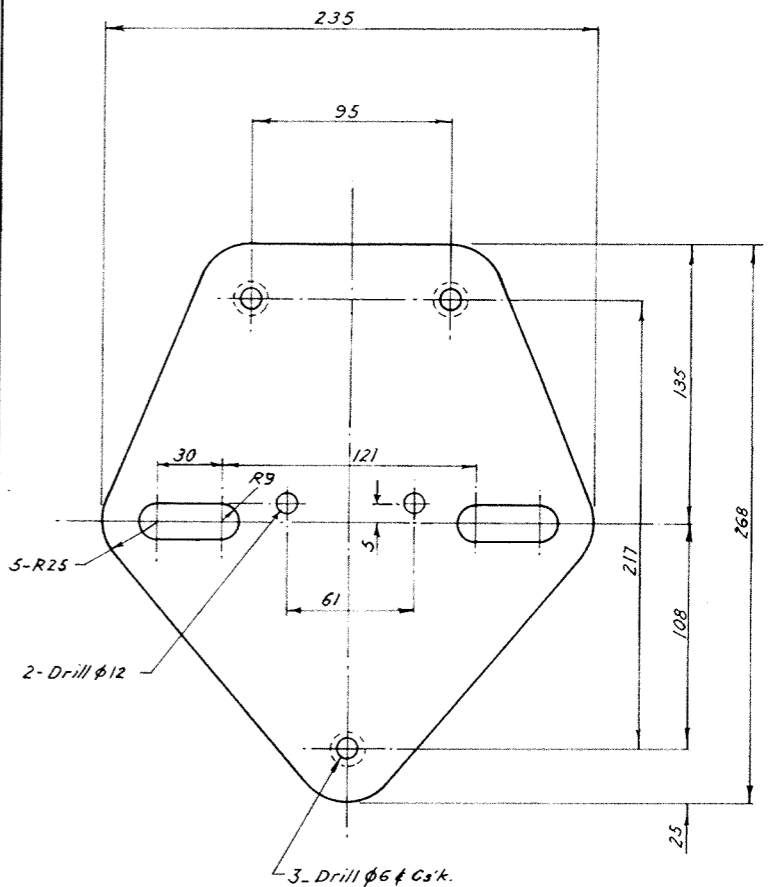


Plessey Telecommunication
 N 1242 A.C.B. Telephone.

Note:- Telephone cables to be piped
 from cable pit to Telephone.

PART N°	NAME	M'T'L.	Q'TY.		
			1M-B3250	2M-B3250	4M-B3250
3M-B3250	Mounting Plate	M. S.	/	/	/
1F934	Clamp	C. S.	/	/	-
2-A3S263-78	"U" Bolt	M. S.	/	-	-
3-A3S263-78	"U" Bolt	"	-	/	-
4-A3S263-78	"U" Bolt	"	-	-	/
Stock	Plessey Tel. N 1242 A.C.B. Telephone	-	/	/	/

For use with 48,3 O.D. Pipe Mast... 4M-B3250
 " " " 139,7 " " " 2M-B3250
 " " " 165,1 " " " 1M-B3250



Supply with:- 3-Screws C.s.k. Hd. M.S. Zinc
 Plated M5x60
 3-Nuts Hex. M.S. Zinc Plated M5
 3-Washers Rd. M.S. Black hole φ5,8

Finish:- Hot Dip Galvanised

FRONT OF MAST

ASSEMBLY

6 M. S. MOUNTING PLATE 3M-B3250

A 25-5-78
 Part N° 4M-B3250 added.
 3M-B3250 amended accordingly
 Converted to the I.S.O.
 metric standard.
 B. V.

VICTORIAN RAILWAYS
 TELEPHONE C. B.
 OUTDOOR, WEATHERPROOF.
 MOUNTED ON SIGNAL MAST
 ASSEMBLY & DETAIL
 13-11-72

S.&C. Engineer B.M.	Designed B. V.	Drawn B. V.
30	30	30
M-B3250		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
 C 6 0

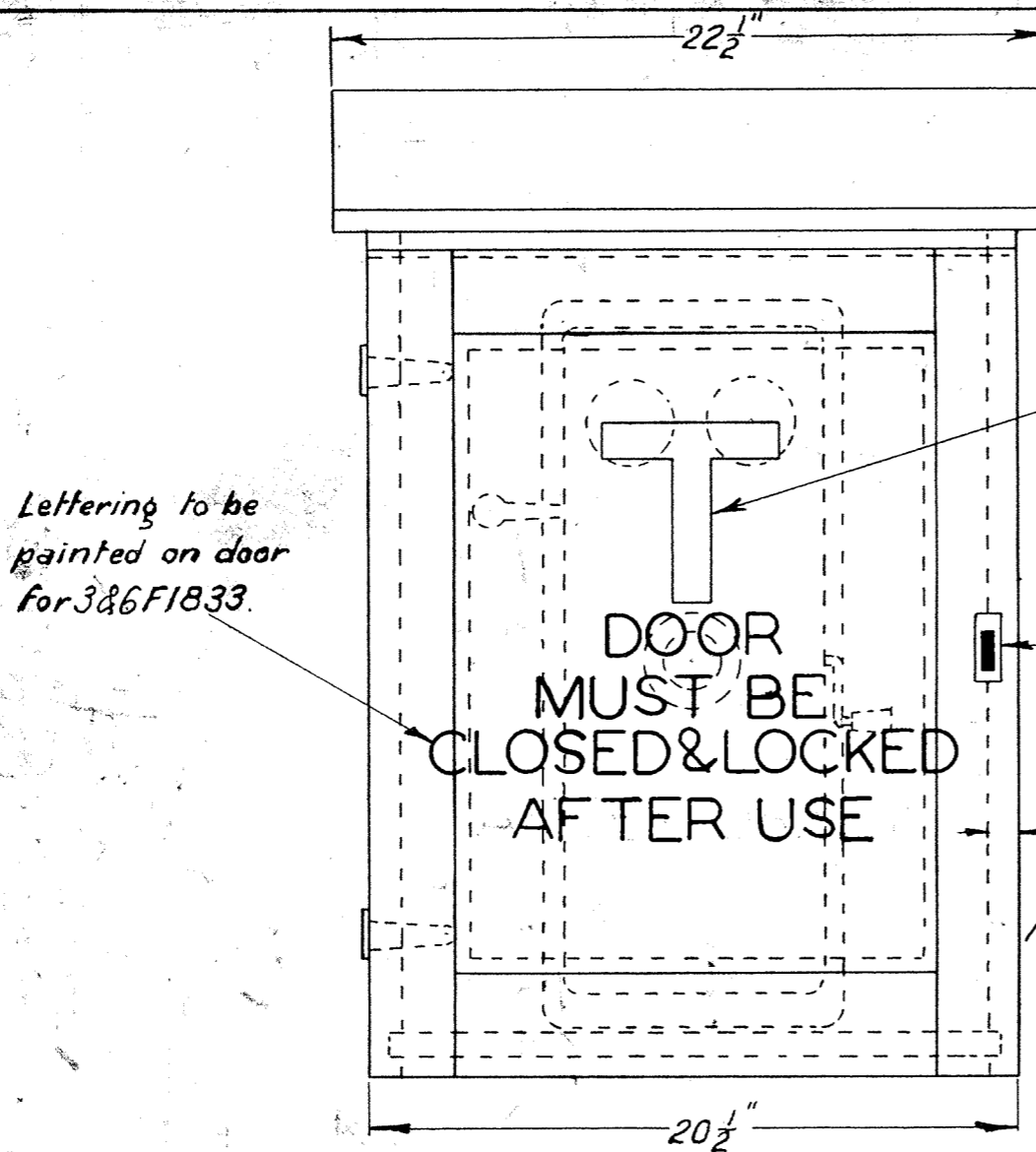
Sheet N°
 1

Rev.
 A

1346.

A1-63.

2 WP
ATT



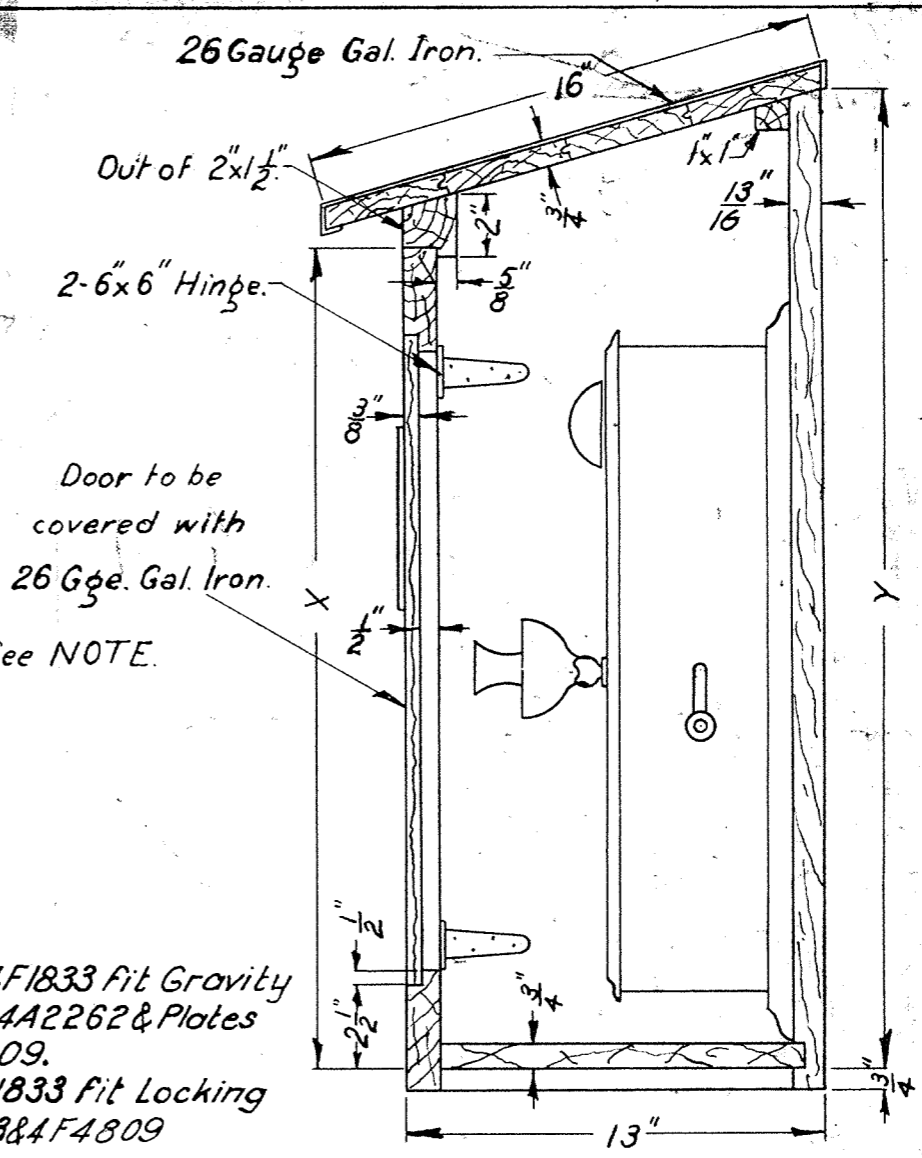
Lettering to be painted on door for 3&6F1833.

DOOR MUST BE CLOSED & LOCKED AFTER USE

IF5007

Catch. See NOTE.

Note:-
For 1&4F1833 fit Gravity Catch 4A2262 & Plates 1&2F4809.
For 3&6F1833 fit Locking Plates 3&4F4809



MATERIAL. Impregnated Pinus
PAINTING. Red Lead priming
2 coats of white
all over.

Alt. 1552 25-9-72
Alt. 1262 29-7-66

	Standard X=2'-1", Y=2'-6"	Special X=2'-7", Y=3'-0"
With Locking Plates for Padlock & with letter "T"	6F1833	
With Gravity Catch & letter T	IF1833	4F1833
With locking Plates for Padlock but without letter "T"	3F1833	

A	5-9-74	Redrawn including Revs. 1&2. & Alt. 157. Note on door added. Original dated 10-12-24.	V.R.	TELEPHONE CABINET OUTDOOR TYPE A 6-2-59.	Sig. & Tel. Engineer. L.A.	Drawn by R.A.L.	Traced by R.A.L.	F1833
Part 6F1833 added								



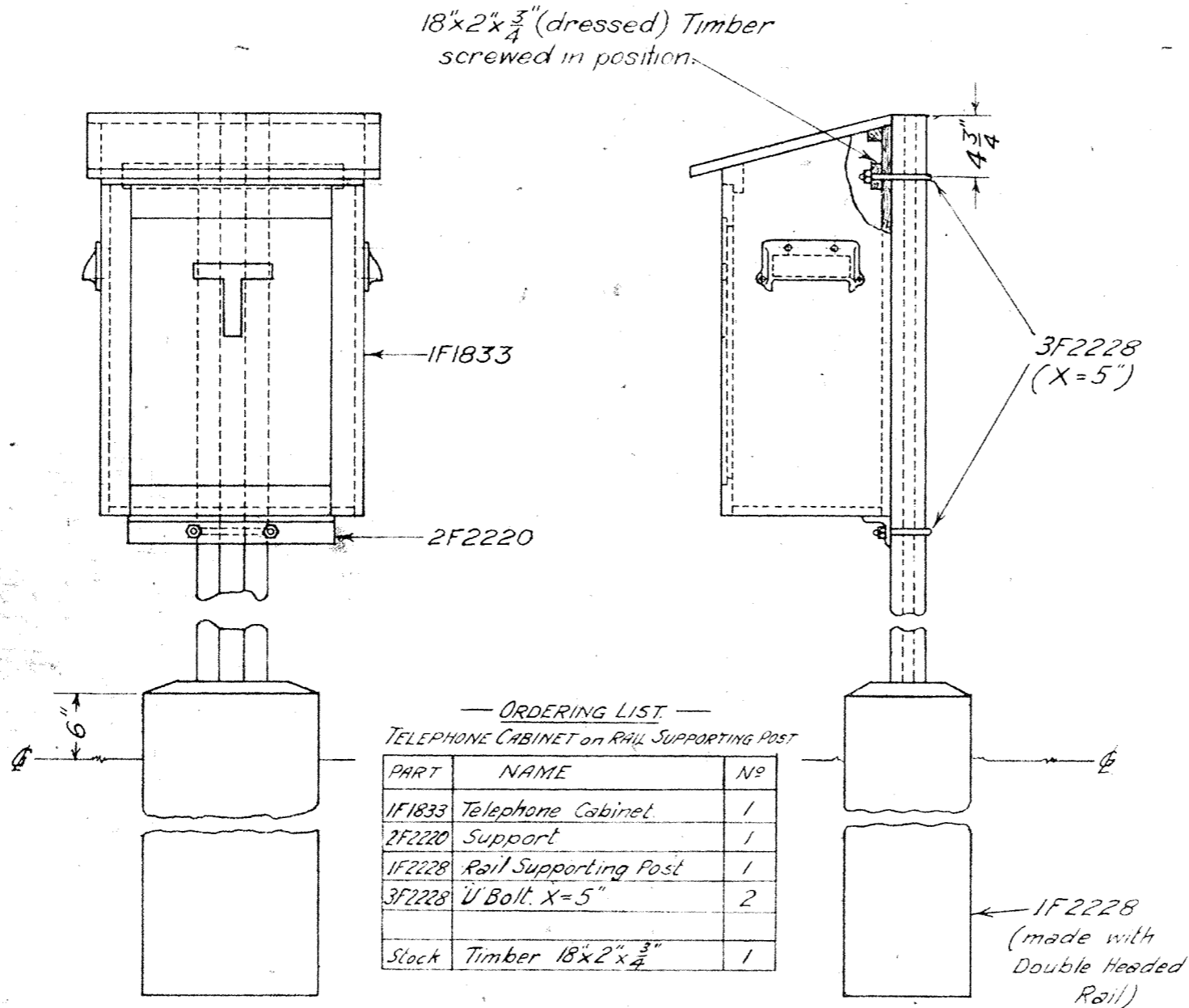
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category	Sheet No	Rev.
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1688

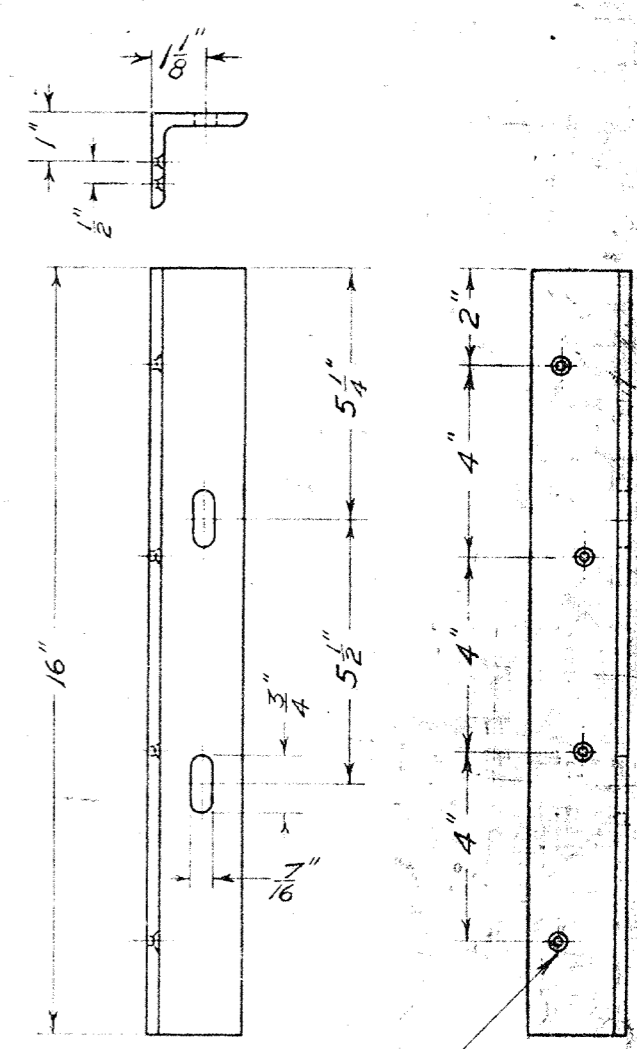
18 11 37

21-80



— ORDERING LIST —
TELEPHONE CABINET ON RAIL SUPPORTING POST

PART	NAME	Nº
1F1833	Telephone Cabinet	1
2F2220	Support	1
1F2228	Rail Supporting Post	1
3F2228	U Bolt, X=5"	2
Stock	Timber 18x2x3/4"	1



20-5-29/AIT 223.
9-6-26

TELEPHONE CABINET ON RAIL SUPPORTING POST

9-6-26

M.S.
SUPPORT

2F2220

1 27-9-43 Part 1F2220 cancelled. Ordering List added.	Redrawn and Parts Nº 3F2220 & 4F2220 deleted	V.R. TELEPHONE CABINET OUTDOOR TYPE METHOD OF MOUNTING		Chief Eng. Sigs. & Tels.	Drawn by LJP	Traced by LJP	F2220
		9-6-26		<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
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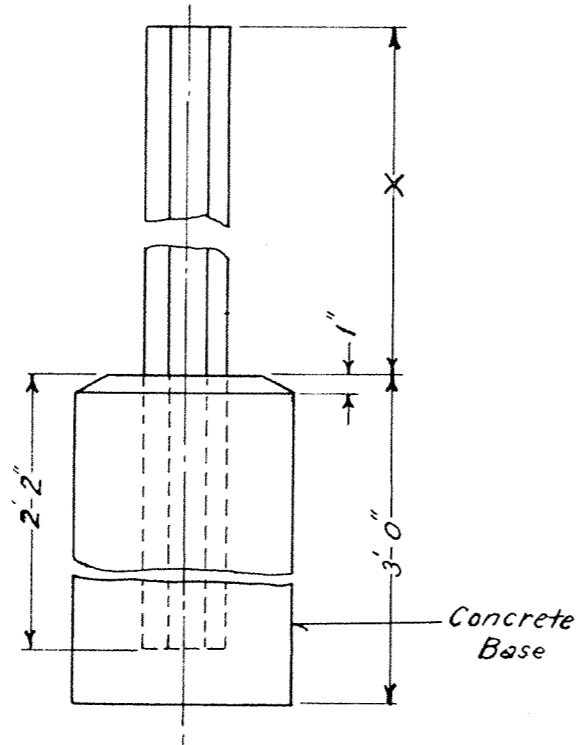
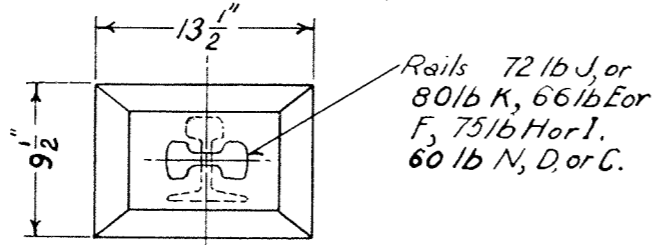
Sheet Nº
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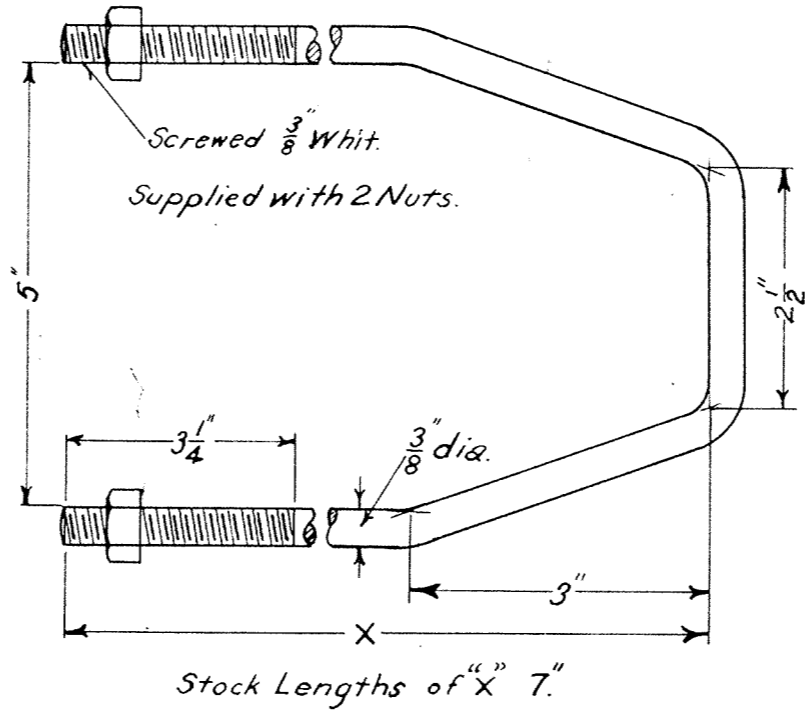
1962.26

A1-80

1693

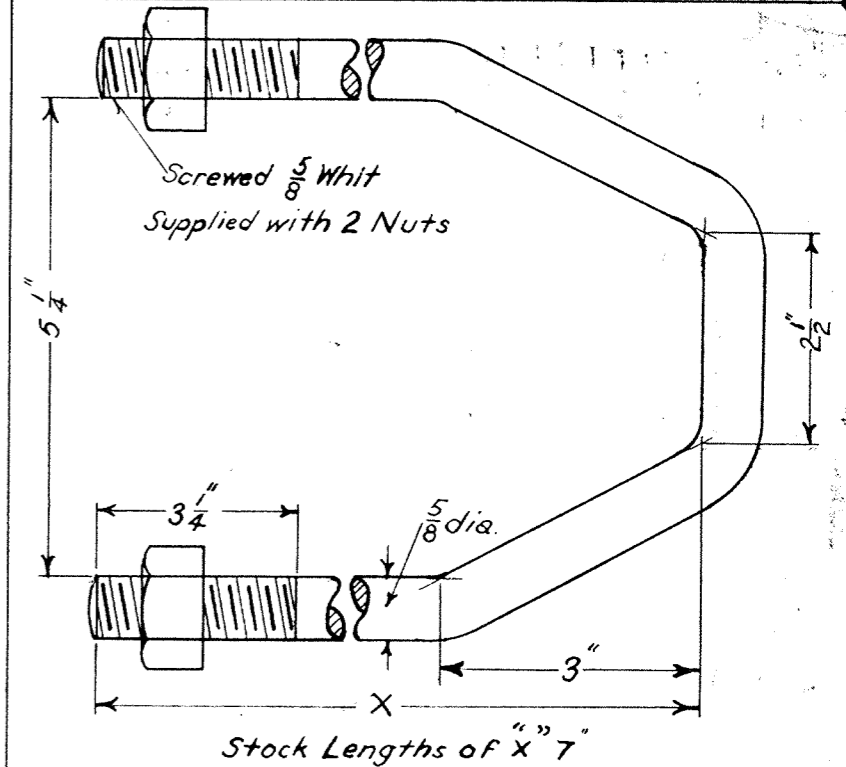


"X" as ordered - 6F 2228
 X = 4'-9" 5F 2228
 RAIL SUPPORTING POST X = 5'-6" 1F 2228

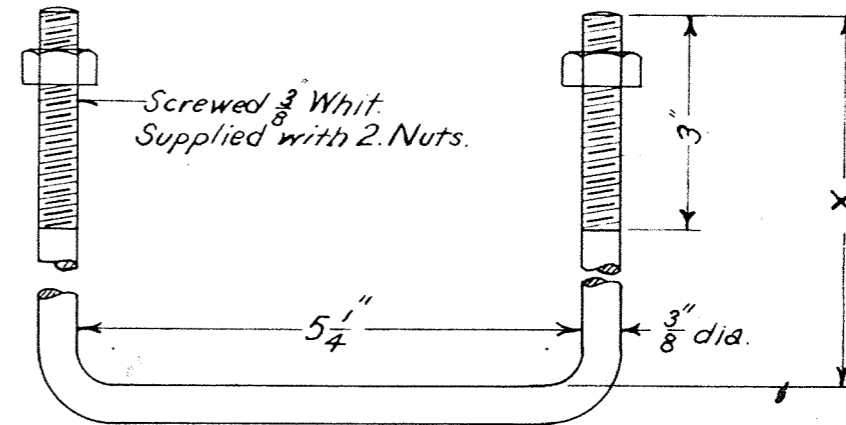


M.S. U. BOLT "X" as ordered - 2F 2228

Stock Lengths of "X" 5' & 7 1/2'



M.S. U. BOLT "X" as ordered 4F 2228



M.S. U. BOLT. "X" as ordered 3F 2228

Redrawn including Alt 223 & 804

VR RAIL SUPPORTING POST AND SPECIAL U BOLTS 9-10-53

SIG & TEL ENGINEER CBY

DRAWN BY I.B.

TRACED BY I.B.

F2228

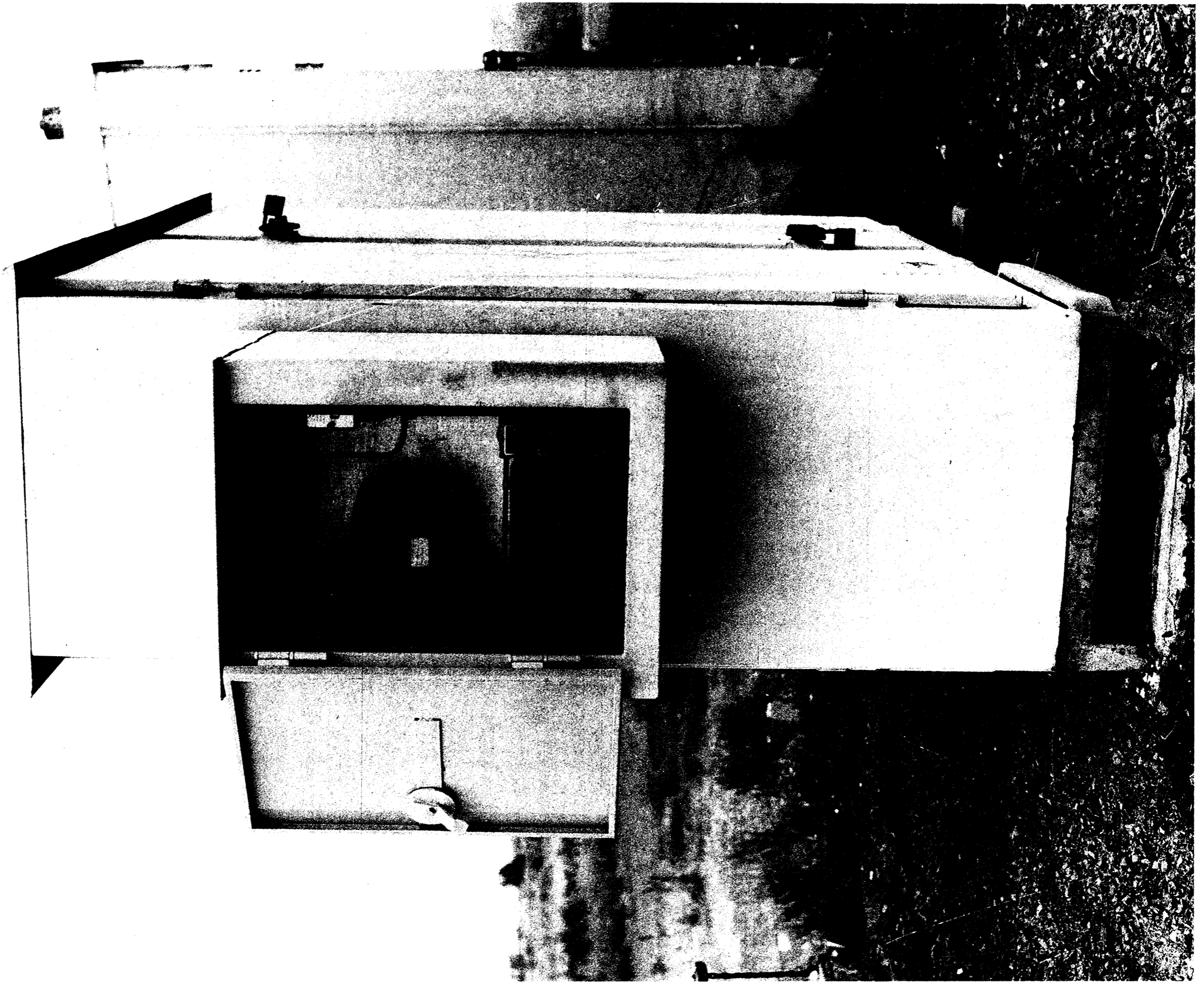


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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Sheet No 4

Rev.



STEEL TELEPHONE CABINET WITH F/L TEST BUTTON MOUNTED ON RELAY BOX

Jan 80

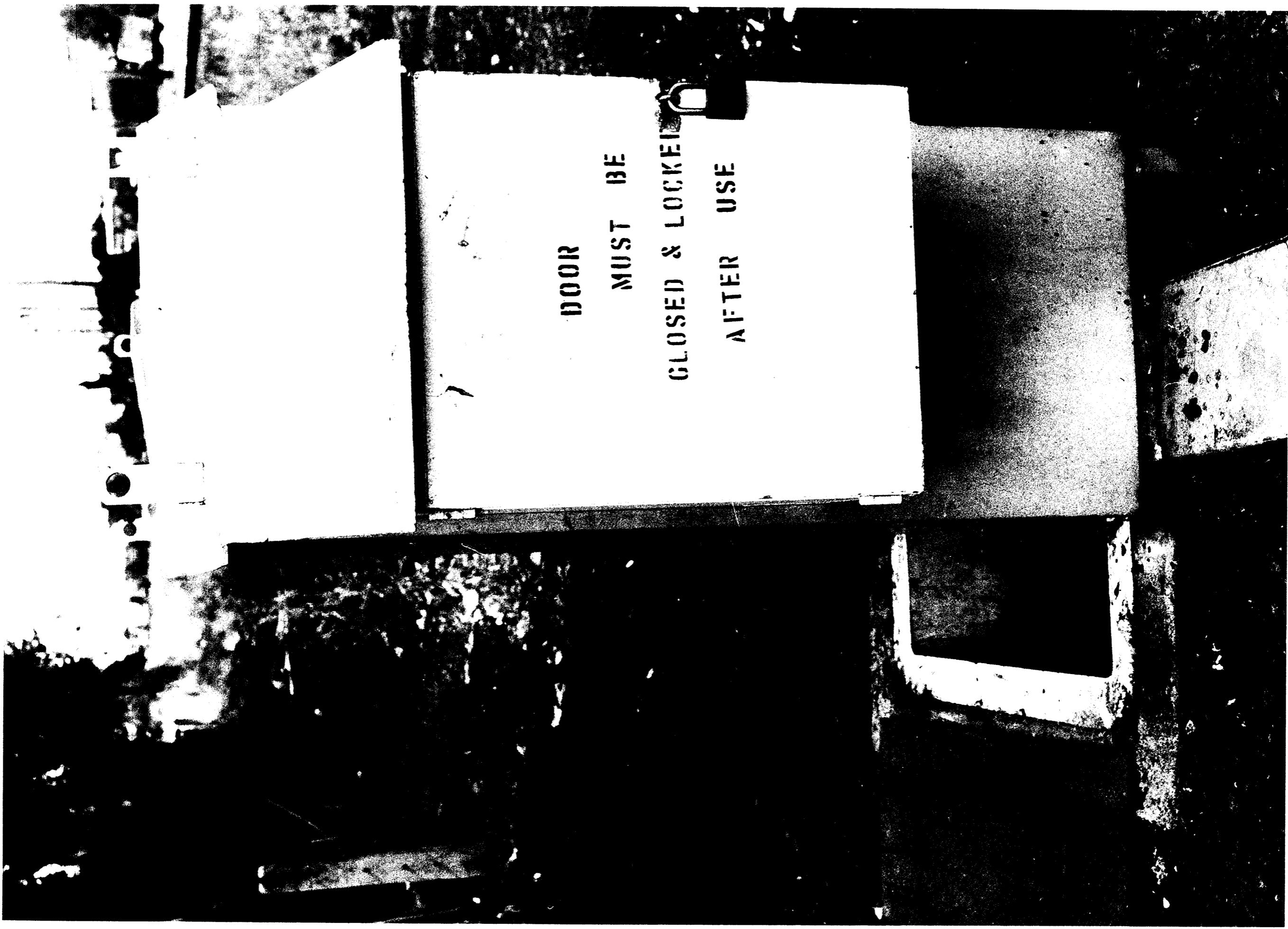


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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WOODEN TELEPHONE CABINET MOUNTED ON N590 BOX

Jan 80



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

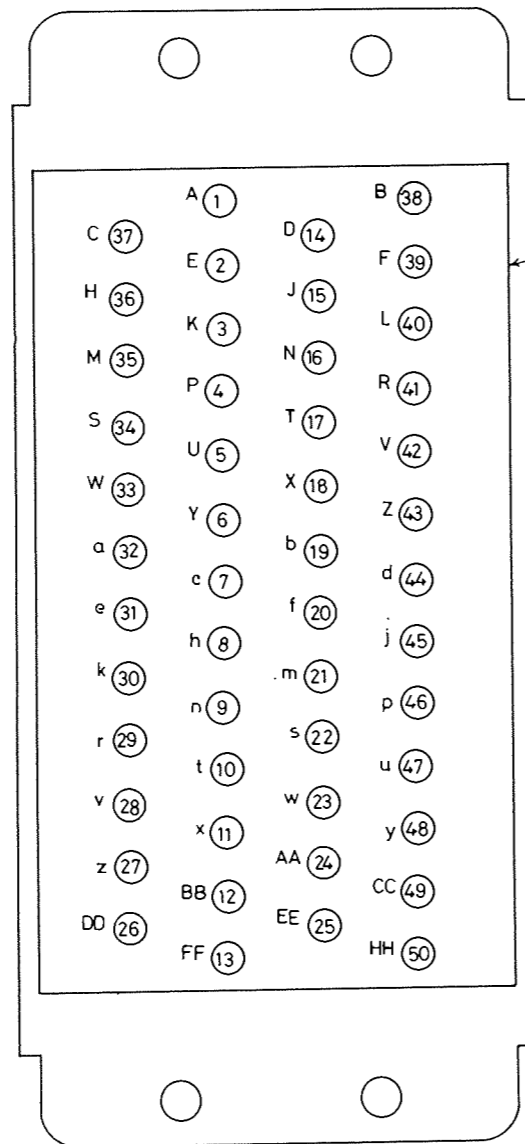
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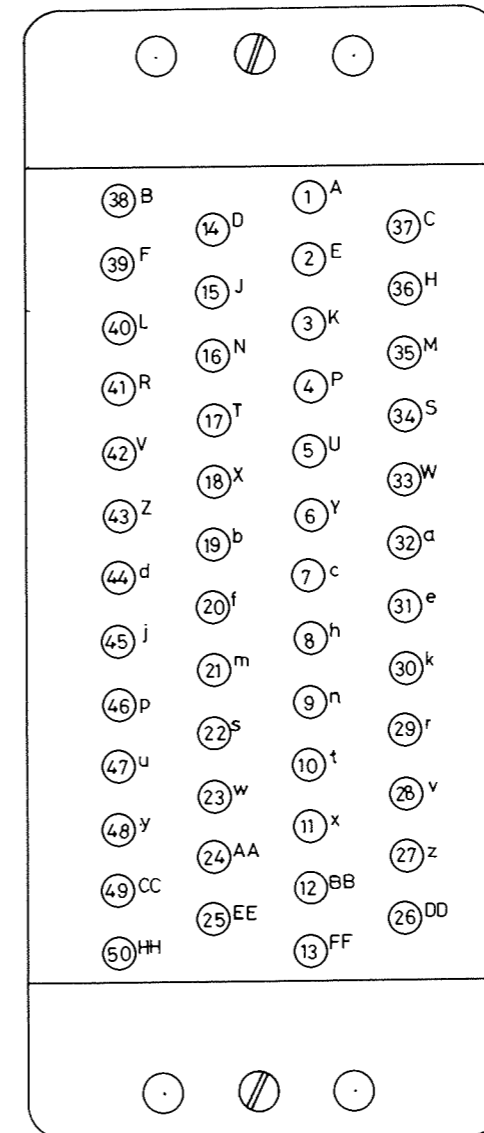
Connectors, Pin Contact, Rectangular,
AMP "M" Series - 50 Position.

Viewed from cable entry side of plug.



Connectors, Socket Contact, Rectangular,
AMP "M" Series 50 Position.
(With cable strain relief clamp)

Viewed from cable entry side of plug.



Socket Contact Block
AMP Part no. 200277-4

NOTES:

1. For coding details see Drg No. H1993.
2. Pins identified by lower case letters eg. -/s are represented on circuit plans as -/s. ie. lower case letter underlined.

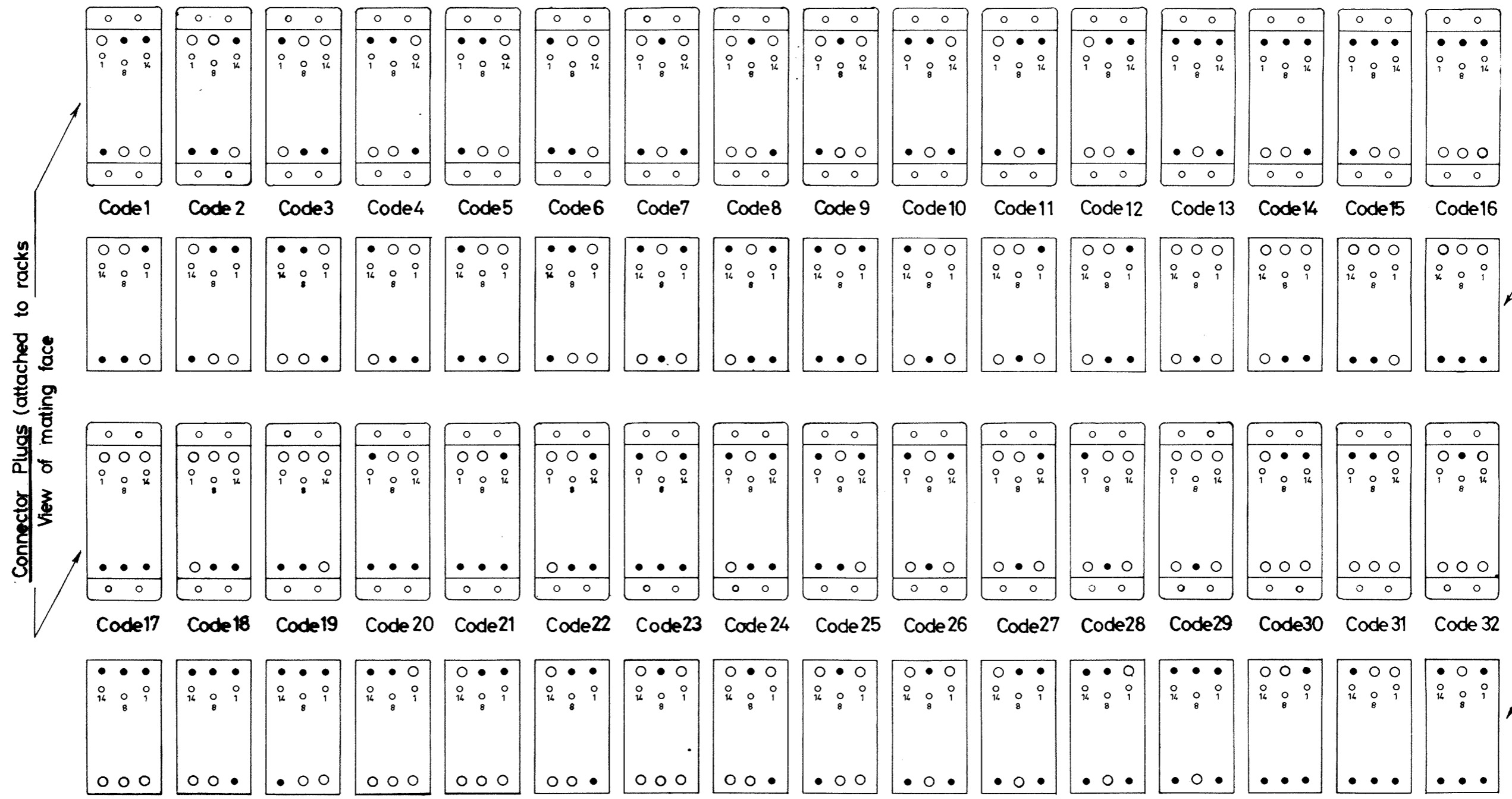
REV	DATE	DESCRIPTION	REV'D	C	KD	S	D	S	S	C	E	DESIGNED	DRAWN	VICTORIAN RAILWAYS	
												CHECKED	K.G.	S&C ENGINEER	
															DATE 23.8.79
															SCALE
															INDEX
															DRAWING NO. S2986/78
															REV N

A.M.P. PLUG COUPLER
50 WAY
PIN LETTERING & CABLE CORE POSITIONS.



**SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES**

Category **C 7 5** Sheet No **1** Rev **1**

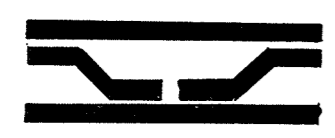


Connector Plugs (attached to racks
View of mating face

Connector Sockets (attached to inter-rack cables), and
fitted with cable clamp. View of mating face.

○ Locating socket or socket jack screw • Locating pin or pin jack screw.

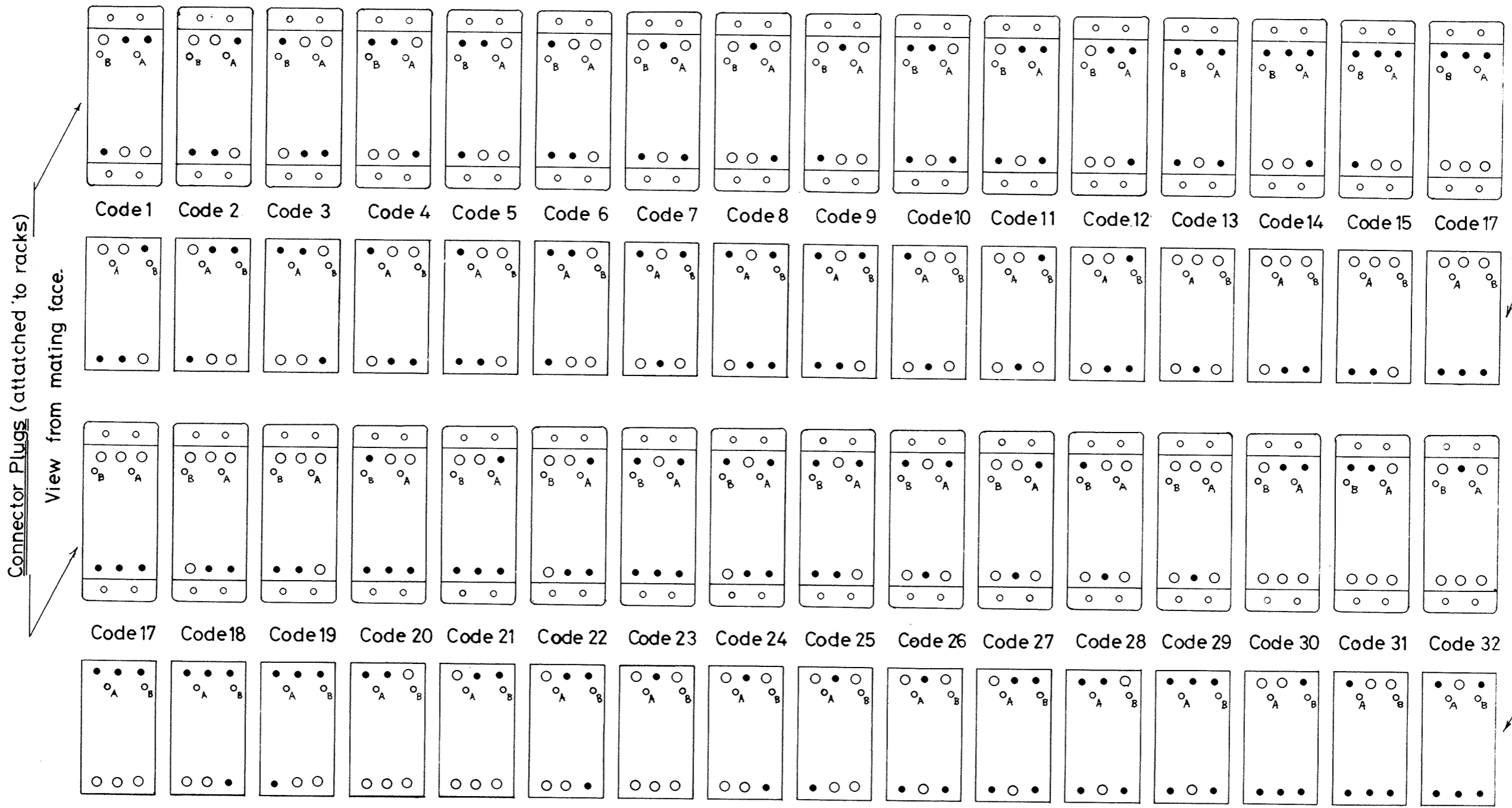
VICTORIAN RAILWAYS		S&C. Engineer.	Designed G. Mc Q.	Drawn G. Mc Q.
AMP. PLUG COUPLERS				
20 WAY				
CODE DETAILS				
2-3-77		H 1992		



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

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Connector Plugs (attached to racks)
View from mating face.

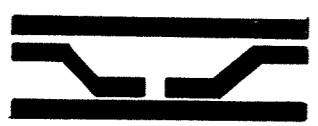
Connector Sockets (attached to inter-rack cables), and fitted with cable clamp. View of mating face.

○ Locating socket or socket jack screw. ● Locating pin or pin jack screw.

Redrawn and revised.
Supersedes H1990 dated 15-5-'73.

VICTORIAN RAILWAYS
AMP. PLUG COUPLERS
50 WAY
CODE DETAILS 2-2-77

S.&C. Engineer.	Designed RJC	Drawn RJC
	S.D.E. C.F.	Ckd. Iss. No.
H 1993		



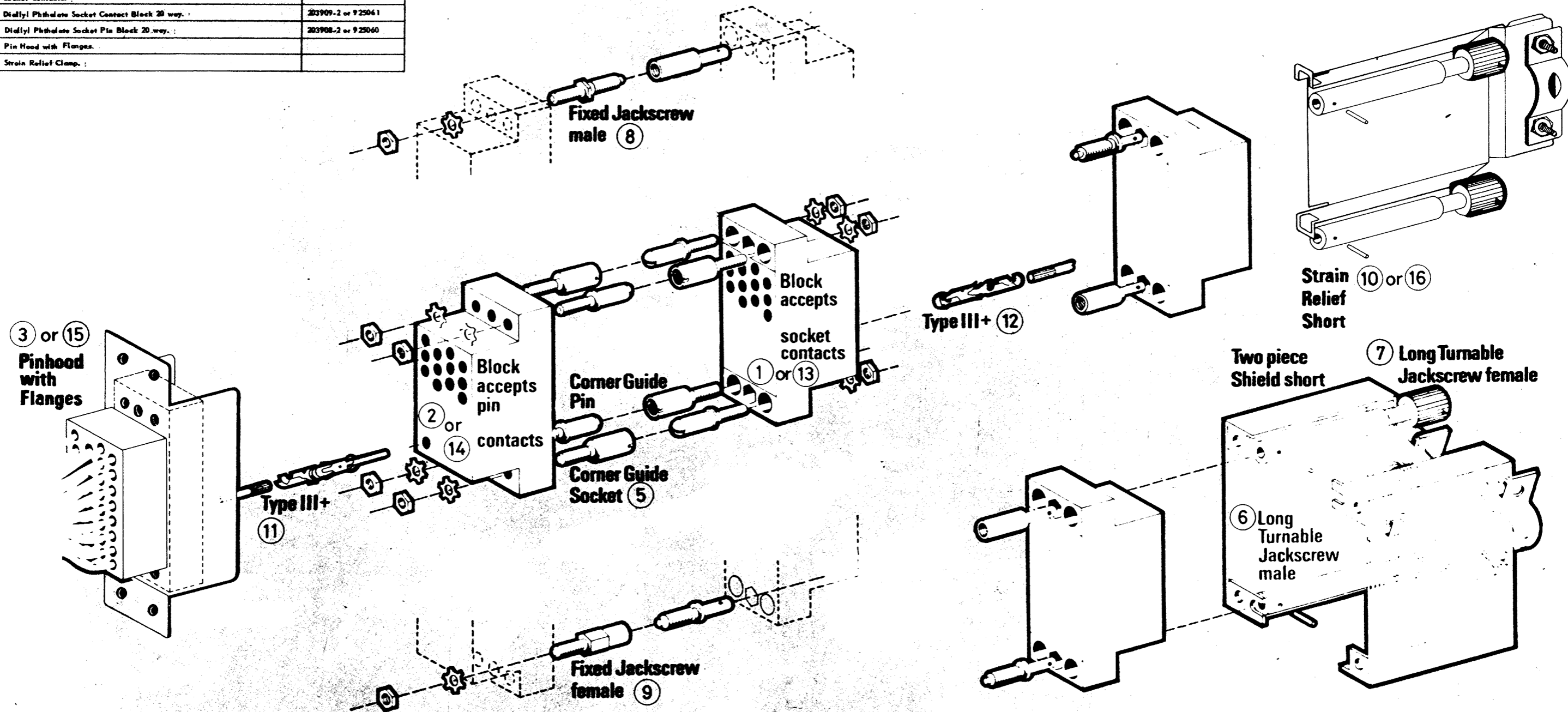
SIGNALLING CATALOGUE
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Rev.
□

PLAN PIECE No.	DESCRIPTION	CATALOGUE PIECE No.
1	Diallyl Phthalate Socket Contact Block 50 way.	20027-4
2	Diallyl Phthalate Pin Contact Block 50 way.	201358-3
3	Pin Head with flanges.	202096-5
4	Corner Guide Pin.	200833-4
5	Corner Guide Socket.	200835-4
6	Male Long Turnable Jack Screw.	200873-2
7	Female Long Turnable Jack Screw.	200874-2
8	Male Fixed Jack Screw.	200874-4
9	Female Fixed Jack Screw.	200875-2
10	Strain Relief Clamp.	201847-1
11	Pin Contacts.	66098-4
12	Socket Contacts.	66100-4
13	Diallyl Phthalate Socket Contact Block 20 way.	203909-2 or 925061
14	Diallyl Phthalate Socket Pin Block 20 way.	203908-2 or 925060
15	Pin Head with Flanges.	
16	Strain Relief Clamp.	



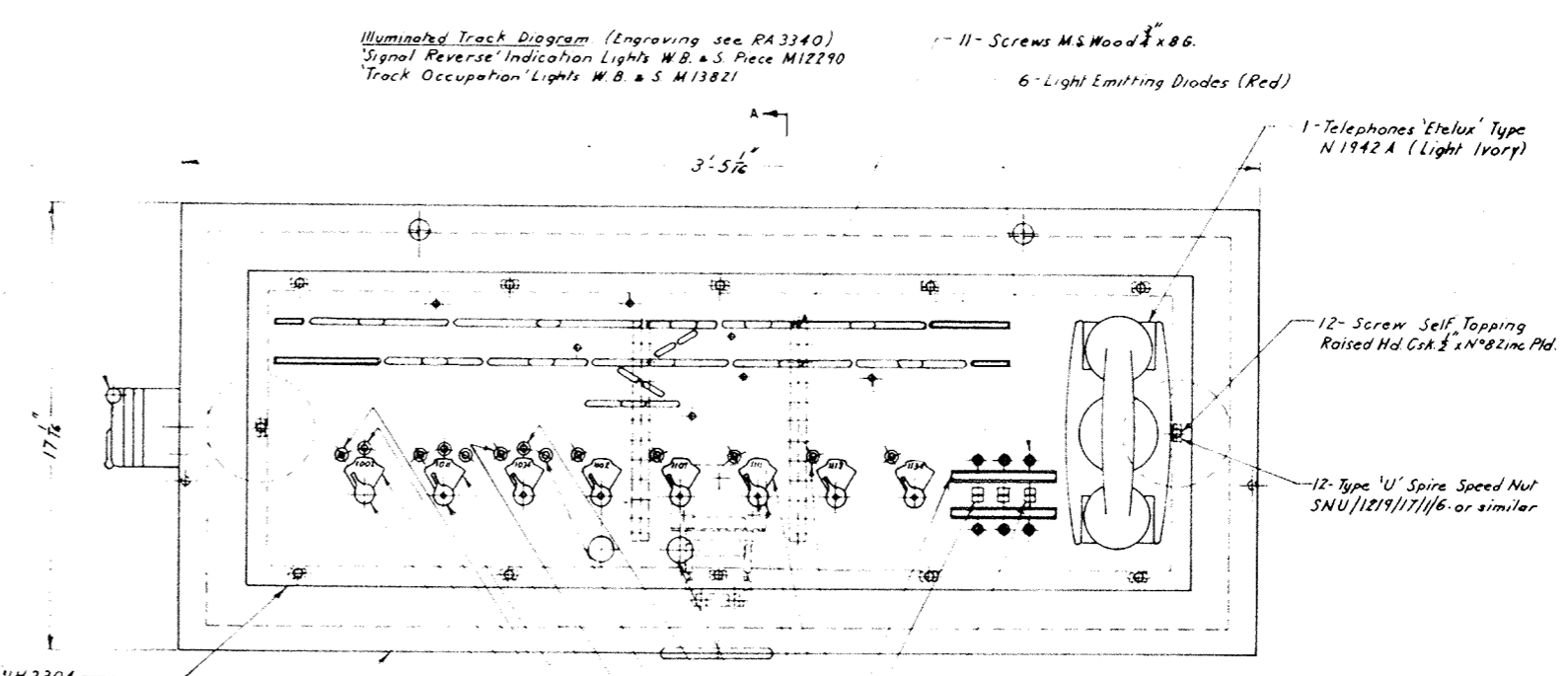
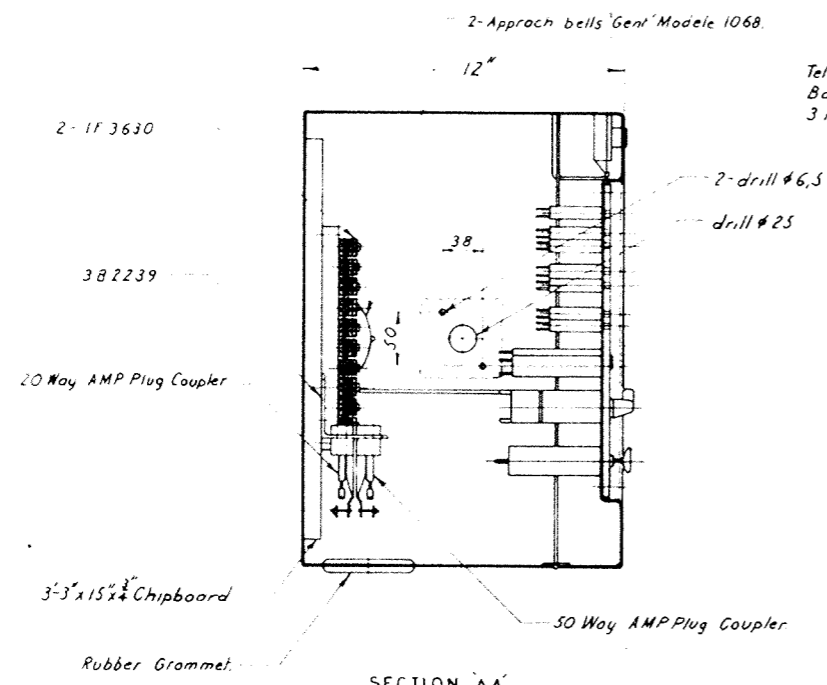
REV	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	S&C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS	
							I. B.	M. S.	S&C ENGINEER	
							J. B.	CORRES	DATE 20-12-79.	
									SCALE	
									INDEX	
									DRAWING N° REV'N	
									RA2 S/901/79	

VICTORIAN RAILWAYS
A-M.P. 20&50 WAY
(SERIES "M")
CONNECTOR.



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category	Sheet N°	Rev.
C 7 5	4	



CONTROL PANEL COMPLETE 1B4487

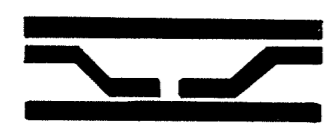
PART NO	NAME	M.T.L.	QTY	PART NO	NAME	M.T.L.	QTY
1B4485	Frame	M.S.	1	Stack	Point Lever Sw. W.B. & S. M20158-002	-	2
1H2304	Panel	B.P. Borehole	1	"	Signal Lever Sw. W.B. & S. M20158-003	-	5
3B2239	Plug Connector Support	"	1	"	Closing Lever Sw. W.B. & S. M20158-001	-	1
1F3630	Busbar 10way	"	2	"	Push Button W.B. & S. M7559	-	2
2F5627	Closing Lever Escutcheon	A1	1	"	Point Lever Escutcheon W.B. & S. M13919	-	2
				"	Signal Lever Escutcheon W.B. & S. M13917	-	5
				"	Dual Lampholders CLEAR FILTER W.B. & S. M12282	-	2
Stack	Termination board 3-3/4 x 15/16 x 3/4"	Timber	1	"	" " " " GREEN FILTER W.B. & S. M12290	-	9
"	Telephone Plug Rowco Base 9303 L.S. Plug #310 3Pin Rd Earth	"	1	"	" " " " RED FILTER W.B. & S. M12289	-	7
"	Approach Bell 'Gent' Model 1068	"	2	"	" " " " AMBER FILTER W.B. & S. M12291	-	2
"	Screw Self Tapping Raised Hd Csk 1/4 x N°8 Zinc Pld	M.S.	12	"	Track Occupation Light W.B. & S. M13821	-	10
"	Type 'U' Spire Speed Nut SNU/1219/17/1/6 or similar	S.S.	12	Stack	Light Emitting Diodes (Red)	-	6
"	Telephones 'Etelux' Type N°1942 A (Light Ivory)	"	1	"	Miniature Lever Key B.P.O. 1000 (Red Key)	-	1
"	Screws M.S. Wood Rd Hd 1/4 x 8 G.	M.S.	11	"	" " " " (White Key)	-	2
"	CONNECTOR 20 WAY A.M.P. 'M' SERIES PIN & SOCK PLUGS PIN #66103-4 SOCK #124100-4 CODE F.	"	1	"	Tag Holder 4" long for detail see 2B3574	Plastic	2
"	CONNECTOR 10 WAY A.M.P. 'M' SERIES PIN & SOCK PLUGS PIN #66107-4 SOCK #66100-4 CODE I.	"	1	"	Tag 4" long " " " 4B3574	"	2

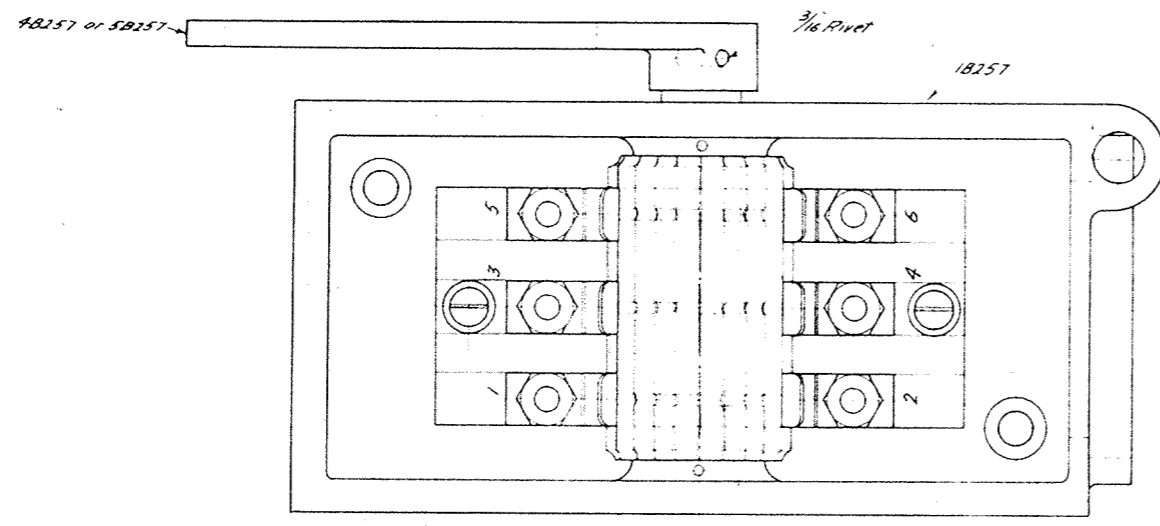
Note - All wiring to be suitably loomed to allow front of control panel to open out.

- Miniature Lever Keys B.P.O. 1000 (Red Key)
 - Miniature Lever Keys B.P.O. 1000 (White Keys)
 - Tag Holder & Tag 4" long for detail see 2B3574
 - Signal Normal Indication Light W.B. & S. Piece M12289
 - Signal Lever Escutcheon W.B. & S. Piece M13917
 - Signal Lever Switch W.B. & S. Piece M20158-003
 - Route Proving Indication Light
 - Low Speed Push Button W.B. & S. Piece M7559
 - Points Out of Correspondance Ind. Light W.B. & S. M12289
 - Points Reverse Indication Light W.B. & S. M12291
 - Points Normal Indication Light W.B. & S. M12290
 - Points Lever Escutcheon W.B. & S. Piece M13919
 - Points Lever Switch W.B. & S. Piece M20158-002
 - Closing Lever Switched In Indication Light W.B. & S. Piece M12292
 - Closing Lever Switched Out Indication Light W.B. & S. Piece M12292
 - Closing Lever Escutcheon 2F5627
 - Closing Lever Switch W.B. & S. Piece M20158-001
- Control Panel**
 Lever Knobs - Point Lever Knobs to be Black.
 Signal Lever Knobs to be Red.
 Closing Lever Knob to be White with Black Band.
- Escutcheons** - Escutcheons to be engraved with Lever Number & Engraving.
 Lights - Points Normal Indication Lights Dual Lampholder & Solid Stem with bezel Green Filters.
 Points Reverse " " " " " " " " Amber "
 Signal Normal " " " " " " " " Red "
 Closing Points Free & Route Proving Indication Lights to be White.
 Points Out of Correspondance Ind. Lights Dual Lampholder & Solid Stem with bezel Red Filters.
- Push Buttons** - Low Speed Push Button to be Red.
- Illuminated Track Diagram**
 Lights - Signal Reverse Indication Lights Dual Lampholder & Solid Stem with bezel Green Filters.
 Track Occupation Light 1 1/2" Oval Conductor Dual Lampholder with 2 Red Filters to show Track Occupation.

55642
H/4-3

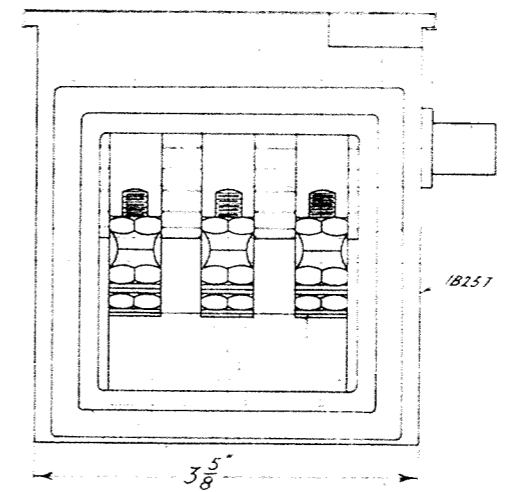
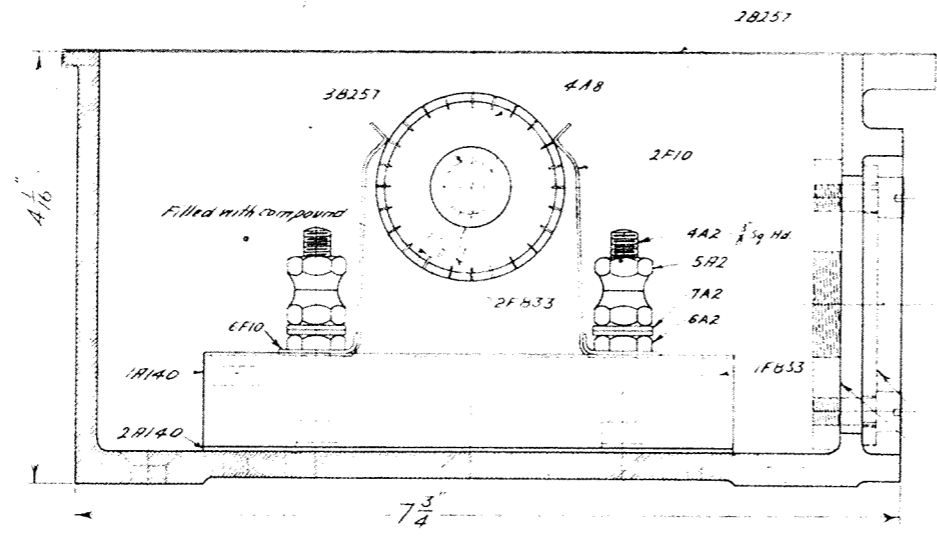
C	3-3-75	B	13-1-76	A	15-12-75	VICTORIAN RAILWAYS VICTORIA PARK CONTROL PANEL ASSEMBLY	S.&C. Engineer. Designed B.V. Drawn B.V. S.D.E. M.E. Ckd B.V. 19-8-75	B4487
Note - Re-Illuminated Track Diagram revised.		Panel revised to accommodate Communication Switches & L.E.D.S.		Details Illuminated Track Diagram added.		Scale: 3"=1'		





Combinations		List of Parts					
N°	For Signal	N°	Quantity				
1B256	As Circuit Controller	3B256	1B256	3B256	4B256	5B256	6B256
1B256	& Pole Changer	4B256					
5B256	Repeater (Pole Changer)						
N°	Name	Material	1B256	3B256	4B256	5B256	6B256
1B257	Case	CI	1	1	1	1	1
1B257	Cover	Steel I	1	1	1	1	1
3B257	Shelf	MS	1	1	1	1	1
4B257	Slotted Arm	Brass	1	1	1	1	1
5B257	Arm	"	1	1	1	1	1
4A2	Terminal $\frac{1}{8}$ " square head	"	6	6	6	6	4
5A2	Terminal Nut	"	12	12	12	12	8
6A2	Clamp Nut	"	6	6	6	6	4
7A2	Washer	"	12	12	12	12	8
1B69	Contact Bands	Phos Bronze	3	1	3	1	
8A69	"	"	1	1	1	1	
9A69	"	"	1	1	1	1	
11A40	Insulating Base	Imp Grey Fibre	1	1	1	1	1
11A40	Sole Plate	"	1	1	1	1	1
2F10	Contact Springs	Phos Bronze	6	6	6	6	4
5F10	" keeper	"	6	6	6	6	4
11B33	Wren - CBA - long - contact 2	MS	2	2	2	2	2
2F633	Wren - 2B9 - long	"	1	1	1	1	1
10A69	Contact Bands	"	1	1	1	1	1
11A69	"	"	1	1	1	1	1
4A8	Contact Roller	Imp Wood	1	1	1	1	1

Note - Pole Changer contacts when fitted to be applied to springs 1-2-3 & 4.
 * Contact springs 2F10 to be adjusted to exert a pressure of 1 lb on roller

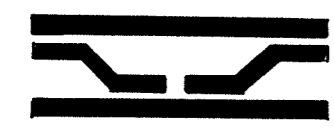


NOTE: When $\frac{3}{16}$ " Pipe is used order Plate 12B257
 " $\frac{1}{2}$ " " " " 11B257
 " 1" " " " 10B257

CORD PLAN
 R 4142
 6 11/37

13-11-26 This drawing is superseded by B625
 15-8-25 Alteration N°112
 10-3-23 Alteration N°45
 3-11-22 Material List 5B256 added

VICTORIAN RAILWAYS
 CIRCUIT CONTROLLER 3WAY
 ASSEMBLY
 2495.19
 24-3-11
B256

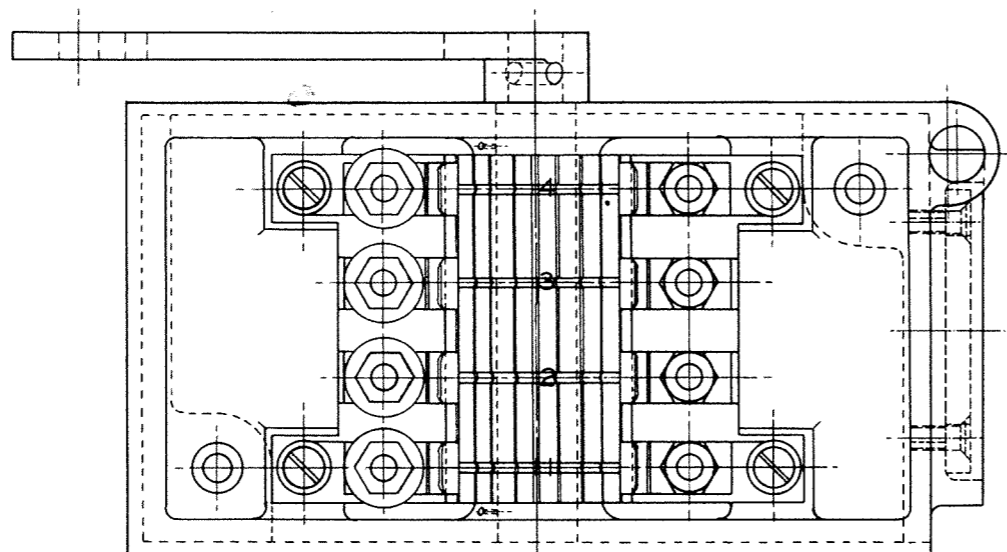


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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ORDERING NUMBERS FOR CIRCUIT CONTROLLERS COMPLETE

WHERE USED	Nº	NAME
Semaphore Signal See Typical Drawing F2544.	1B625 3B625 12B625	Circuit Controller. Repeater Pole Changer. Circuit Controller + Repeater Pole Changer.
Interlocking Lever See Typical Drawing F258 + F3361	5B625 6B625	Circuit Controller. Circuit Controller + Pole Changer.
W.B. Disc Signal See Typical Drawing F3029.	7B625 9B625 11B625	Circuit Controller. Repeater Pole Changer. Circuit Controller + Repeater Pole Changer.
Mechanical Dwarf Semaphore. See Typical Drawing F4631	13B625	Circuit Controller.
Gate Lever See Typical Drawing F4689	5B625	Circuit Controller

NOTE.
In 6B625 Pole Changer Contacts to be applied to Contact Band positions 1+2.
" 3B625 + 9B625 Repeater Pole Changer Contacts to be applied to Contact Band positions 2+3
" 11B625 + 12B625 Repeater Pole Changer Contacts to be applied to Contact Band positions 1+2.

* Contact springs 2F10 to be adjusted to exert a pressure between $\frac{1}{2}$ and $\frac{1}{16}$ on roller.

CIRCUIT CONTROLLER COMPLETE IB625

Nº	NAME	MAT'L	Q'TY.
1B626	Case	C.I.	1
2B626	Cover	Sheet S.	1
11A2	Terminal	Brass	8
5A2	Terminal Nut	Brass	12
6A2	Clamp Nut	Brass	8
7A2	Washer	Brass	16
1F4561	Contact Roller unit		1
5B626	Insulating Base	Civ. Bakle	1
2A69	Contact Bands	PhosBroze	4
* 2F10	" Spring	"	8
6F10	" Keeper	"	8
1F833	Screw OBA 1" long, screwed $\frac{1}{8}$ "	M.S.	4
3Fock	Screw Metal Thread Csk. Head $\frac{1}{4}$ B.S.W. x $\frac{3}{8}$ long	M.S.	4
"	Insulated nut M.K. & H. Piece Nº M11136		4

Circuit Controller IB625 may be converted to any one of the types 3B625 to 13B625 by interchanging of parts as shown below.

ROLLER UNIT

For 3B625, 12B625	retain roller unit	1F4561
" 5B625, 6B625	" "	2F4561
" 7B625, 9B625 or 11B625	" "	3F4561
" 13B625	" "	4F4561

CONTACT BANDS

For 3B625 or 9B625	fil contact bands	2A69	1Nº
" 5B625, 7B625 or 13B625	" "	11A69	1Nº
" 6B625	" "	2A69	4Nº
"	" "	2A69	2Nº
"	" "	2A69	1Nº
"	" "	3A69	1Nº
" 11B625 or 12B625	" "	2A69	2Nº
"	" "	3A69	1Nº
"	" "	10A69	1Nº
"	" "	11A69	1Nº

CONTACT SPRINGS

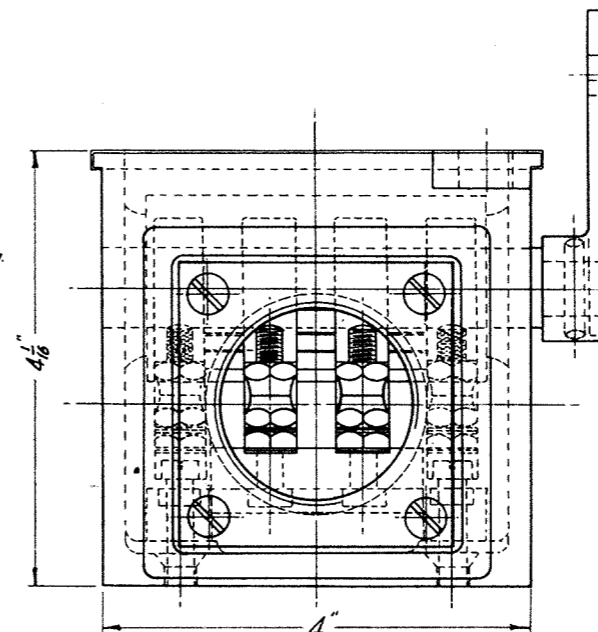
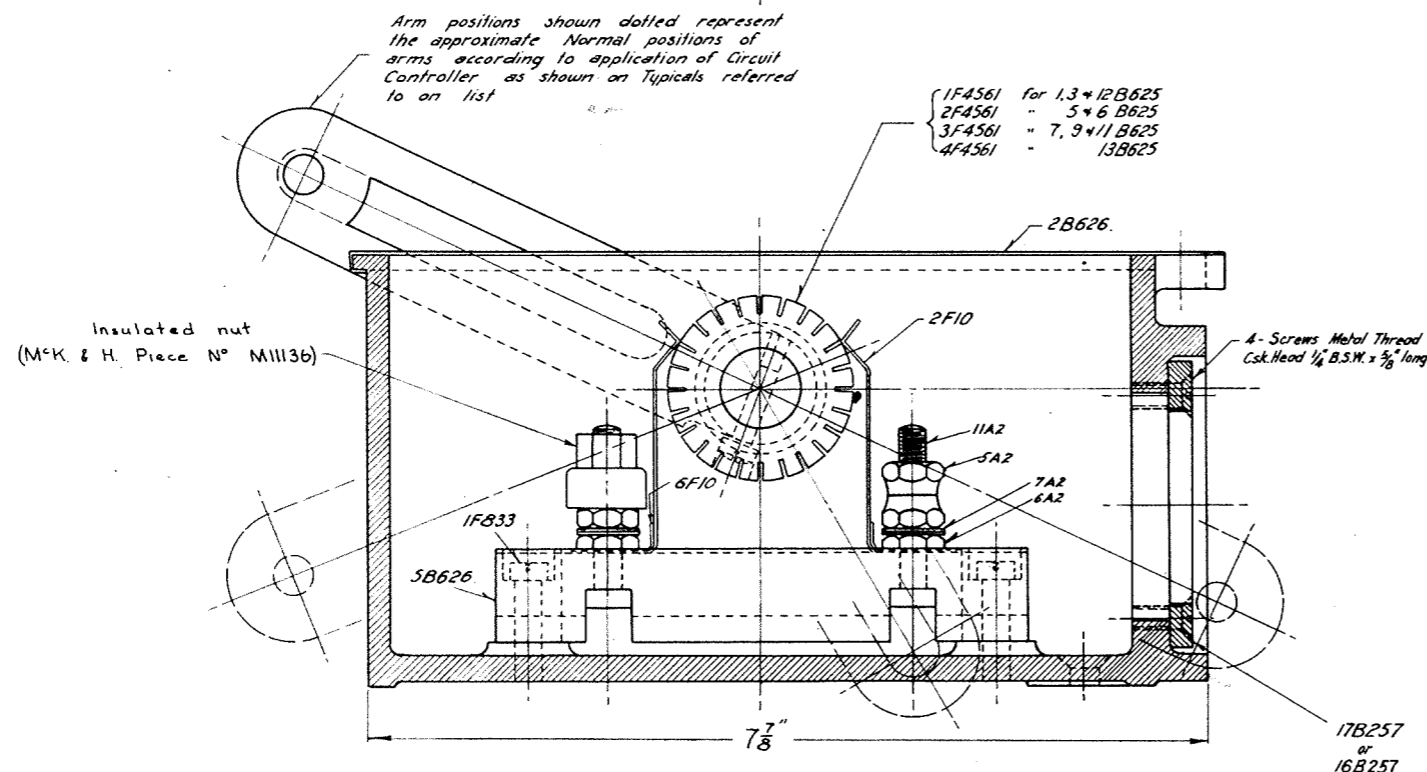
For 3B625 or 9B625 use contact spring 2F10
" all other types use 8Nº of both 2F10 + 6F10

TERMINAL SCREWS

For 3B625 or 9B625 use terminal screw 11A2 4Nº
" all other types " " " 8Nº

INLET PLATE FOR CABLE GLAND

For $\frac{1}{4}$ " conduit thread gland use 16B257.
For other glands use 17B257 and Reducing Bush 1 or 3F554B.



4404

J9-1.

21-4-72 Alteration Nº 1521	A Note added re inlet plate for cable gland.	27-1-71	14-12-70 Alteration Nº 1439	1-3-60 Alteration Nº 1329	Redrawn including revisions 1+2 and alteration Nº 323, 418, 464, & 472. Parts 2, 4, 8 & 10B625 cancelled. Part 13B625 added. Original dated 13-11-26.	VICTORIAN RAILWAYS. CIRCUIT CONTROLLER. 4 WAY ASSEMBLY.	Sig & Tel Engineer. J.G.M.	Drawn by J.G.M.	Traced by J.G.M.
						25-11-58	B625		



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category

E 1 5

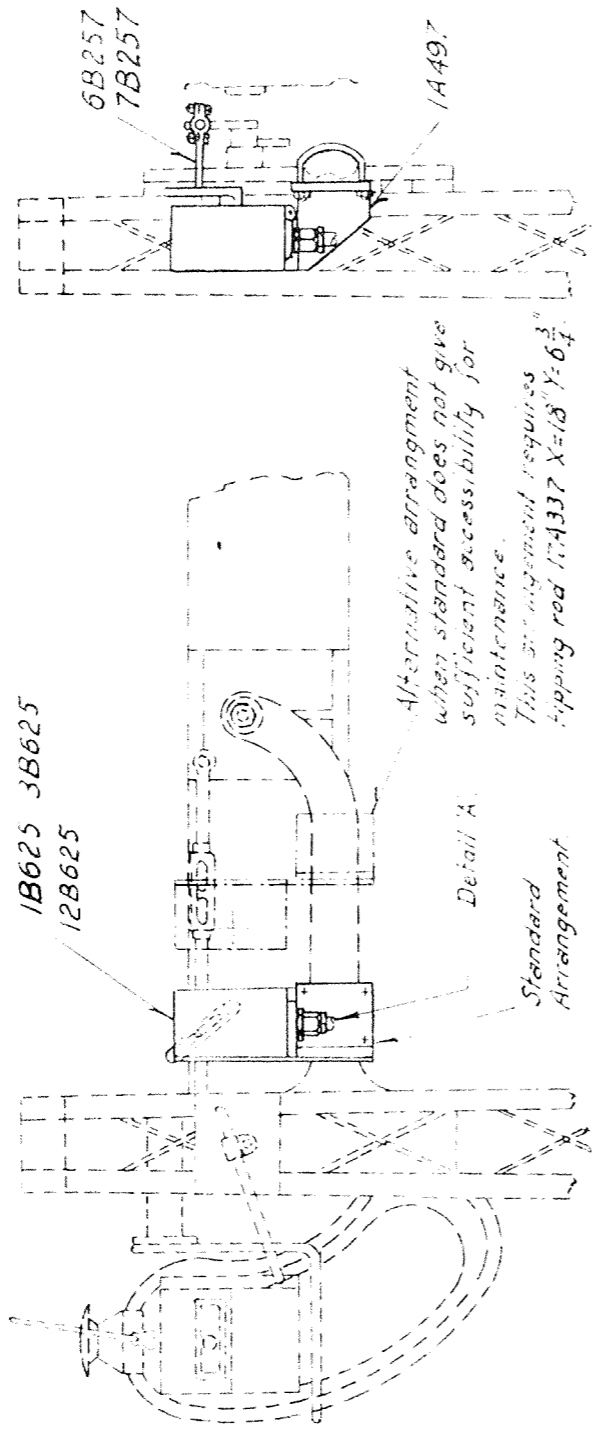
Sheet Nº

2

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A

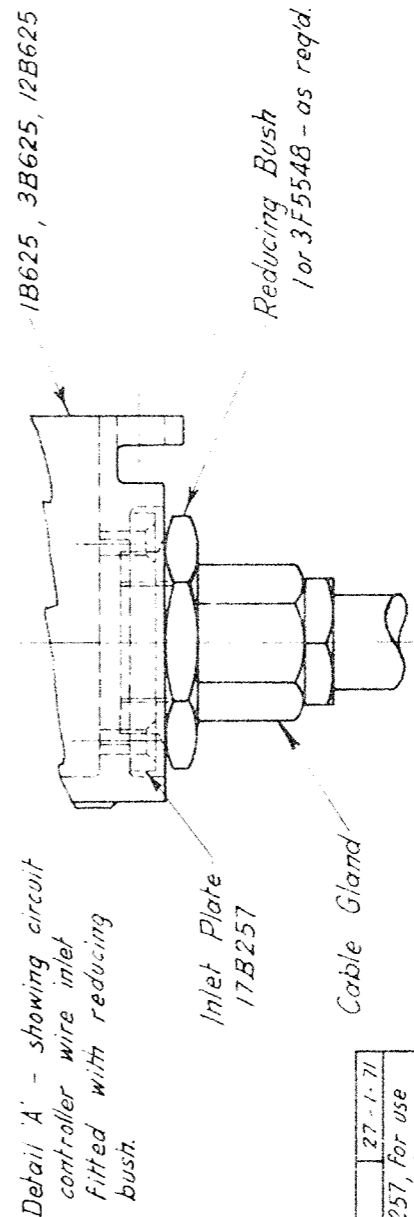
1964
A2-4.



1F2544 CIRCUIT CONTROLLER 4 CONTACTS
 3F2544 REPEATER POLECHANGER
 7F2544 CIRCUIT CONTROLLER & REPEATER POLECHANGER

Nº	NAME	MATERIAL	1F2544	3F2544	7F2544
1B625	Circuit Controller	—	1	—	—
3B625	Repeater Polechanger	—	—	1	—
6B257	Connecting Rod	M.S.	1	1	1
7B257	Clamp	"	1	1	1
1A497	Bracket Complete	—	1	1	1
12B625	Circuit Controller & Repeater Polechanger	—	—	—	1
B257	Inlet Plate 16 or 17B257 as required	M.S.	1	1	1
F5548	Reducing Bush, for 3F5548 as required, for use with Inlet Plate 17B257	Brass	1	1	1
Stock	Bolt & Nut Hex Rd Hex 5/16" B.S.W. x 1" long	M.S.	2	2	2
"	Screws Steel Metal Thread Csk Head 5/16" B.S.W. x 1" long Hex Nut	M.S.	2	2	2
"	Cable Gland - to suit Inlet Plate or Reducing Bush ordered.	—	1	1	1

* Inlet plate required for circuit controller must be stated when ordering.



B
 27-1-71
 Inlet plate 16B257, for use with cable gland only, added to material list.

A
 14.12.70
 Circuit controller wire inlet fitted with cable gland in lieu of flexible connection
 (J.L.) J.B. N.T.T.

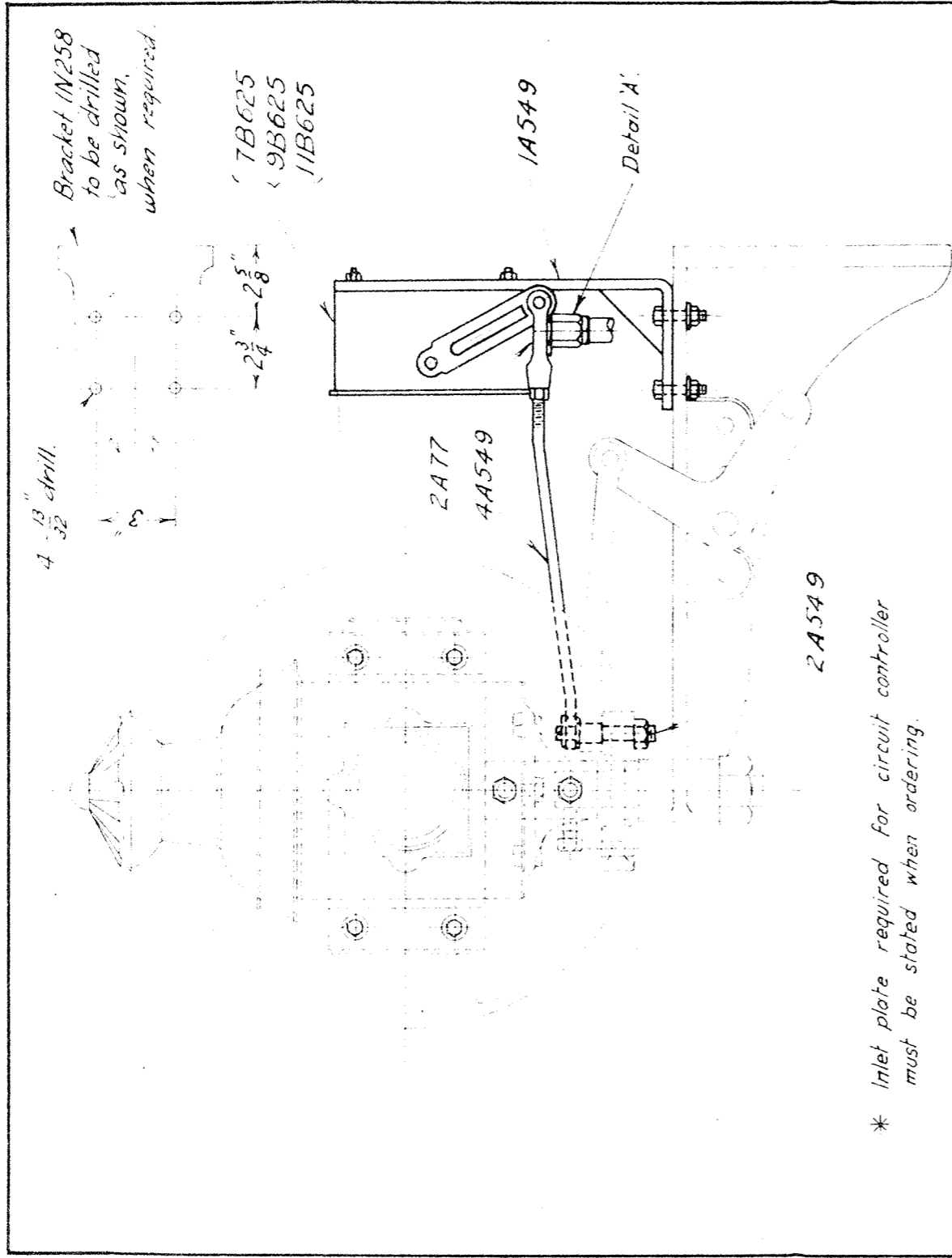
1-6-65
 AIF N° 1216
 Redrawn including alteration No 329, 472 & 717 and Revision 1. Parts 2 & 4 F2544 cancelled. Original dated 25.10.29.

VR.
 CIRCUIT CONTROLLER FOR MECHANICAL SIGNAL ASSEMBLY 25.11.55
 Drawn by J.G.M.
 Traced by J.G.M.
 8/10/55

Sig & Tel Engineer
 F2544



2435
A2-27.

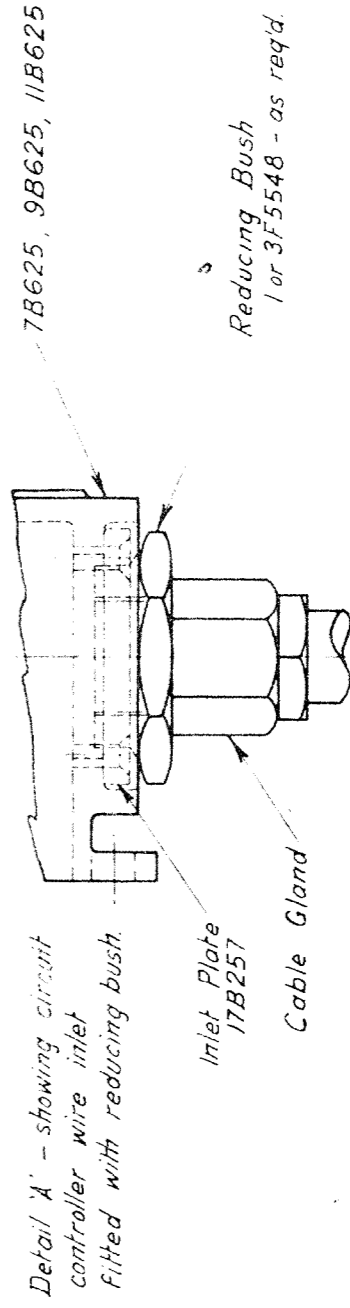


* Inlet plate required for circuit controller must be stated when ordering.

- 1F3029 CIRCUIT CONTROLLER 4 CONTACTS
- 3F3029 REPEATER POLECHANGER
- 7F3029 CIRCUIT CONTROLLER & REPEATER POLECHANGER.

N ^o	NAME	MATERIAL	1F3029	3F3029	7F3029
1B625	Circuit Controller	-	-	-	-
9B625	Repeater Pole-changer	-	-	-	-
11B625	Circuit Controller, & Repeater Pole-changer.	-	-	-	-
1A549	Bracket	M.S.	/	/	/
2A549	Stud	M.S.	/	/	/
4A549	Connecting Rod	M.S.	/	/	/
2A77	Adjustable Jaw	Brass	/	/	/
B257	Inlet Plate 16 or 17B257 as required	M.S.	/	/	/
F5548	Reducing Bush, 1 or 3F5548 as required, for use with Inlet Plate 17B257	Brass	/	/	/
Stock	Cable Gland - to suit Inlet Plate or Reducing Bush ordered.	-	/	/	/

*



F3029		V.R. <i>Redrawn including Rev. 1 only Alt 472 Parts 2 & 4F3029 cancelled. Original dated 14-12-70</i>	SIG & TEL ENGINEER <i>AW</i>	F3029
B	27-1-71 A	14-12-70	CIRCUIT CONTROLLER FOR WALL BRACKET DISC SIGNAL ASSEMBLY	
Inlet plate 16B257, for use with cable gland only, added to material list.		Circuit controller wire inlet fitted with cable gland in lieu of flexible connection.	DRAWN BY <i>AW</i>	TRACED BY <i>AW</i>
			27-11-55	27-11-55





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MODULE TYPE NO MONITOR DIAGRAM AS REQUIRED	TYPE OF MODULE (APPLICATION)	MONITOR DIAGRAM (AS REQUIRED)	RELAY MODULE	DESIGNATION PLATE	LAYOUT OF APPARATUS	MATERIAL LIST	WIRING DIAGRAM
1B4000	CROSSOVER	1B3579	1B3583	3B3578	6G100	6B4130	G111
		2B3579					
2B4000	TURNOUT	3B3579	1B3583	1B3578	8G100	8B4130	G115
		4B3579					
3B4000	TURNOUT AND CATCH	1B3589	1B3583	1B3578	8G100	8B4130	G115
		2B3589					
3B4000	TRAILING TURNOUT	5B3579	1B3583	2B3577	11G100	11B4130	G121
		6B3579					
4B4000	FACING TURNOUT	7B3579	1B3583	1B3577	10G100	10B4130	G119
		8B3579					
5B4000	DIAMOND CROSSOVER	1B3580	1B3583	1B3576	7G100	7B4130	G113
		2B3580					
6B4000	DIAMOND TURNOUT	3B3580	1B3583	2B3576	9G100	9B4130	G117
		4B3580					
7B4000	HOME SIGNAL 2-WAY	5B3580	1B3583	3B3575	3G100	3B4130	G105
		6B3580					
8B4000	HOME SIGNAL 1-WAY	7B3580	1B3583	1B3575	4G100	4B4130	G107
		8B3580					
9B4000	AUTOMATIC SIGNAL 2-WAY	9B3580	1B3585	4B3575	1G100	1B4130	G101
		10B3580					
10B4000	AUTOMATIC SIGNAL 1-WAY	10B3580	1B3585	2B3575	2G100	2B4130	G103
		11B3580					
11B4000	DWARF SIGNAL	11B3580	1B3585	2B3578	5G100	5B4130	G109
		1B3997					
12B4000	CROSSOVER WITH OVERLAP	2B3997	1B3583	1B3994	13G100	13B4130	OG103
		3B3997					
13B4000	TURNOUT WITH OVERLAP	4B3997	1B3583	2B3994	14G100	14B4130	OG105
		5B3997					
14B4000	DIAMOND TURNOUT WITH OVERLAP	6B3997	1B3583	1B3995	15G100	15B4130	OG107
		7B3997					
15B4000	CONT. AUTO. SIG. 2-WAY WITH OVERLAP	8B3997	1B3583	2B3995	12G100	12B4130	OG101
		9B3997					
16B4000	HOME SIGNAL 2-WAY WITH OVERLAP	9B3997	1B3585	1B3996	16G100	16B4130	OG109
		9B3997					

B4000

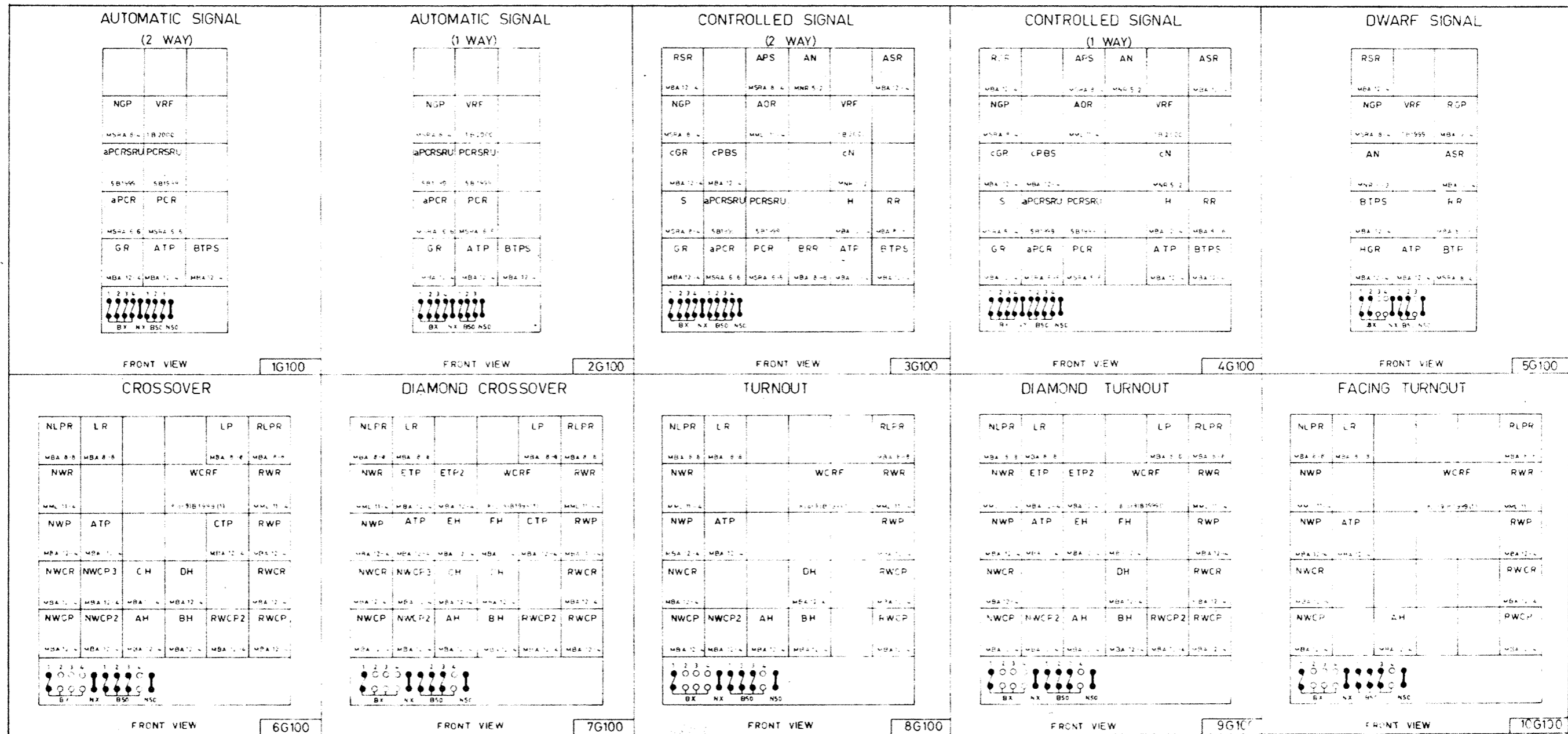
9.9.76
MODULE TYPES
12, 13, 14, 15
B16B4000
ADDED

VICTORIAN RAILWAYS
GEOGRAPHICAL INTERLOCKING
RELAY MODULES
SCHEDULE

S & C
Engineer
S.D.M.E.
Designed
M.V.P.
Drawn
M.V.P.
Issued
M.V.P.

B4000

14.10.74



2-2-77
 12100 to 160100 inclusive added
 at provision of overlap
 modules. Typical rear views
 revised accordingly.

Redrawn, primarily
 shown on B3530
 & B3533 dated
 8-10-73

**VICTORIAN RAILWAYS
 GEOGRAPHICAL
 MODULES**
 LAYOUT OF APPARATUS.

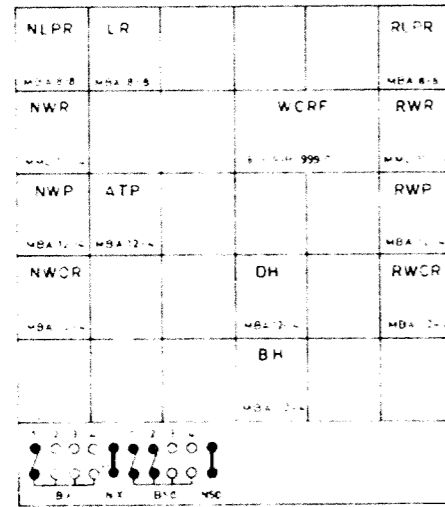
S&C
 Engineer
 Designed
 G.J.M.
 Drawn
 M.S.
G 100 Sheet
 1



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

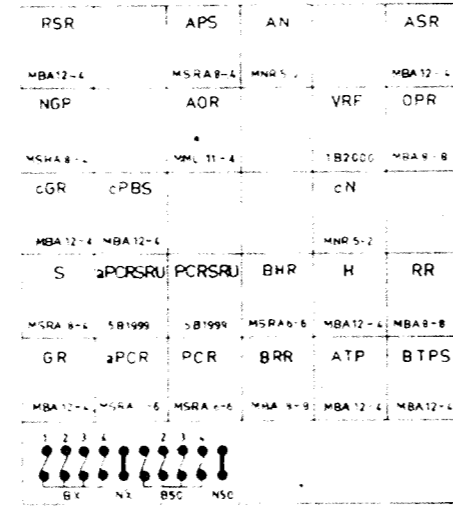
Category **G 1 1** Sheet No **2** Rev. **A**

TRAILING TURNOUT



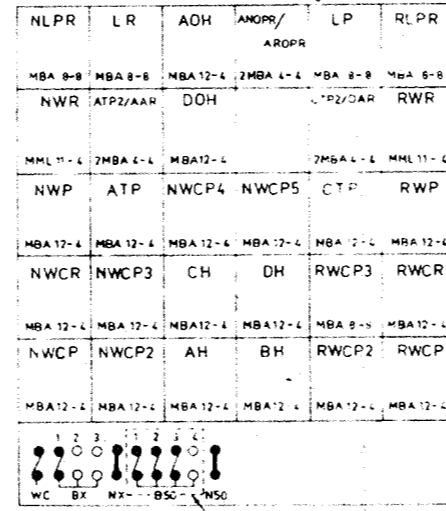
FRONT VIEW 11G100

OVERLAP CONTROLLED SIGNAL (2WAY)



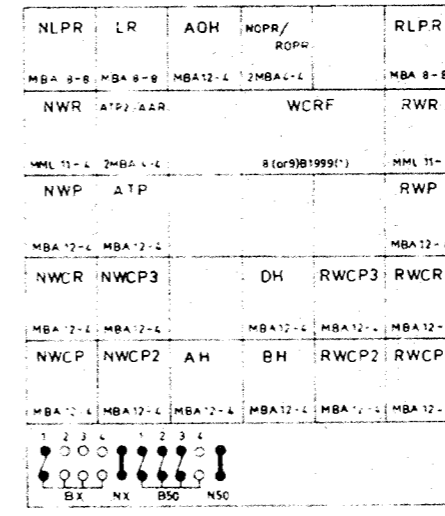
FRONT VIEW 12G100

OVERLAP CROSSOVER



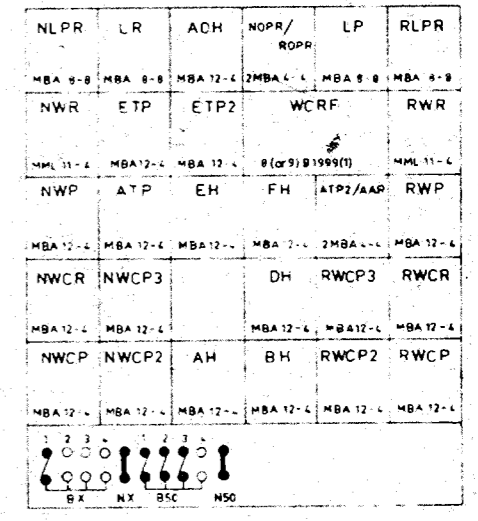
FRONT VIEW 13G100

OVERLAP TURNOUT



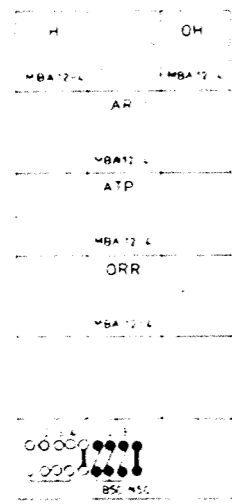
FRONT VIEW 14G100

OVERLAP DIAMOND TURNOUT



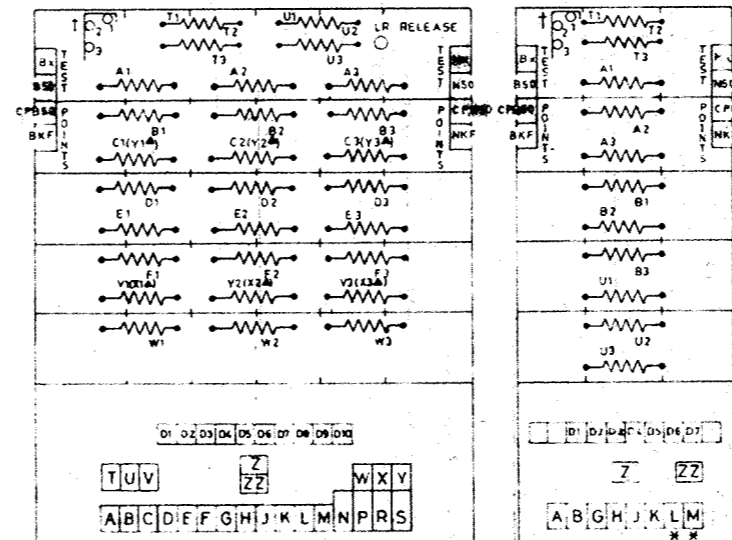
FRONT VIEW 15G100

OVERLAP LIMIT



FRONT VIEW 16G100

TYPICAL REAR VIEW OF MODULES



NOTE † Side view of resistors (T & U) mounted at the top of the modules

MODULE TYPE	PLUG COUPLERS FITTED & CODES																										
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	Z	ZZ			
1G100	17	18	-	-	-	-	23	24	5	25	-	27	-	-	-	-	-	-	-	-	-	-	-	-	13	-	
2G100	17	18	-	-	-	-	23	24	4	25	-	27	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-
3G100	17	18	-	-	-	-	23	24	3	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
4G100	17	18	-	-	-	-	23	24	2	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
5G100	17	18	-	-	-	-	23	24	1	25	26	27	-	-	-	-	-	-	-	-	-	-	-	-	-	13	-
6G100	17	18	19	20	-	-	23	24	10	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
7G100	17	18	19	20	21	22	23	24	11	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
8G100	17	18	-	20	-	-	23	24	6	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
9G100	17	18	-	20	21	22	23	24	9	25	26	27	28	29	30	31	-	-	-	-	-	-	-	-	-	13	-
10G100	17	18	-	20	-	-	23	24	7	25	26	-	28	29	30	-	-	-	-	-	-	-	-	-	-	13	-
11G100	17	18	-	20	-	-	23	24	8	25	26	-	28	29	30	-	-	-	-	-	-	-	-	-	-	13	-
12G100	17	18	-	-	-	-	23	24	3	25	26	27	28	29	30	31	14	15	-	29	-	-	-	-	13	28	
13G100	17	18	19	20	-	-	23	24	10	25	26	27	28	29	30	31	14	15	16	29	30	31	33	28	-	-	
14G100	17	18	-	20	-	-	23	24	6	25	26	27	28	29	30	31	14	15	-	29	30	-	-	-	13	28	
15G100	17	18	-	20	21	22	23	24	9	25	26	27	28	29	30	31	14	15	16	29	30	31	13	28	-	-	
16G100	17	18	-	-	-	-	23	24	12	25	-	-	-	-	-	-	14	15	-	-	-	-	-	-	13	28	
FreeWiring	17	18	19	20	21	22	23	24	32	25	26	27	28	29	30	31	14	15	16	29	30	31	-	-	-	-	

NOTE: Plug Couplers A to M inclusive, T to Y inclusive, Z, and ZZ are AMP 20 way Plug Couplers N, P, R & S are AMP 50 way
 *16G100 uses Plug Couplers T & U instead of L & M respectively
 †15G100 uses resistors Y1, Y2, Y3 and X1, X2, X3 instead of C1, C2, C3 & V1, V2, V3.

A 2/3-77 Redrawn, partially shown on B3530 & B3531 dated 10-73	NOTE - For references to assemblies and circuits see B400.	VICTORIAN RAILWAYS GEOGRAPHICAL MODULES LAYOUT OF APPARATUS.	S & C Engineer	Designed G.J.M.	Drawn MS
			G 100 Sheet 2		



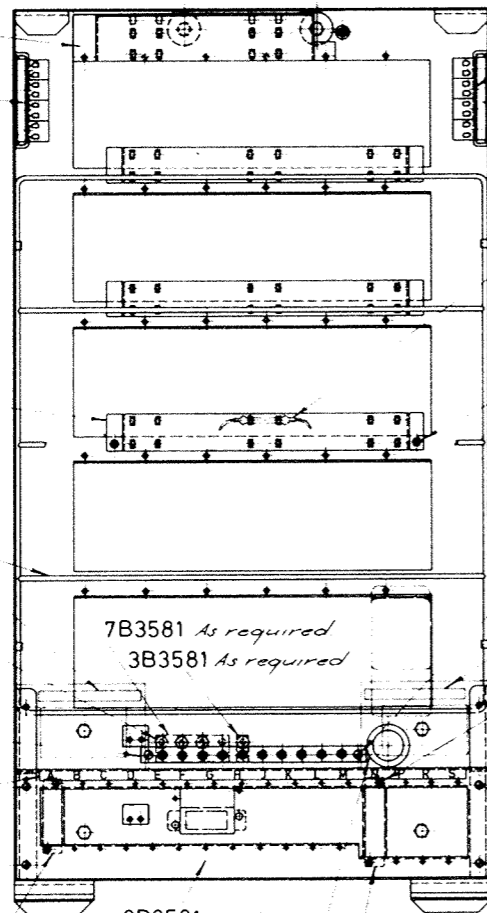
3B3998
As required
4B3581

5B3586
Mounted as
required in
positions shown

5B3587
1B3998 As reqd
Diodes
Westinghouse
type 5SAR6
As required

1F3629

1B3581



8B3581 as shown
or 7B3587 As reqd

20 way Pin Contact Connector
A.M.P part 203908-2, complete
with Pin Hood A.M.P part 202095-5
corner Guide Pins, Sockets & fixed
Jack Screws As required

Rubber Grummet 'Kaymac' type K666

50 way Pin Contact Connector
A.M.P part 201358-3, complete
with Pin Hood A.M.P part 202096-5
corner Guide Pins, Sockets & fixed
Jack Screws. As required

8 - Terminals 'Klippon' type BK2 (VR Modified)
Screw to 1B3582 with 8 - Screws
Ch Hd Cad Plated MS $\frac{1}{8}$ " B.S.W
 $\times \frac{3}{4}$ " long

5B3581

Resistors 6 K Ω 10W wire wound
with 3'-0" leads Insulated with
'Raychem' heat shrink tubing
As required

Screws Ch Hd Cad Plated MS
 $\frac{3}{16}$ " B.S.W $\times 1$ " long with 2 Nuts
 $\frac{1}{16}$ " Hex Cad Plated & Washers
Shakeproof internal lock Cad
Plated $\frac{3}{16}$ " (Retains 5B3586
& Relay Base) As required

2 - Screws Ch Hd Cad Plated MS
 $\frac{5}{16}$ " B.S.W $\times \frac{5}{8}$ " long with Nuts Hex
Cad Plated & Washers Shakeproof
internal lock Cad Plated $\frac{5}{16}$ "
2B3998 As required
2 - (Each Connector) - Screws Ch Hd
Cad Plated MS $\frac{1}{8}$ " B.S.W $\times 1$ " long with
Nuts Hex Cad Plated & Washers
Shakeproof internal lock Cad
Plated $\frac{1}{8}$ " As required

Screws Ch Hd Cad Plated MS
 $\frac{3}{16}$ " B.S.W $\times \frac{1}{2}$ " long with Washers
Shakeproof internal lock Cad
Plated $\frac{3}{16}$ " As required

2-1B3587

6B3581
As required

Test Point Terminal Train
Cat N°D186 Red As reqd

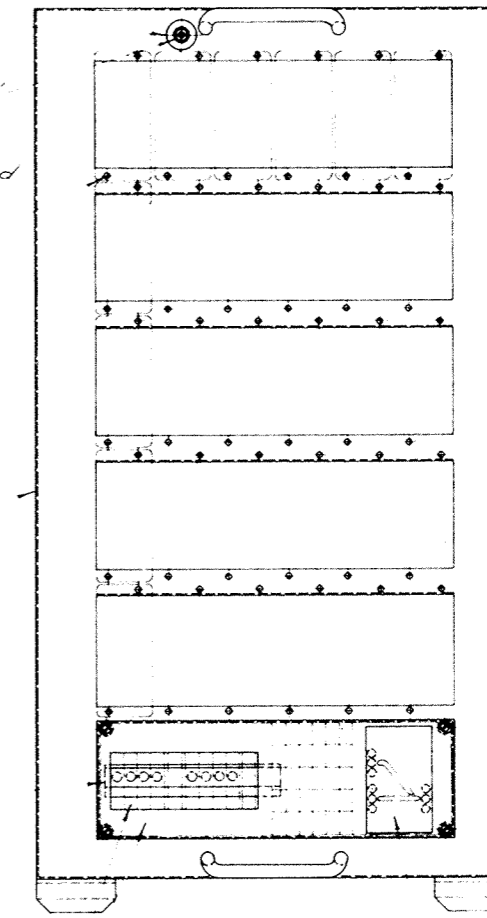
Each Relay Base retained
with 2 - Screws Ch Hd
Cad plated MS $\frac{3}{16}$ " B.S.W
 $\times \frac{5}{8}$ " long with Nut Hex
Cad Plated & Washers
Shakeproof internal
lock Cad Plated $\frac{3}{16}$ "

1B3582

1B3586

3B3586

4-4B3586



30 RELAY MODULE COMPLETE

PART N°	NAME	MTL	QTY.
1F3629	Terminal Block 2B A 10-way	-	1
1B3582	Modular Relay Frame	MS	1
8B3581	Connector Mounting Bracket	"	As reqd
1B3581	Designation Tag	Al	1
3B3581	Single Diode Link	"	As reqd
4B3581	Designation Tag	"	1
5B3581	"	"	1
6B3581	"	"	As reqd
7B3581	Bus	"	"
1B3586	Cover	MS	1
3B3586	Terminal Bracket	"	1
4B3586	Pillar	"	4
5B3586	Resistor Bracket	"	As reqd
1B3587	Handle	"	2
5B3587	Looming Frame	"	1
Stock	'Klippon' End Section A.P	"	As reqd
"	Grummet 'Kaymac' type K666	Rubber	1
"	'Klippon' End Brackets E.W.K.1	"	As reqd
1B3998	Designation Tag	Al	"
2B3998	"	"	"
3B3998	Resistor Bracket	MS	"
7B3587	Connector Mounting Bracket	"	"

1B3583

PART N°	NAME	MTL	QTY.
Stock	Test Point Terminal Train Cat N°D186	-	As reqd
"	Diodes 'Westinghouse' type 5SAR6	-	As reqd
"	Resistors 6K Ω 10W insulated 3'-0" leads	-	"
"	Connector 20 way A.M.P (See plan)	-	"
"	Connector 50 way A.M.P (See plan)	-	"
"	Terminals 'Klippon' type BK2 Modit	-	"
"	Terminals " " SAKG	-	"
"	Terminals " " SAKS1	-	As reqd
"	Mouldings & Footsprings only SAKS	-	"
"	Screws Ch Hd Cad plate $\frac{1}{8}$ " B.S.W $\times \frac{3}{4}$ " long	MS	8
"	Screws Ch Hd Cad $\frac{3}{16}$ " B.S.W $\times 1$ " long & Hex Nuts	"	As reqd
"	" " " $\frac{5}{16}$ " B.S.W $\times \frac{5}{8}$ " long & Hex Nuts	"	"
"	" " " $\frac{1}{8}$ " B.S.W $\times 1$ " long & Hex Nuts	"	"
"	" " " $\frac{3}{16}$ " B.S.W $\times \frac{1}{2}$ " long & Hex Nuts	"	As reqd
"	Washers Shakeproof int lock Cad $\frac{3}{16}$ "	S.S	"
"	" " " " " $\frac{5}{16}$ "	"	"
"	" " " " " $\frac{1}{8}$ "	"	"

Monitor Diagram (For typical assembly see 1B3588) To be
Designation Plate (See drg B3581 6, 7, 8 and 9) ordered
separately
2 - Standard Terminals 'Klippon' type SAKG
Fuse Terminals 'Klippon' type SAKS1 As reqd
(When Fuse positions are not filled to
capacity, use Fuse Terminal Mouldings &
Spring Clips as Blanks)

Note - Designation Plates & Tags to be riveted
to Relay Module with Pop Rivets TAP/D329 BH
For Material Requirements see plan B4000
Material shown * ordered on
Circuit Engineers material list

Note - In cases where 30 relays are fitted to a
Module, for installation of transformer
rectifier unit see F5722

15-4-77 A
Modified to
include provision
for Overlap Module
see
B3585
M.J.R. J.P. D.H.B. M.J.R.

For
15 Relay
Module
see
B3585
Scale - 3" = 1'-0"
2-5-74

VICTORIAN RAILWAYS
GEOGRAPHICAL INTERLOCKING
30 RELAY MODULE (MK II)
ASSEMBLY
Scale - 3" = 1'-0"
2-5-74

S.&C. Engineer	Designed M.J.R.	Drawn M.J.R.
	S.D.E. M.E.	Ckd. Iss.No.
B3583		



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
G 1 1

Sheet N°
4

Rev.
A

7B3998
4B3581

6B3587

2B3587
Mounted as
required in
positions shown

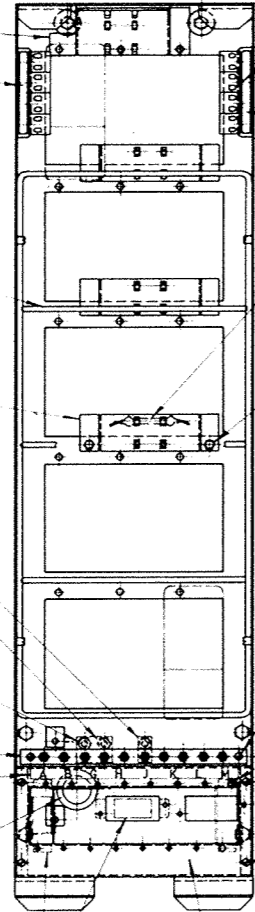
3B3581 As required
7B3581 As required

Diodes
'Westinghouse'
type 55A6
As required

1F3629
2B3581 as shown
or
6B3998 As reqd

Rubber Grummet
'Kaymac' type K666

20 way Pin Contact Connector
A.M.P. part 203908-2 complete
with Pin Hood A.M.P. part 202095-5
corner Guide Pins, Sockets & fixed
Jack Screws. As required



8-Terminals 'Klippon' type BK2 (VR Modified)
Screw to 1B3584 with 8-Screws
Ch Hd Cad Plated MS $\frac{3}{16}$ " B.S.W. x $\frac{3}{4}$ " long

5B3581

Resistors 6 K Ω 10W wire wound
with 3'-0" leads insulated with
'Raychem' heat shrink tubing.
As required

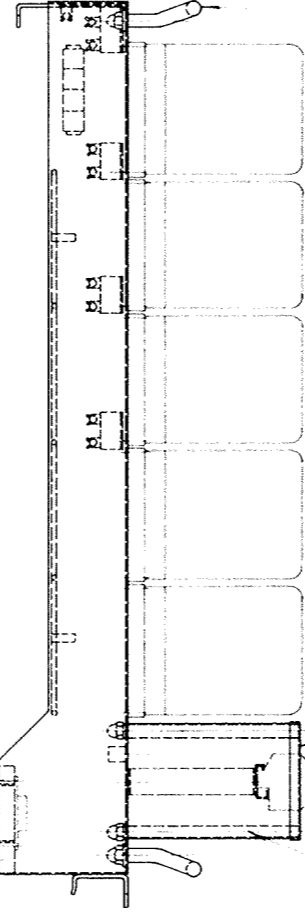
Screws Ch Hd Cad Plated MS
 $\frac{3}{16}$ " B.S.W. x 1" long with 2 Nuts
Hex Cad Plated & Washers
Shakeproof internal lock Cad
Plated $\frac{3}{16}$ " (Retains 5B3587
& Relay Base). As required

2-Screws Ch Hd Cad Plated MS
 $\frac{5}{32}$ " B.S.W. x $\frac{5}{8}$ " long with Nuts Hex
Cad Plated & Washers Shakeproof
internal lock Cad. Plated $\frac{5}{32}$ "

2-(Each Connector)-Screws Ch Hd Cad. Plated
MS $\frac{5}{32}$ " B.S.W. x 1" long with Nuts Hex Cad. Plated
& Washers Shakeproof internal lock Cad
Plated $\frac{5}{32}$ " As required

4-Screws Ch Hd Cad Plated MS $\frac{5}{32}$ " B.S.W.
x $\frac{5}{8}$ " long with Washers Shakeproof internal
lock Cad Plated $\frac{5}{32}$ "

9B3581



2-1B3587

Each Relay Base retained
with - 2-Screws Ch Hd Cad
plated MS $\frac{3}{16}$ " B.S.W. x $\frac{3}{8}$ " long
with Nuts Hex Cad Plated
& Washers Shakeproof internal
lock Cad Plated $\frac{3}{16}$ "

1B3584

6B3586

2B3586

4-4B3586

15 RELAY MODULE COMPLETE

PART NO	NAME	MTL	QTY
1B3584	Modular Relay Frame	MS	1
9B3581	Connector Mounting Bracket	"	1
* 2B3581	Designation Tag	Al	As reqd
* 4B3581	"	"	1
* 5B3581	"	"	1
* 3B3581	Single Diode Link	"	As reqd
* 7B3581	Bus	"	"
* 2B3586	Cover	MS	1
* 6B3586	Terminal Bracket	"	1
4B3586	Pillar	"	4
1B3587	Handle	"	2
6B3587	Looming Frame	"	1
1F3629	Terminal Block 2BA 10-way	"	1
* 2B3587	Resistor Bracket	MS	As reqd
* 7B3998	"	"	"
* 6B3998	Designation Tag	Al	"

1B3585

PART NO	NAME	MTL	QTY
Stock	Diodes 'Westinghouse' type 55A6	"	As reqd
"	Resistors 6K Ω 10W insulated 3'-0" leads	"	"
"	Connector 20 way A.M.P. (see plan)	"	"
"	Terminals 'Klippon' type BK2 modif	"	8
"	Terminals " " SAK6	"	As reqd
"	" " SAKSI	"	As reqd
"	Mouldings & Footsprings only SAKS	"	"
"	Screws Ch Hd Cad plated $\frac{3}{16}$ " B.S.W. x $\frac{3}{8}$ " long	MS	8
"	Screws Ch Hd Cad $\frac{3}{16}$ " B.S.W. x 1" lg & Hex Nuts	"	As reqd
"	" " " $\frac{5}{32}$ " B.S.W. x $\frac{5}{8}$ " lg	"	"
"	" " " $\frac{3}{16}$ " B.S.W. x 1" lg	"	"
"	" " " $\frac{3}{16}$ " B.S.W. x $\frac{3}{4}$ " lg	"	4
"	" " " $\frac{3}{16}$ " B.S.W. x $\frac{3}{8}$ " lg & Hex Nuts	"	As reqd
"	Washers Shakeproof int lock Cad $\frac{3}{16}$ "	Sp	5
"	" " " " $\frac{5}{32}$ "	"	"
"	" " " " $\frac{3}{16}$ "	"	"
"	" " " " $\frac{3}{16}$ "	"	"
"	'Kaymac' Rubber Grummet K666	Rubber	1
"	'Klippon' End Section A.P.	"	As reqd
"	" End Brackets EWK1	"	"

Monitor Diagram (For typical assembly see 1B3585) To be
Designation Plate (See drgs. B3575, 8 & B3996, 9) ordered
separately

2- Standard Terminals 'Klippon' type SAK6
Fuse Terminals 'Klippon' type SAKSI As reqd
(When Fuse positions are not filled to
capacity, use SAKS mouldings & foot springs
as blanks)

Note:- Designation Plates & Tags to be riveted
to Relay Module with Pop Rivets TAP/D329 BH.
For Material Requirements see B4000.
Material shown thus * ordered
on Circuit Engineer's material list

53742

H12-4

15-4-77 A

Modified to
include provision
for Overlap Module

For
30 Relay
Module
see
B3583

VICTORIAN RAILWAYS
GEOGRAPHICAL INTERLOCKING
15 RELAY MODULE (Mk II)
ASSEMBLY
Scale - 3"=1'-0" 2-5-74

S.&C. Engineer	Designed M.J.R.	Drawn M.J.R.
	S.D.E. ME	Ckd. Iss No
B3585		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

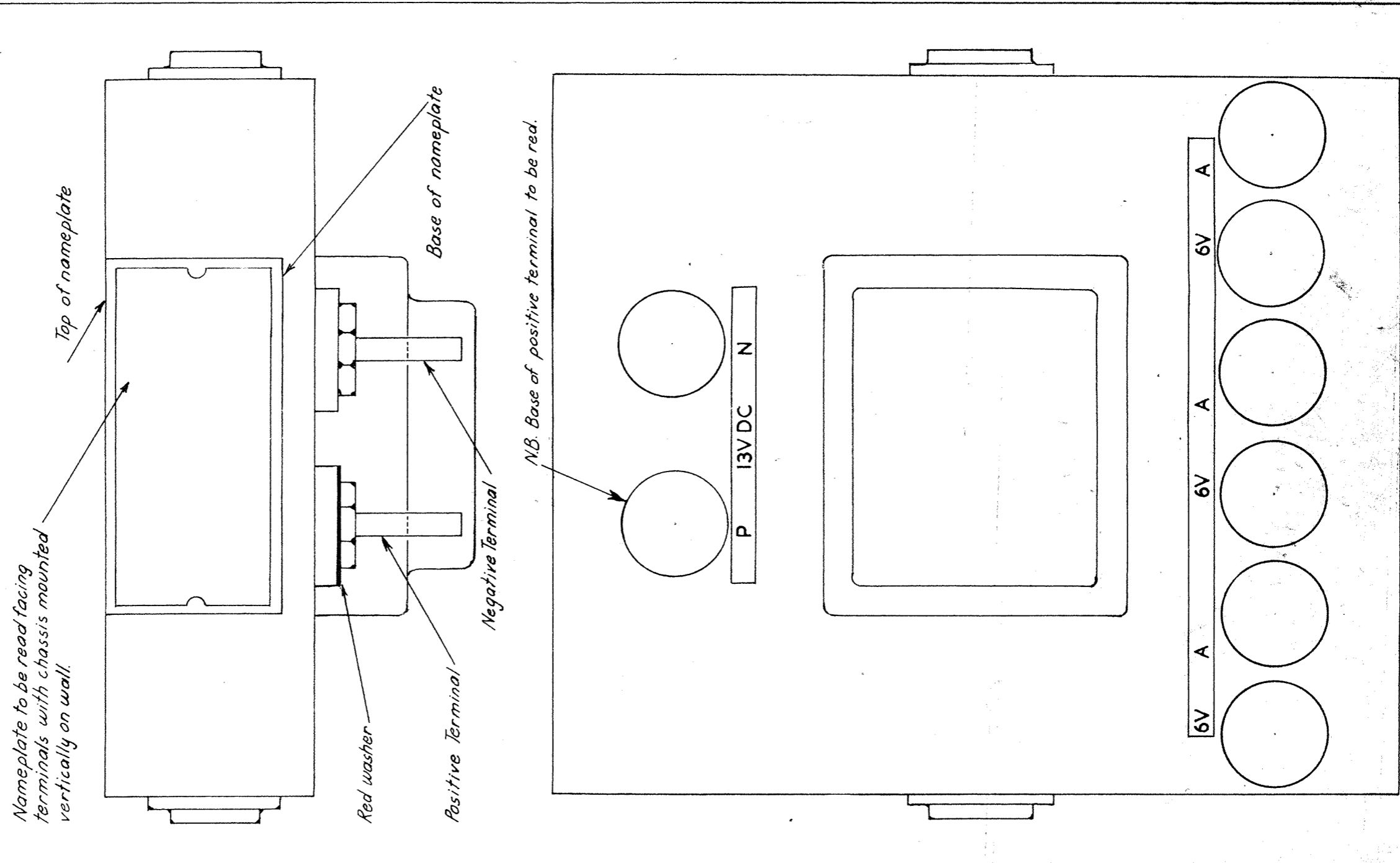
Category
G 1 1

Sheet No
5

Rev.
A

46595

C1-54



V.R. STANDARD LAYOUT FOR V.R. TRANSISTORISED INVERTERS. 9-10-67		Sig & Tel. Engineer KEL	Drawn by R.E.G.S. K.P. ASH	Traced by F5363
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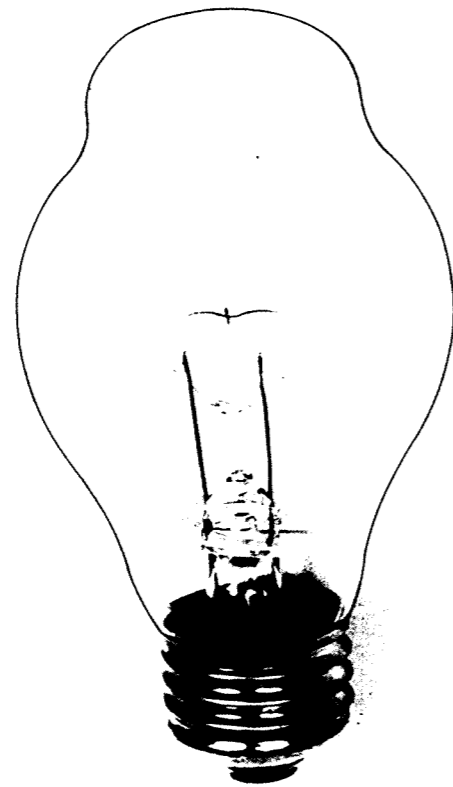


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
1 3 0

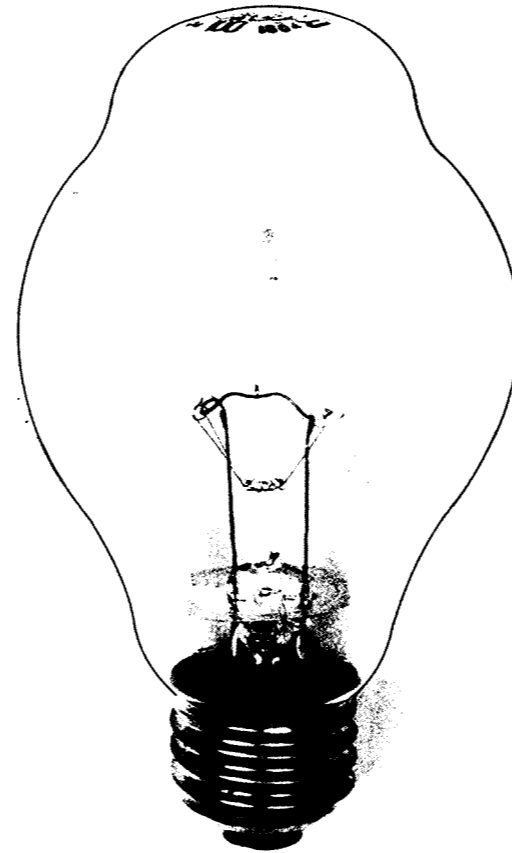
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Rev.
□



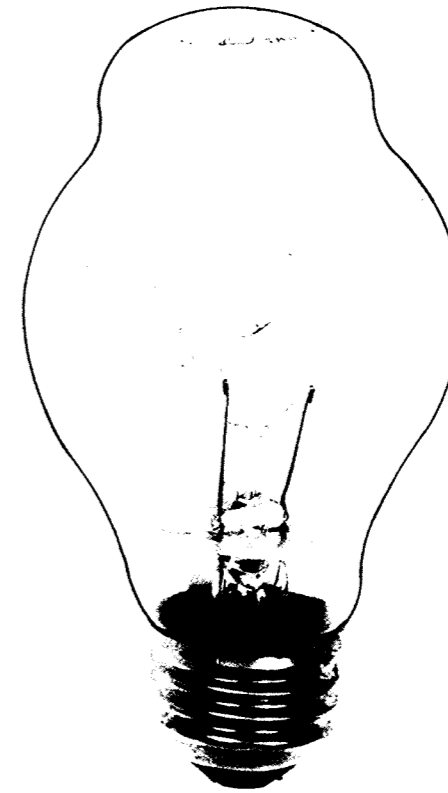
Duro-Test
120Volts-67Watts
E.S.

Uses:- Co-ordinated
Rail/Road Traffic
Signals.
V.R. Light Signal
Semaphore Signals
Route Indicators.



Duro-Test
120Volts-100Watts
E.S.

Uses:- Co-ordinated
Rail/Road Traffic
Signals.



Duro-Test
120-125Volts-60Watts
E.S.

Uses:- Co-ordinated
Rail/Road Traffic
Signals.
V.R. Light Signals
Semaphore Signals
Route Indicators.

REV	DATE	DESCRIPTION	REV'D	C'D	S.D.E.	S&CE	DESIGNED	DRAWN
							I.B.	
							CHECKED J.B.	CORRES.
							DESIGN OFFICE	
							SIG. DESIGN ENGINEER	

**VICTORIAN RAILWAYS
LAMPS - SIGNAL**

Duro Test
120 - 125 Volts.

S&C ENGINEER

DATE 26.3.80

SCALE

IN SERVICE

A3 DRAWING NO S 302/80



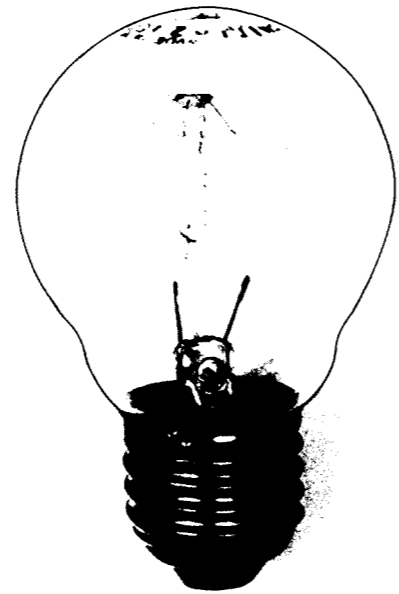
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
L 1 1

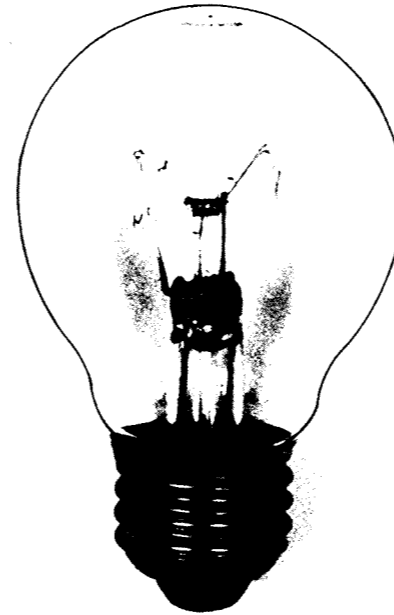
Sheet N°
1

Rev.
□

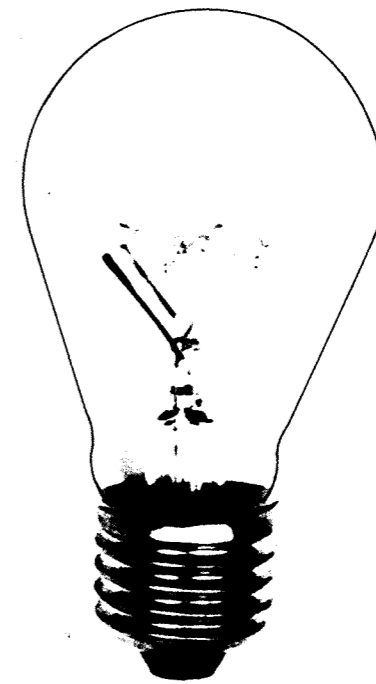
120Volts-25Watts
E.S.
Uses:- Backlight
V.R. Light Signal



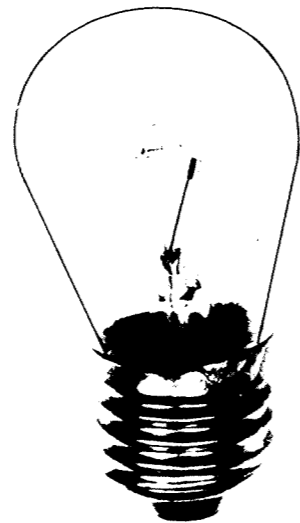
115Volts-40Watts
E.S.
Uses:-Frontlight
V.R. Light Signal.



116Volts-46Watts
E.S.
Uses:-Alternative
Lamp for V.R.
Light Signal.



120Volts-25Watts
E.S.
Uses:- Backlight
V.R. Light Signal



120Volts-25Watts
E.S.
Uses:- Backlight
V.R. Light Signal



110-120Volts-15Watts
E.S.
Clear Pilot
Uses:-Test Lamps.



REV	DATE	DESCRIPTION	REV	C'KD	S.O.E	S&CE	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS - SIGNAL 110 - 120 Volt	S&C ENGINEER DATE 26.3.80 SCALE IN SERVICE A3 DRAWING NO S 303/80 ISS N°
							I. B.			
							CHECKED J. B.	CORRES.		
							DESIGN OFFICE			
							SIG. DESIGN ENGINEER			



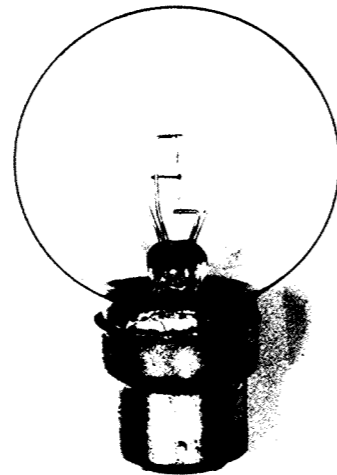
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
L 1 1

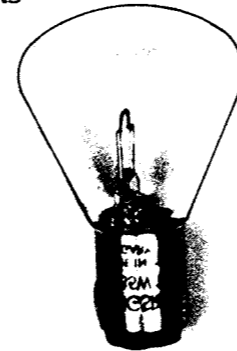
Sheet N°
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Rev.
□

12 Volts - 24-24 Watts
 Double - Filament
 B.C. 3pin
 Double Contact
 Uses:- Modular
 Style "R.M.I."
 Light Signal



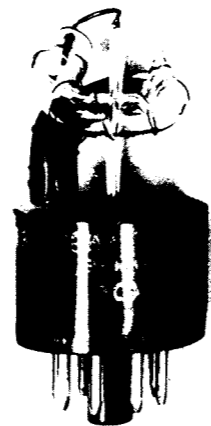
6 or 12 Volts 35 Watts
 S.B.C.
 Double Contact
 Uses:- V & S
 Indicator.



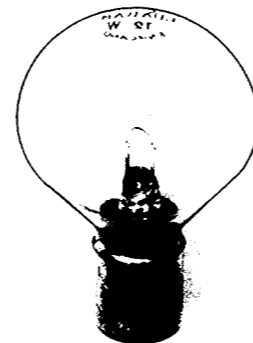
12 Volts - 2.5 Watts
 E.S.
 Uses:- Block Shelf
 Indications
 Lighting Country
 Signals.



Strobe Beacon
 Flash Tube
 P/N S 406
 Uses:- Whelen
 Strobe Lights
 12 Volts D.C.



6 Volts 12 Watts
 S.L.13
 S.B.C.
 Single Contact
 Uses:- A.C
 Searchlight
 Signals.



6 Volts - 2.5 Watts
 E.S.
 Uses:- Blockshelf
 Indications.
 Marker Lights



REV	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	S&CE	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS - SIGNAL 6-12 Volts	S&C ENGINEER		
							I.B.				DATE 26.3.80	
							CHECKED J.B.	CORRES.			SCALE	
							DESIGN OFFICE				INDEX	
							SIG. DESIGN ENGINEER			DRAWING NO.	ISS N°	
										S 304/80		

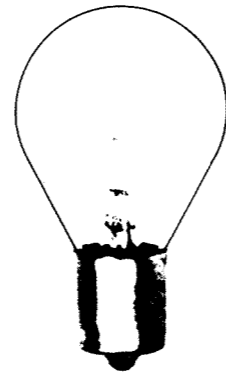


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

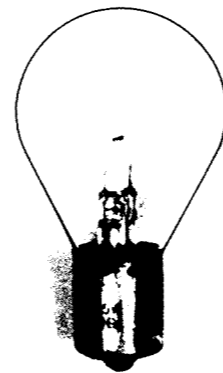
Category
 L 1 1

Sheet N°
 3

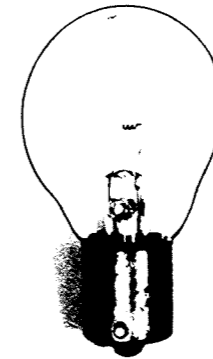
Rev.



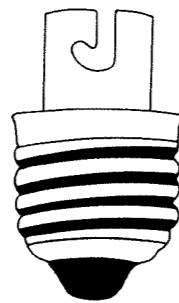
10Volts-25Watts
S.B.C.
Single Contact
Uses:-Flashing
Light & Boom
Barrier Installations.



10Volts-18Watts.
S.B.C.
Single Contact
Uses:-Flashing
Light Installations
(with limited battery
standby capacity).



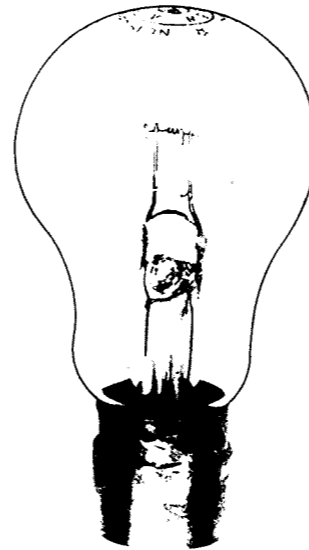
10Volts-13 & 3.5Watts
S.B.C.
Single Contact
Uses:-D. C.
Searchlight
Signals.



Lamp Adaptor
V.R. Type
E.S. to S.B.C.
Single Contact
Uses:-Blockshelf
Indications
Lighting Country
Signals
Marker Lights.



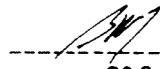
Lamp Adaptor
West Brake &
Signal Co.
Uses:-S.B.C base
to B.C. base for
Style "R" Signals.



10Volts-18 & 3.5Watts
Signal precision
B.C.
Single Contact
Uses:-Style "R"
Light Signal.



Lamp Adaptor
V.R. Type.
Uses:- S.B.C. base
to B.C. base for
Style "R" Signals.

REV'N	DATE	DESCRIPTION	REV'D	C'KD	S.D.E	S&C.E	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS - SIGNAL 10 Volts	 S&C ENGINEER DATE 26.3.80 SCALE INDEX A3 DRAWING NO S 305/80 ISS N°
							I. B.			
							J. B.	CORRES.		
							DESIGN OFFICE			
							SIG DESIGN ENGINEER			



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

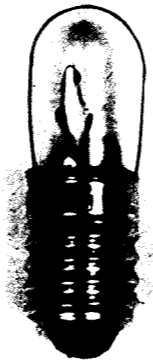
Category
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4

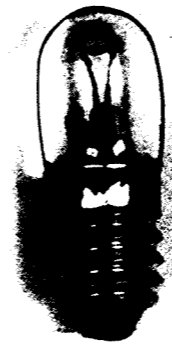
Rev.



60Volts-2 Watts
M.E.S.
Uses:- Power
Supply Cabinets
& Indication
Lights.



6Volts-1.2 Watts
M.E.S.
Uses:- Power
Supply Cabinets
& Indication
Lights.



12Volts-2Watts
M.E.S.
Uses:- Power
Supply Cabinets.



Neon Lamp
110 Volts
(Diffused envelope)
M.E.S.
Uses:- Power
Supply Cabinets.



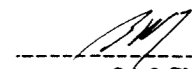
110-125Volts
-25 Watts
M.B.C.
Uses:- Power
Supply Cabinet



12Volts- 2Watts
M.B.C.
Uses. Power
Supply Cabinets

Neon Lamp
110 Volts
M.E.S.
Uses:-Power
Supply Cabinet.



REV	DATE	DESCRIPTION	REV'D	C'KD	S.O.E.	S&CE	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS-SIGNAL POWER SUPPLY CABINETS & INDICATION LIGHTS	 S&C ENGINEER		
							1. B.			DATE 26.3.80	SCALE	
							J. B.	CORRES.		IN SERVICE		
							DESIGN OFFICE			A3	DRAWING NO.	ISSN°
							SIG. DESIGN ENGINEER			S 306/80		



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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12Volts-1.2Watts
Lilliput E.S.
Uses:-Push-pull
Circuit Controllers.



28Volts-40mA.
Lilliput E.S.
Uses:-Push-pull
Circuit Controllers



60Volts-30mA.
Lilliput E.S.
Uses:-Push-pull
Circuit Controllers.

60Volts-30mA
Min. Flange
Uses:-Pushbuttons
& Indication Lights.

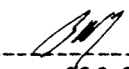


12Volts-1.2 Amps
Min. Flange
Uses:-Pushbuttons
& Indication Lights.



28Volts-40mA.
Min. Flange.
Uses:-Pushbuttons
& Indication Lights.



REV	DATE	DESCRIPTION	REV	C'KD	S.O.E.	S&C.E	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS-SIGNAL Push-pull Controllers, Push buttons & Indication Lights.	 S&C ENGINEER		
							1. B.			DATE <i>26.3.80</i>	SCALE	
							J. B.			IN SERVICE	DRAWING NO. ISSN°	
							DESIGN OFFICE			A3	S 307/80	
							SIG. DESIGN ENGINEER					



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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Lamps. Pencil
6Volts-40m.A
Nº 2
• Uses:-Switch-
boards & visual
indicators.-



Lamps. Pencil
12 Volts-1.2 Watts
Nº2
Uses: Signal
Diagrams &
Indications.



Lamps. Pencil
12Volts 50m.A
Uses:- Signal
Diagrams &
Indications.

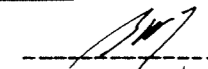




Lamps. Pencil
48Volts-20m.A
Uses:- Push
Buttons &
Indicators.



Lamps. Pencil
60Volts-20mA
Uses:- Push
Buttons &
Indicators.



REV	DATE	DESCRIPTION	REV	D	C	KD	S.D.E	S&CE	DESIGNED	DRAWN	VICTORIAN RAILWAYS LAMPS-SIGNAL Pencil 6-60 Volts	 S&C ENGINEER		
									<i>I. B.</i>			DATE <i>26.3.80</i>		
									CHECKED <i>J. B.</i>	CORRES.		SCALE		
									 DESIGN OFFICE			IN SERVICE		
									 SIG. DESIGN ENGINEER			A3	DRAWING NO.	ISSNº
												S 308/80	3	

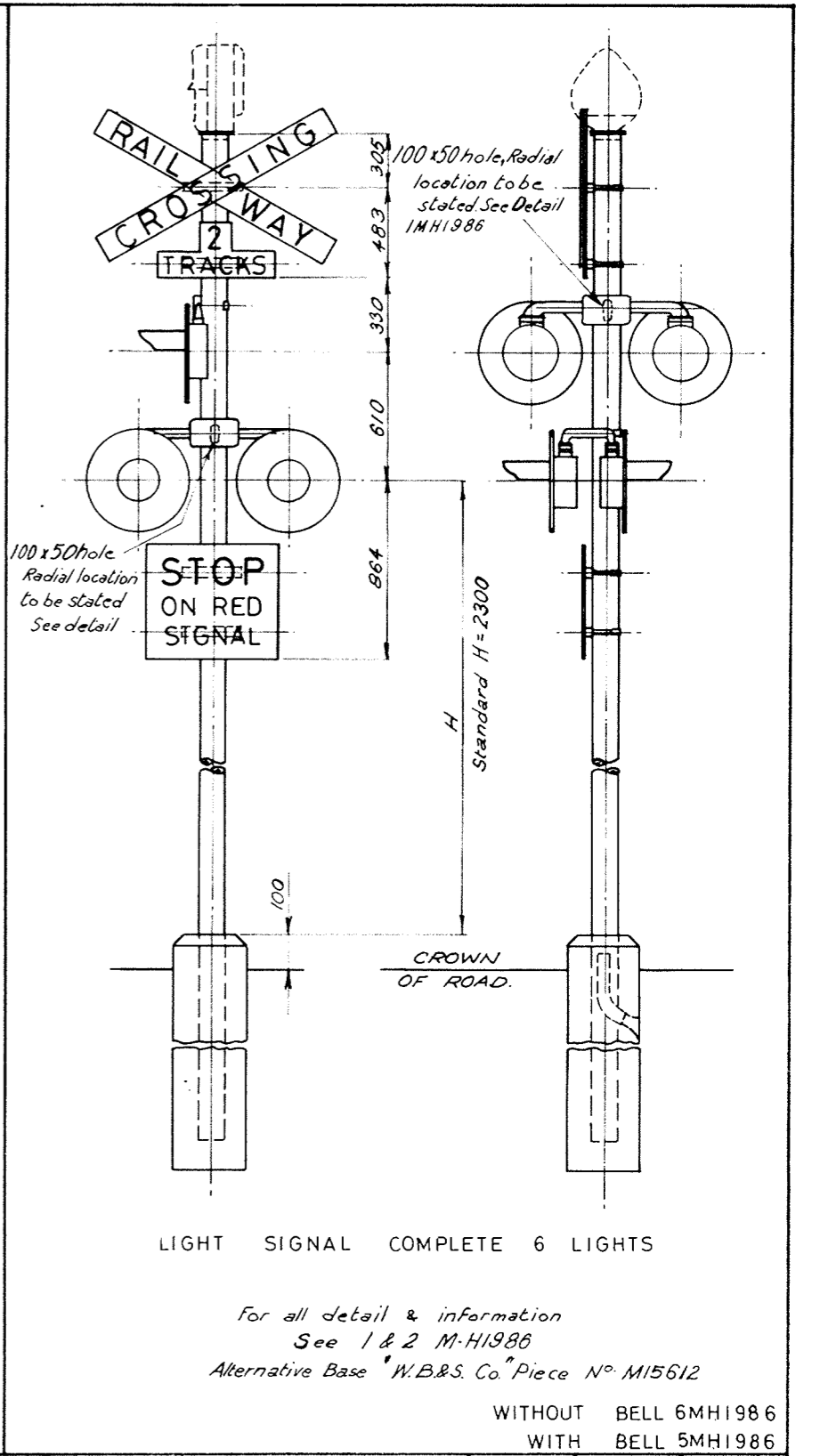
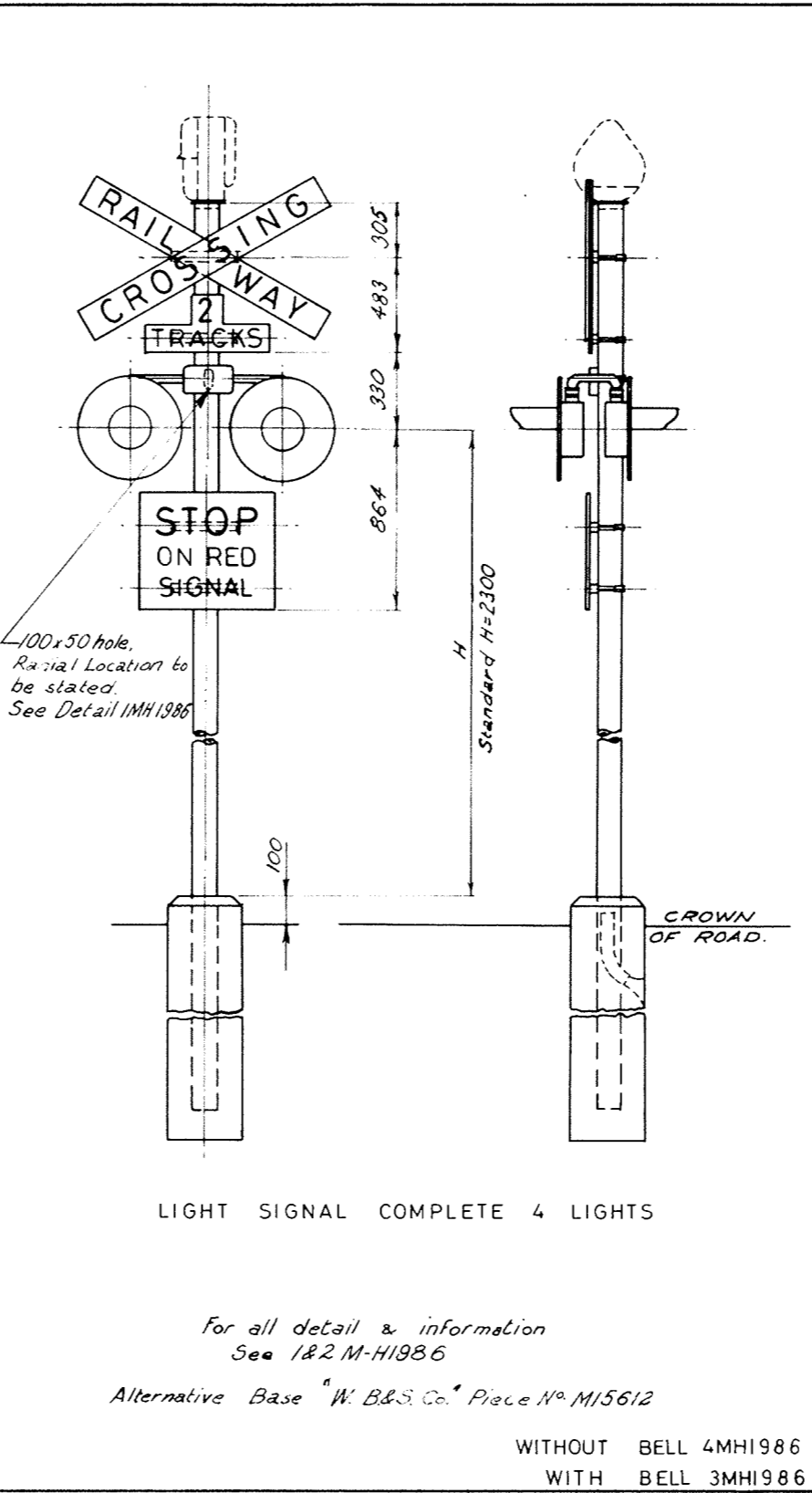
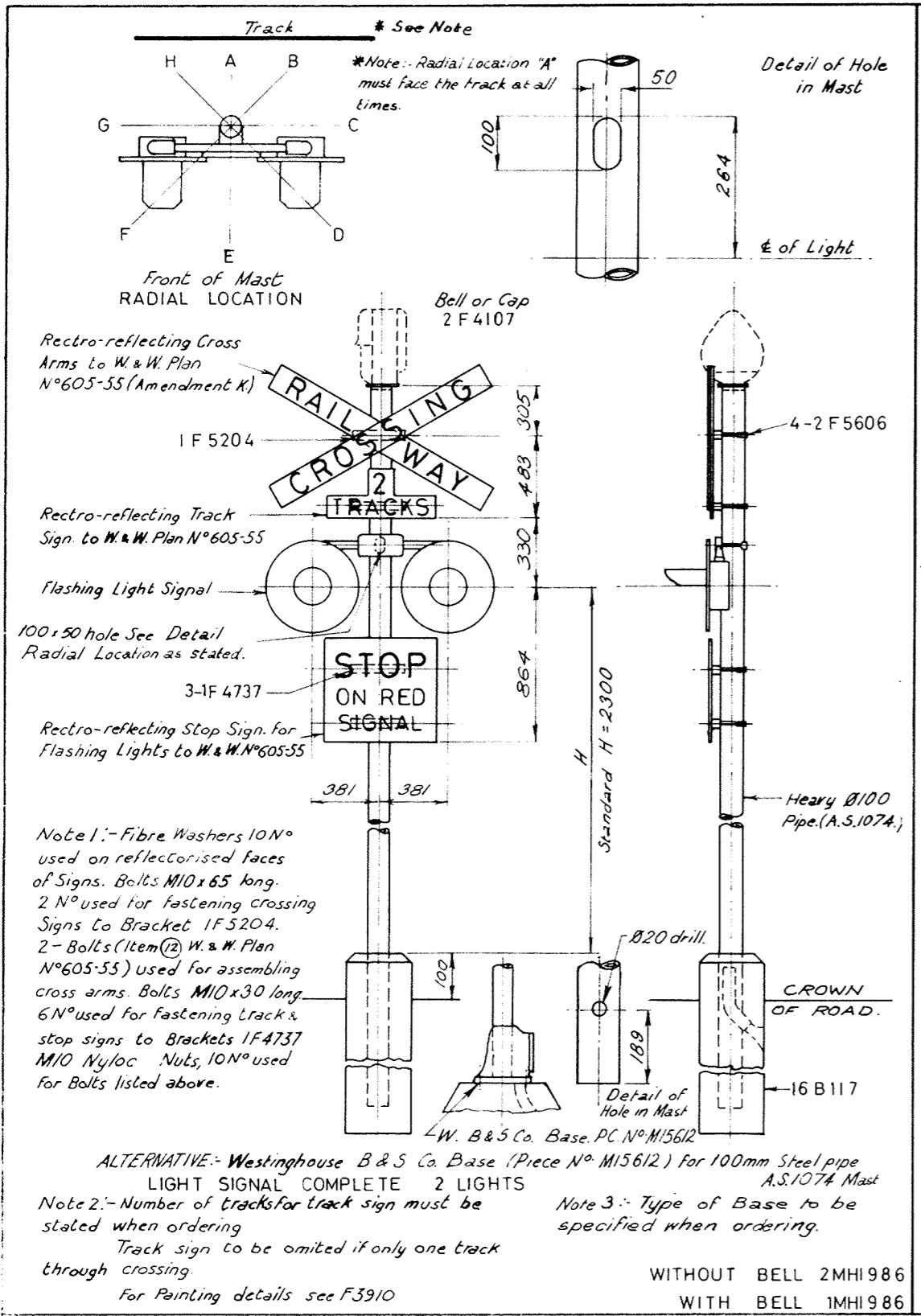


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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VICTORIAN RAILWAYS		S&C. Engineer.	Designed B. V.	Drawn B. V., I.G.B.
LEVEL CROSSING			S.D.E. M. F.	Ckd. Iss. No.
ROAD SIGNAL FLASHING LIGHT				
TYPE H.C. 100				
8-1-80.		M-H1986		



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

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L 3 0	1	

2 - BOLTS M.S. H.R.H. CAD. PL.
M10 x 1,5 x 6 LG
2 - NUTS M.S. HEX. M10 x 1,5
2 - WASHERS FIBRE 16.0 D. x 11.0 x 1,6

2 - BOLTS TEE HEAD
M10 x 1,5 x 32 LG
SEE W.&W. PLAN N° 605-55 ITEM 12
2 - NUTS M.S. HEX. M10 x 1,5
2 - WASHERS FIBRE 16.0 D. x 11.0 x 1,6

RETRO-REFLECTING CROSS ARMS
TO W & W
N° 605-55

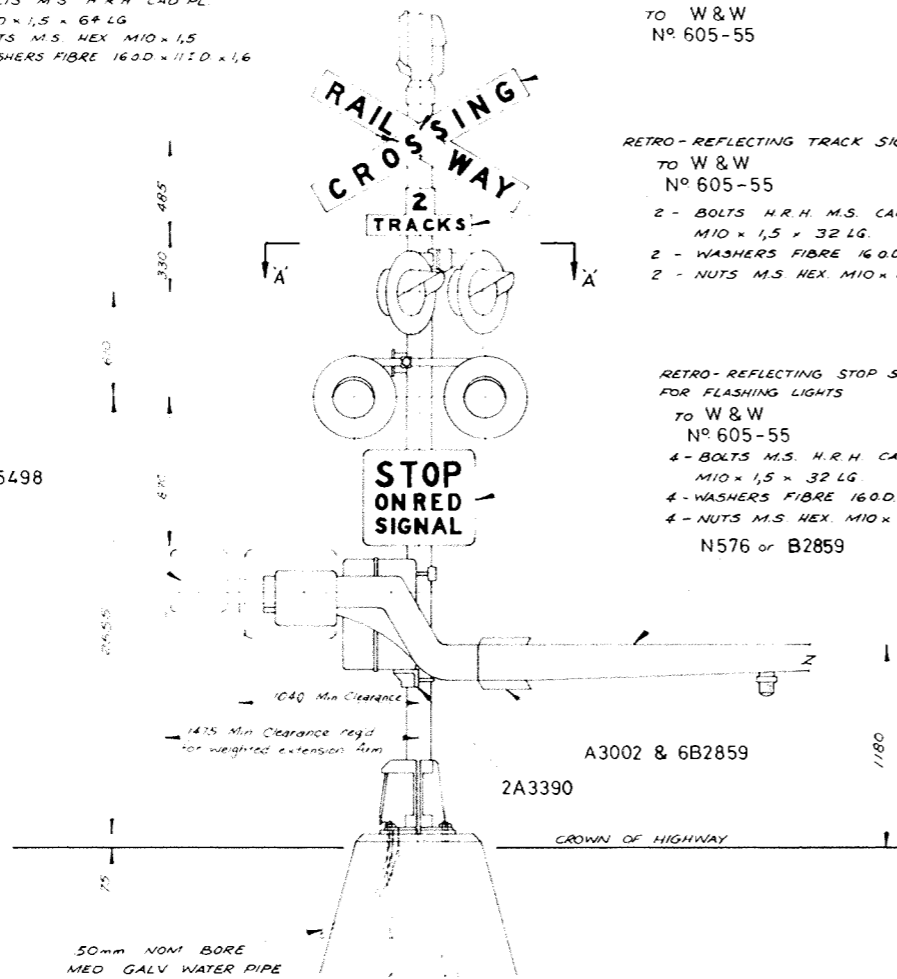
RETRO-REFLECTING TRACK SIGN
TO W & W
N° 605-55

2 - BOLTS H.R.H. M.S. CAD. PL.
M10 x 1,5 x 32 LG.
2 - WASHERS FIBRE 16.0 D. x 11.0 x 1,6
2 - NUTS M.S. HEX. M10 x 1,5

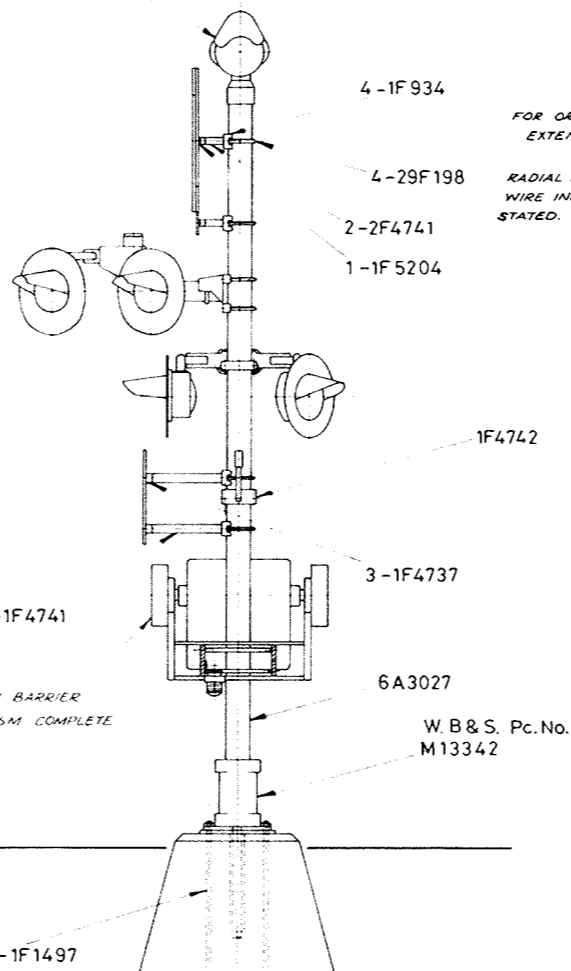
RETRO-REFLECTING STOP SIGN
FOR FLASHING LIGHTS
TO W & W
N° 605-55

4 - BOLTS M.S. H.R.H. CAD. PL.
M10 x 1,5 x 32 LG
4 - WASHERS FIBRE 16.0 D. x 11.0 x 1,6
4 - NUTS M.S. HEX. M10 x 1,5
N576 or B2859

1F5498



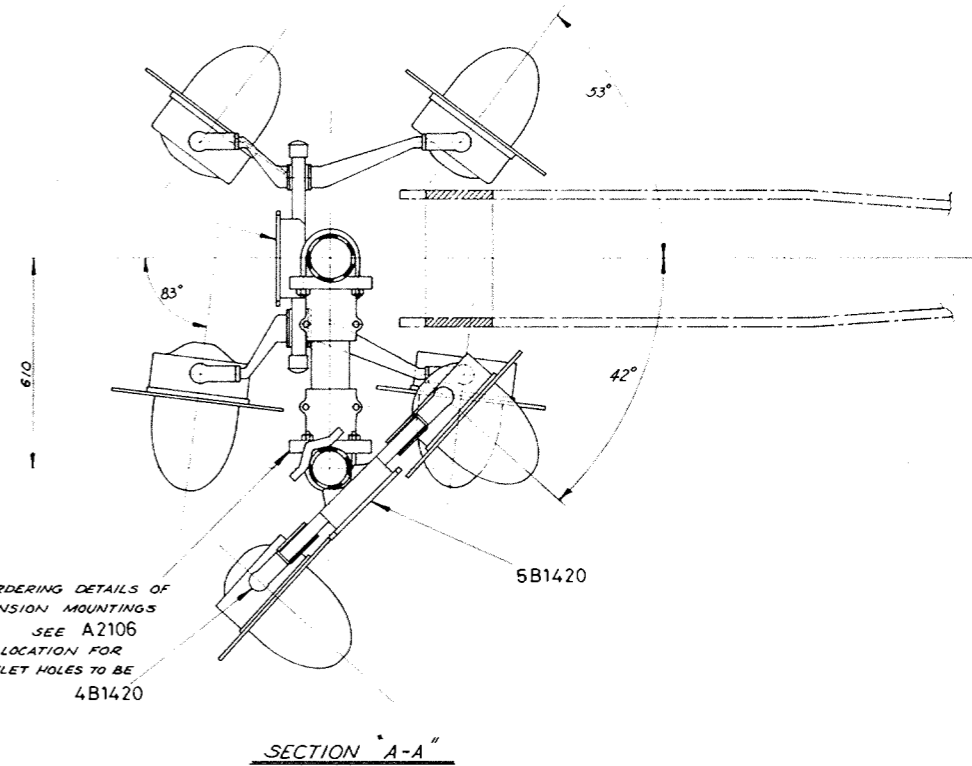
BELL



BOOM BARRIER
MECHANISM COMPLETE

MOULD - ZA2132 TO BE USED TO FORM
BASE ABOVE GROUND DEPTH OF
FOUNDATION TO SUIT LOCATION.

7B1420



FOR ORDERING DETAILS OF
EXTENSION MOUNTINGS
SEE A2106
RADIAL LOCATION FOR
WIRE INLET HOLES TO BE
STATED. 4B1420

SECTION "A-A"

INFORMATION FOR ORDERING :-

STATE LENGTH OF BOOM REQUIRED. LENGTH IS MEASURED FROM CENTRE OF MAST
NUMBER OF TRACKS FOR TRACK SIGN MUST BE STATED
TRACK SIGN TO BE OMITTED IF ONLY ONE TRACK THROUGH CROSSING
POSITION OF ROADWAY ARM LIGHTS WILL BE AS SHOWN ON N576 UNLESS
OTHERWISE SPECIFIED.

PART N°	DESCRIPTION	MAT'L	QTY.	PART N°	DESCRIPTION	MAT'L	QTY.
STOCK	WARNING BELL	M.S.	1	1F5204	BRACKET	M.S.	1
STOCK	BOOM BARRIER MECHANISM COMP	M.S.	1	STOCK	BOLTS TEE HD M10 x 1,5 x 32 LG	M.S.	2
6A3027	MAST	M.S.	1	"	BOLTS H.R.H. M10 x 1,5 x 6 LG CAD PL	M.S.	2
N576 or B2859	BOOM BARRIER ARM	"	1	"	BOLTS H.R.H. M10 x 1,5 x 32 LG CAD PL	M.S.	6
N576 or B2859	BASE COMP WITH JUNCTION BOX	"	1	"	NUTS HEX M10 x 1,5	M.S.	10
STOCK	LIGHT SIGNALS COMP WITH MTGS	"	6	"	WASHERS 16.0 D. x 11.0 x 1,6	FIBRE	10
N576 or B2859	RETRO-REFLECTING CROSS ARMS	ALUM.	1	2A3390	MECHANISM SUPPORT	C.I.	1
"	RETRO-REFLECTING TRACK SIGN	"	1	N576 or B2859	ARM BRACKETS AS REQ'D	M.S.	1
"	RETRO-REFLECTING STOP SIGN	"	1	1F5498	EXTENSION ARM	M.S.	2
A2106	AUTOMATIC BOOM BARRIER EXTENSION MOUNTING	"	1				
1F1497	"L" BOLTS	M.S.	4				
4B1420	ELBOW & LAMP UNIT SUPPORT	C.I.	2				
5B1420	CROSS ARM	C.I.	1				
7B1420	AUTOMATIC BOOM BARRIER - 4 BRACKET ASSEMBLY	"	1				
29F138	"U" BOLT	M.S.	4				
1F934	CLAMP	C.I.	4				
1F4737	BRACKET	M.S.	3				
1F4741	BRACKET x = 387 (15 1/4")	M.S.	2				
2F4741	BRACKET x = 133 (5 1/4")	M.S.	2				
1F4742	OUT OF ORDER CATCH	M.S.	1				

NOTES :-

FOR PAINTING DETAILS SEE F4823
FOR AUTO BOOM BARRIER FITTED ON PIPE MAST A1043 SEE B1285.
FOR AUTO BOOM BARRIER FITTED WITH STANDARD FLASHING LIGHT
ARRANGEMENT SEE B2010.

REV'N	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	S.&C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS	
							T. B.	T. B.	AUTOMATIC BOOM	
							CHECKED	CORRES.	BARRIER	
							<i>Sam Beaton</i> DESIGN OFFICE		DATE 4-10-77 SCALE INDEX DRAWING NO. S918-77 REV'N	
							<i>A. H. H.</i> SIG. DESIGN ENGINEER		SHEET NO. 10 REV.	

59/34

H 2.2-2



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category

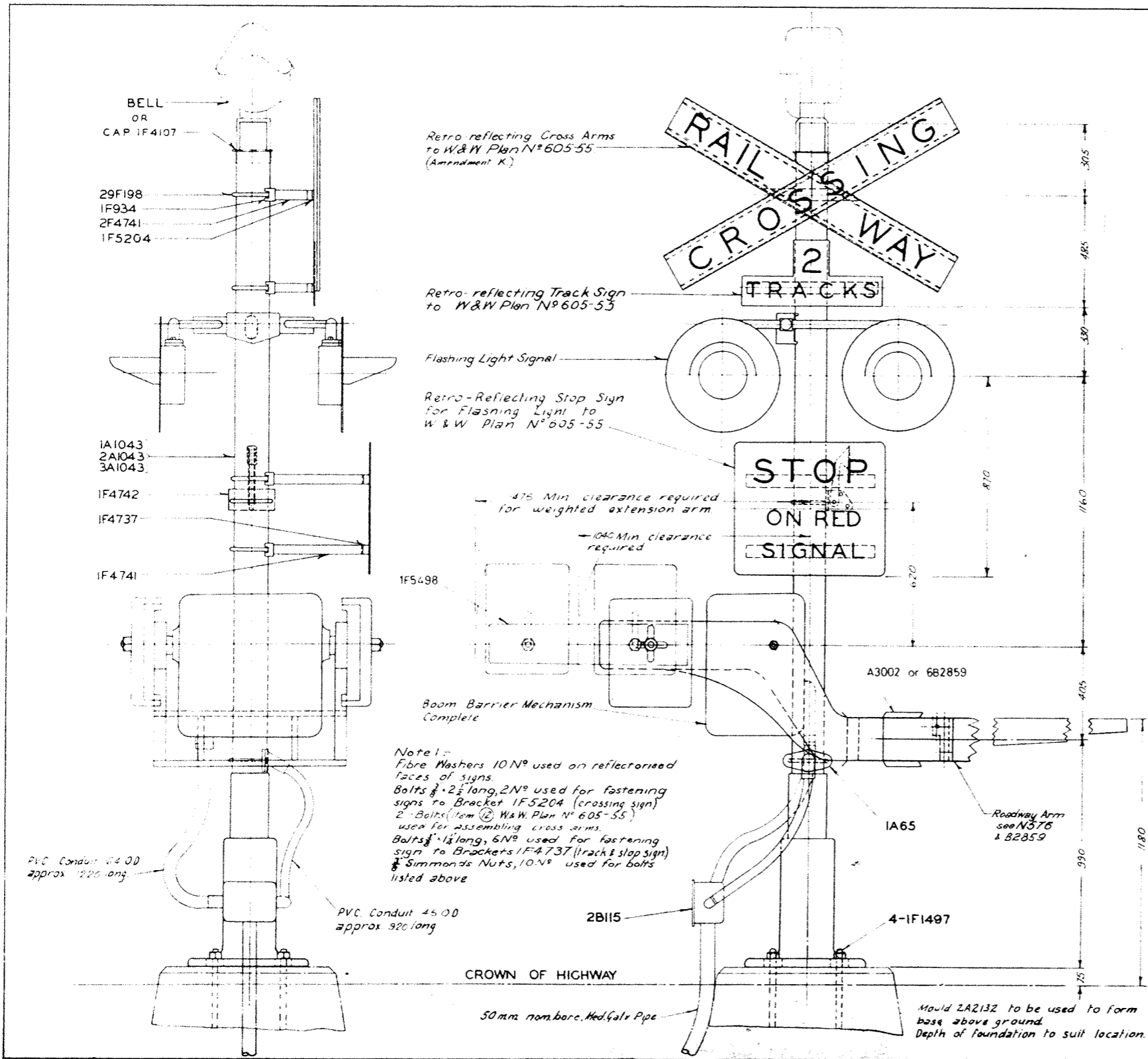
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56941
J16-1



MATERIAL LIST

Part No	Description	Material	Quantity
1A1043	Mast (With extension for Bell H=3550)	M.S.	1
2A1043	Mast (Without extension for Bell H=3550)	M.S.	1
3A1043	Mast (Without extension for Bell H=2750)	M.S.	1
N575	Roadway Arm B2859 Roadway Arm (Length as reqd)	-	1
1A65	Wire Inlet (only as required)	-	1
IF4737	Brackets	M.S.	3
IF5204	Bracket	M.S.	1
IF934	Clamps	C.S.	4
29F198	U Bolts	M.S.	4
IF4742	Out of Order Catch	M.S.	1
IF4741	Brackets	M.S.	2
2F4741	Brackets	M.S.	2
IF4107	Cap	M.S.	1
Stock	Warning Bell	-	1
"	Light Signal Complete with Mountings 4 Lights	-	1
"	Retro-reflecting Cross Arms to W&W Plan N° 605-55	Alum.	1
"	Retro-reflecting Track Sign to W&W Plan N° 605-55	Alum.	1
"	Retro-reflecting Stop Sign for Flashing Light to W&W Plan N° 605-55	Alum.	1
"	Boom Mechanism Complete	-	1
"	Bolts see W&W Plan N° 605-55 Item (2)	M.S.	2
"	Washer 8/16 x 1/2	Fibre	10
"	Bolts 3/8 BSW H.R. Cad Pltd 2 1/2 long	M.S.	2
"	Bolts 3/8 BSW H.R. Cad Pltd 1 1/2 long	M.S.	6
"	Nuts 3/8 BSW Simmonds. N.P/V126/1a/2	M.S.	10
"	Bolts 1/2 BSM H.R.H. 1 1/2 long	M.S.	8
"	Spring Washers 1/2	S.S.	8
IF1497	L-Bolt	M.S.	4
2B115	Pipe Junction Box	C.I.	1
IF5498	Extension Arm	M.I.	2
A3002 & 6B2859	Arm Brackets (as reqd)	M.S.	1

Note - For Painting details see F4823.

INFORMATION FOR ORDERING
 State length of boom required. Length is measured from centre of mast.
 State whether mast is to be equipped with or without bell.
 When mast is to be equipped with boom mechanism only short mast 3A1043 is to be supplied.
 Number of tracks for track sign must be stated.
 Track sign to be omitted if only one track through crossing.
 Radial location of 102.5 hole for flashing lights also hole for wire inlet 1A65 must be stated when required. Refer drilling information on F4810.
 Position of Roadway Arm Lights will be as shown on N576 unless otherwise specified.

FOR AUTOMATIC BOOM BARRIER FITTED WITH M&H TERMINAL BOX BASE - SEE B2010

VICTORIAN RAILWAYS
AUTOMATIC BOOM BARRIER ASSEMBLY

B1285

2-1-55

19 9 57
13 6 57
20 4 30
9 5 75

Part No. 155408 added
Part No. B2859 added
Part No. 1110 17-5-62
Part No. 1085 24-7-64
Part No. 1571 21-1-74
Part No. 1206 5-9-65
Part No. 1259 9-10-65
Part No. 1110 17-5-62
Part No. 1085 24-7-64

Warning bell turned 90° face of bell now at right angles to sight-line of flashing light circuits added.

M&H Re. roadway arm amended to include drawing F4810

Spanned description of Signalling Works added

Dimensions previously shown as N.R.R.S. Pt. No. 1585

Jig & Tel. Drawn by Taced by I.B. I.B. 4.11.11

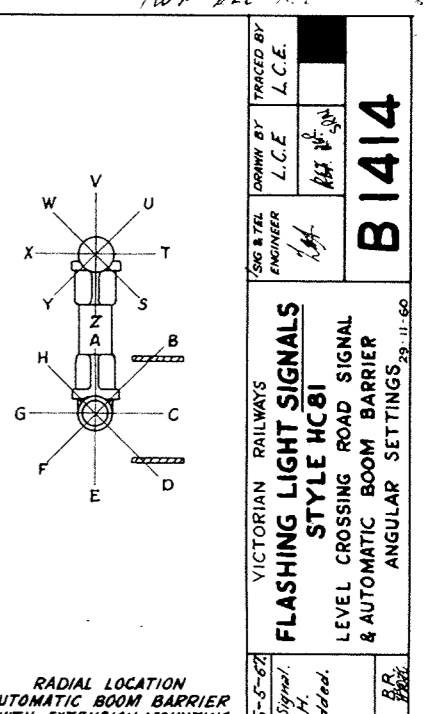
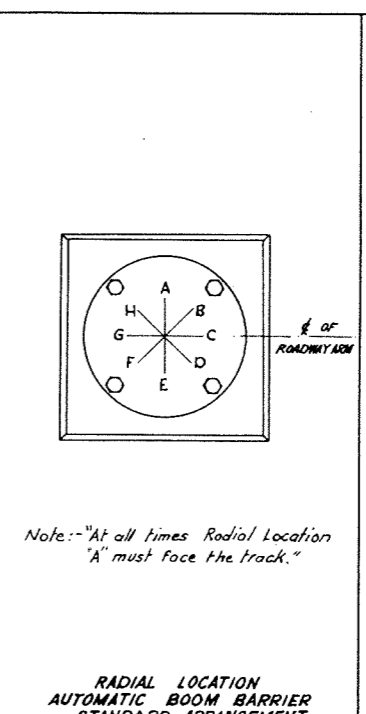
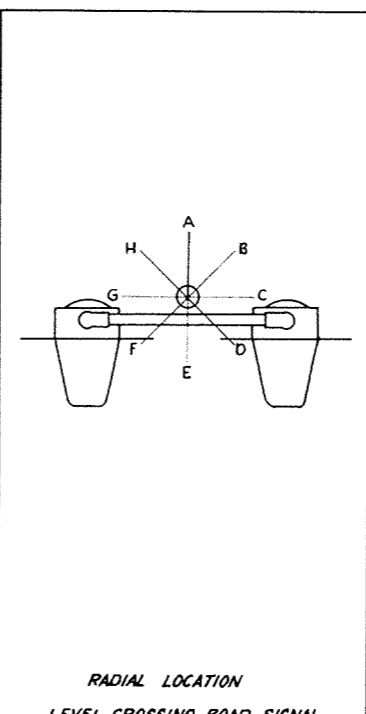
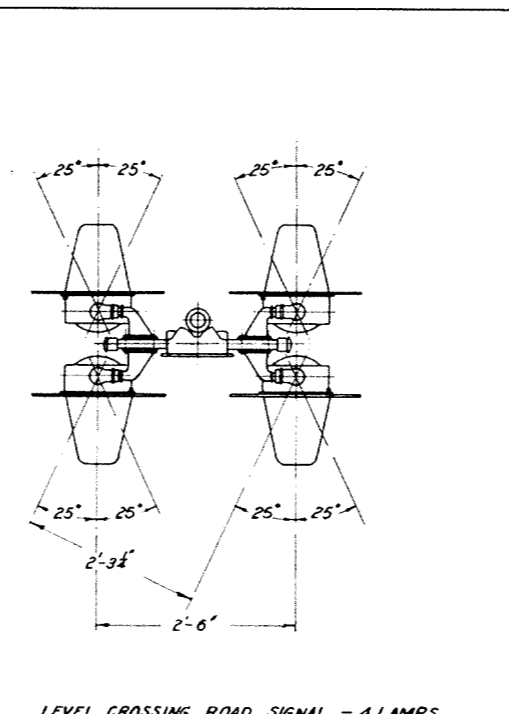
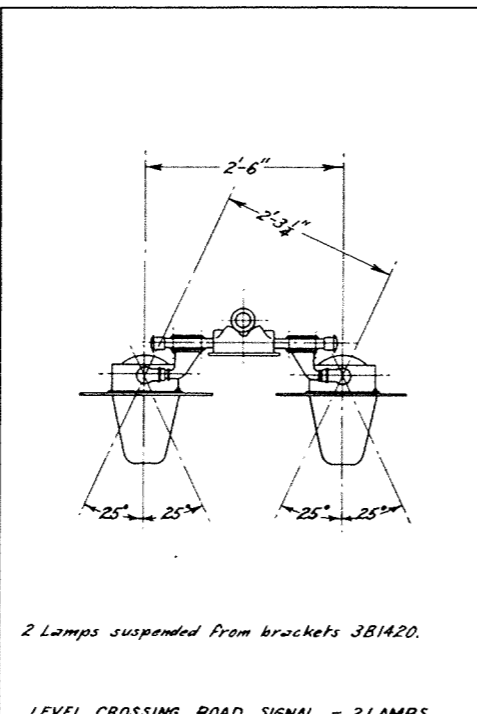
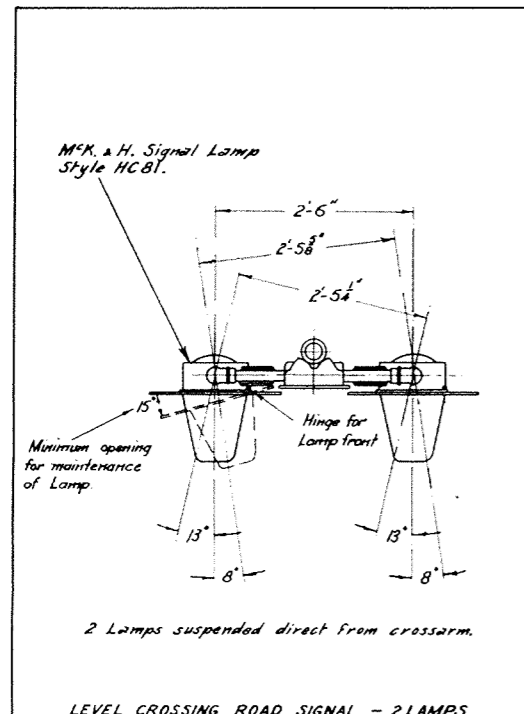
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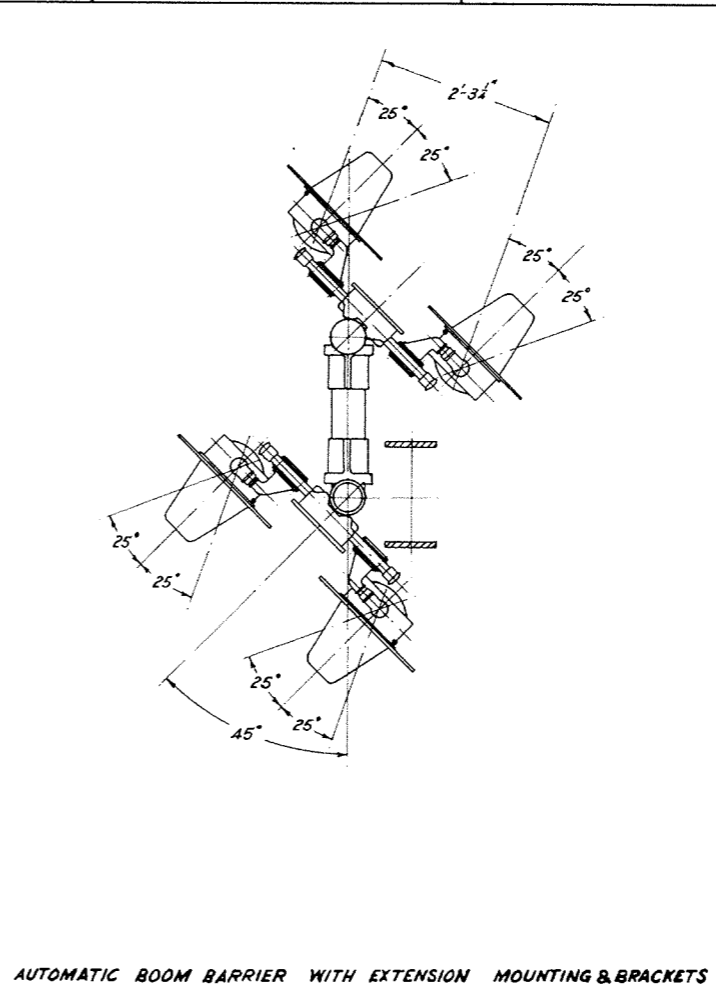
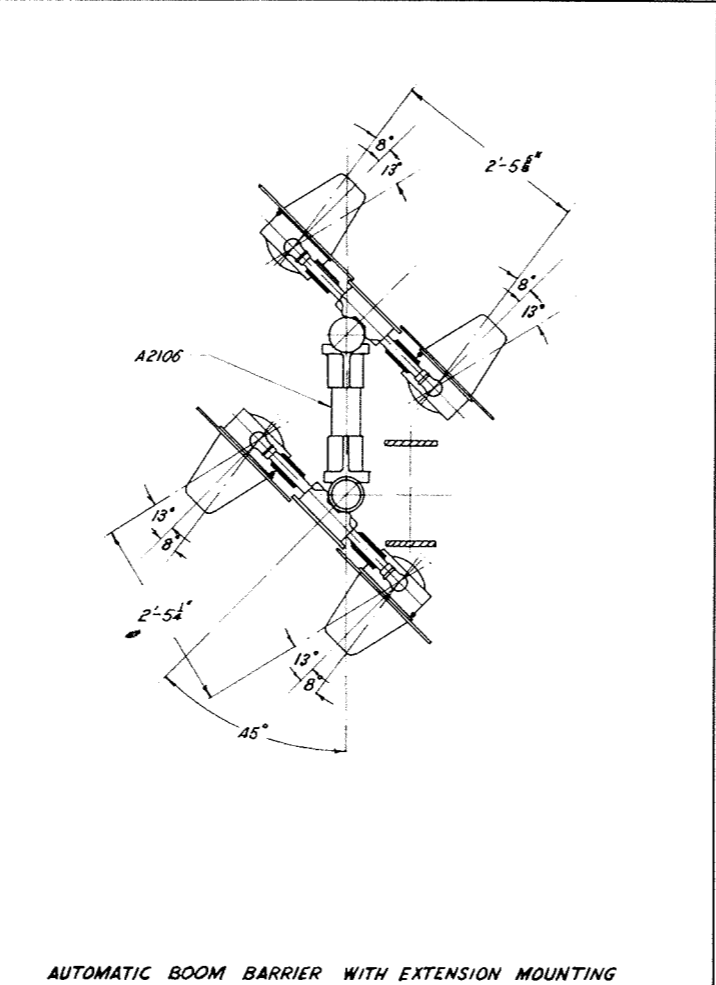
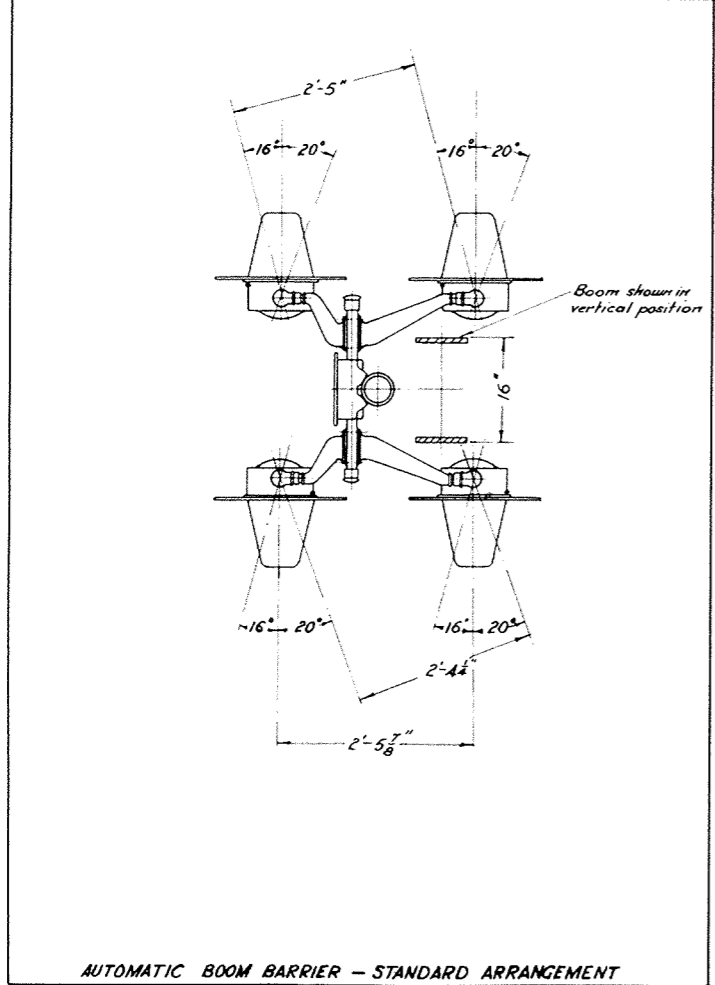
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

1 WP 226 1-7

DESIGNED BY L.C.E.	DRAWN BY L.C.E.	TARGETED BY L.C.E.
VICTORIAN RAILWAYS FLASHING LIGHT SIGNALS STYLE HC81 LEVEL CROSSING ROAD SIGNAL & AUTOMATIC BOOM BARRIER ANGULAR SETTINGS 29.11.80		
B1414		



Note: "At all times Radial Location 'A' must face the track."



NOTES:-
 All angles shown are for maximum setting of lamps allowing for front of the lamps to be opened for maintenance
 For assembly of Level Crossing Road Signal see drg H996
 For assembly of Automatic Boom Barrier see drg B1285
 For general dimensions of Brackets and Cross Arm See drg. B1420

15-5-82	Level Crossing Road Signal, 2 Lamps on MFK, a H. Brackets M10571 added. See 3B1420.	B.P.
3-8-76	Alteration N° 1732	B.V.

40838
J19-3



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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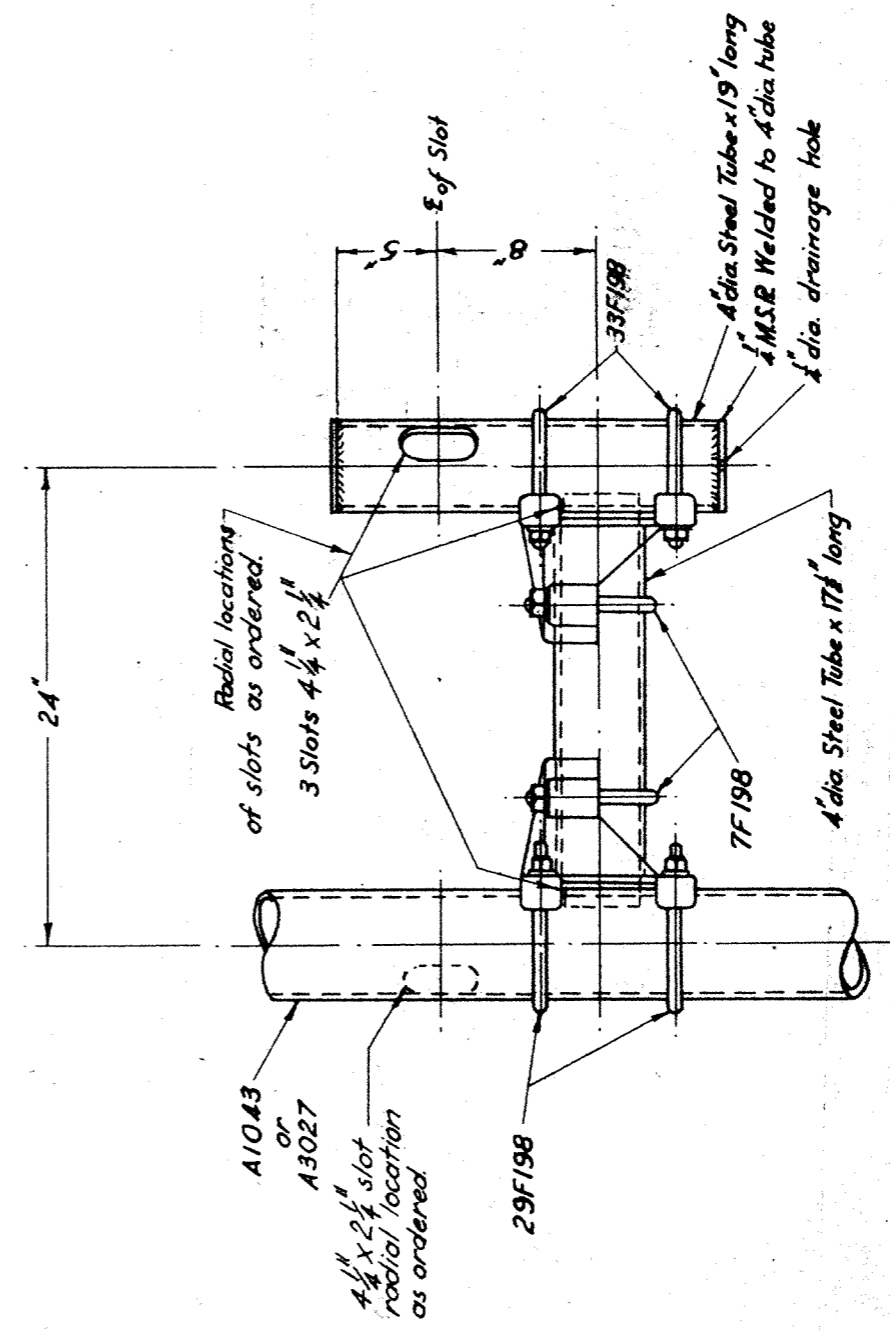
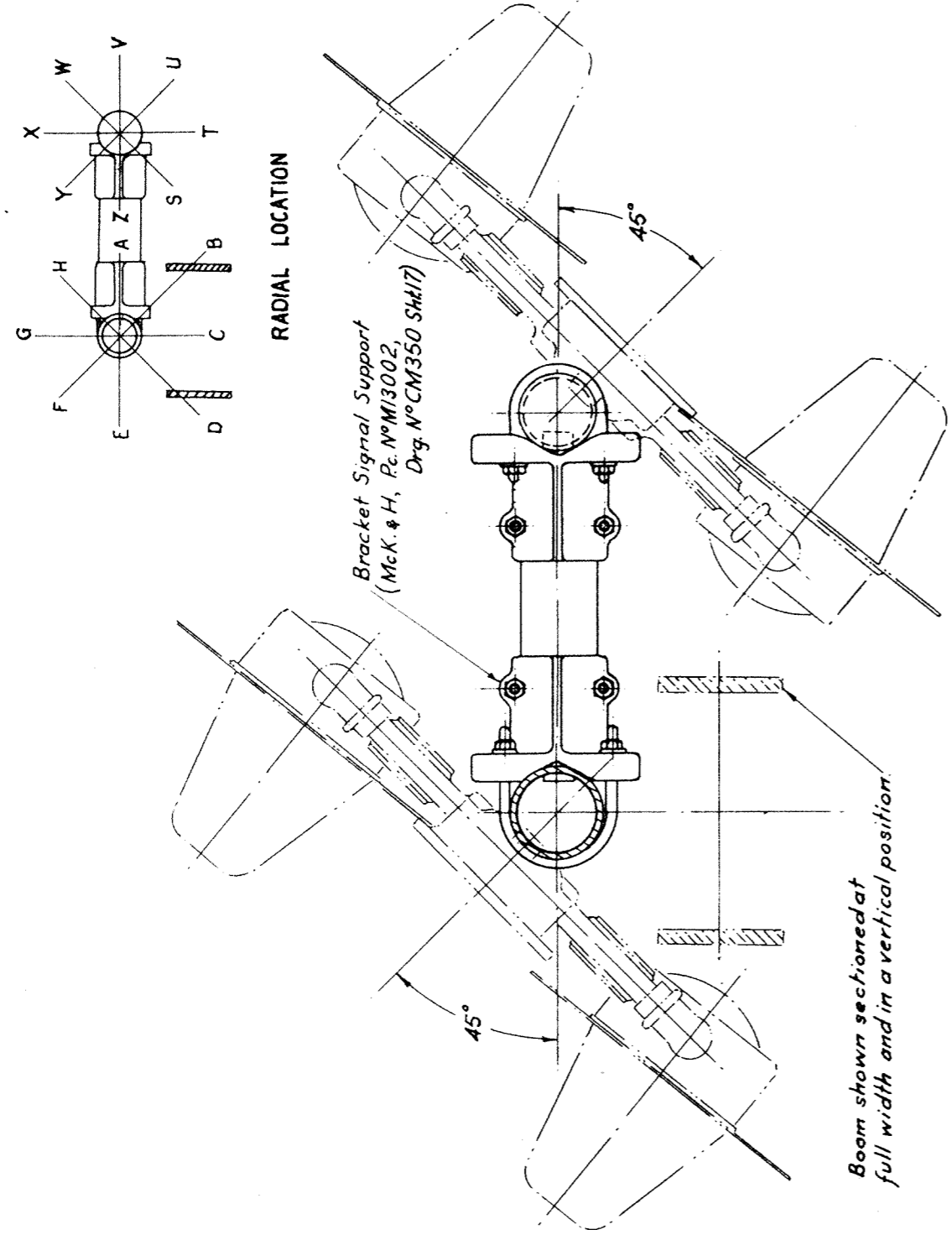


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22-9-65 AIF. 1228
AIF. No 1180 - 29.7-64.

A2106

VICTORIAN RAILWAYS
AUTOMATIC BOOM BARRIER
 EXTENSION MOUNTING FOR
 FLASHING LIGHT SIGNALS
 TYPICAL ASSEMBLY

SCALE: 1 1/2" to 1" 29-11-60

SIG & TEL ENGINEER
 L.C.E.
 DRAWN BY
 L.C.E.
 TRACED BY
 L.C.E.

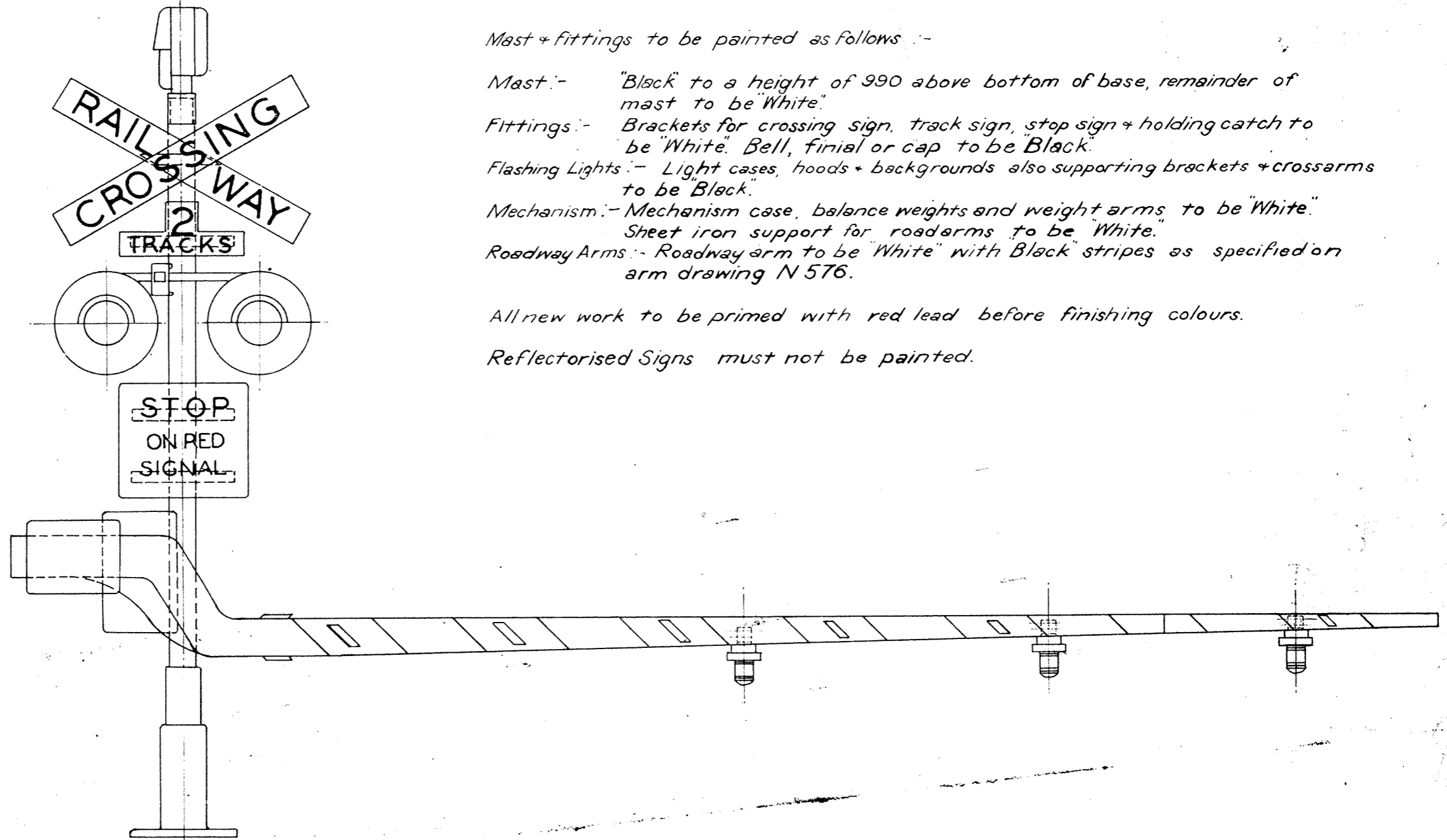
A2106

9579

IWR R.S. 152 4411-562

39621.

C1-44.



Mast & fittings to be painted as follows :-

Mast :- "Black" to a height of 990 above bottom of base, remainder of mast to be "White".

Fittings :- Brackets for crossing sign, track sign, stop sign & holding catch to be "White". Bell, finial or cap to be "Black".

Flashing Lights :- Light cases, hoods & backgrounds also supporting brackets & crossarms to be "Black".

Mechanism :- Mechanism case, balance weights and weight arms to be "White". Sheet iron support for roadway arms to be "White".

Roadway Arms :- Roadway arm to be "White" with "Black" stripes as specified on arm drawing N 576.

All new work to be primed with red lead before finishing colours.

Reflectorised Signs must not be painted.

2. Drawing Metricised. 5 '75 Lantern previously shown as W.R.R.S. Pt. No. 1585	1. Warning bell turned 90° 28-7-59 Face of bell now at right angles to sight-line of flashing light.	V.R. AUTOMATIC BOOM BARRIER	Sig & Tel Engineer	Drawn by I.B.	Traced by I.B.	F4823
AB	T.B. PE	INSTRUCTIONS FOR PAINTING 15.10.57				



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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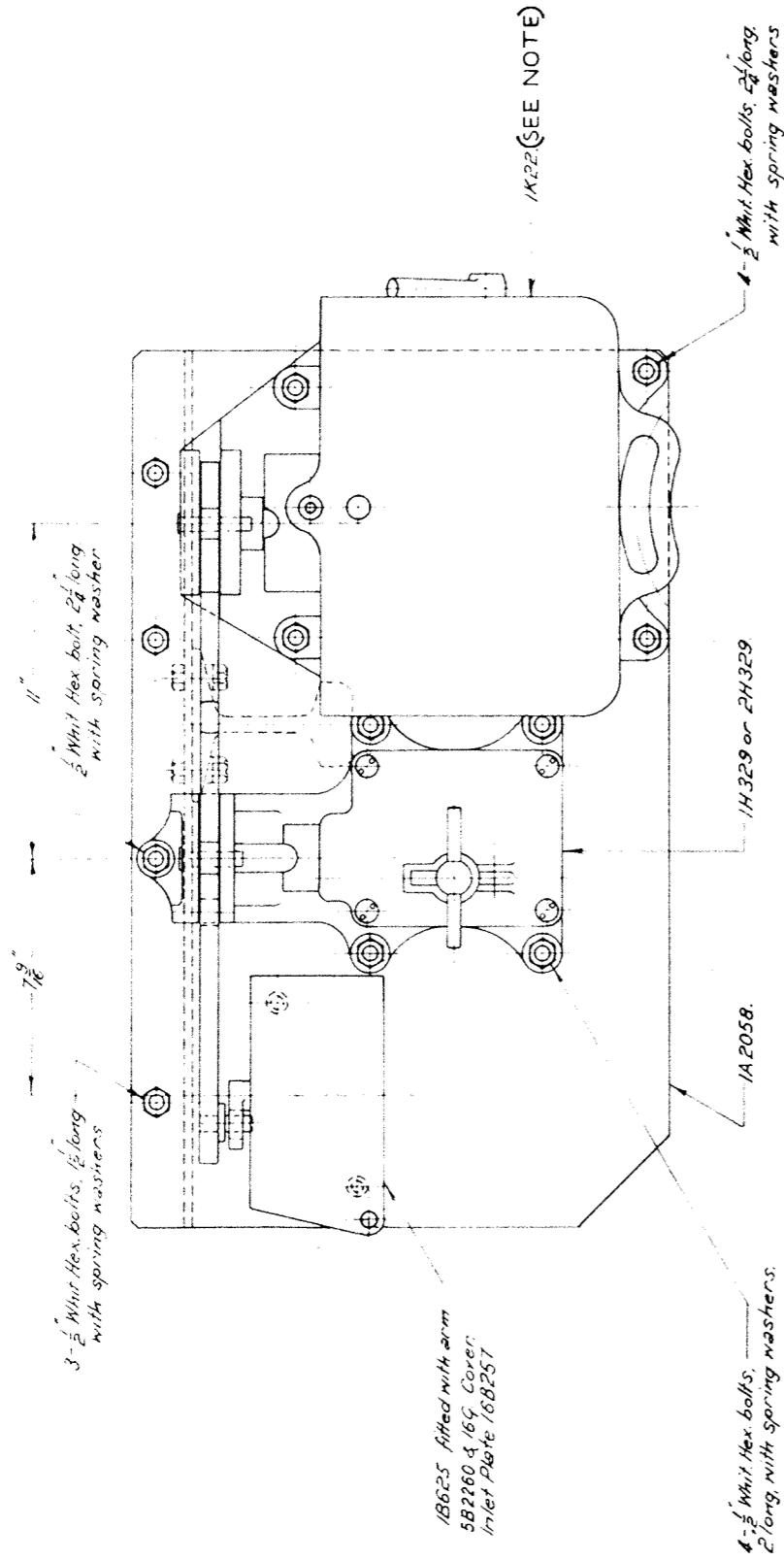


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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A



IK22 (SEE NOTE)

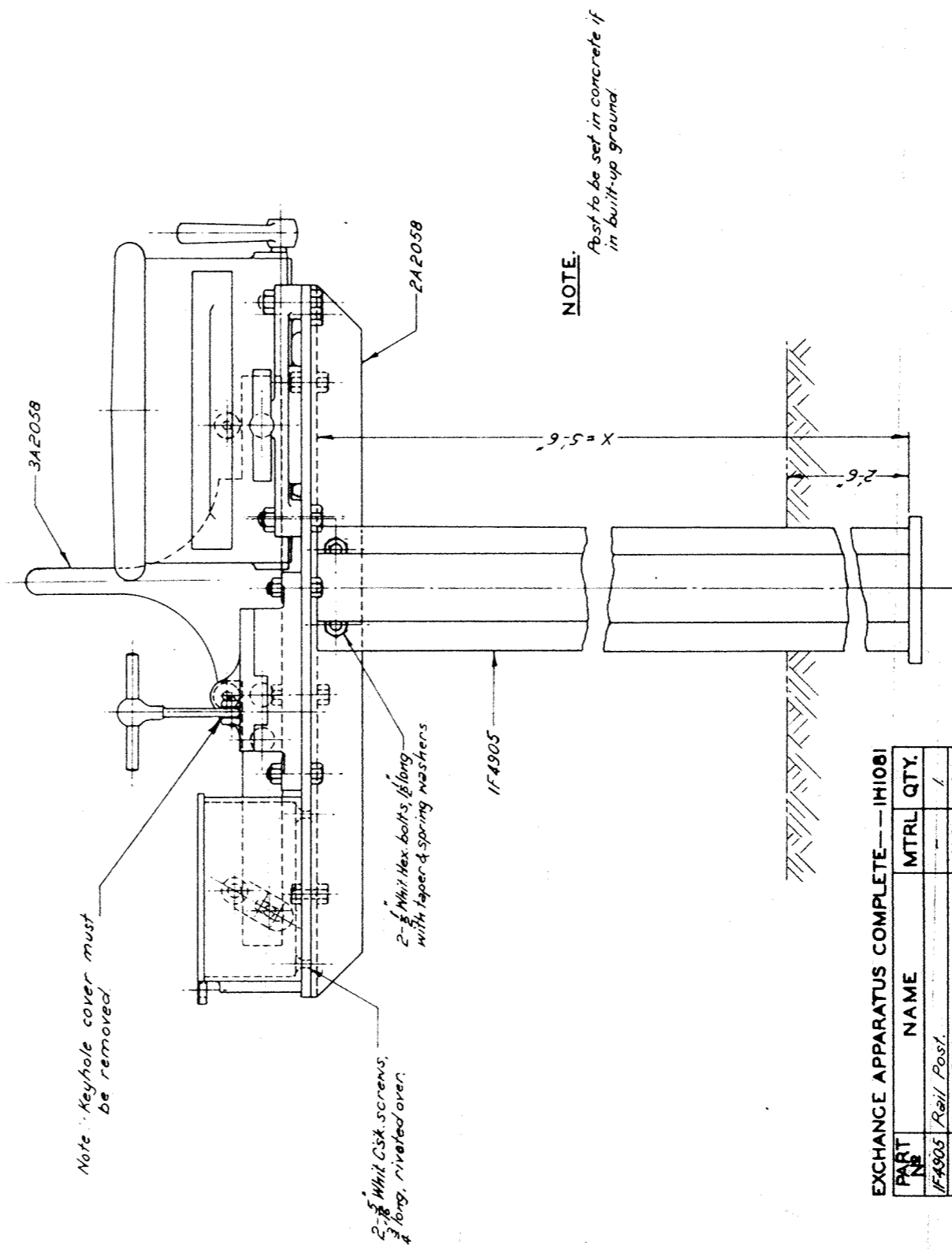
4-1/2 Whit Hex bolts, 2 1/2 long, with spring washers

1H329 or 2H329

1A2058

1B625 fitted with arm 5B2260 & 16G Cover. Inlet Plate 1B25T

4-1/2 Whit Hex bolts, 2 long, with spring washers.



NOTE:

Post to be set in concrete if in built-up ground.

NOTE:-

Gauge plate 2B770 will be fitted to staff locks in all cases unless definite identification of Staff is required. If so B2320 plates are to be fitted as requested.

Railpost to be painted Black. All other parts to be suitably undercoated and finished with Frame/3ed Paint Light Grey No631. B.S.381.C.

EXCHANGE APPARATUS COMPLETE—IH1081

PART No	NAME	MTRL	QTY.
1F4905	Rail Post.		1
1A2058	Base Plate.	M.S.	1
2A2058	Angle.	" "	1
3A2058	Slide.	" "	1
IK22	Staff Lock (Miniature Staff).		1
1H329	Annett Lock (Part A) As reqd		1
2H329	Annett Lock (Part B)		1
1B625	Circuit Controller (Modified).		1
Stock	Bolts & nuts H.R.H. 1/2 Whit, 2 1/2 long.	M.S.	5
"	" " " " 1/2 Whit, 2 "	" "	4
"	" " " " 1/2 Whit, 1 1/2 "	" "	5
"	Screws Csk. 3/8 Whit, 3/4 long.	" "	2
"	Washers Taper 3/8 d. hole.	" "	2
"	" " spacing 1/2 d. hole.	S.S.	1A

SEE NOTE

H1081

VICTORIAN RAILWAYS
EXCHANGE APPARATUS
FOR
MINIATURE STAFF & ANNETT KEY
WITH CIRCUIT CONTROLLER
ASSEMBLY

25-3-69
Note re-fitting of gauge plates to staff lock added.
I.B. 742D
21-12-59

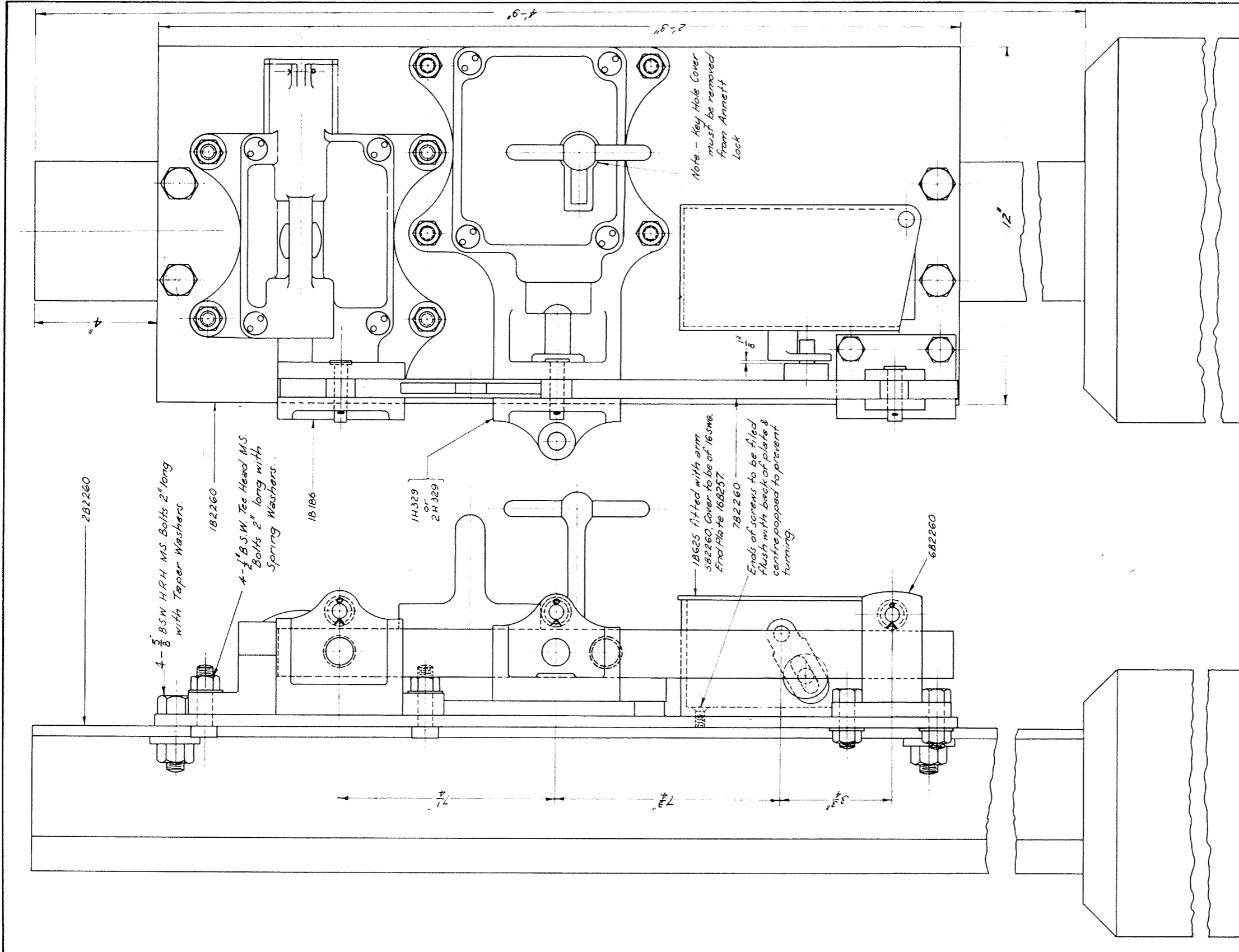
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A

1352 38501



Exchange Apparatus complete 1B1248

No	Name	M/I	Qty
1B186	Staff Lock		1
1H329	Annett Lock (Part A)		1
2H329	Annett Lock (Part B)		1
1B625	Circuit Controller (Mod)		1
5B2260	Socket Arm	M.S.	1
7B2260	Base Plate		1
6B2260	Slide		1
2B2260	Guide		1
Stock	3/8" B.S.W. Tee Head Bolt, 2 1/2" long with Taper Washers	M.S.	4
"	3/8" B.S.W. Hex. Nut, 2 1/2" long with Taper Washers	M.S.	4
"	3/8" B.S.W. Hex. Washer, 2 1/2" long		4
"	Spring Washer, 3/8" dia. x 1 1/2" long		2
"	Key Hole Cover		1

Note: Railpost to be painted Black. All other parts to be suitably undercoated and finished with Enamelled Paint Light Grey No. 631, B.S.381C.

Note: When ordering state whether 'A' or 'B' pattern Annett Lock is required. Annett key is part of Apparatus and must be supplied with Apparatus.

12 REV K153

B1248	VICTORIAN RAILWAYS EXCHANGE APPARATUS FOR LARGE STAFF & ANNETT KEY WITH CIRCUIT CONTROLLER Scale 1" = 6" = 1/2"	DRAWN BY M.J.R. M.J.R.	SICA TEL. ENGINEER M.J.R.	IB 1248 DRAWN BY M.J.R. M.J.R.
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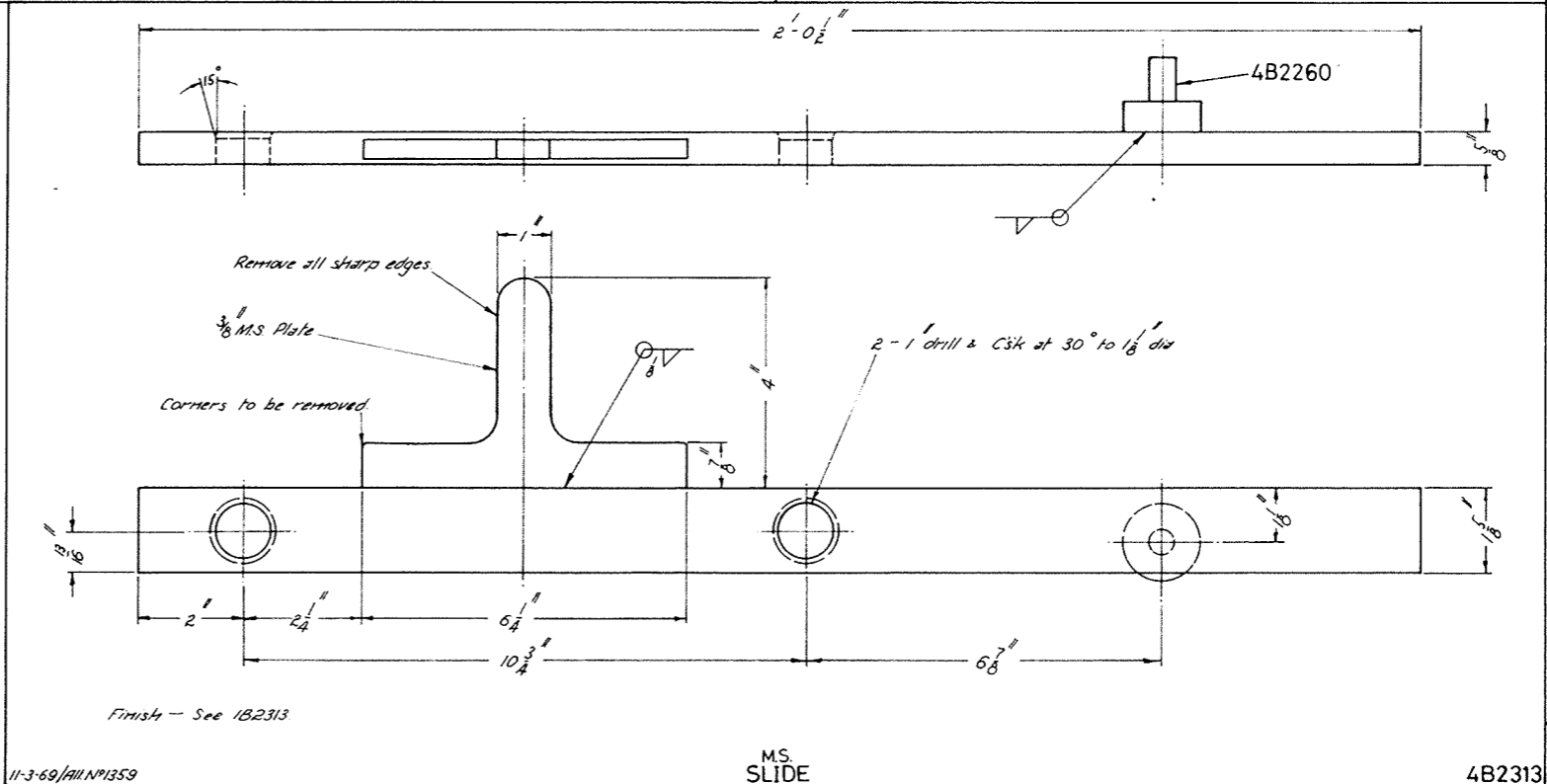
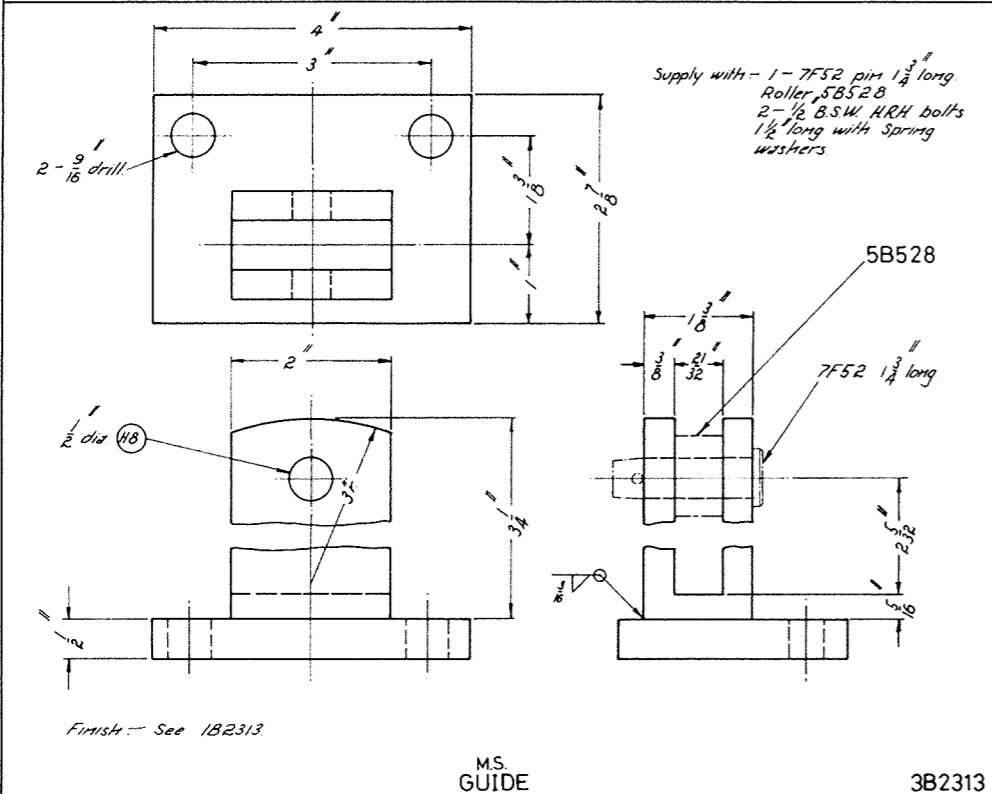
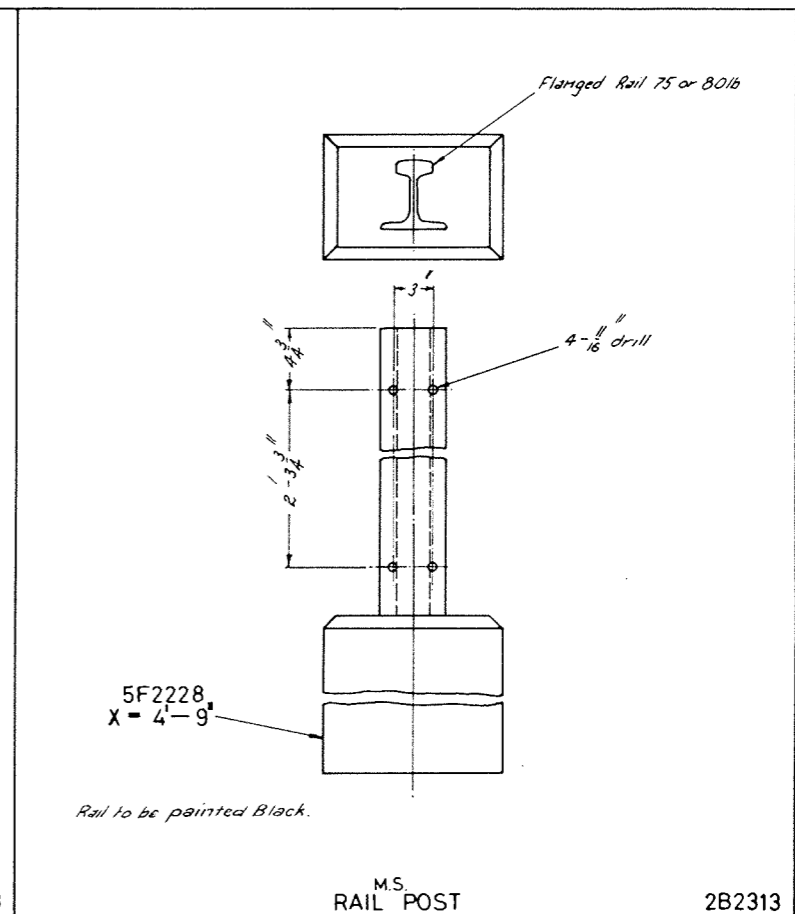
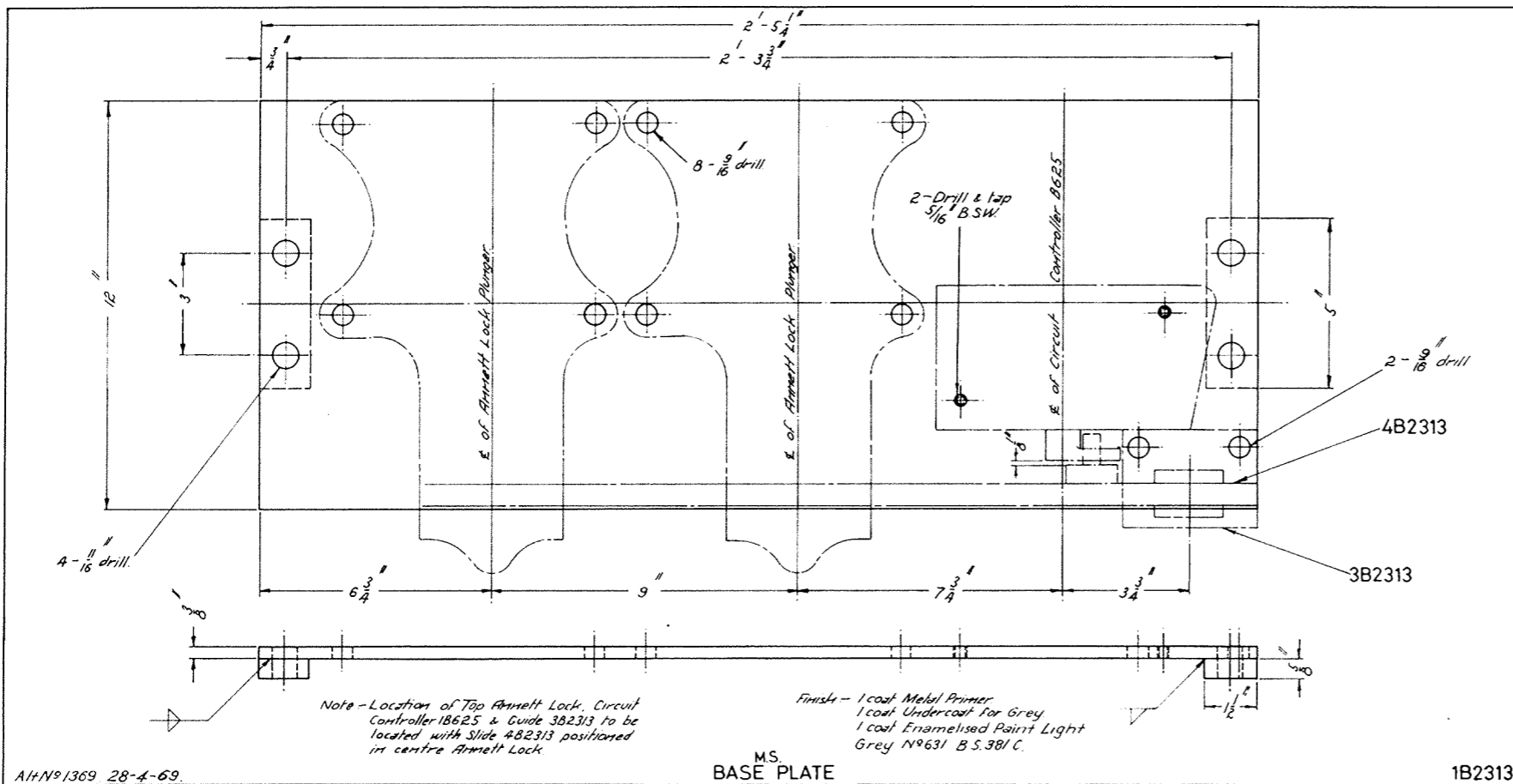


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Sp & Tel
Engineer
K/C

Drawn by
R/MH

16/1-69

VICTORIAN RAILWAYS
EXCHANGE APPARATUS
FOR
TWO ANNETT KEYS
WITH CIRCUIT CONTROLLER
DETAILS

B2313

Tolerances - Unless otherwise stated
Decimal Dimensions ± .005"
Fractional Dimensions ± 1/64"

3rd Angle Projection

For Assembly see 82314.

B2313



SIGNALLING CATALOGUE
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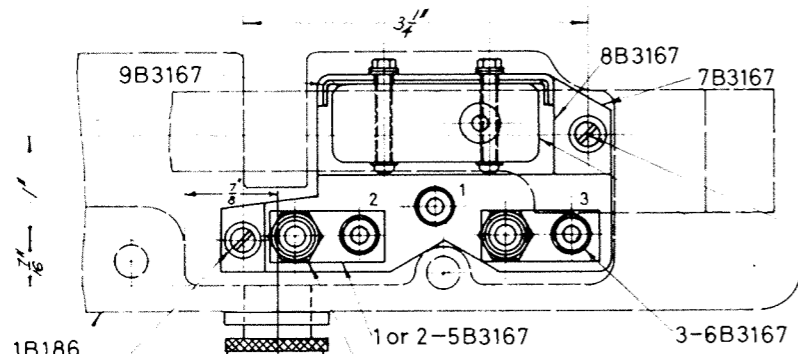
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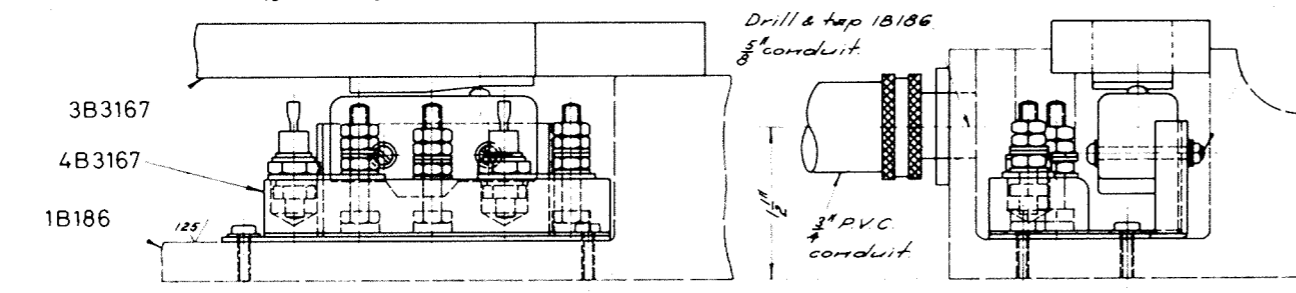
LOCK COMPLETE WITH PLUNGER DETECTION & ONE DIODE -1B3167
 LOCK COMPLETE WITH PLUNGER DETECTION & TWO DIODES-2B3167

PART No	NAME	MTL	QUANTITY	
			1B3167	2B3167
1B186	Staff Lock	MS	1	1
3B3167	Snib	MS	1	1
4B3167	Terminal Block	PRBF	1	1
5B3167	Link	Br	1	2
6B3167	Terminal	"	3	3
7B3167	Base	"	1	1
8B3167	Insulating Sheet	PRBF	1	1
9B3167	"	"	1	1
1F833	Screws 4BA x 3/8" long dull N.P.	Dr	2	2
Stock	Diode W.M.K.&H. SIARG	"	1	2
"	Omron Switch Type Z-10FY55-B	"	1	1
"	Screws Ch hd 1/8" B.S.W. x 1/4" D.N.P.	Br	2	2
"	Nuts 1/8" B.S.W. Dull Nickel Plated	Br	2	2
"	Washers shakeproof internal 5/32"	Steel	4	4
"	Washers Rd 5/16" x 206 x 1/4" Rd hole	Br	6	6
"	5/8" Male conduit tail	"	1	1
"	3/8" Conduit Hex Locknut	M.S.	1	1
"	Labels, Term W.M.K.&H. Pce 142777	"	2	3

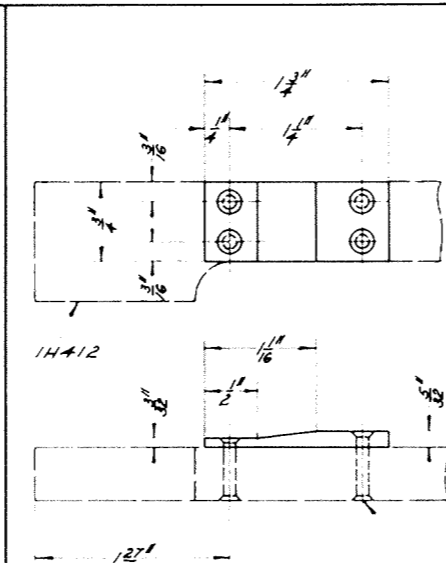
(Numbered as shown on plan)



1 or 2 - Diodes W.M.K.&H. SIARG.
 5/8" Male conduit tail with 3/8" Hex Locknut.
 2-1F833, Screws Brass 4BA x 3/8" long dull nickel plated & Washers Brass Rd 5/16" x 206 x 1/4" hole & Washers shakeproof internal 5/32"

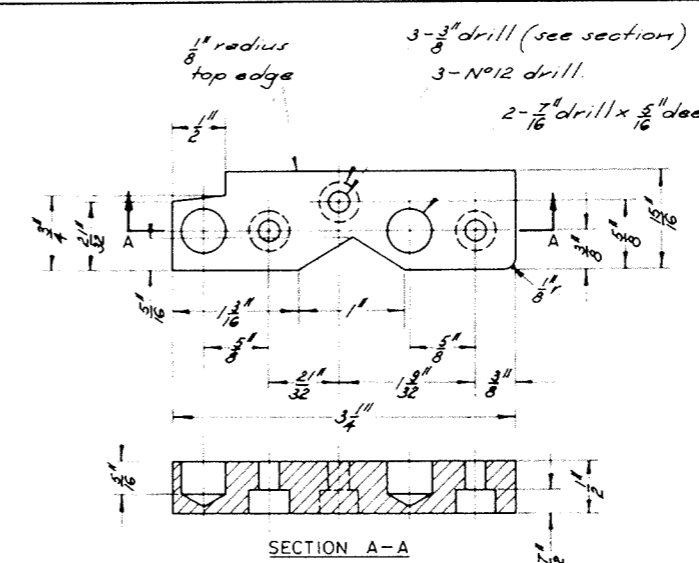


Notes:- 1. Assembly shown for Two Diodes. Parts 4, 6, 7, 8 & 9B3167 to be assembled using 'Araldite' Adhesive.
 2. Case 1B642 of Staff Lock to be machined flat over area covered by 7B3167
 3. Switch set to operate at 50% of Plunger 1H412 travel
 4. Travel of Switch Plunger approx 1/32" therefore height of Switch to be adjusted so pressure is not applied to Switch Plunger after it has travelled its full stroke.
 5. 1/4" clearance provided between Plunger 1H412 and Cover 2B642 must not be exceeded.

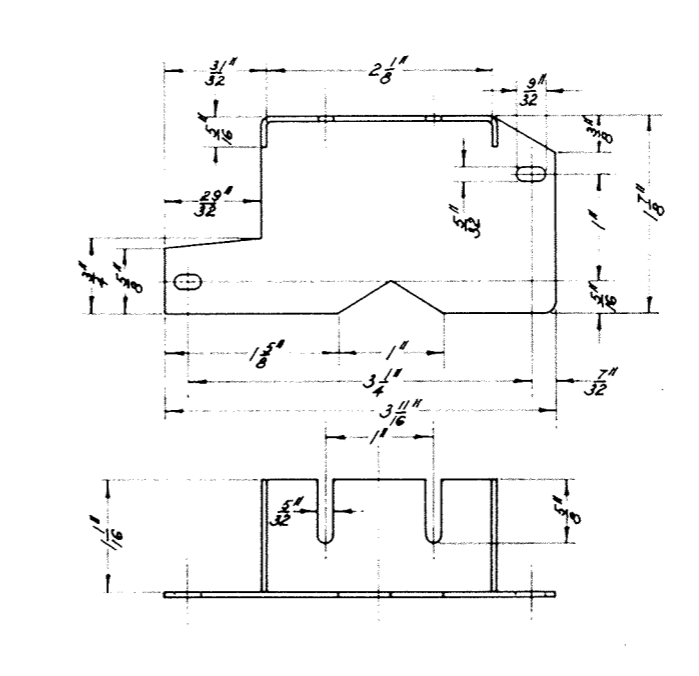


Bright MS SNIB 3B3167
 3-drill & tap 4BA in 1B642

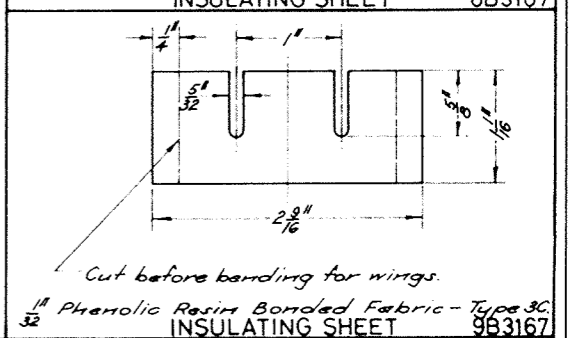
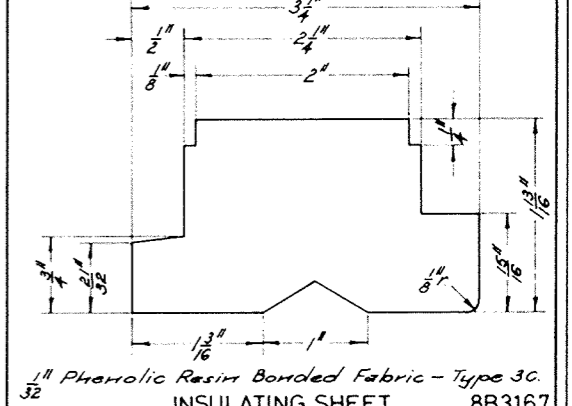
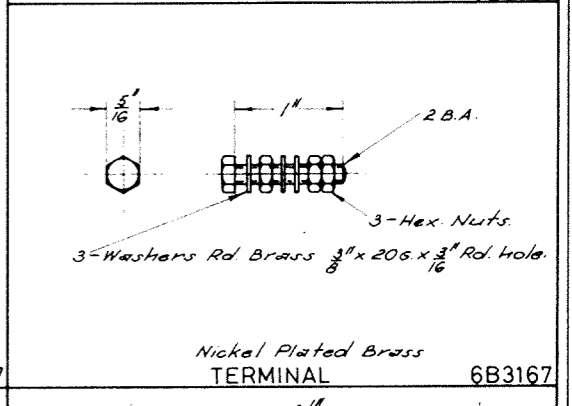
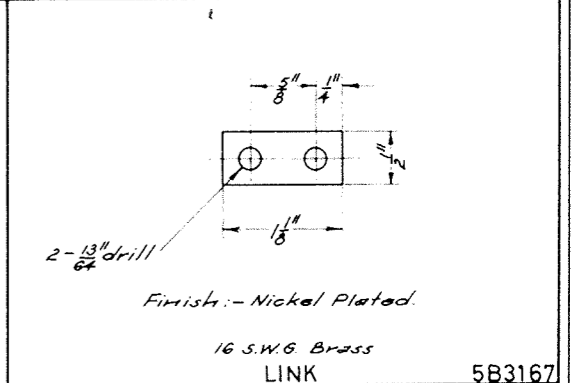
"Omron" Switch type Z-10FY55-B
 2-Screws Ch hd Br 1/8" B.S.W. x 1" long dull nickel plated & Hex Nuts with Washers Rd Br 5/16" x 206 x 1/4" Rd hole & Washers shakeproof internal 5/32"



Phenolic Resin Bonded Fabric - Type 3C
 TERMINAL BLOCK 4B3167



16 S.W.G. Brass BASE 7B3167



1/32 inch Phenolic Resin Bonded Fabric - Type 3C. INSULATING SHEET 8B3167

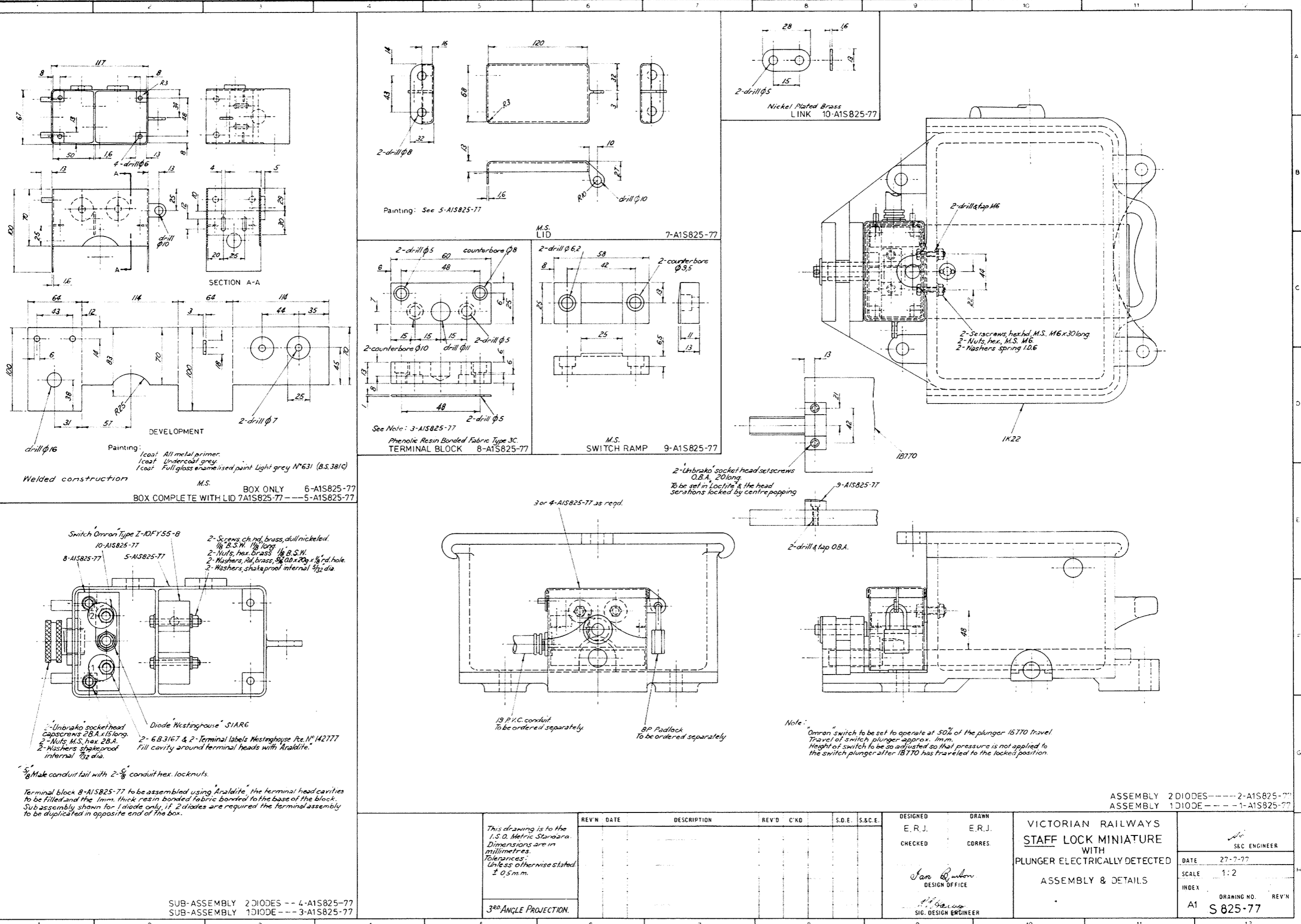
This drawing supervises 02328	TOLERANCES:- Unless otherwise stated Decimal Dimensions ±.005" Fractional Dimensions ±1/64" 3RD ANGLE PROJECTION	VICTORIAN RAILWAYS STAFF LOCK WITH PLUNGER ELECTRICALLY DETECTED (Within Case) 13.10.72	S.&C. Engineer M.J.R. S.D.E.M.E. 1894 J.B.	Designed M.J.R. Ckd. J.S.	Drawn M.J.R. Iss. No.
		B3167			



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H 8 - 2.



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

LIGHT SIGNAL COMPLETE 2 LIGHTS WITH BELL 1MH1986
 " " " " WITHOUT BELL 2MH1986
 " " " " WITH BELL 3MH1986
 " " " " WITHOUT BELL 4MH1986
 " " " " WITH BELL 5MH1986
 " " " " WITHOUT BELL 6MH1986

PART N ^o	NAME	MATL.	1M- H1986	2 M- H1986	3M- H1986	4 M- H1986	5M- H1986	6 M- H1986
1F4737	Brackets	M.S.	3	3	3	3	3	3
1F5204	Bracket	"	/	/	/	/	/	/
*16B117	Foundation	Concrete	/	/	/	/	/	/
2F4107	Cap	M.S.	-	/	-	/	-	/
2F5206	Clip (with bolts)	"	4	4	4	4	4	4
Stock	Warning Bell	-	/	-	/	-	/	-
"	Light Signals. (Complete with Mountings) Type H.C. 100		2	2	4	4	6	6
"	Ø100 pipe (Length as required)	M.S.	/	/	/	/	/	/
"	Retro-reflecting Track Sign to W & W Plan 605-55	Alum.	/	/	/	/	/	/
"	Retro-reflecting Stop Sign for Flashing Light to W & W Plan 605-55	Alum.	/	/	/	/	/	/
"	Bolts see W & W Plan 605-55 Item (12)	M.S.	2	2	2	2	2	2
"	Washers 18 x 10 x 1,6	Fibre	10	10	10	10	10	10
"	Bolts M10 Hex Hd. Cad Pltd. 65 long	M.S.	2	2	2	2	2	2
"	Bolts M10 Hex Hd. Cad. Pltd 30 long	"	6	6	6	6	6	6
"	Nuts Nyloc M10.							
"	N.P/V126/10/2		10	10	10	10	10	10
"	Retro-reflecting Cross Arms to W & W Plan 605-55 (Amend 'K')	Alum.	/	/	/	/	/	/
	Base & Junc. Box Ø 100 pipe "W.							
	B & S. Co. Piece No. M/5612		/	/	/	/	/	/

⊙ Note: - Number of tracks for track sign will be stated
 When signals are ordered.

Track Sign will be omitted if only one track
 through crossing.

* Alternatives; 16 B117 or West. B & S Co. "Base & Junction Box, Piece No. M/5612.

M-F
5705

For use with
H.C. 100

V.R. LEVEL CROSSING
ROAD SIGNAL
FLASHING LIGHT
MATERIAL LIST

ES & C.
Engineer.

S.D.E.
Iss. No.

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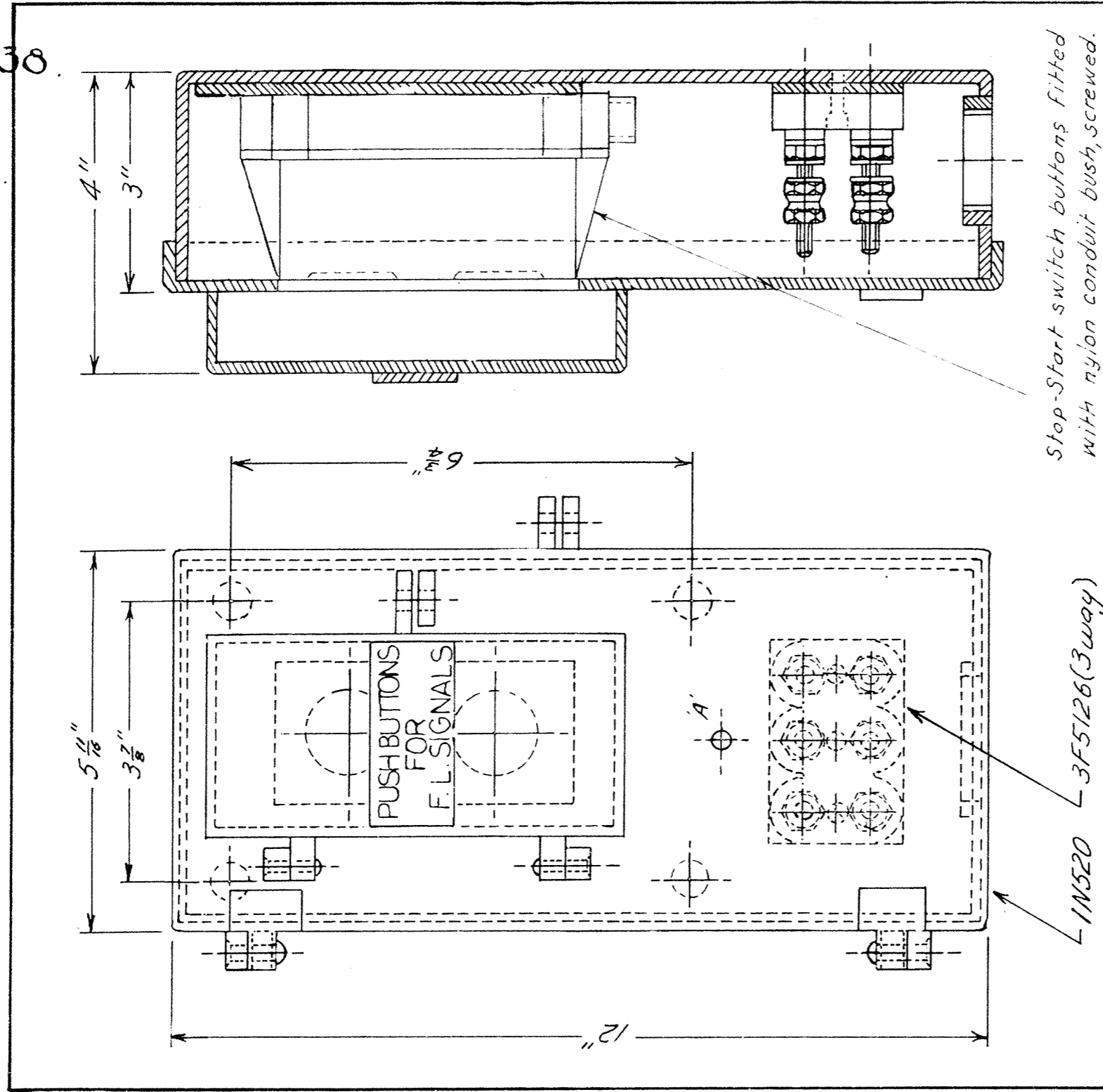
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C1-41



BOX COMPLETE 1F4681

PART No.	PART NAME	MATERIAL	QUANTITY
1N520	Box	M.S.	1
	Stop-start push buttons,		
	Rowco PB2 07		1
3F833	Screws 1BA, 3/8" long.	Brass	2
1F833	Screws 2BA, 1/2" long.	Brass	2
3F5126	Terminal block 3 way.		1
stock	SP padlock and chain.		1
"	Rivet 1/4" dia, 1/2" long.	M.S.	1

Note: Free end of chain to be secured by 1/4 dia. rivet at 'A'

Note: For Illuminated Push Buttons see A2S2996-78

1-10-73 AK 1601

F4681		1F4681		
Redrawn & revised to include Alt. No. 1452. Same title & No. Original dated 8-7-55.		VR.	BOX FOR FLASHING LIGHT SIGNAL PUSH BUTTONS ASSEMBLY 25-3-71	SIG. & TEL. ENGINEER
		DRAWN REGS.	TRACED REGS.	KALC
				F4681

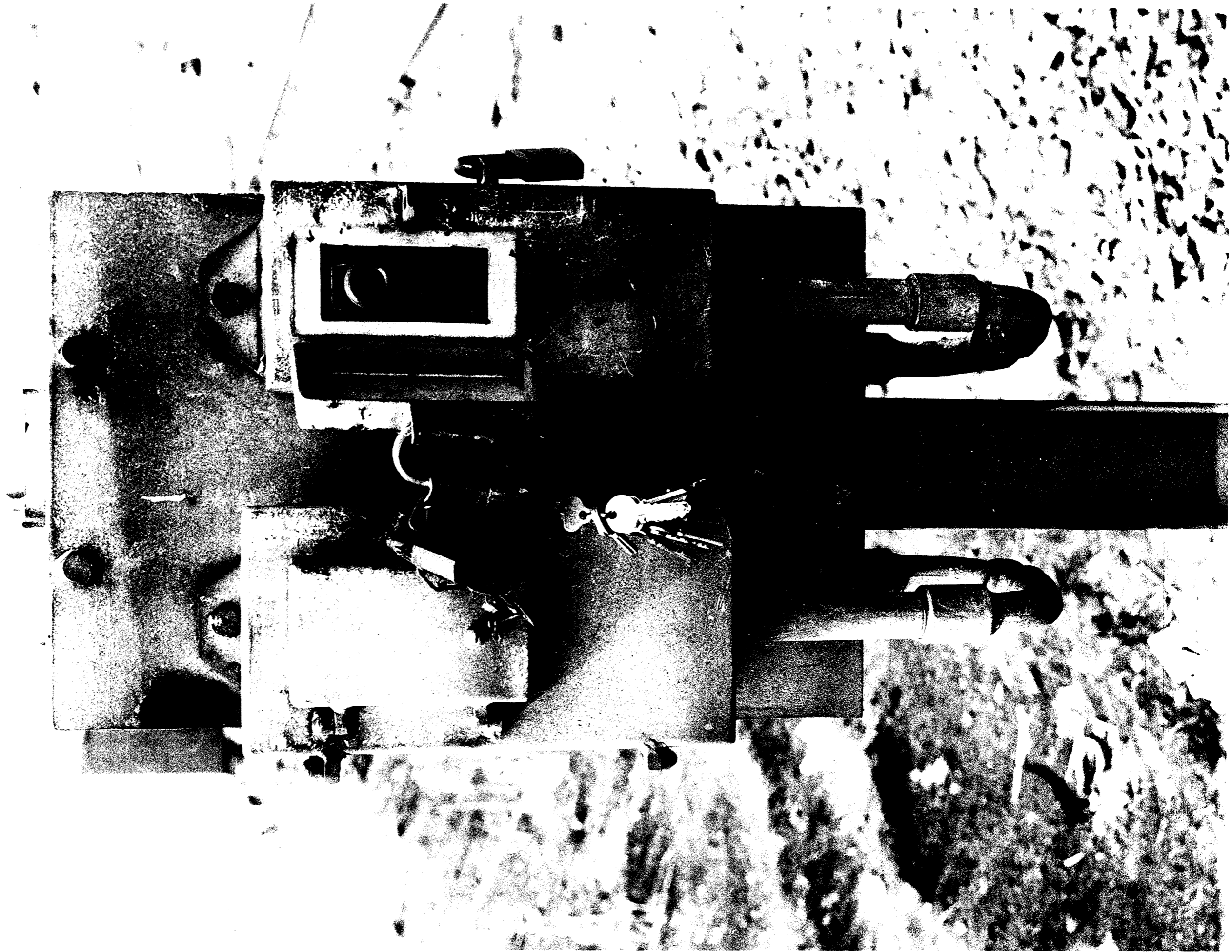


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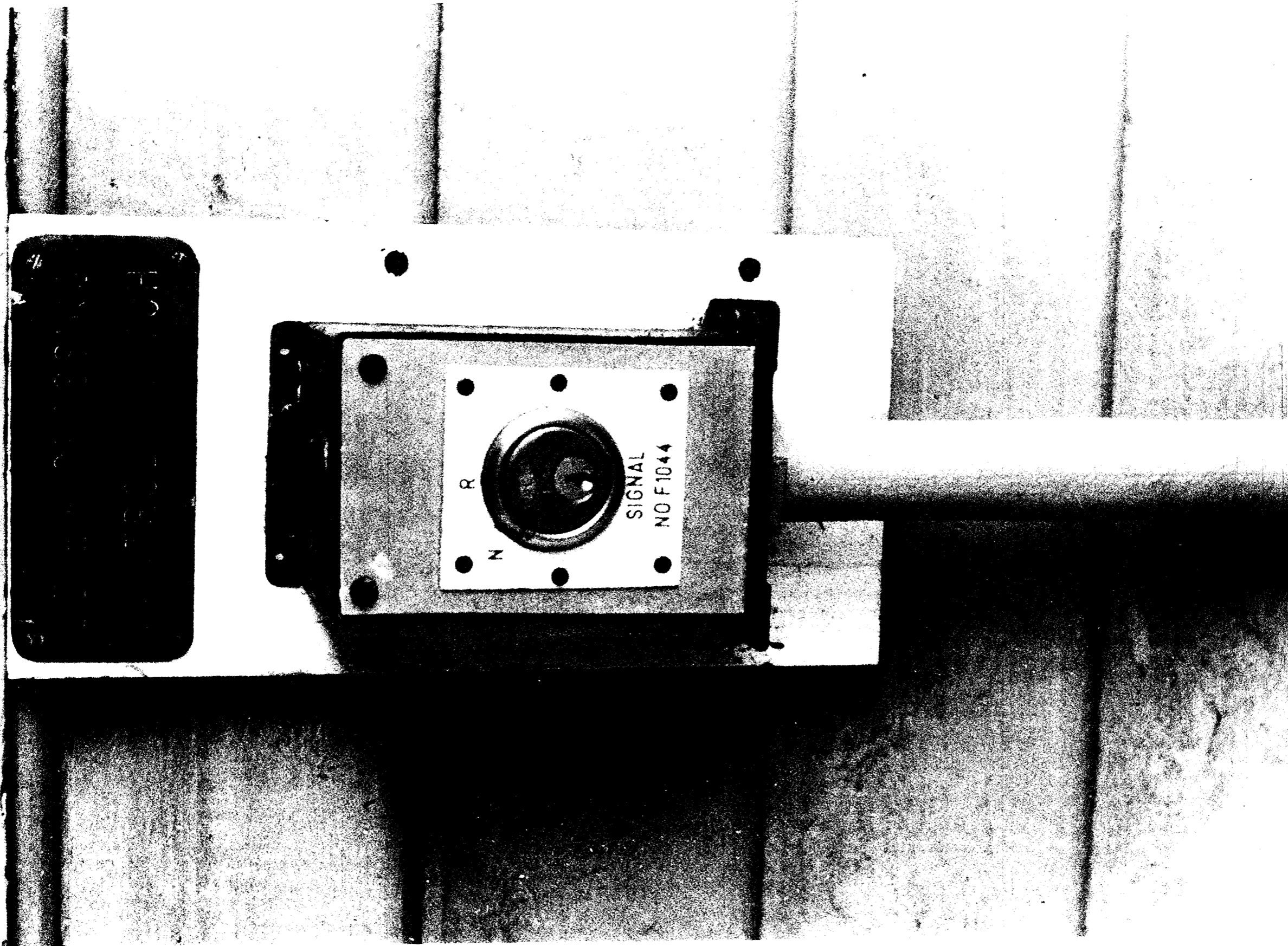
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STOP-START PUSH BUTTON FOR FLASHING LIGHT CONTROL



KEY BOX FOR LEVEL CROSSING CONTROL SWITCH
OPERATED BY 5P KEY



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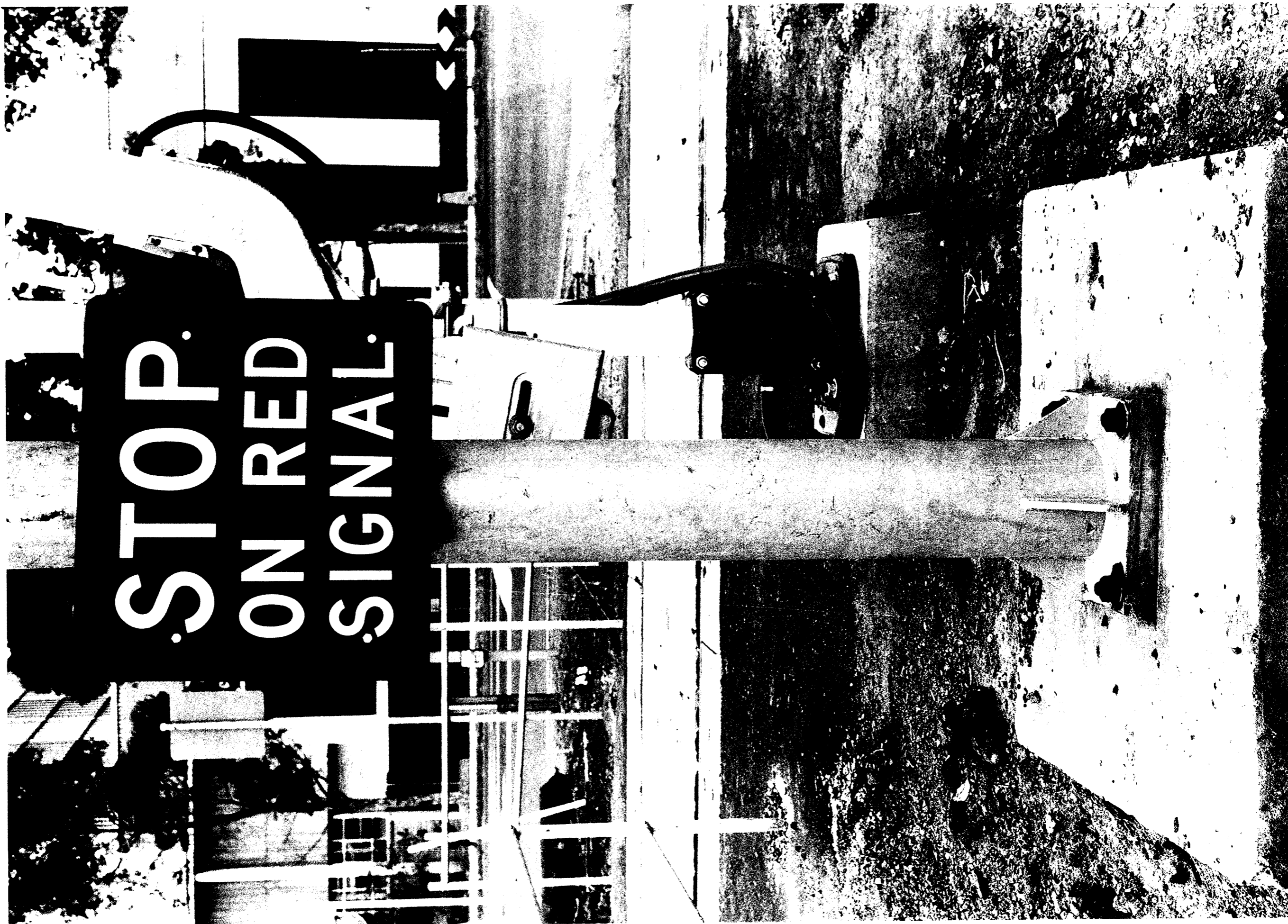


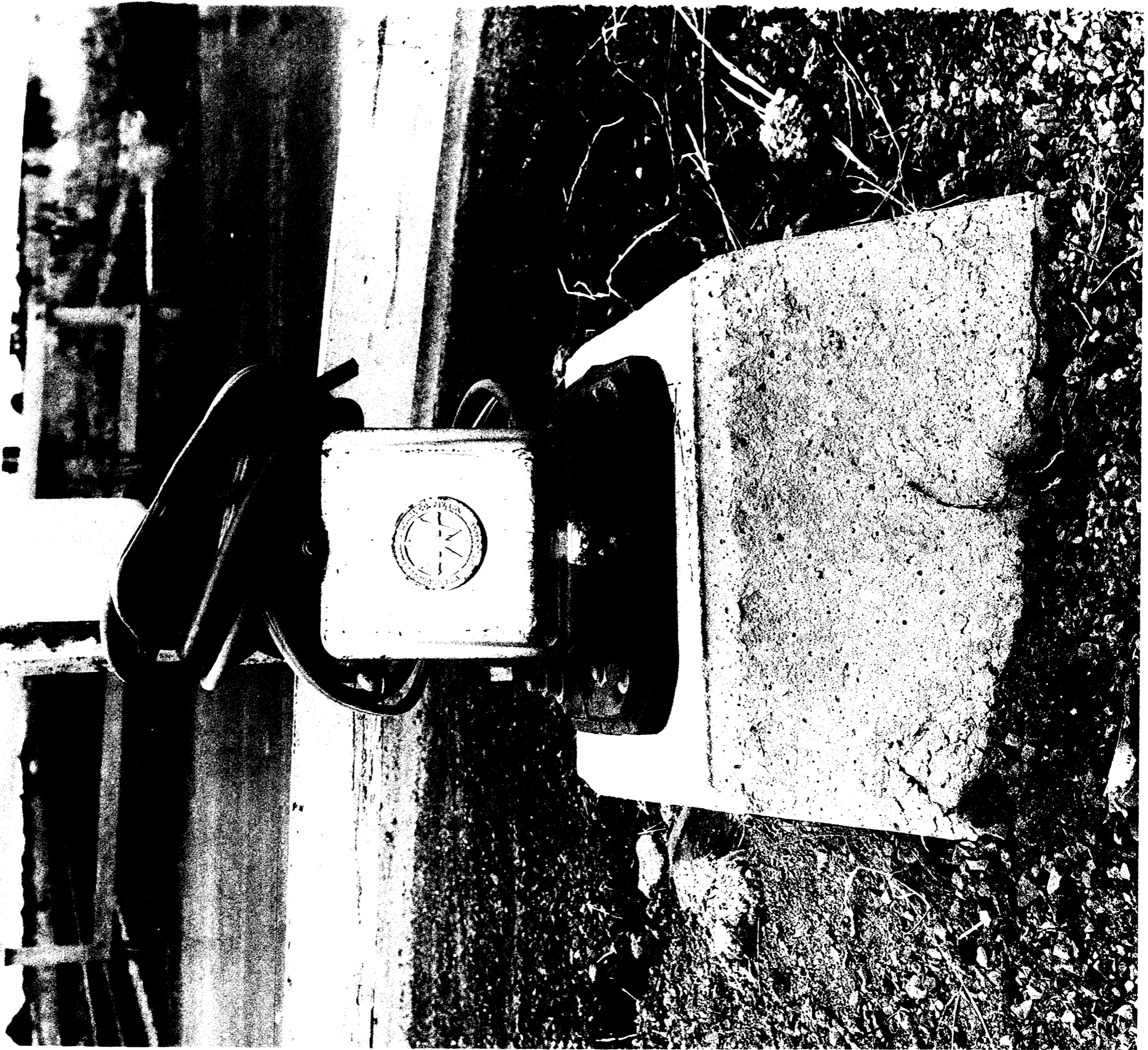
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STANDARD BOOM BARRIER FOUNDATION

Jan 80



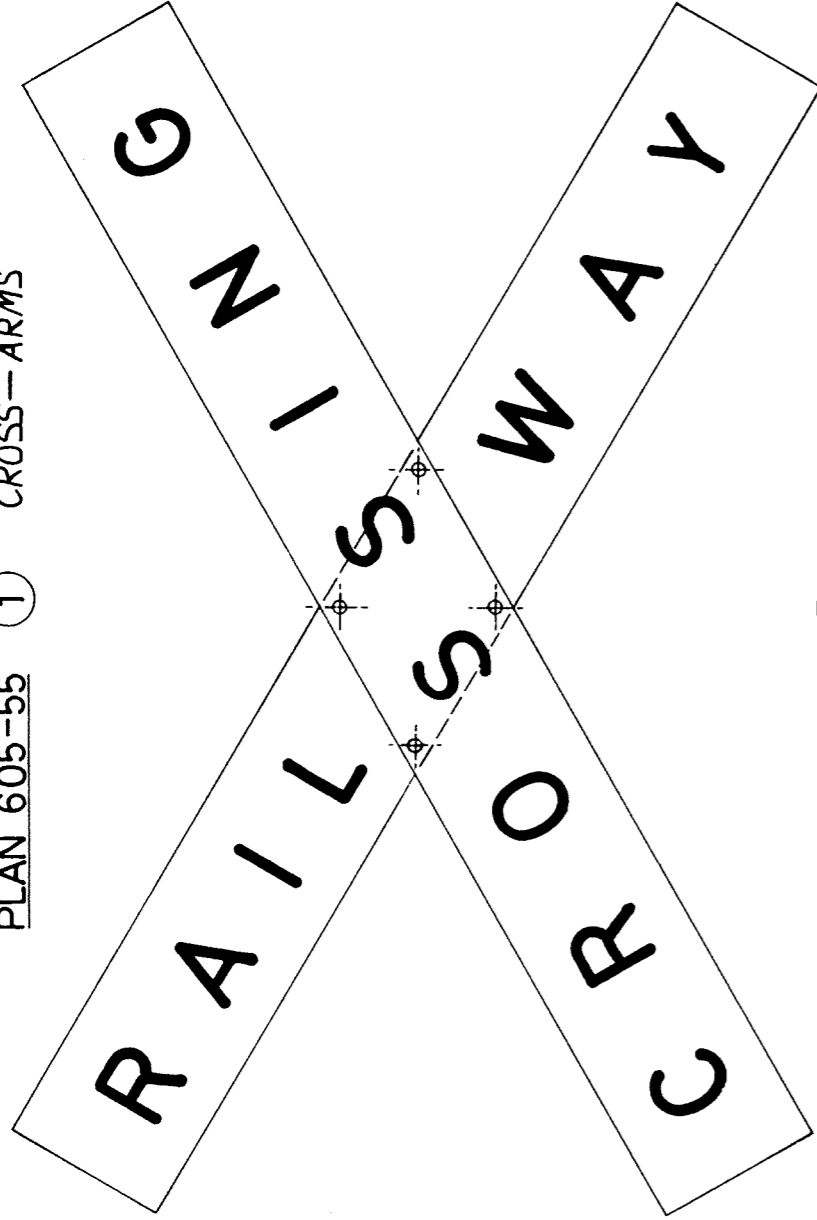
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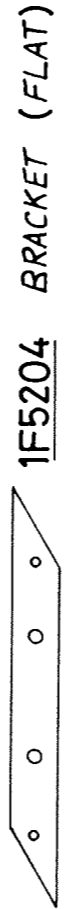
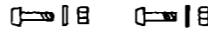
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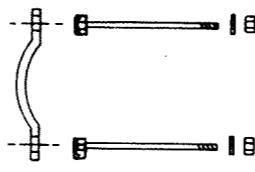
PLAN 605-55 ① CROSS-ARMS



2N°-TEE BOLTS 3/8" B.S.W. 1 1/4" LONG.
 2N°-NUTS SIMMONDS 3/8" B.S.W.
 2N°-WASHERS FIBRE 5/8" X 1 3/32" X 1/16".

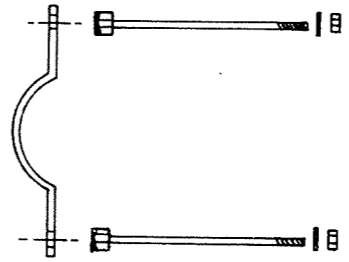


1F5204 BRACKET (FLAT)
 2N° BOLTS 3/8" B.S.W. 2 1/2" LONG.
 2N° NUTS SIMMONDS 3/8" B.S.W.
 2N° WASHERS FIBRE 5/8" X 1 3/32" X 1/16"



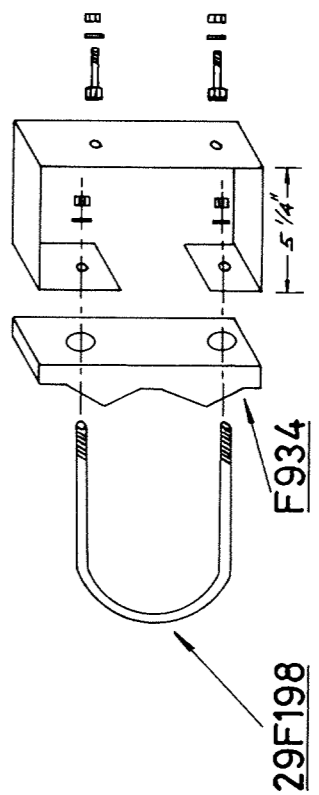
2F5606 M.S. CLIP (TO FIT 4" DIAMETER PIPE.)
 2N°-1/2" B.S.W. BOLTS 5 1/2" LONG
 WITH NUTS & SPRING WASHERS.

OR



1F5606 M.S. CLIP (TO FIT 8" DIAMETER PIPE.)
 2N°-3/8" B.S.W. BOLTS 8" LONG
 WITH NUTS & SPRING WASHERS.

OR



29F198 'U' BOLTS - SUPPLY WITH 2N° 5/8" B.S.W. NUTS & SPRING WASHERS.
 10r2F934 CLAMP FOR PIPE MASTS 4" TO 6 1/2" DIAMETER.
 2F4741 M.S. BRACKETS-USED TO OFFSET SIGN FROM BOOM BARRIER MAST ONLY-(SHORT BRACKET)
 2N° BOLTS 1/2" B.S.W. 1 1/2" LONG WITH NUTS & SPRING WASHERS.

"CROSS ARMS ASSEMBLY."



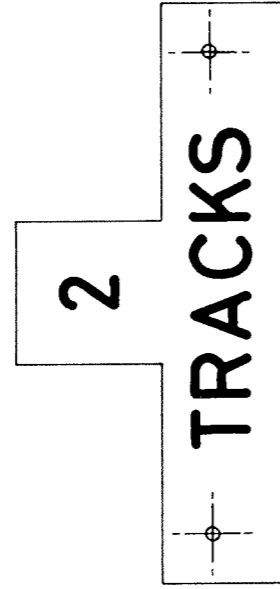


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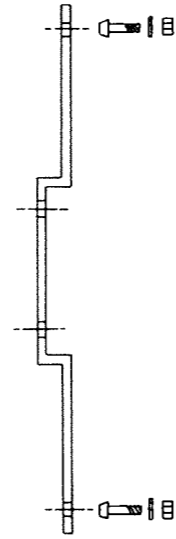
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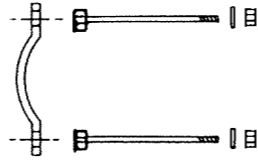
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PLAN 605-55 (8) TRACK SIGN
NUMBER OF TRACKS - FOR TRACK SIGN
MUST BE STATED WHEN ORDERING TRACK
SIGN. TO BE OMITTED IF ONLY ONE TRACK.

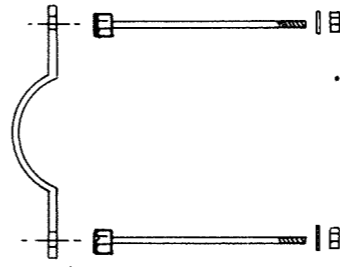


1F4737 BRACKETS FOR FLASHING LIGHT SIGNALS
2N°-TEE HEAD BOLTS 3/8" B.S.W. 1 1/4" LONG
2N°-NUTS SIMMONDS 3/8" B.S.W.
2N°-WASHERS FIBRE 5/8" X 13/32" X 1/16."



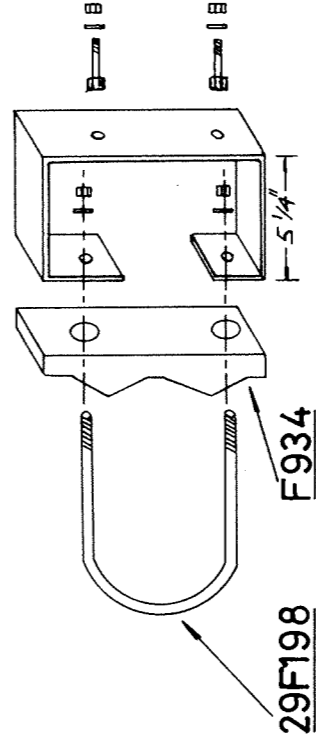
2F5606 M.S. CLIP (TO FIT 4" DIAMETER PIPE)
2N°-1/2" B.S.W. BOLTS 5 1/2" LONG WITH
NUTS & SPRING WASHERS.

OR



1F5606 M.S. CLIP (TO FIT 8" DIAMETER PIPE.)
2N°-3/8" B.S.W. BOLTS 8" LONG WITH
NUTS & SPRING WASHERS.

OR



2F4741 M.S. BRACKETS-USED TO EXTEND
SIGN FROM BOOM BARRIER
MAST ONLY - (SHORT BRACKET)

2N° BOLTS 1/2" B.S.W. 1 1/2" LONG WITH
NUTS & SPRING WASHERS.

1or2F934 CLAMP FOR PIPE MASTS
4" TO 6 1/2" DIAMETER.

29F198 "U" BOLTS - SUPPLY WITH 2N° 5/8" B.S.W.
NUTS & SPRING WASHERS.

Notes:- All bolts to be Cad. pltd.



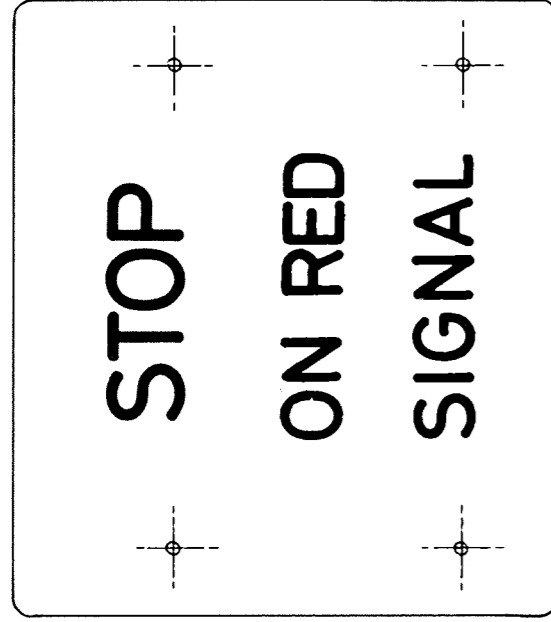
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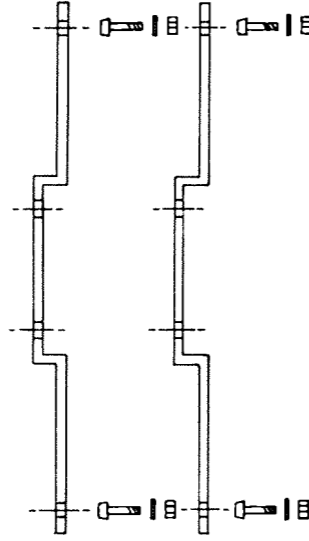
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"STOP SIGN FOR FLASHING LIGHT ASSEMBLY."

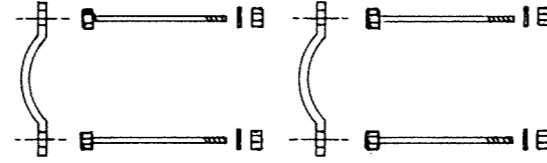


PLAN 605-55 (9) STOP SIGN FOR FLASHING LIGHT.



1F4737

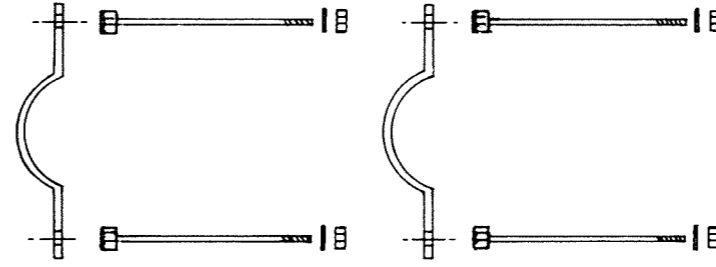
BRACKETS FOR FLASHING LIGHT SIGNALS
4N°-TEE HEAD BOLTS 3/8" B.S.W 1/4" LONG.
4N°-NUTS SIMMONDS 3/8" B.S.W.
4N°-WASHERS FIBRE 5/8" X 13/32" X 1/16."



2F5606

M.S. CLIP (TO FIT 4" DIAMETER PIPE.)
4N°-1/2" B.S.W. BOLTS 5 1/2" LONG WITH
NUTS & SPRING WASHERS.

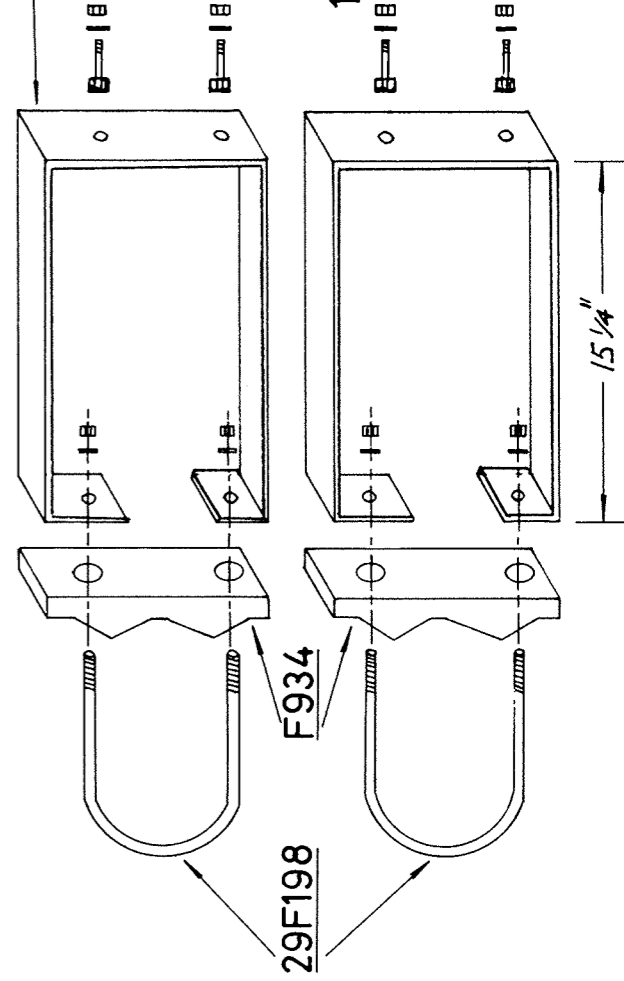
OR



1F5606

M.S. CLIP (TO FIT 8" DIAMETER PIPE.)
4N°-3/8" B.S.W. BOLTS 8" LONG WITH
NUTS & SPRING WASHERS.

OR



1F4741

M.S. BRACKETS—USED TO EXTEND
SIGN FROM BOOM BARRIER
MAST ONLY— (LONG BRACKET.)

4N° BOLTS 1/2" B.S.W. 1 1/2" LONG WITH
NUTS & SPRING WASHERS.

1or2F934

CLAMP FOR PIPE MASTS
4" TO 6 1/2" DIAMETER.

29F198

"U" BOLTS — SUPPLY WITH 4N°
5/8" B.S.W NUTS & SPRING
WASHERS.

Note: All bolts to be Cad. plated

Feb '80

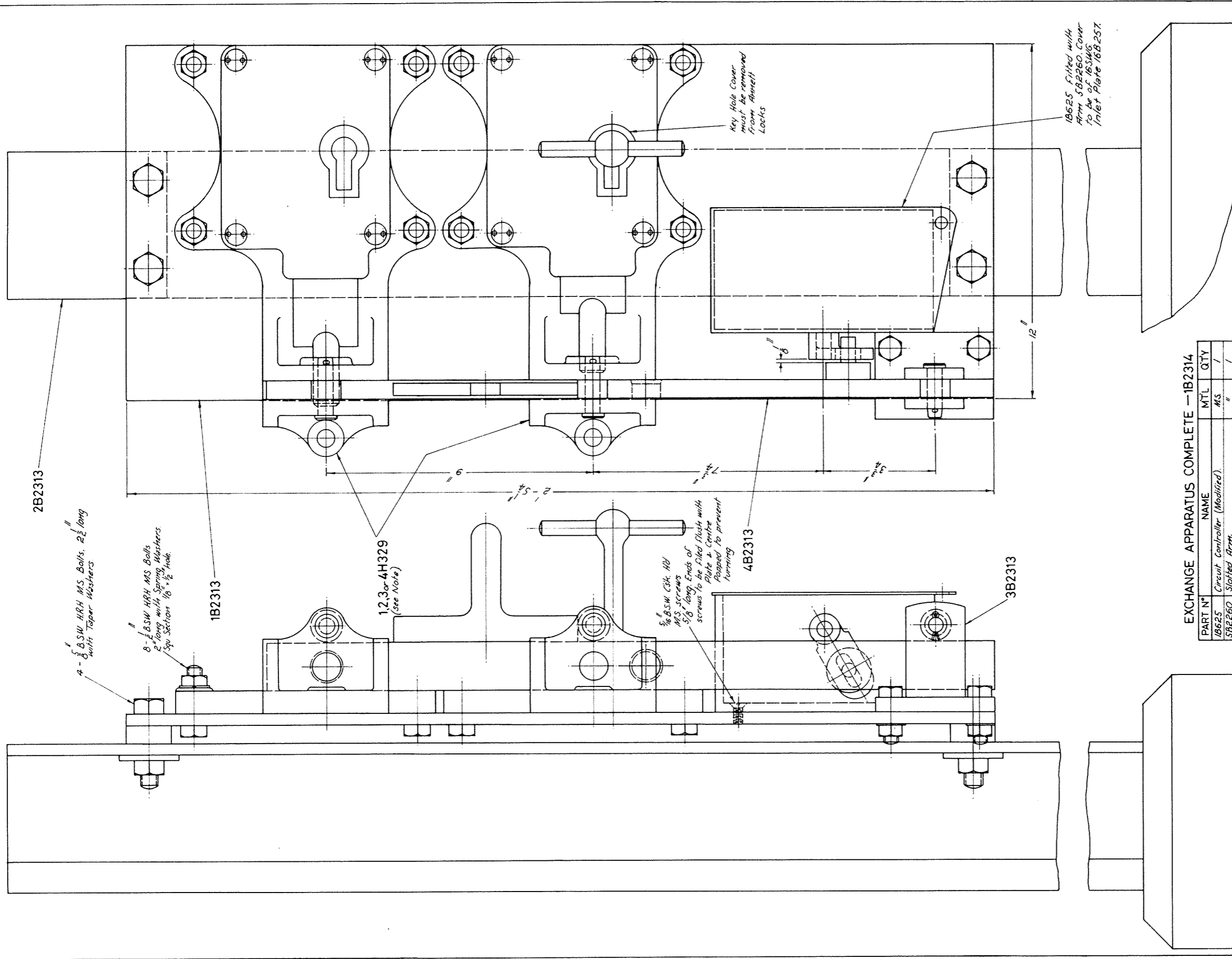


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NOTE: - When ordering Annett Locks & must be supplied with Annett Locks & Circuit Controller to be suitably undercoated and finished with Enamelled Paint Light Grey No. 631, B.S.381.C.

EXCHANGE APPARATUS COMPLETE - 1B2314

PART N°	NAME	MTL	QTY
1B625	Circuit Controller (Modified)	MS	1
SB2260	Slotted Arm.	"	1
1B2313	Base Plate.	"	1
2B2313	Rail Post.	"	1
3B2313	Guide.	"	1
4B2313	Slide.	"	1
1H329	Annett Lock A Pattern	"	1
2H329	" " B "	"	1
3H329	" " C "	"	1
4H329	" " D "	"	1
	5/16" B.S.W. Csk Hd. Screws, 5/8" long.	MS	2
	1/2" B.S.W. HRH Bolt, 2" long.	"	4
	5/8" B.S.W. HRH Bolt, 2 1/2" long & 1/2" taper wash.	"	8
	Spring washer, Sq. Section 1/8" x 1/2" hole	SS	8

1B2314

VICTORIAN RAILWAYS
EXCHANGE APPARATUS
FOR
TWO ANNETT KEYS
WITH
CIRCUIT CONTROLLER
ASSEMBLY 16-1-69.

Sig. & Tel. Engineer. *Kyle*

Drawn by *RMH*

Traced by *RMH*

1/3-69

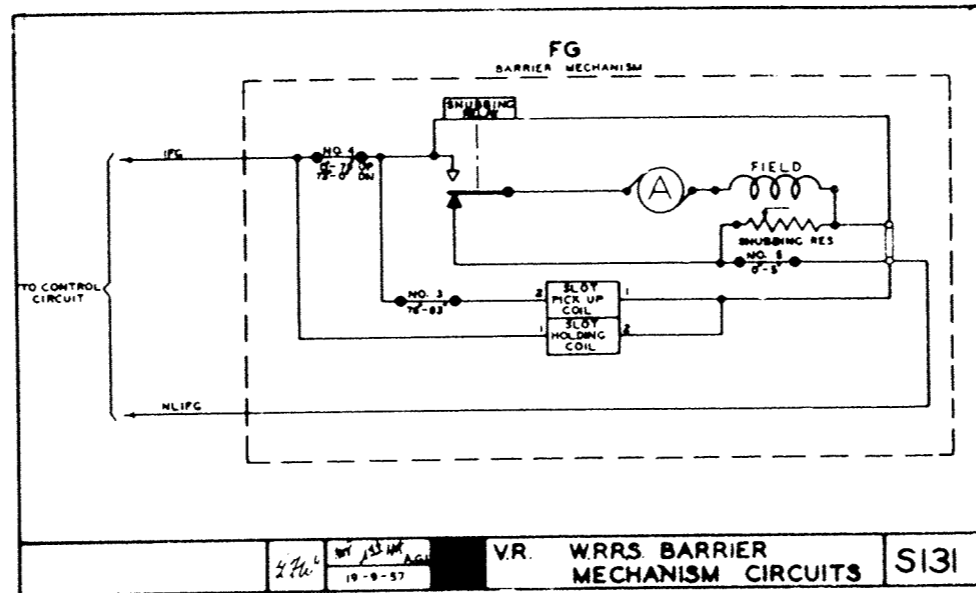
Allocation N° 1359

A/H. N° 1369

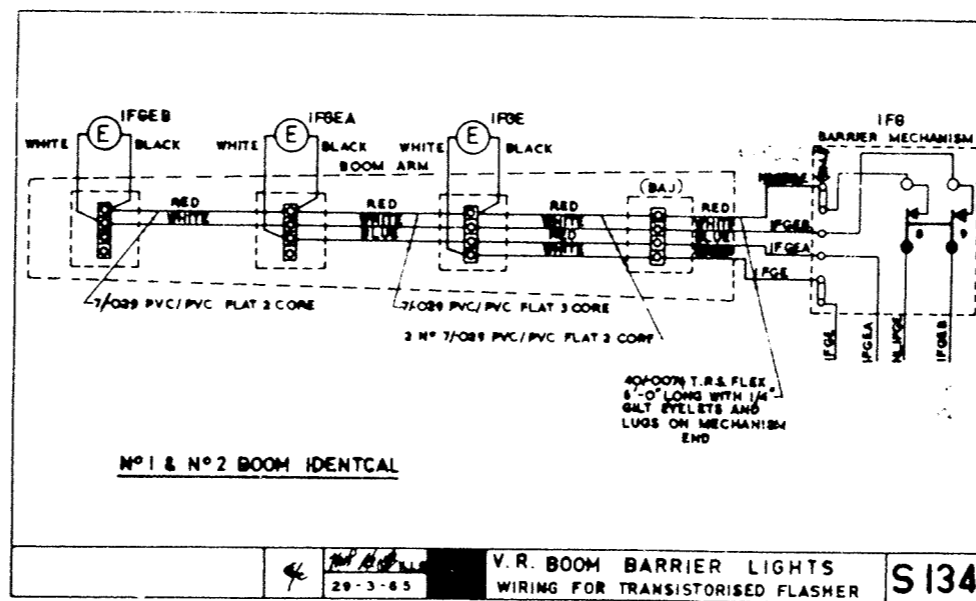
I.B.

RMH

B2314



276
 19-9-57
 V.R. WRRS BARRIER MECHANISM CIRCUITS S131



29-3-65
 V.R. BOOM BARRIER LIGHTS WIRING FOR TRANSISTORISED FLASHER S134



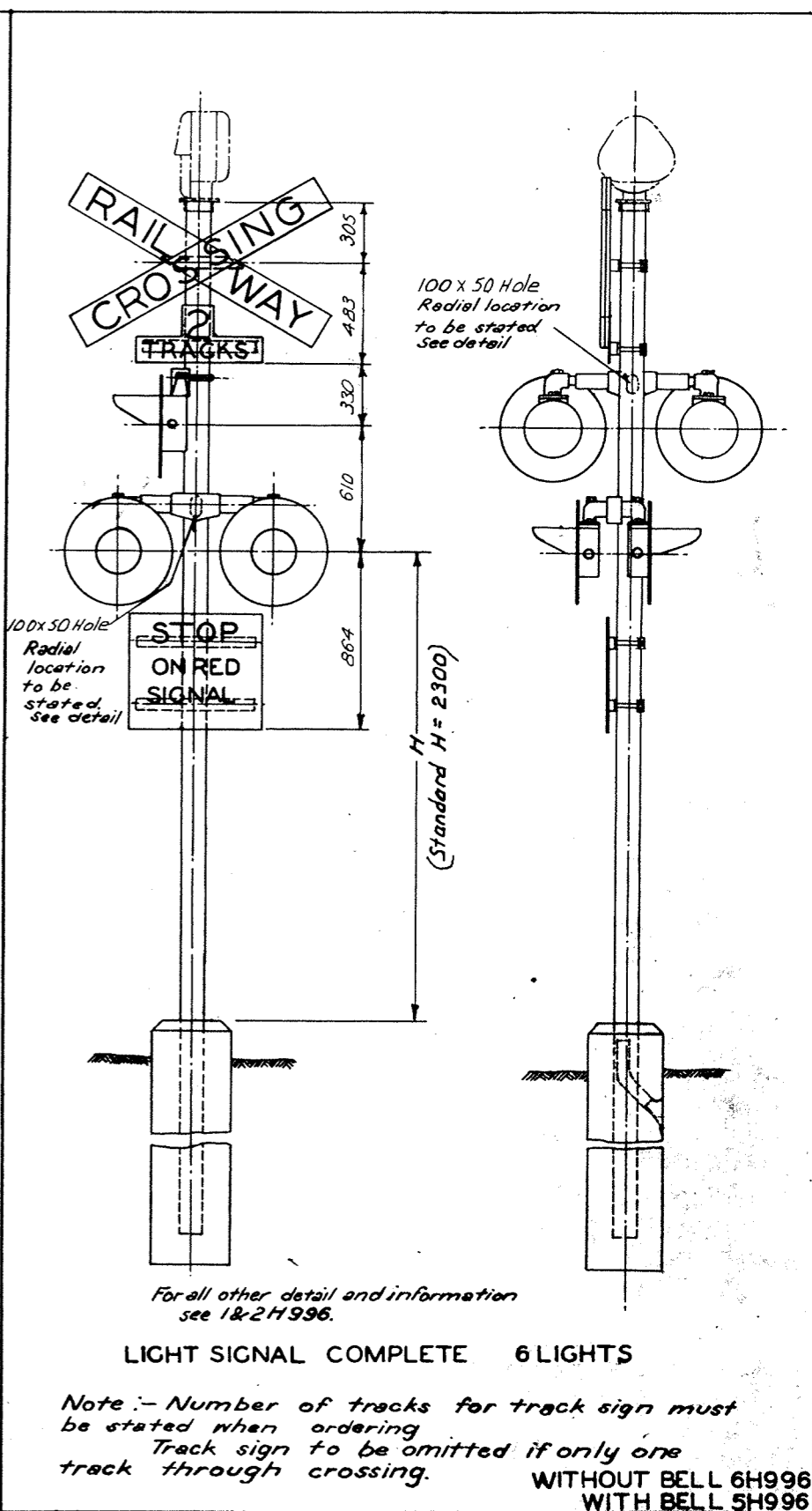
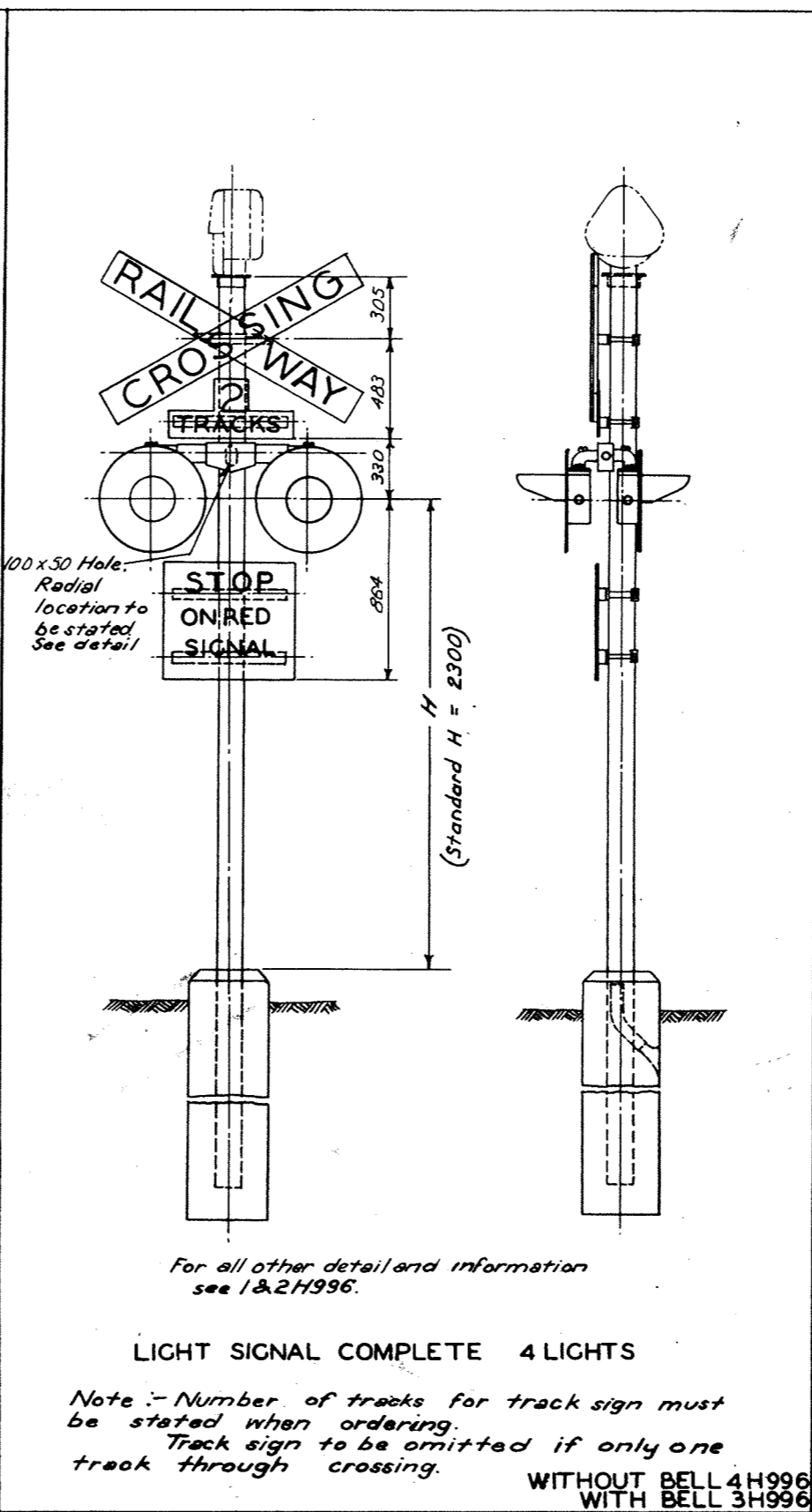
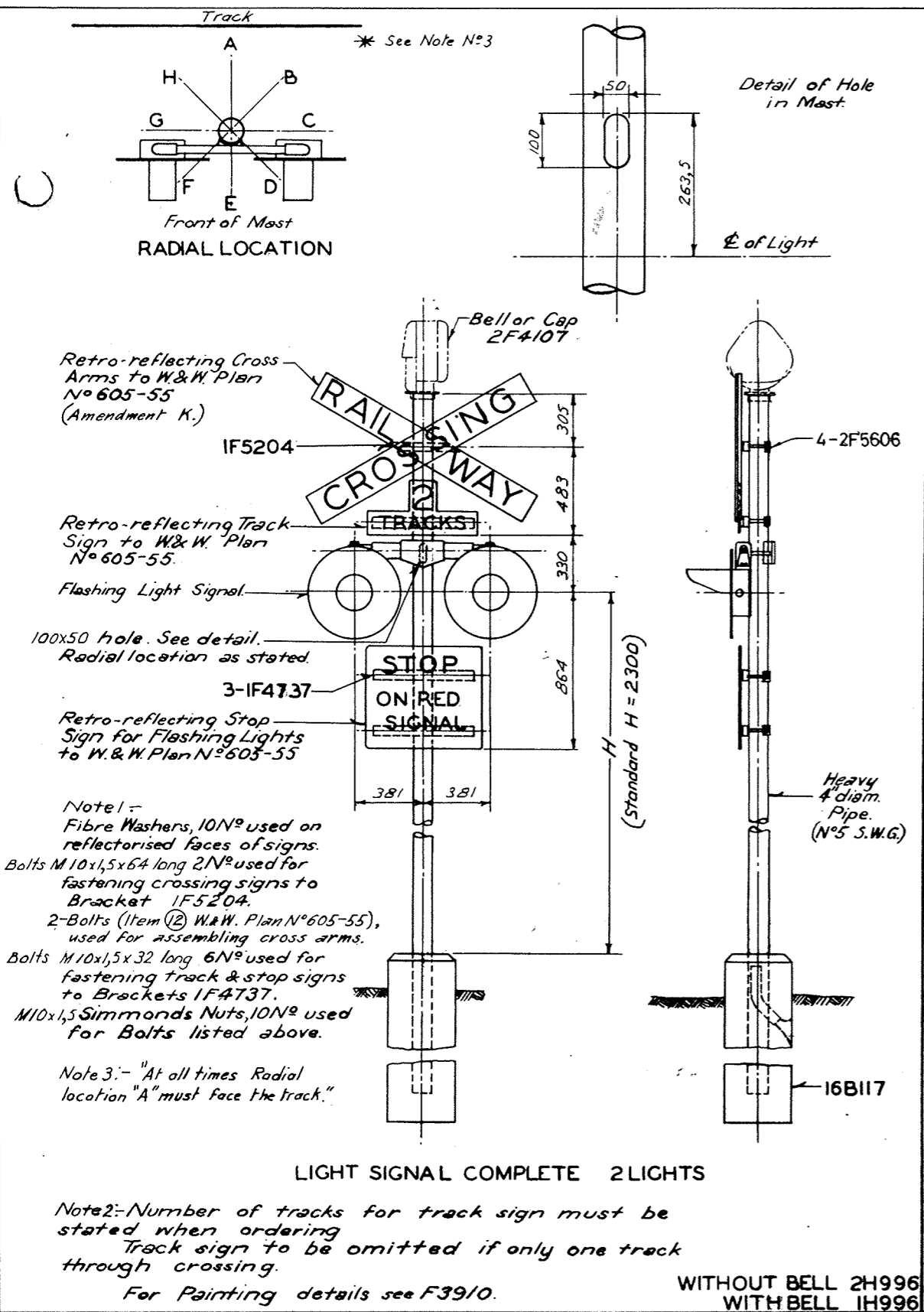
SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

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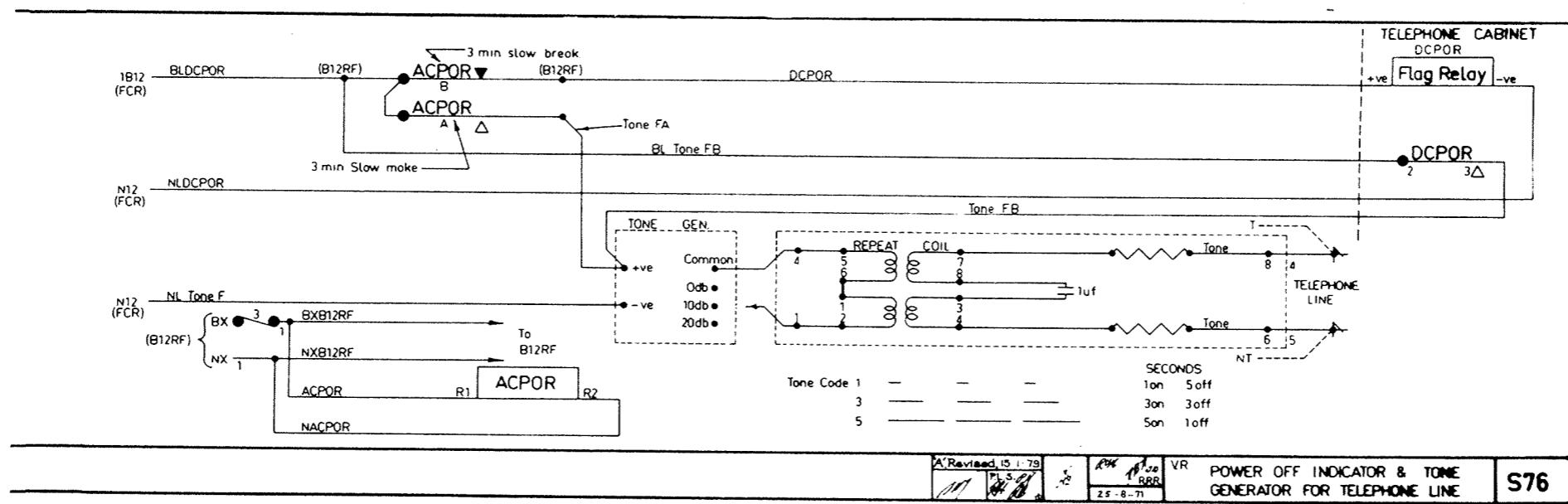
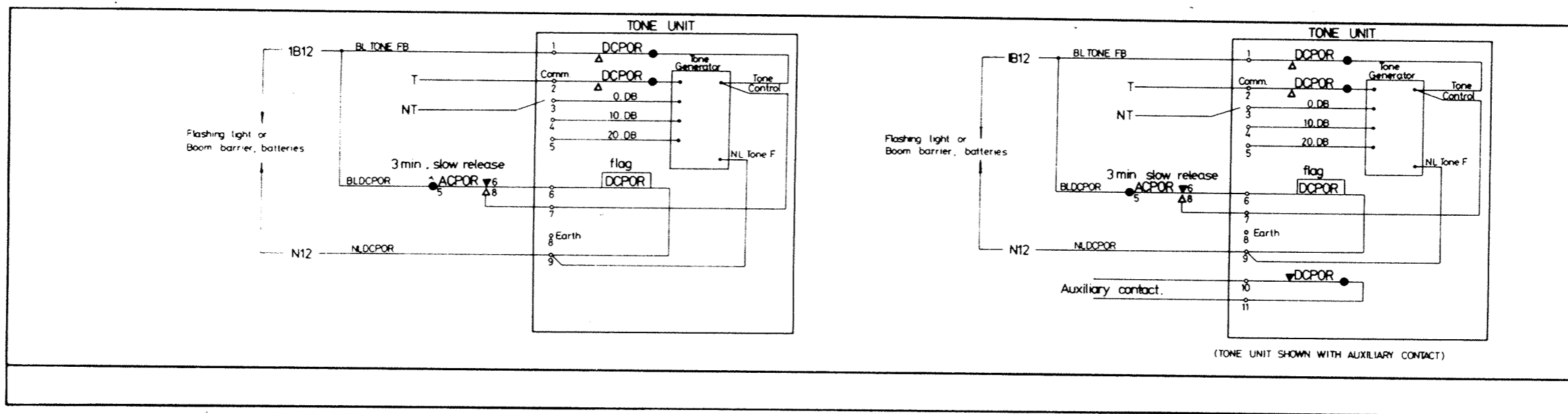


2	27-9-76.	3-8-76	2-6-71	3-9-70	14-11-67	5-4-65	28-7-59	15-4-57	VICTORIAN RAILWAYS LEVEL CROSSING ROAD SIGNAL FLASHING LIGHT TYPE H.C.81	Sig & Tel Engineer I.B.	Drawn by I.B.	Traced by I.B.
ALL DIMENSIONS METRICISED.	Alt. No 1732	Alt. No 1471	Alt. No 1418	Alt. No 1317.	Alt. No 1206	Warning bell turned 90° Face of bell now at right angles to sight-line of flashing light.	Alt. No 932	For Material List see F4738.				
	B.V.	M.J.R.	R.M.H.	B.R.	B.R.			I.B.	17-9-56	H996		

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38913.
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LIGHT SIGNAL COMPLETE 2 LIGHTS WITH BELL WITH BELL IH996
" " " " WITHOUT BELL 2H996
" " " " WITH BELL 3H996
" " " " WITHOUT BELL 4H996
" " " " WITH BELL 5H996
" " " " WITHOUT BELL 6H996

PART No	NAME	MATL.	IH996	2H996	3H996	4H996	5H996	6H996
IF4737	Brackets	M.S.	3	3	3	3	3	3
IF5204	Bracket	M.S.	1	1	1	1	1	1
16B117	Foundation	Concrete	1	1	1	1	1	1
2F5606	Clip. (with Bolts)	M.S.	4	4	4	4	4	4
2F4107	Cap	M.S.	1	1	1	1	1	1
Stock	Warning Bell.		1		1		1	
"	Light Signals. (Complete		2	2	4	4	6	6
"	with Mountings) Type HC81.		Lights	Lights	Lights	Lights	Lights	Lights
"	100 dia. Pipe (Length as required)	M.S.	1	1	1	1	1	1
"	Retro-reflecting Cross Arms							
"	to W & W Plan No 605-55.	Alum.	1	1	1	1	1	1
"	Retro-reflecting Track Sign							
"	to W & W Plan No 605-55.	Alum.	1	1	1	1	1	1
"	Retro-reflecting Stop Sign for							
"	Flashing Light to W & W Plan 605-53	Alum.	1	1	1	1	1	1
"	Bolts see W & W Plan No 605-55 Item (2)	M.S.	2	2	2	2	2	2
"	Washers 16 x 11 x 1,6	Fibre	10	10	10	10	10	10
"	Bolts M10 x 1,5 H.R. Cad. P1td 64 long	M.S.	2	2	2	2	2	2
"	Bolts M10 x 1,5 H.R. Cad. P1td 32 long.	M.S.	6	6	6	6	6	6
"	Nuts M10 x 1,5 Simmonds.							
"	N.P/V126./10/2.		10	10	10	10	10	10

Note: - Number of tracks for track sign will be stated when signals are ordered.

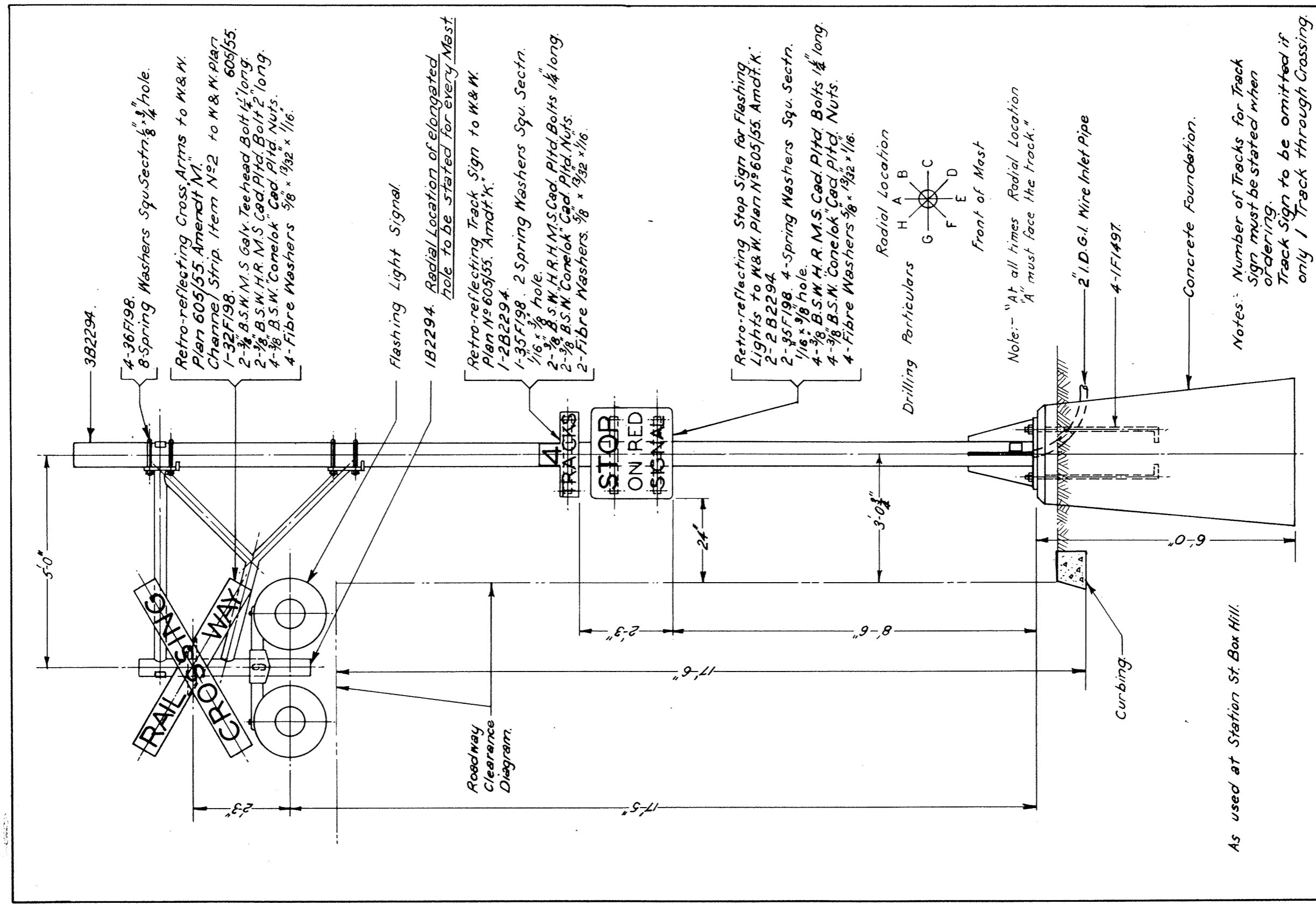
Track Sign will be omitted if only one track through crossing.

2-6-71/AH 1471

A ALL DIMENSIONS METRICISED.

3-9-70	5-4-65	15-4-57	7-3-57	24-9-76	R.B.
A/H No 1418	A/H No 1206	A/H No 932	Standardised description of Simmonds Nuts added	V.R. LEVEL CROSSING ROAD SIGNAL FLASHING LIGHT MATERIAL LIST 179-58	Sig & Tel Engineer
R.M.H.	B.R.	I.B.	I.B.	Drawn by Traced by	I.B.
F4738				F4738	

N 243
45400



As used at Station St. Box Hill.

Notes: Number of Tracks for Track Sign must be stated when ordering.
Track Sign to be omitted if only 1 Track through Crossing.

FLASHING LIGHT SIGNAL COMPLETE		IA3599	
		Sig & Tel. Engineer I.B.	Drawn by Traced by I.B.
3-8-76	VICTORIAN RAILWAYS	8.E.B.	
Alteration N°1732	CANTILEVER MAST	M.A.P. [Signature]	
B.K.	FOR FLASHING LIGHTS	A3599	
	ASSEMBLY	20-9-68	
Scale 1/2" = 1'-0"			



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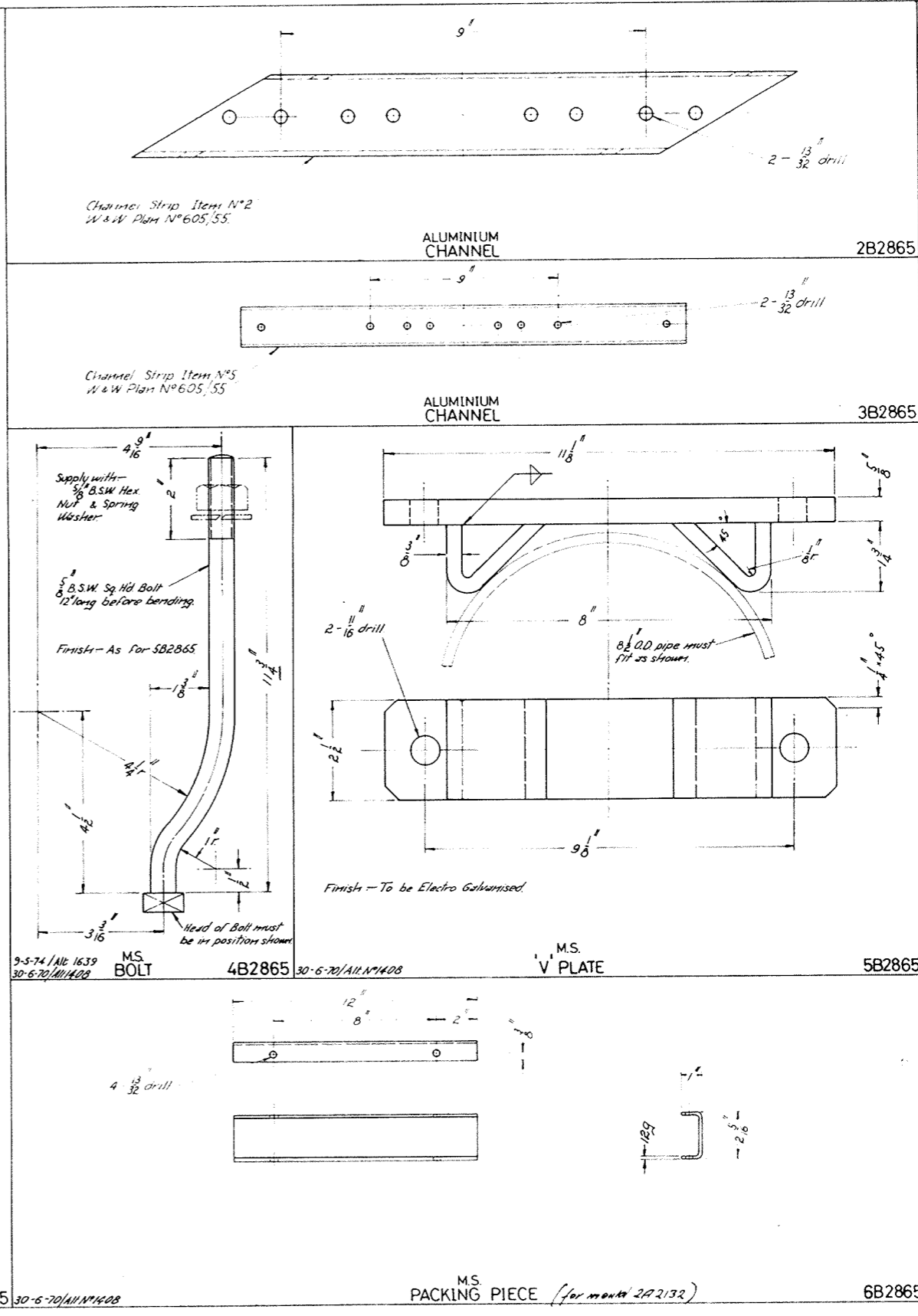
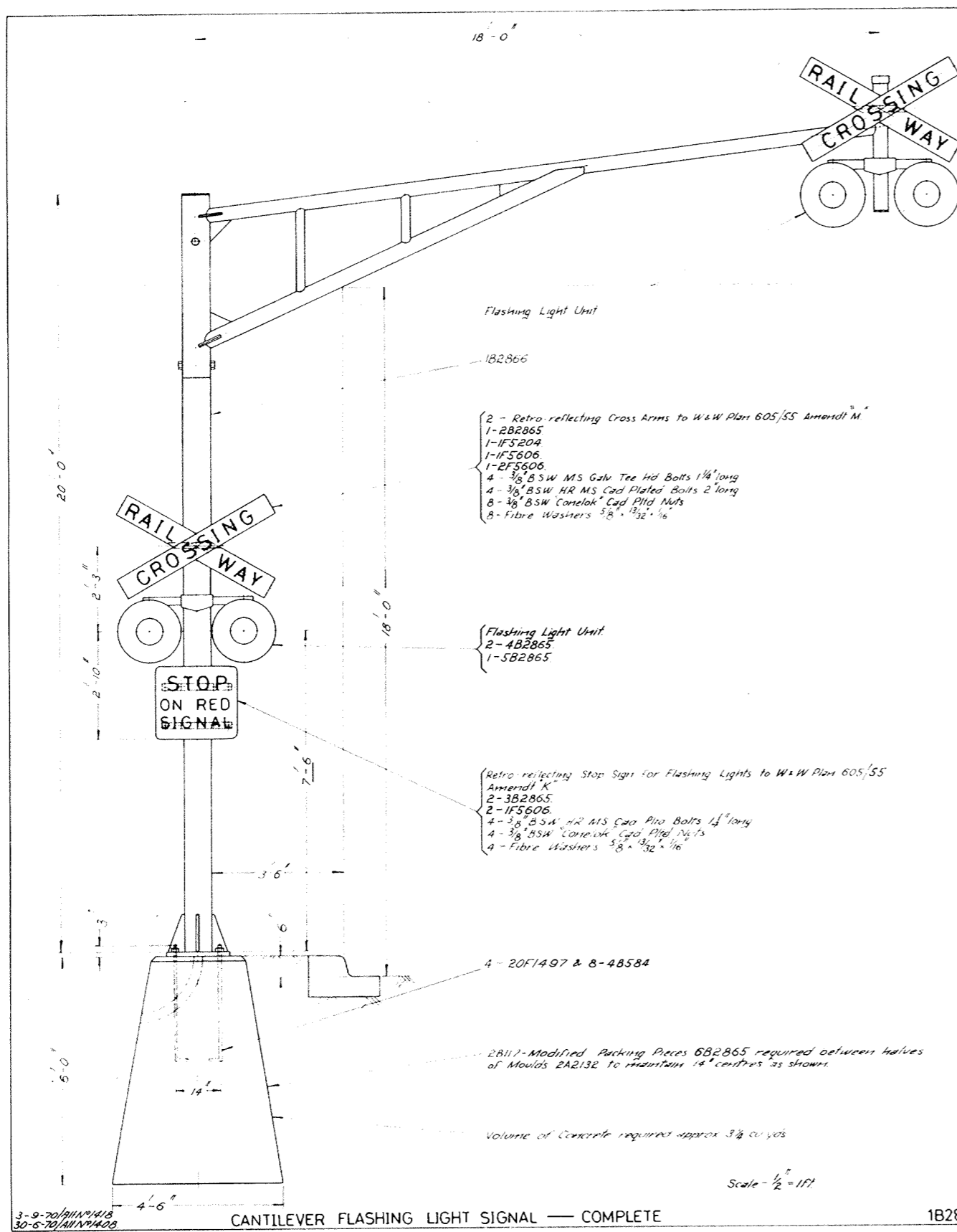
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H-1-2



Traced by R.M.H.	
Drawn by R.M.H.	
Sig & Tel Engineer A.J.	
B2865	
VICTORIAN RAILWAYS CANTILEVER MAST FOR FLASHING LIGHTS DETAILS & ASSEMBLY	
B2865	



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

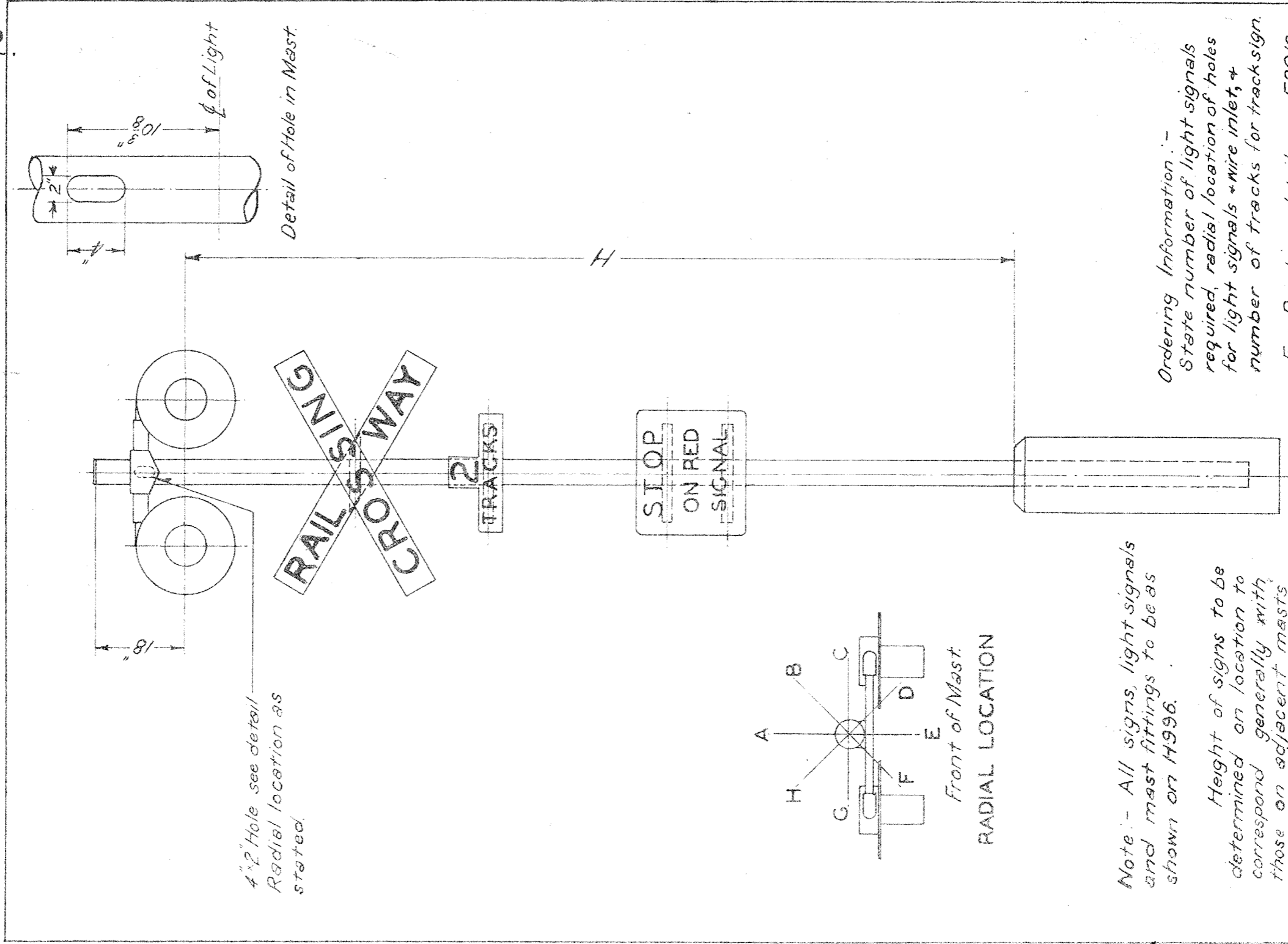
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C1-43.



Note: - All signs, light signals and mast fittings to be as shown on H996.

Height of signs to be determined on location to correspond generally with those on adjacent masts.

Ordering Information: - State number of light signals required, radial location of holes for light signals + wire inlet, + number of tracks for track sign.

For Painting details see F3910

F4821	2-6-71/Alt 1471.		This drawing is for use where modification of standard Crossing Signal is required to provide clearance for Light Signal.	V.R. LEVEL CROSSING ROAD SIGNAL FLASHING LIGHT TYPE H.C.81 2.9.57	Sig & Tel Engineer G.W.	IF4821
	Drawn by I.B.	Traced by I.B.				

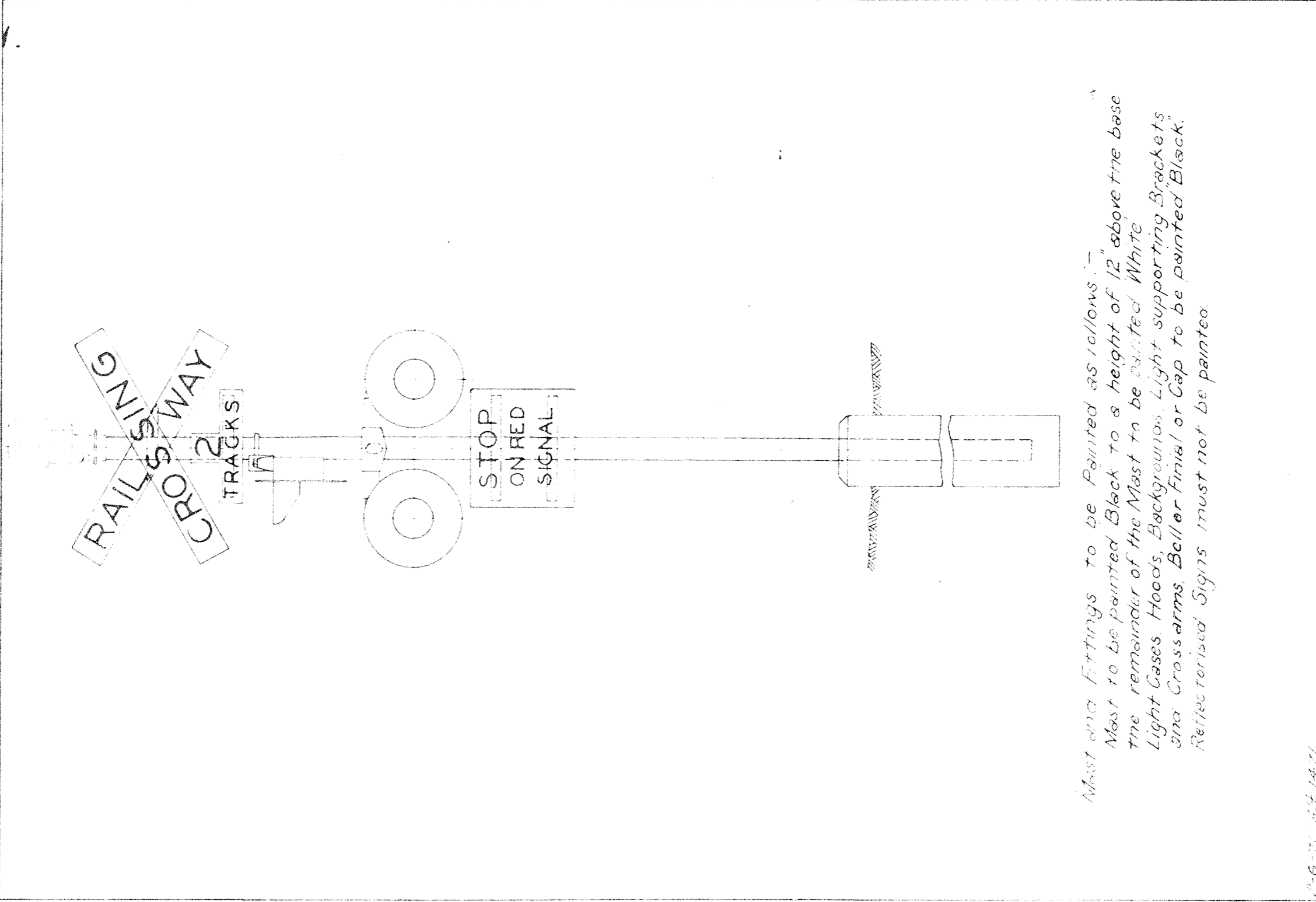


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33181.

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*Mast and Fittings to be Painted as follows:—
 Mast to be painted Black to a height of 12" above the base
 the remainder of the Mast to be painted White
 Light Cases, Hoods, Backgrounds, Light supporting Brackets
 and Cross arms, Bell or Finial or Cap to be painted Black.
 Reflectorised Signs must not be painted.*

F3910	20-11-59	Re-drawn to conform with fitting of Reflectorised Signs	Original Dated 18.12.45	M.B.	1978	M.B.	Drawn by M.B.	Traced by M.B.	6.9.1957	Sigsbee & Tel. Engineer	F3910



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BELL
OR
CAP IF4107

29F198
IF934
2F4741
IF5204

3A3027
4A3027

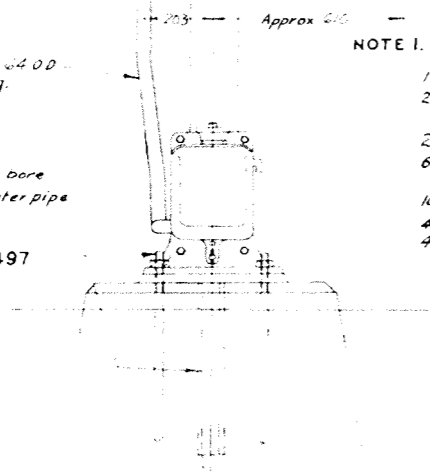
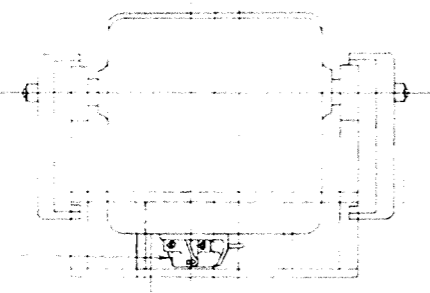
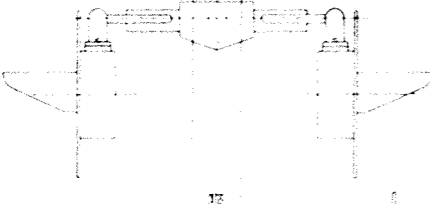
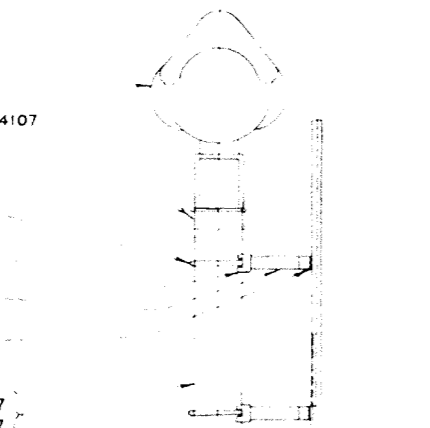
IF4742

IF4737

IF4741

PVC Conduit 40D
Approx 320 long.

4-IF1497



Retro-reflecting Cross Arms
to W&W Plan N° 605-55.
(Amendment K)

Retro-reflecting Track Sign
to W&W Plan N° 605-55

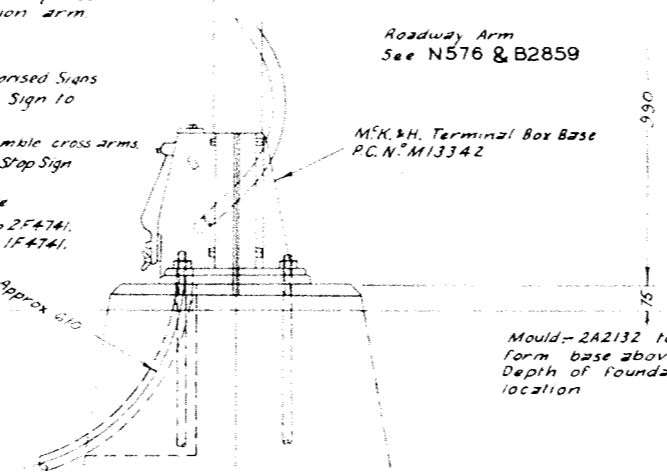
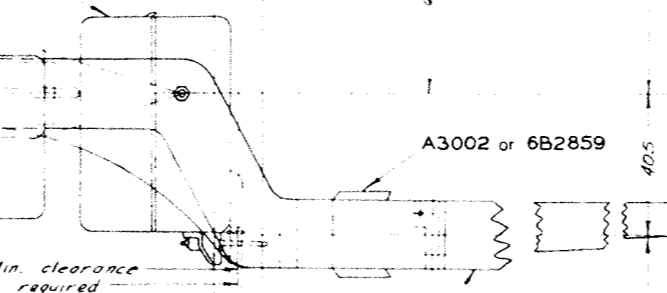
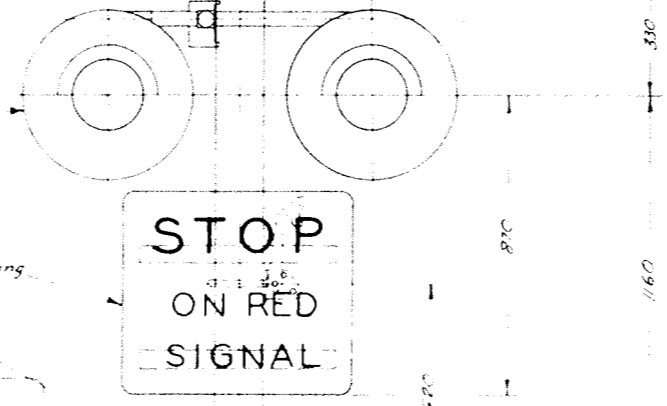
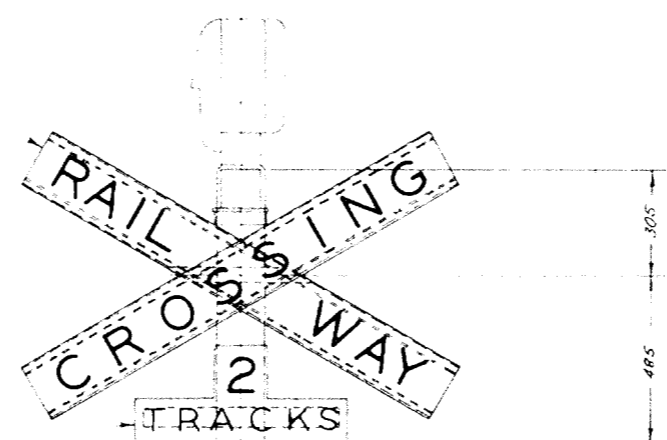
See B1414 for angular setting
of Flashing Light Signal

Retro-reflecting Stop Sign for Flashing
Light to W&W Plan N° 605-55

Boom Mechanism Complete

NOTE 1. (see stock list)

- 10 - Fibre washers for 3/8" bolts securing Reflectorised Signs
- 2 - 3/8" Whit bolts 2 1/2" long used to fasten Crossing Sign to bracket IF5204
- 2 - Bolts (Item 2) W&W Plan 605-55 used to assemble cross arms
- 6 - 3/8" Whit bolts 1 1/2" long used to fasten Track & Stop Sign to brackets IF4737
- 10 - 3/8" Whit Simmonds Nuts for bolts listed above
- 4 - 1/2" Whit bolts 1 1/2" long used to fasten IF5204 to 2F4741
- 4 - 1/2" " " " " " IF4737 & IF4741

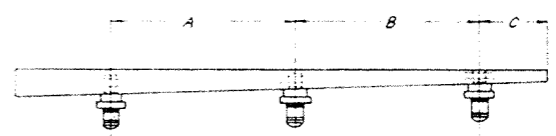


PART N°	NAME	MTRL	QTY
3A3027	Mast (with extension for Bell H = 3550)	MS	1
4A3027	Mast (without extension for Bell H = 3550)	"	1
5A3027	Mast (without holes & Bell extension H = 2150)	"	1
N576 & B2859	Roadway Arms (Length as req'd)	-	1
IF4737	Brackets	M.S.	3
IF5204	Bracket	"	1
IF934	Clamps	C.S.	4
29F198	U. Bolts	M.S.	4
IF4742	Out of Order Catch	"	1
IF4741	Brackets	"	2
2F4741	Brackets	"	2
IF4107	Cap	"	1
IF1497	L. Bolt	M.S.	4
A3002 & 6B2859	Arm Brackets (as req'd)	"	1
A3390	Mechanism Support (or 2A3390 See A3389)	C.I.	1
STOCK	Warning Bell	-	1
"	Light Signal Complete with Mountings & Lights	-	1
"	Retro-reflecting Cross Arms to W&W Plan N° 605-55	Alum	1
"	Retro-reflecting Track Sign to W&W Plan N° 605-55	Alum	1
"	Retro-reflecting Stop Sign for Flashing Light to W&W Plan N° 605-55	Alum	1
"	Boom Mechanism Complete	-	1
"	Bolts see W&W Plan N° 605-55 Item 2	M.S.	2
"	Washer 3/8" x 1/2" x 1/16"	Fibre	10
"	Bolts 3/8" B.S.W. HR Cad Plated 2 1/2" long	M.S.	2
"	Bolts 3/8" B.S.W. HR Cad Plated 1 1/4" long	"	6
"	Nuts 3/8" B.S.W. Simmonds N.P. V126/10/2	"	10
"	Bolts 1/2" B.S.W. HR H 1 1/2" long	"	8
"	Spring Washers 1/2"	SS	8
IF5498	Extension Arm	MS	2

NOTE - For Painting details see F4823

INFORMATION FOR ORDERING

State length of boom required. Length is measured from centre of mast. State whether mast is to be equipped with or without bell. When mast is to be equipped with boom mechanism only, mast 3A1043 is to be supplied. Number of tracks for track sign must be stated. Track sign to be omitted if only one track through crossing. Position of Roadway Arm Lights will be as shown on N576 unless otherwise specified.



FOR AUTO. BOOM BARRIER FITTED ON PIPE MAST A1043 - SEE B1285

VICTORIAN RAILWAYS	Drawn by	RAMH	T.B.
	Checked by		
	Engineer	RAMH	RAMH
	Sig. & Tel. Officer	RAMH	RAMH
AUTOMATIC BOOM BARRIER ASSEMBLY			
B2010			
24 10 63			
Part N° A3390 added.	Part N° B2859 added.	Part N° 1216 added.	Part N° 15398 added.
Part N° 1511	Part N° 1511	Part N° 1511	Part N° 1511
Part N° 1511	Part N° 1511	Part N° 1511	Part N° 1511

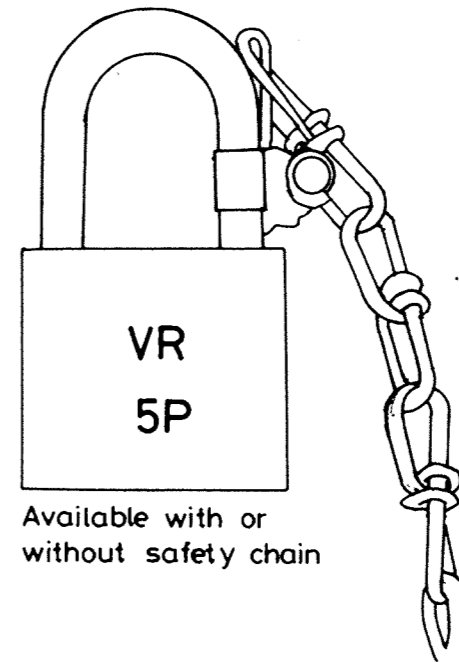
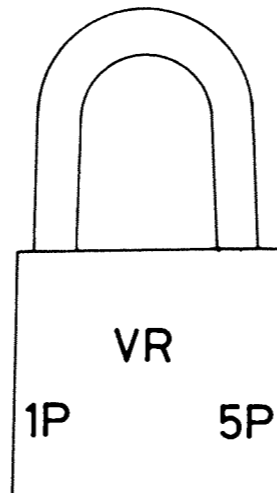
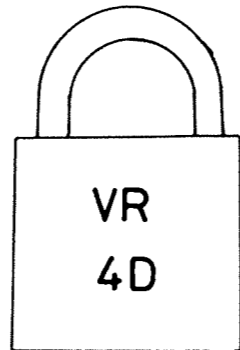
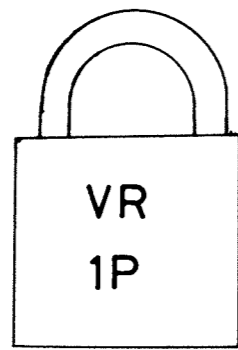


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

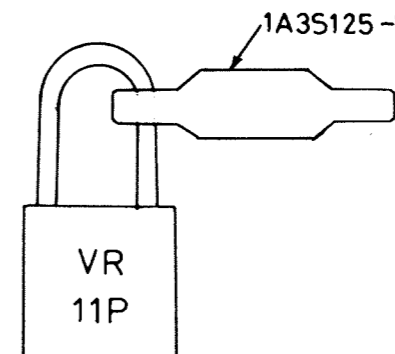
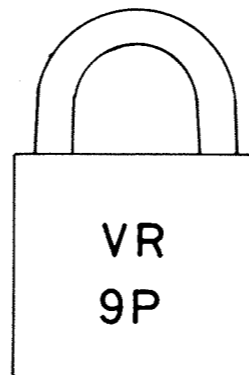
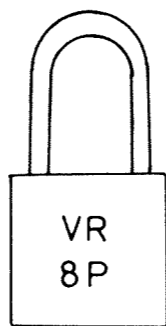
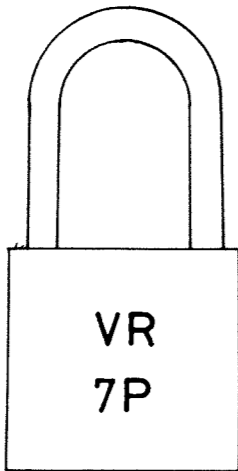
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Available with or without safety chain



REV'N	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	S&C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS STANDARD LOCKS AS USED BY SIGNAL & COMMUNICATIONS DIVISION.	 S&C ENGINEER
							1. B			
							J. G.	CORRES.		
									DATE 20-12-79.	
									SCALE	
									INDEX	
									A3	DRAWING NO. S 903/79
										PRINT

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SCHEDULE OF STANDARD LOCKS AND KEYS AS USED BY SIGNAL & COMMUNICATIONS DIVISION

PURPOSES REQUIRED FOR	TYPE	PURPOSES REQUIRED FOR	TYPE
Apparatus, Safe Working, maintained by S&C Division.	VR-7P VR-8P	Circuit Controllers, signal arms.	VR-8P
Bags, Staff Balancing.	VR-7P VR-8P	Cubicles, S.&.C. H.T. Switchgear.	VR-S.37P
Blocks, Chock or Scotch.	VR-5P	Cabinets Console Power Supply.	VR-12P
Boxes, Annett Lock Controller.	VR-7P	Doors, Basement, signal boxes in electrified area with electrical equipment in locked racks.	VR-22P
Boxes, Battery.	VR-7P	Doors, Basement, signal boxes in electrified area with electrical equipment in unlocked racks.	VR-21P
Boxes, Cable and Junction.	VR-7P	Doors, Basement, signal boxes where electrical equipment not installed.	VR-22P
Boxes, Carrying Staffs.	VR-7P VR-8P	Doors, Electrical Fitters and Signal Adjusters cabins.	VR-20D
Boxes, Master Key.	VR-7P VR-8P	Doors, Office, inner, of Dist. Supts., Dist. Engrs., Workshops Managers, Storekeepers, Road Masters, Sig. Supvrs., Road Foreman, Works Foreman and where authorised Timekeepers.	VR-31D
Boxes, Meter.	VR-9P	Doors, Upper of signal boxes (excluding frames within station office of signal bays.)	VR-22P
Boxes, Pilot Key, lower door.	VR-S.122D	Generators, Magneto Staff Instrument.	VR-S.120P
Boxes, Pilot Key, upper door.	VR-7P VR-8P	H Vans - see under Vans.	
Boxes, Push Button Control, level crossing flashing lights.	VR-5P	Handles, Lever locking anti-clack wise rotation.	VR-7P
Boxes, Relay.	VR-7P	Instrument, Staff, miniature and large.	VR-S.120P
Boxes, Staff Exchange, composite staff.	VR-5P	Ladders Level Crossings.	VR-7P
Boxes, Staff Exchange, divided staff.	VR-5P	Lights, Signal - see under Signals	
Boxes, Staff Exchange, large staff.	VR-7P VR-8P	Lock for releasing points after failure.	VR-11P
Boxes, Staff Exchange, (Large & miniature staff) and train staff.	VR-5P	Locks, Lever.	VR-8P
Boxes, Staff Exchange, miniature staff cover.	VR-8P	Locks, Miniature Staff.	VR-7P
Boxes, Staff Exchange, miniature staff release key.	VR-S.125D	Locks, Point Device.	VR-5P
Boxes, Staff Switch, large staff.	VR-S.120P	Locks, Safety, Signal switchgear.	VR-S.17D
Boxes, Staff Switch, miniature staff.	VR-8P	Locks, Switch, operated by Electrical Fitter.	VR-7P
Boxes, Switchgear, H.T. & Transformer.	VR-7P	Machines, Point, dual control levers.	VR-5P
Boxes, Testing, flashing lights.	VR-1P	Machines, Point, dual & non-dual control covers.	VR-7P
Boxes, Tool, employees, containing departmental property (Where authorised)	VR-4D	Mechanisms, Boom Barrier.	VR-7P
Boxes, Track Feed, 110V.	VR-7P	Mechanisms, Signal.	VR-7P
Cabinets, Battery.	VR-S.123P	Releases, Time.	VR-8P
Cabinets, Power Interlocking Machine.	VR-8P	Signal Supvrs. Office-see under Doors.	
Cabinets, Relay.	VR-S.123P	Signals, Light.	VR-7P
Cable and Junction Boxes - See Boxes		Staff Boxes for carrying - see under Boxes.	
		Staff Exchange Boxes-see under Boxes.	
		Staffs, Large, divided.	VR-S.17D
		Stops, Train.	VR-7P
		Switches, H.T. Signal Power Supply.	VR-S.51D
		Switchgear, H.T.	VR-S.8P
		Vans, HD, Transport of non ferrous metals.	VR-S.46

REV'N	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	S&C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS APPLICATION OF STANDARD LOCKS AS USED BY SIGNAL & COMMUNICATIONS DIVISION.	 S&C ENGINEER	
							J.B.				DATE 20-12-79.
							CHECKED J.B.	CORRES.			SCALE
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									PRINT		

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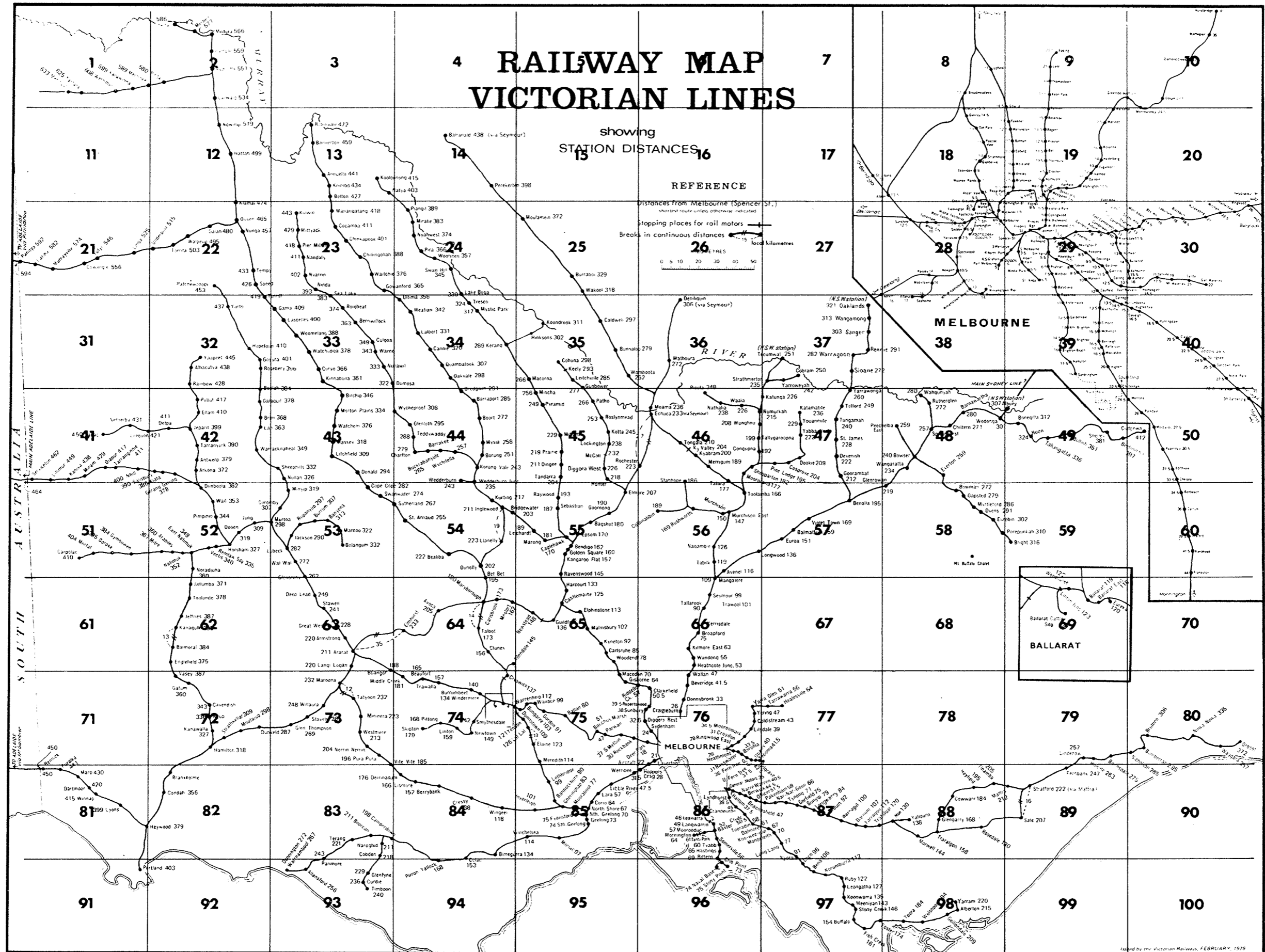


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Issued by the Victorian Railways, FEBRUARY, 1979

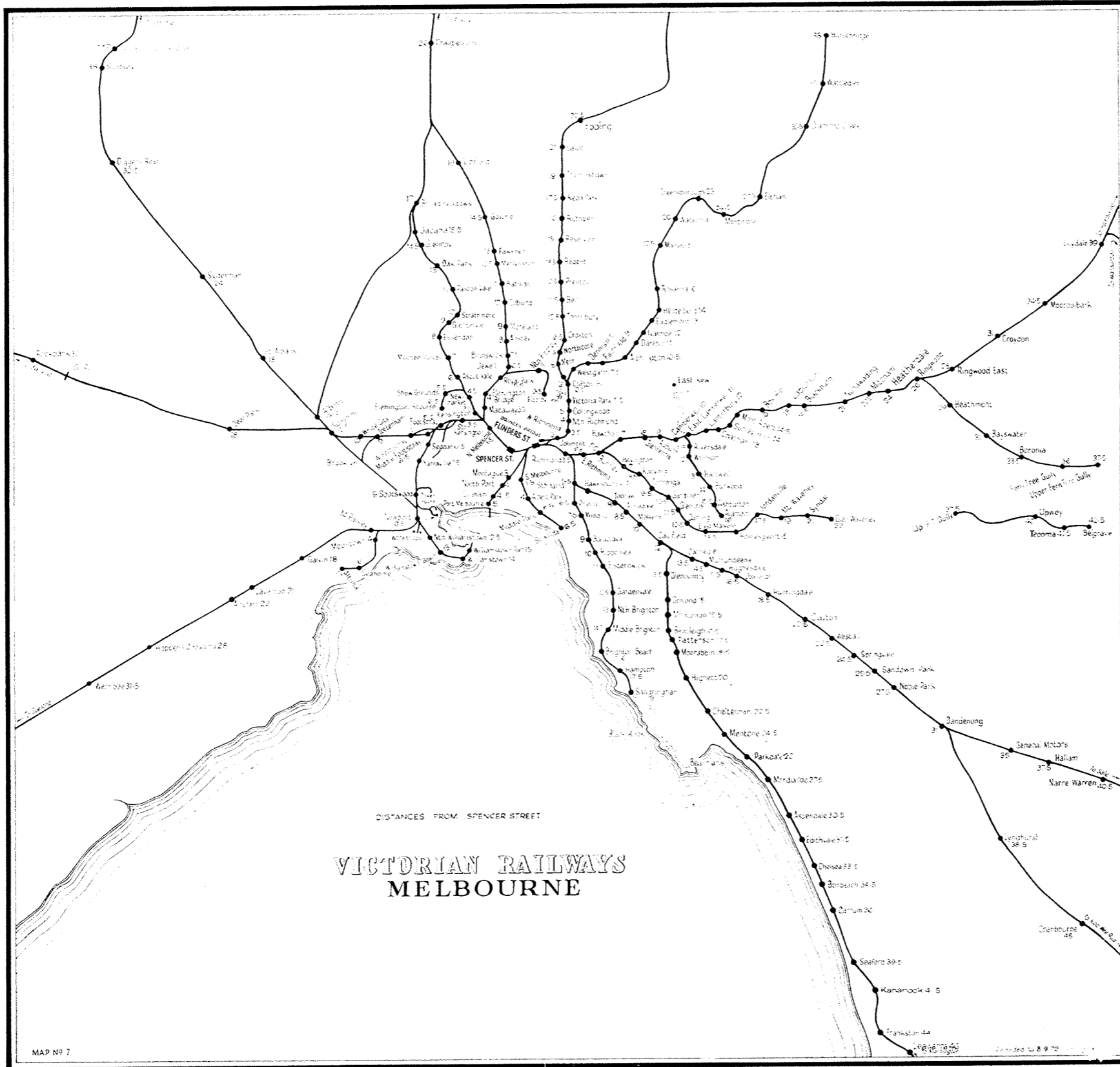
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ANNETT LOCK AND PLUNGER LOCK LAYOUT

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ANNETT LOCK POINT LAYOUT AND LEVEL CROSSING PUSH BUTTON CONTROL.

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GENERAL LAYOUT OF APPARATUS OF A SWITCHLOCK LOCATION



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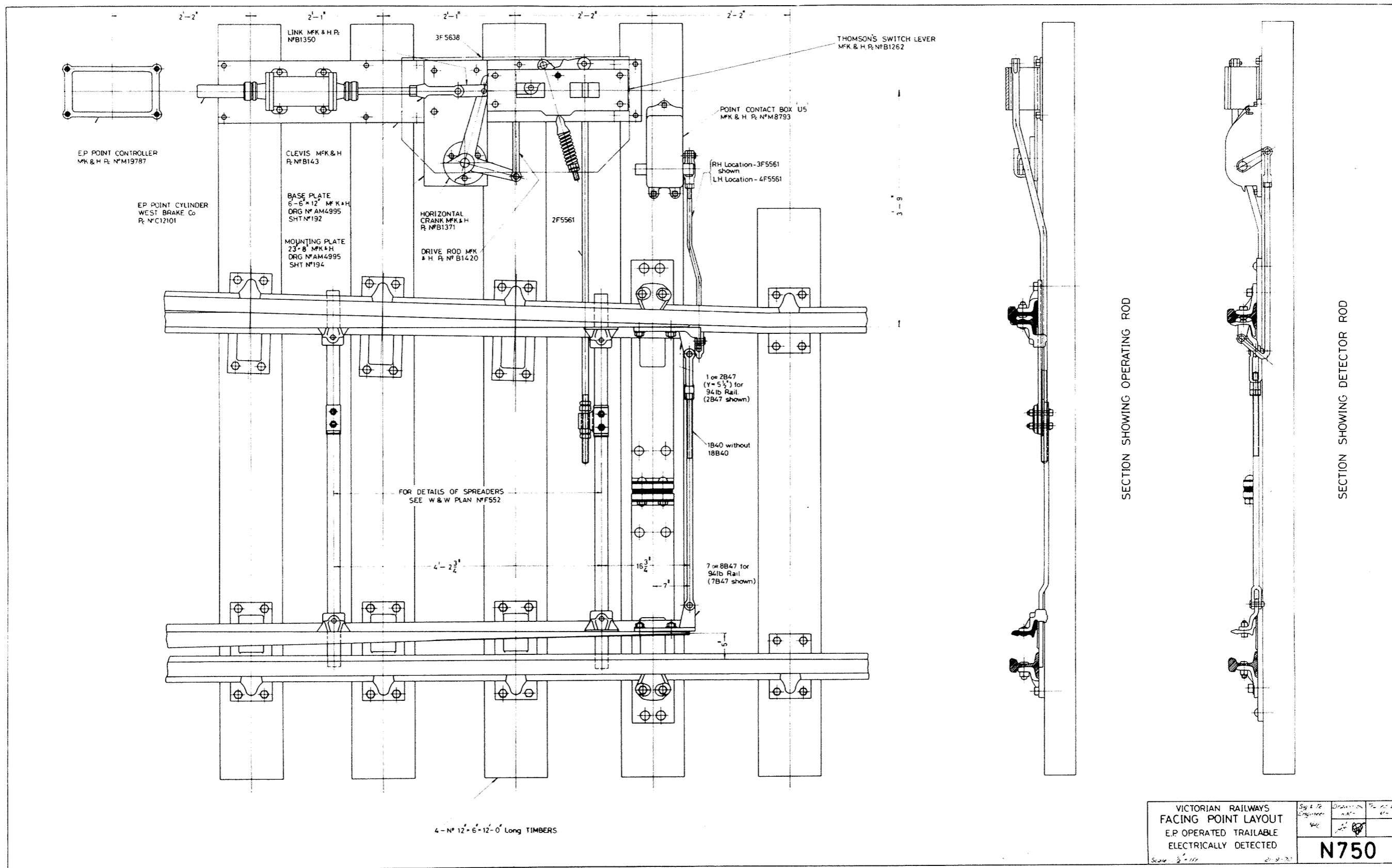
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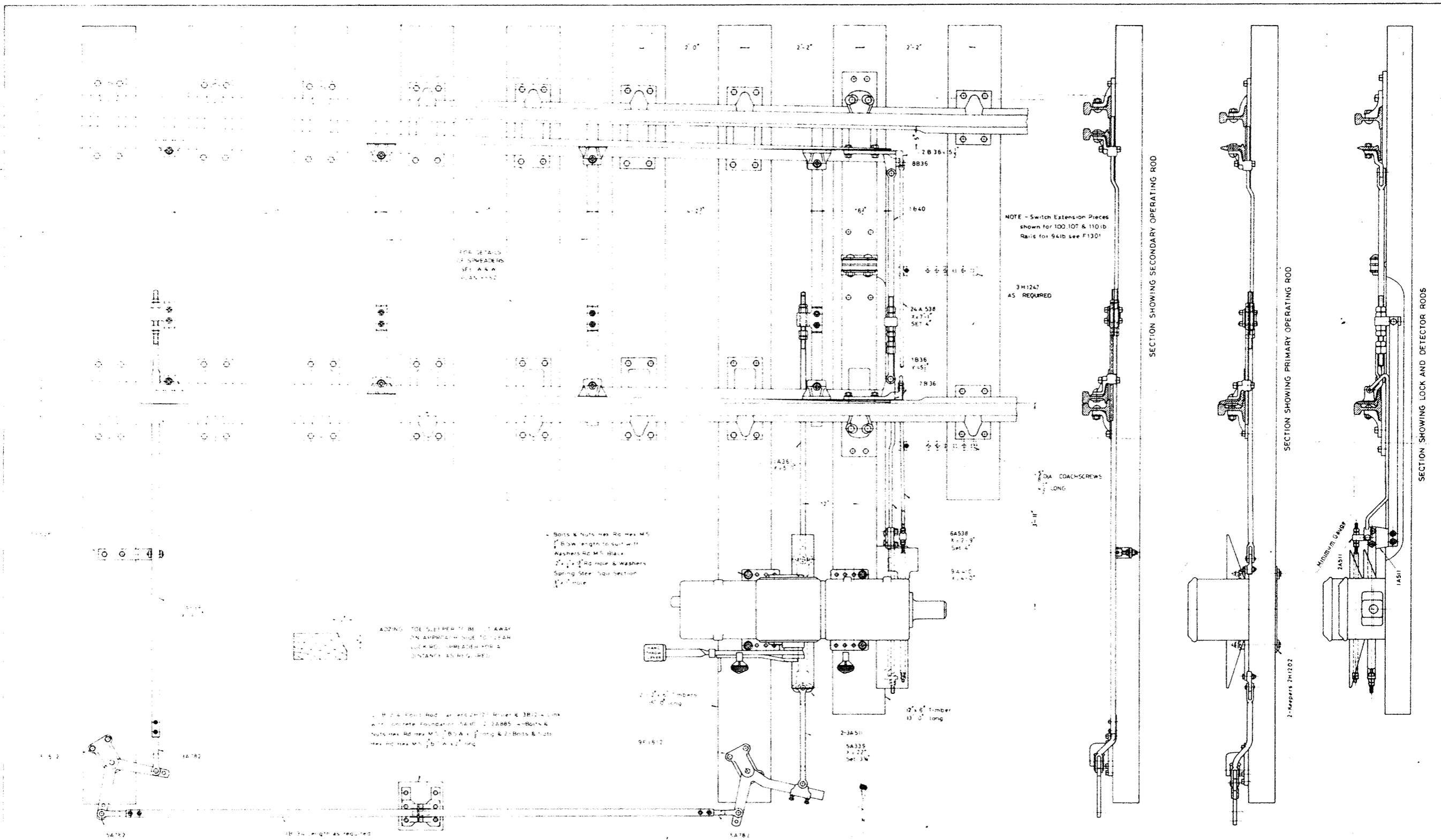
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FOR DETAILS OF SINEADERS SEE A.A.W. PLAN 1152

Bolts & Nuts max Rd hex M5 1/2" Row length to suit with Washers Rd M5 1/2" 2 1/2" Rd Hex & Washers Spring Steel 1/2" section 1 1/2" wide

ADD TOE SLEEPER TO BE 1" AWAY ON APPROACH IN ORDER TO CLEAR LOCK ROD. DIMENSIONED HERE & DISTANCE AS SHOWN HERE

2 1/2" x 6" Posts Rod 4" x 1/2" 2" Rivets & 3/16" dia link with concrete foundation 1/4" dia 2 2A885 4-Bolts & Nuts max Rd hex M5 1/2" 1 1/2" long & 2-Bolts & Nuts max Rd hex M5 1/2" 1 1/2" long

Note - E of Motor primarily shown at 30" from running edge for 107 lb Material Lengths of all rods standardised for use with both 94 lb & 107 lb material

Redrawn & Revised under same title & number dated 1952-70

VICTORIAN RAILWAYS		S.E.C. Engineer	Designed B.V.	Drawn B.V.
F.P. LAYOUT 30 ft. BLADES			SHEPHERD	1952
POWER OPERATED DUAL CONTROL				
WESTINGHOUSE M23A MECHANISM				
Scale: 1 1/4" = 1'-0"				
				K309



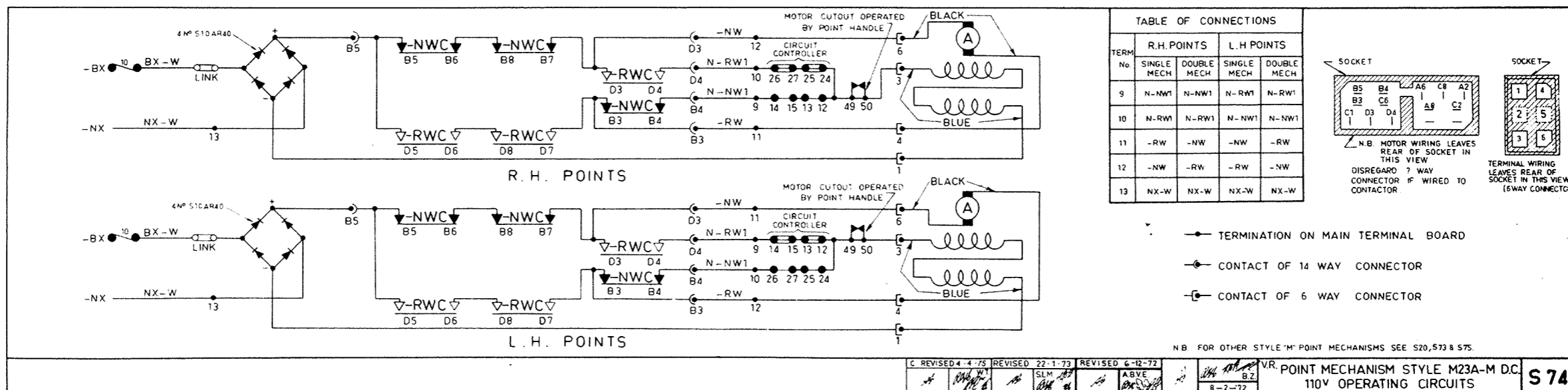
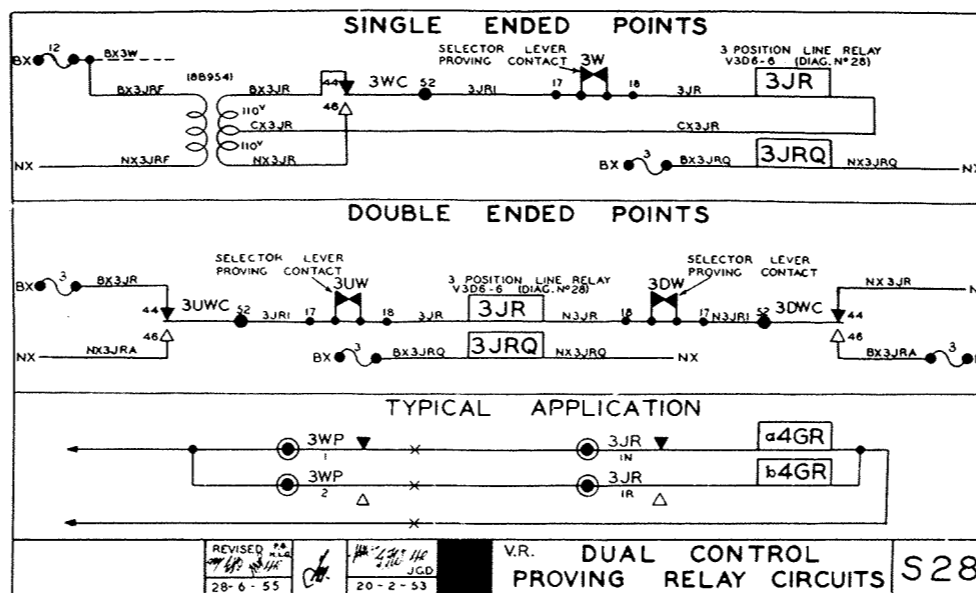
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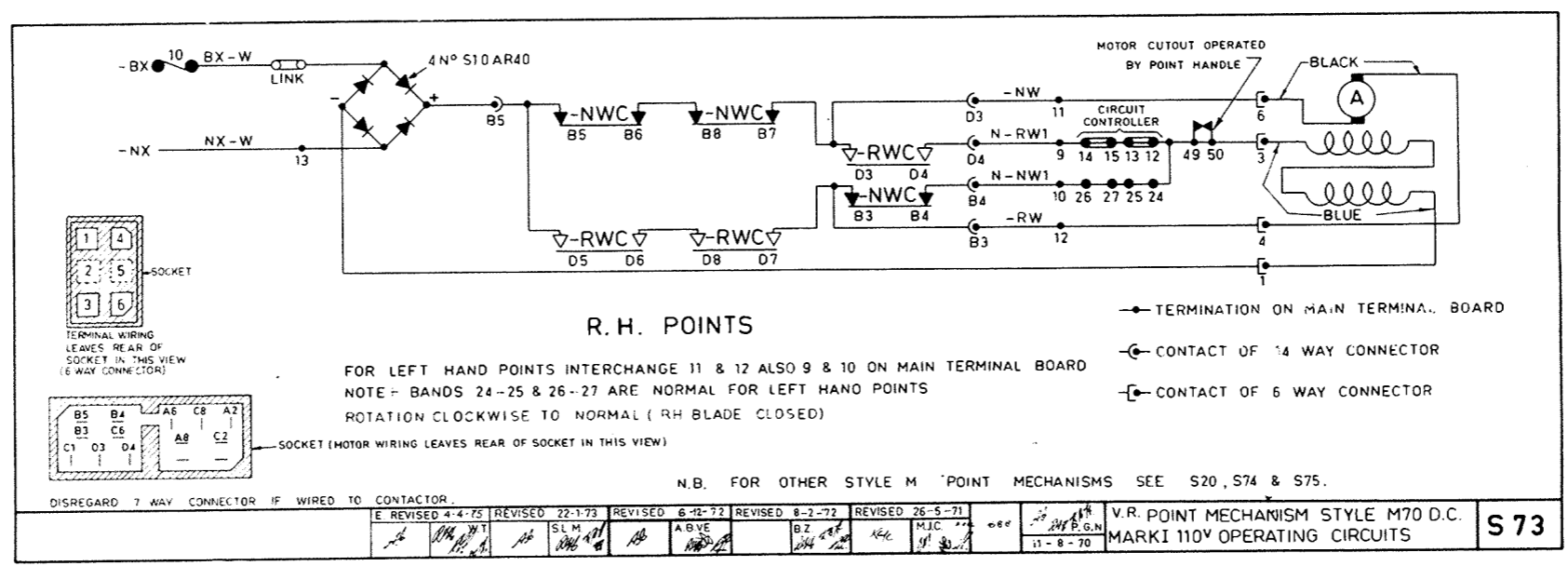
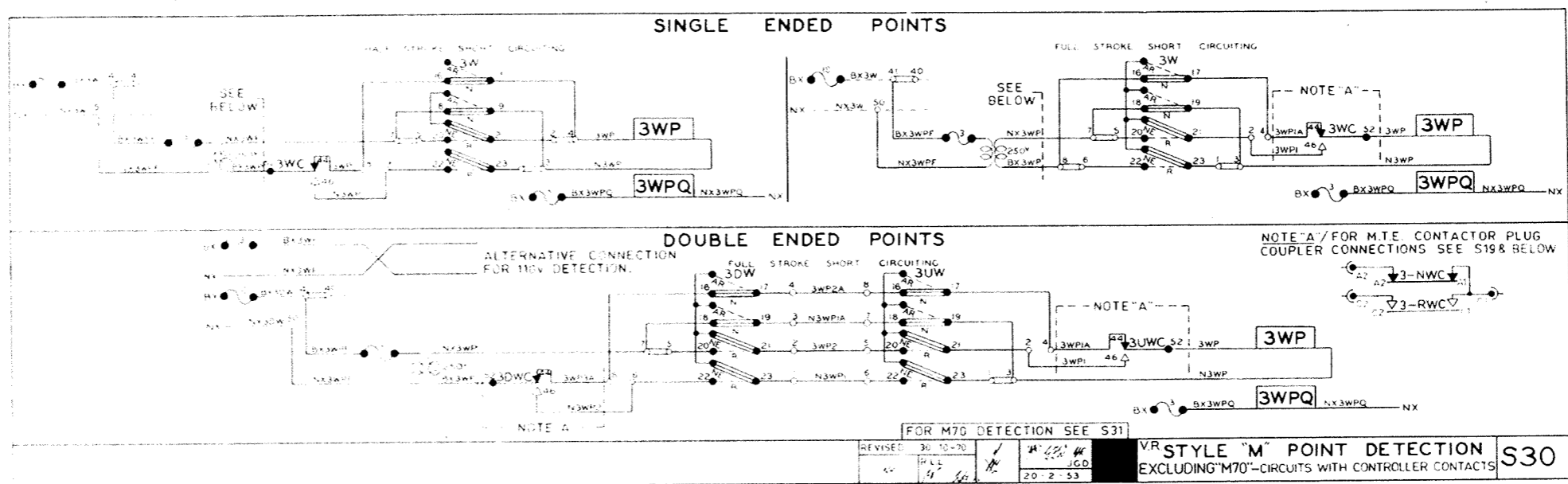
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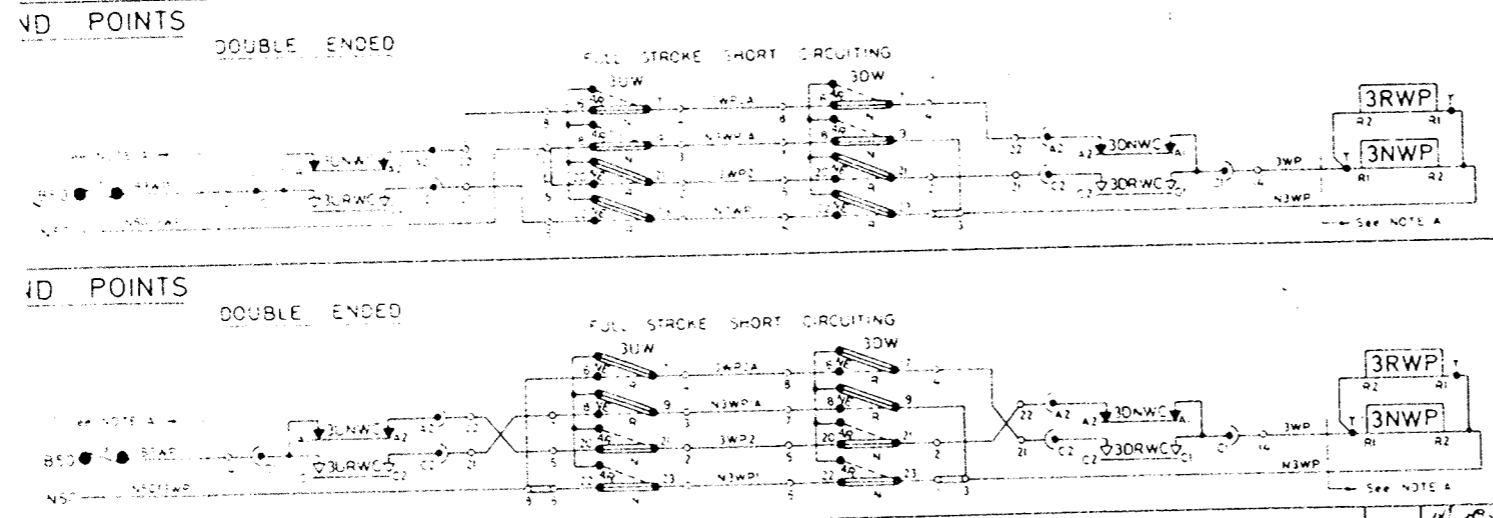
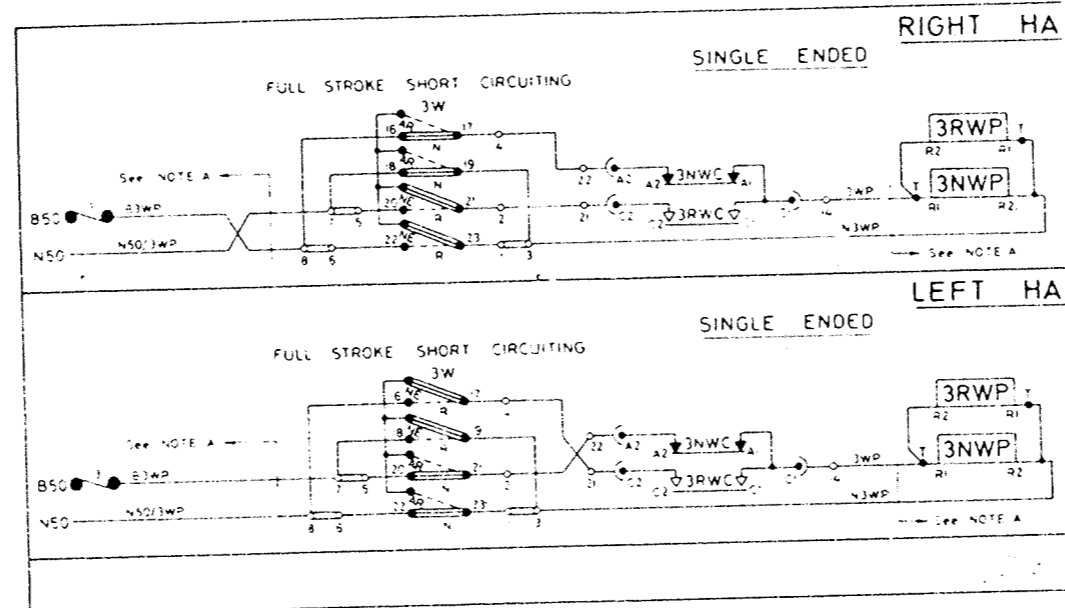
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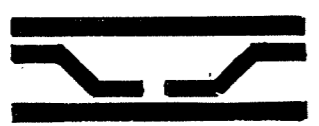






NOTES:
 A For AC detection feed and relay arrangements see S30
 —○— Contact of 14 way connector (Typical S19)
 —○— Terminal post on point machine main terminal board

16-10-70 POINT DETECTION - STYLE 'M70' S31
 CIRCUITS WITH M.T.E. CONTACTOR



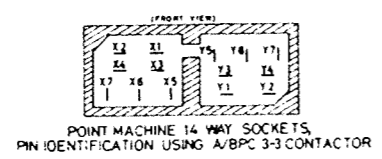
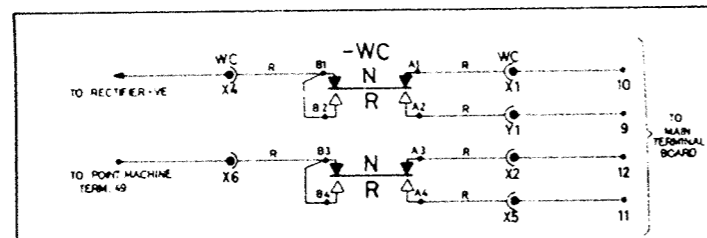
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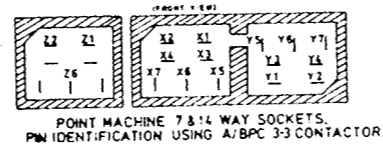
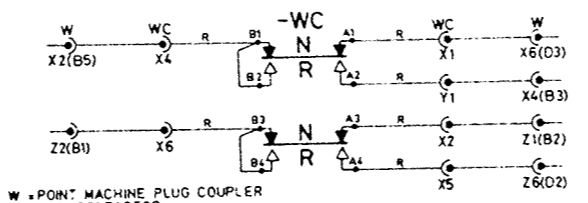
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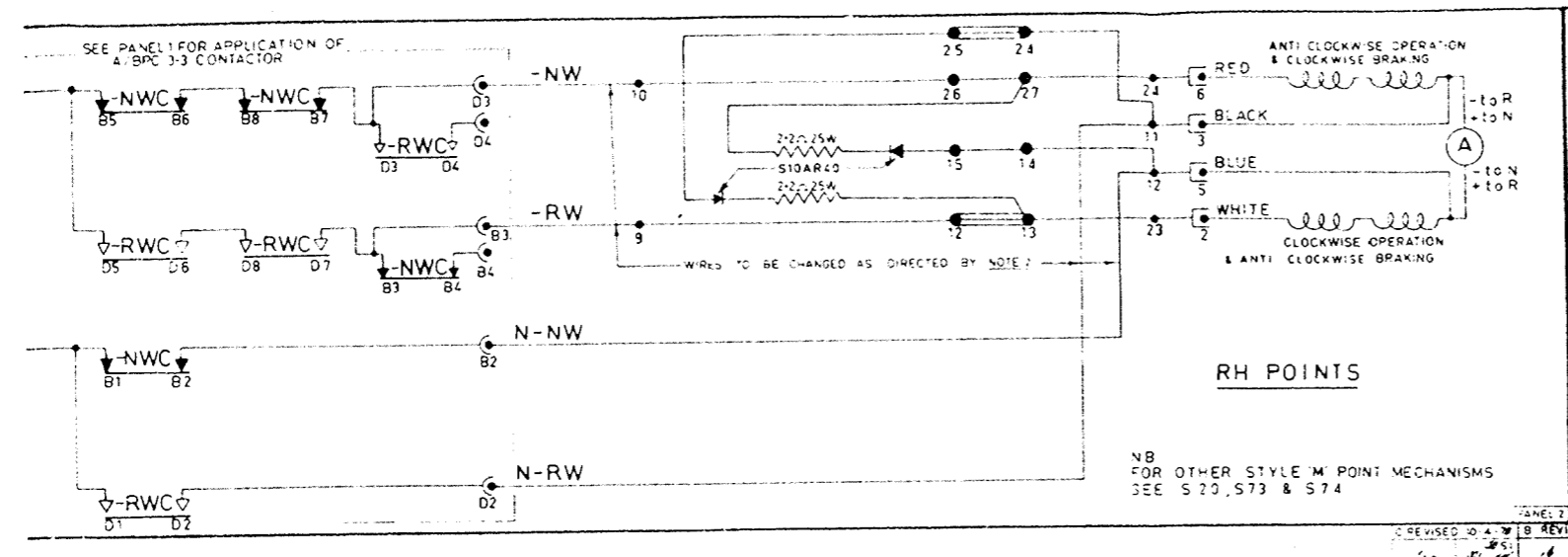
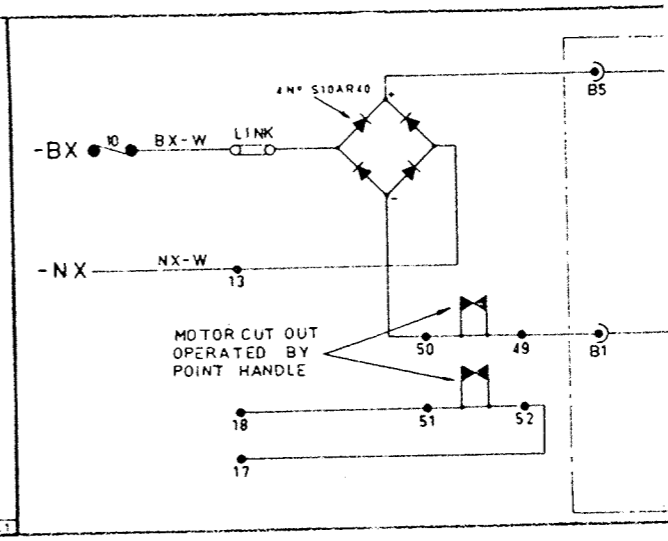
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A/BPC 3-3 CONTACTOR - PERMANENT WIRING



A/BPC 3-3 CONTACTOR - TEMPORARY CONVERSION.



LEGEND

- MAIN TERMINAL BOARD.
- CONNECTORS 7 WAY & 14 WAY.
- ⊙ CONNECTOR 5 WAY.

POINT MACHINE 7 & 14 WAY SOCKETS

DA A

LOAD 900 LB SUPPLY 110 VAC
 LOAD 500 LB SUPPLY 110 VAC
 SNUGGING CURRENT A INSTANT OF SWITCH OVER 20-24 AMP
 FUSIBLES 220 OHM 25 WATT
 DIODES TYPE 16N9 SIDAR 40
 BANDS 25-27 TO NORMAL OPERATING 25-26 TO NORMAL BRAKING
 12-13 TO REVERSE OPERATING 12-14 TO REVERSE BRAKING

NOTE 1: FOR APPLICATION OF A/BPC 3-3 CONTACTOR SEE PANEL 1

NOTE 2: FOR LINK POINTS INTRODUCED 7 & 10 ON MAIN TERMINAL BOARD & 12

NOTE 3: FOR DETECTION CIRCUIT SEE 531

VR POINT MECHANISM STYLE M70 D.C. MARK II 110V OPERATING CIRCUIT

S 75

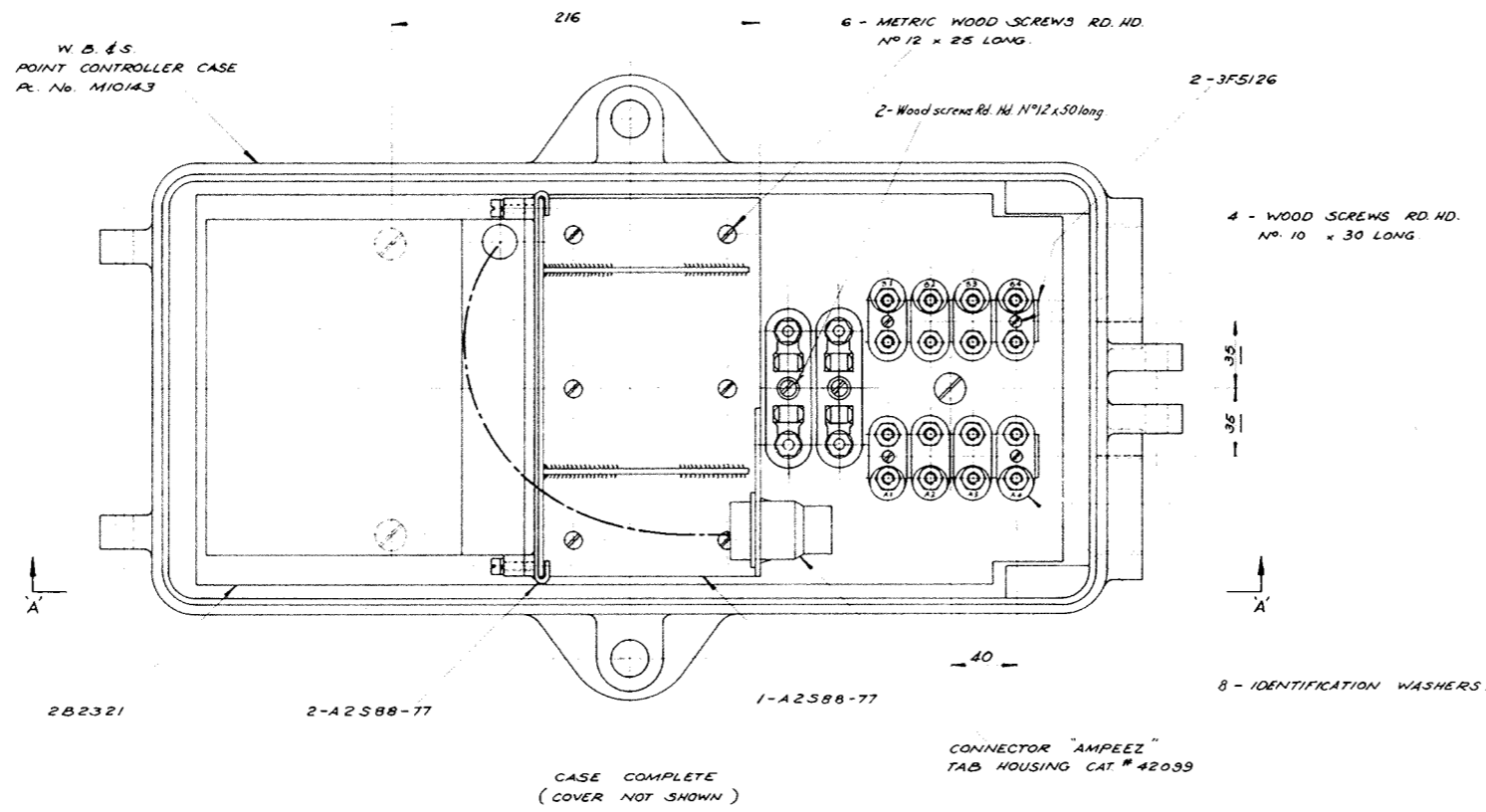


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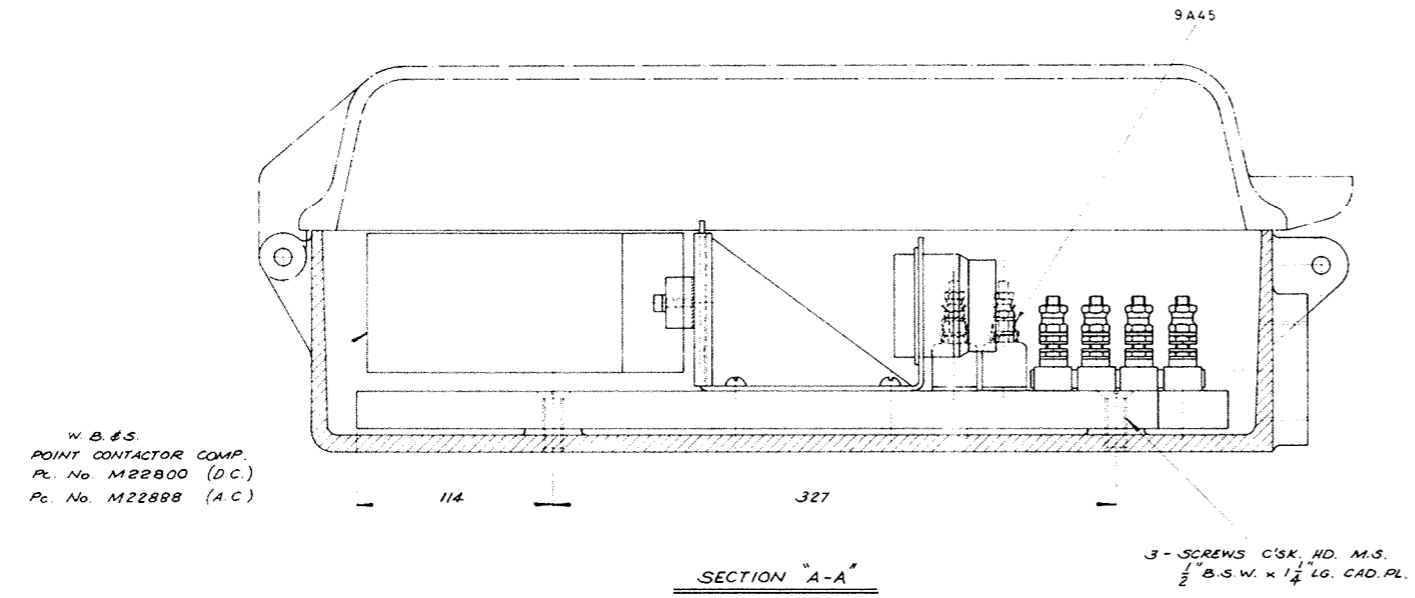
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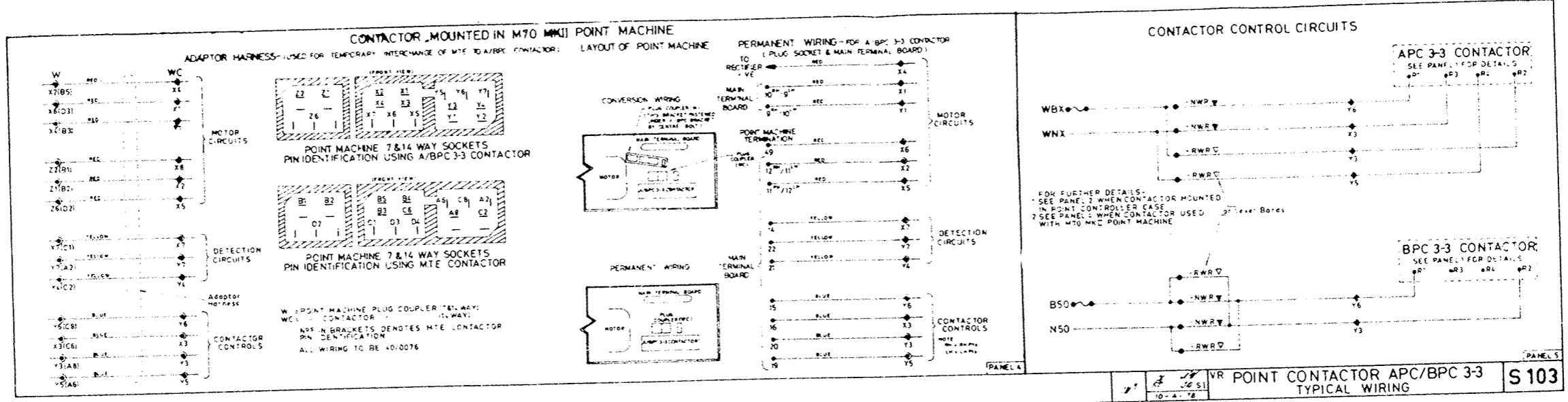
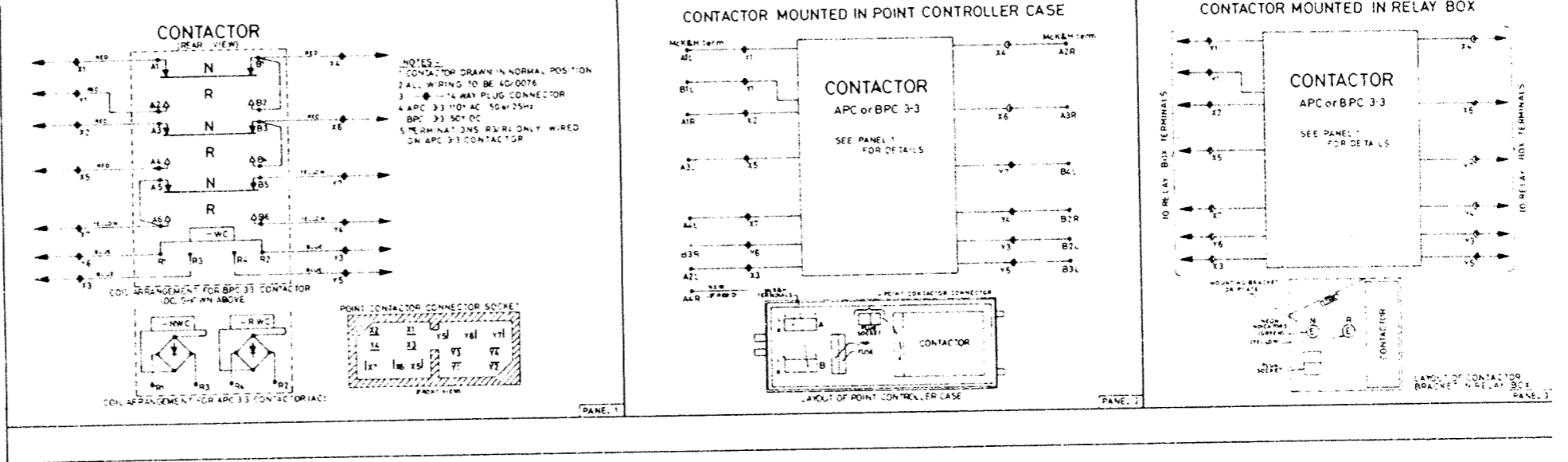
CASE COMP WITH EQUIP1-A1S89-77

PART NO.	DESCRIPTION	MAT'L.	QTY.
STOCK	POINT CONTROLLER CASE		1
	W B & S Pt No M10143		
2B2321	BASE BOARD	H WOOD	1
1A2S88-77	BRACKET	M.S.	1
1A2S88-77	MOUNTING PLATE	M.S.	1
STOCK	POINT CONTACTOR COMP		1
	W B & S Pt No A3 REQ'D		
3F5126	TERMINAL BLOCK R S A - 4 WAY		2
STOCK	"AMPEEZ" CONNECTOR TAG		1
	HOUSING CAT # 42039		
	SCREW C'SK. HD. CAD PLATED	M.S.	3
	1/2" B.S.W. x 1 1/2" LG.		
	WOOD SCREW RD HD N° 12 x 25	M.S.	6
	WOOD SCREW RD HD N° 10 x 30 LG.		4
	IDENTIFICATION WASHERS W.B.S.		8
	Wood screws Rd. Hd N° 12 x 50	M.S.	2
9A45	Fuses Block		2



REV'N	DATE	DESCRIPTION	REV'D	C'KD	M. E.	S.D.E.	S.S.C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS WESTINGHOUSE BPWR2 CONTACTOR IN POINT CONTROLLER CASE ASSEMBLY		
A	2-5-77	Fuse Block 9A45 added Terminal Block previously shown as 1F5126 Material List amended accordingly.	B.V.		S.B.	A.H.	A.H.	T.B.	T.B.	DATE 1.4.1977		
B	12-4-78	Increased Facilities. Now 2N°9A45 Fuse blocks, previously 1 only.	B.V.					CHECKED	CORRES.	SCALE 1:2		
								<i>John Boulton</i> DESIGN OFFICE <i>M. J. ...</i> SIG. DESIGN ENGINEER		INDEX A1 DRAWING NO. S 89-77 REV'N		

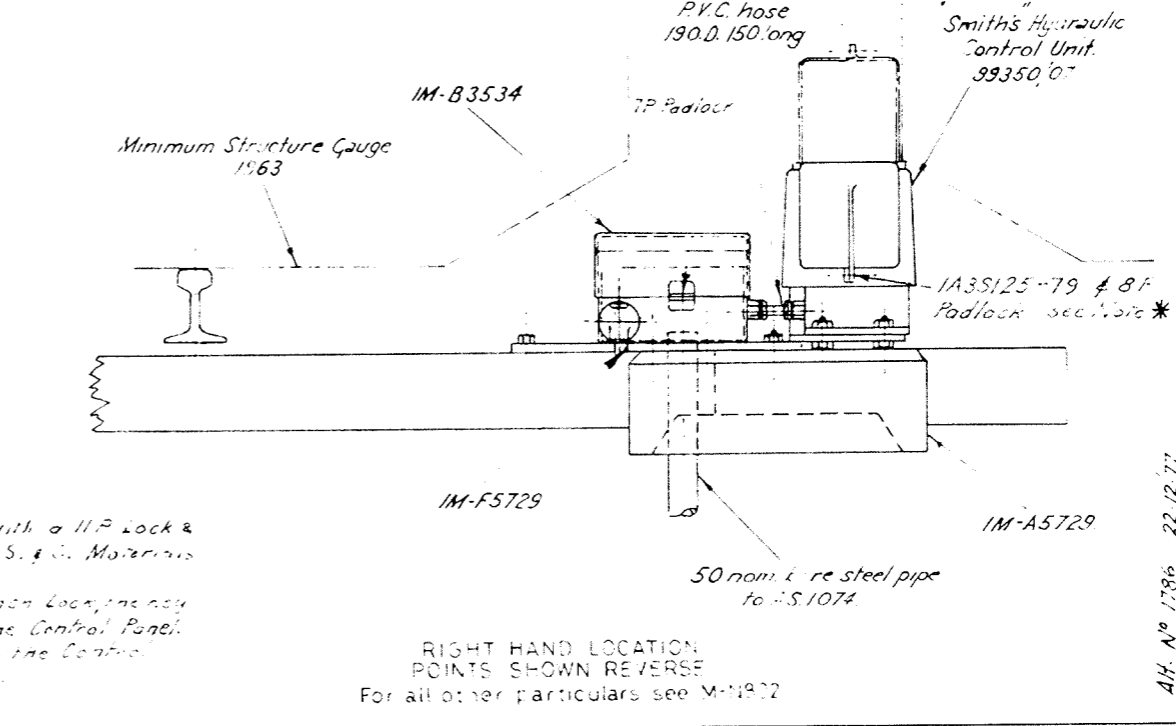
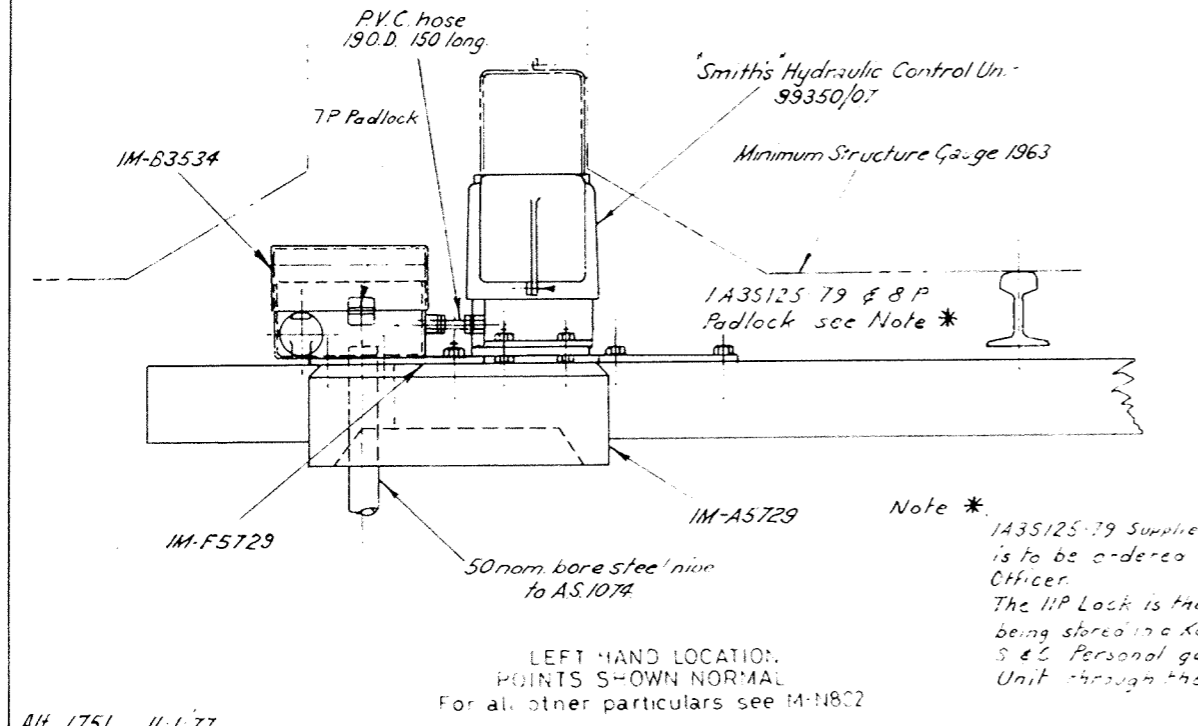
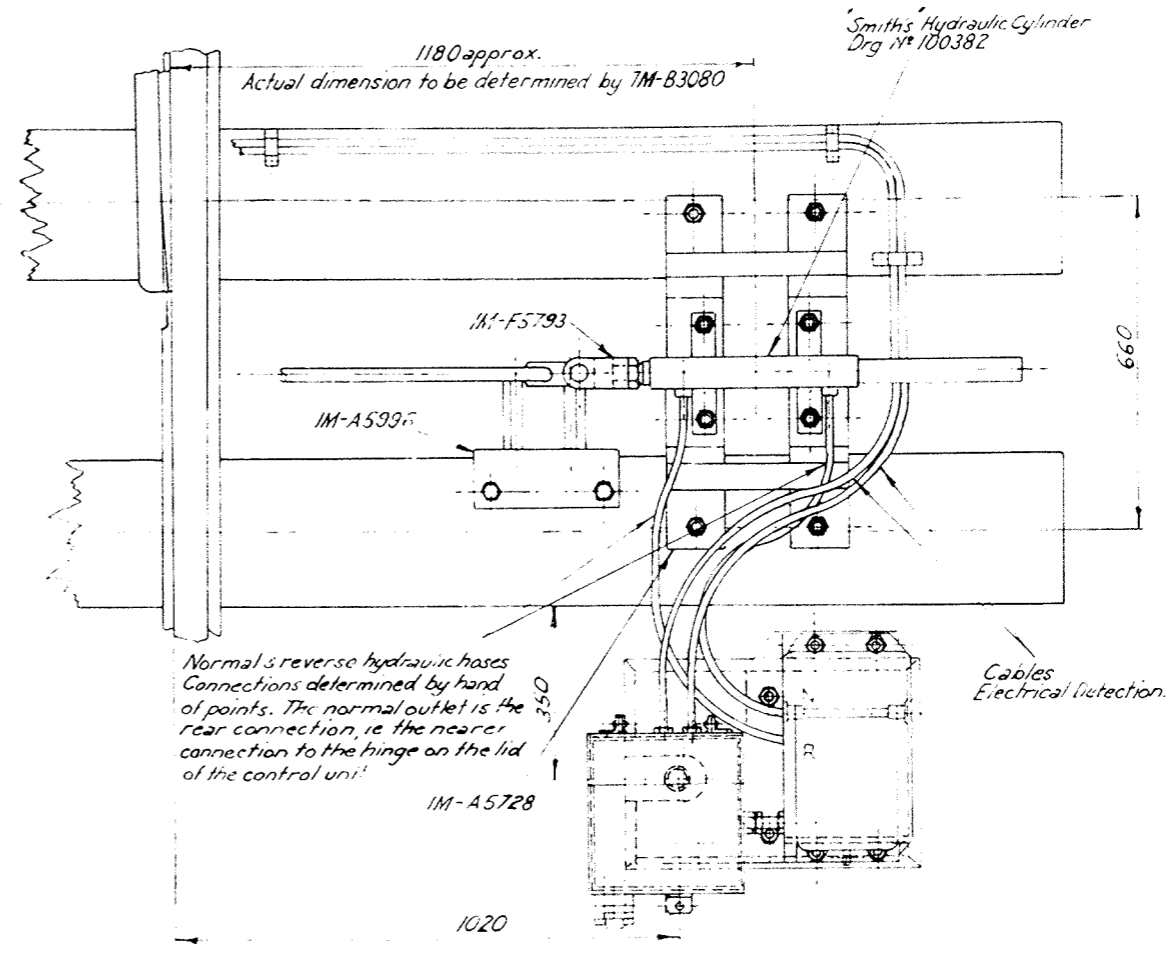
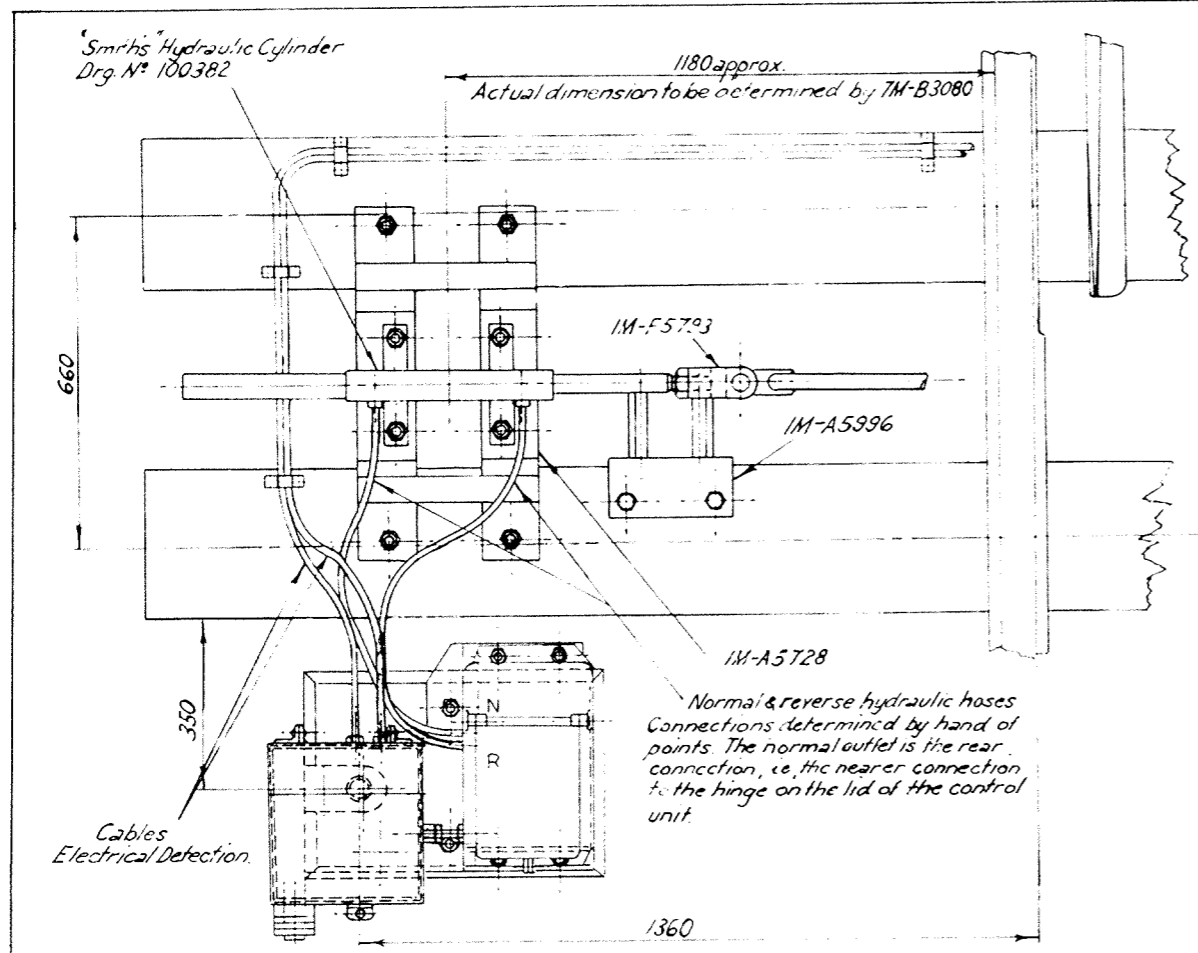




**SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES**

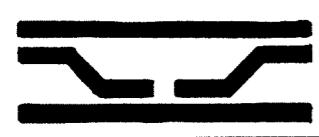
Category	Sheet No	Rev.
P 5 5	2	

56523
11/17/1



AH. 1751 11-1-77

S & C Engineer E. R. J.		Designed E. R. J.		Drawn E. R. J.	
S.O.E. M.F.		S.O.E. M.F.		S.O.E. M.F.	
M-H2308					
VICTORIAN RAILWAYS F.P. LAYOUT POWER OPERATED RAIL CLAMP POINT LOCK ELECTRO-HYDRAULIC					
Scale: 1:10					
This drawing is in the (S.O. Metric Standard. Dimensions are in millimetres. For Material Ordering Lists see M-A5998 & M-A5999					
AH. No. 1786		22.12.77		E.R.J.	
18-5-79 A		18-5-79 A		18-5-79 A	
Part No. 1A35125-79		Part No. 1A35125-79		Part No. 1A35125-79	
added.		added.		added.	
M-H 2308					



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category			Sheet No		Rev.
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SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category
P 7 1

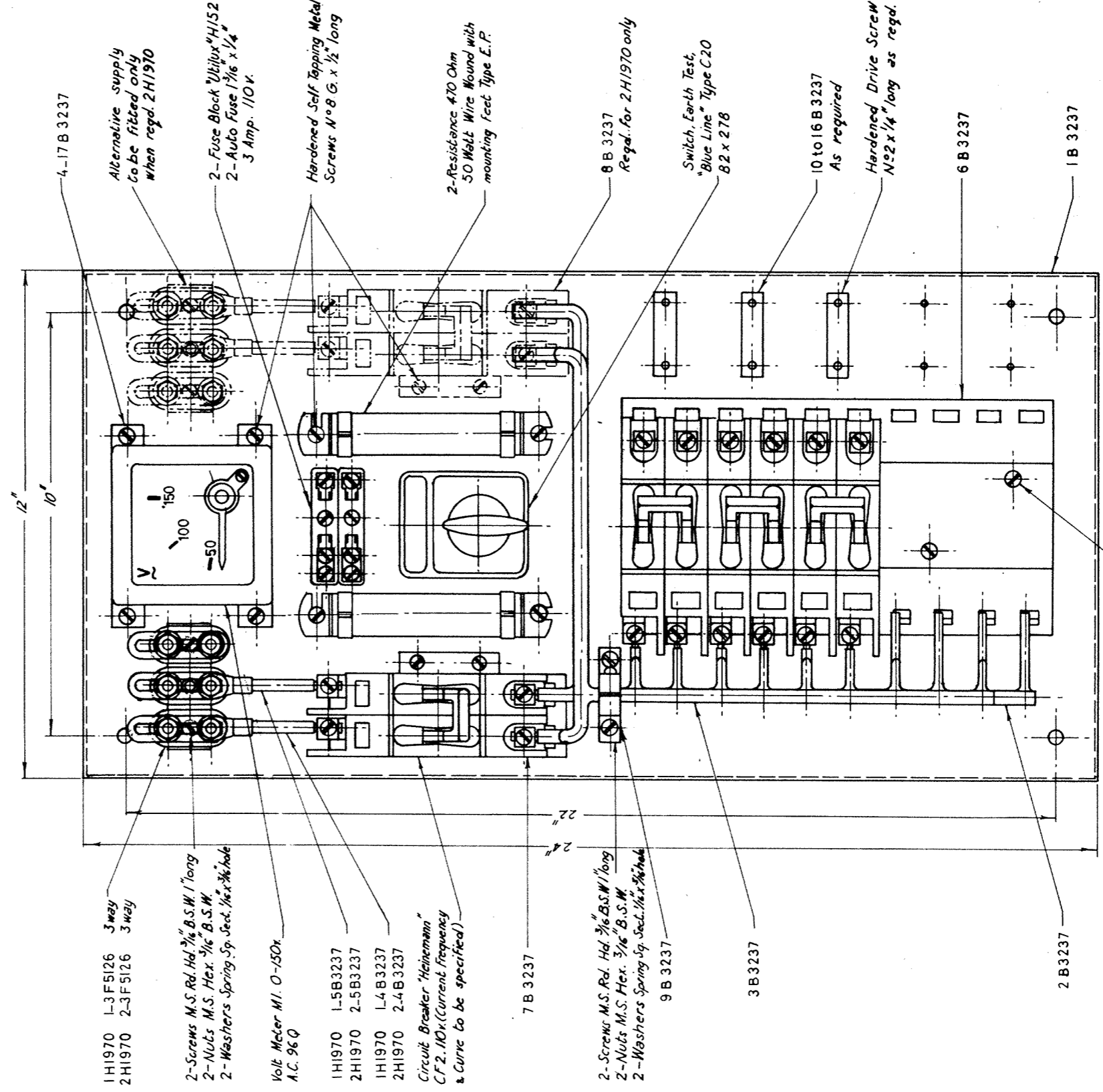
Sheet No
1

Rev.
A

SWITCH BOARD 110 VOLTS WITH ALTERNATIVE SUPPLY SWITCH BOARD 110 VOLTS

2H1970
1H1970

PART NO	NAME	QTY		PART NO	NAME	QTY	
		1H1970	2H1970			1H1970	2H1970
1B3237	Base Plate	1	1	Stock	Screws M.S. Rd. Hd. $\frac{3}{16}$ " B.S.W. 1" long	4	6
2B3237	Bus Bar	1	1	"	Nuts M.S. Hex. $\frac{3}{16}$ " B.S.W.	4	6
3B3237	Bus Bar	1	1	"	Washers Spring Sp. Sect. $\frac{1}{16}$ " x $\frac{3}{16}$ " hole	8	10
4B3237	Connecting Link "Red"	1	2	"	Hardened Self Tapping Metal Screws		
5B3237	" " "Blue"	1	2	"	N° 8 G. x $\frac{1}{2}$ " long	17	19
6B3237	Mounting Chassis	1	1	"	Hardened Drive Screw N° 2 x $\frac{1}{4}$ " long	25	25
7B3237	" "	1	1	"	Resistance 470 Ohm 50 Watt Wire Wound with mounting feet Type E.P.	2	2
8B3237	" "	1	1	"	Circuit Breaker "Heinemann" CF2, 110V.	25	25
9B3237	Bus Bar Mounting	1	1	"	(Current frequency & Curve to be specified)	25	25
10-16B3237	Identification Tag	25	25	regd.	Volt Meter MI 0-150v. A.C. 96Q	1	1
17B3237	Volt Meter Bracket	4	4	"	Switch Earth Test, Blue Line Type C20 B2-27B	1	1
3F5126	Terminal Block 3 Way	1	2	"	Fuse Block "Utilux" H152	2	2
				"	Auto Fuse $\frac{1}{16}$ " x $\frac{1}{4}$ " 3amp. 110v	2	2



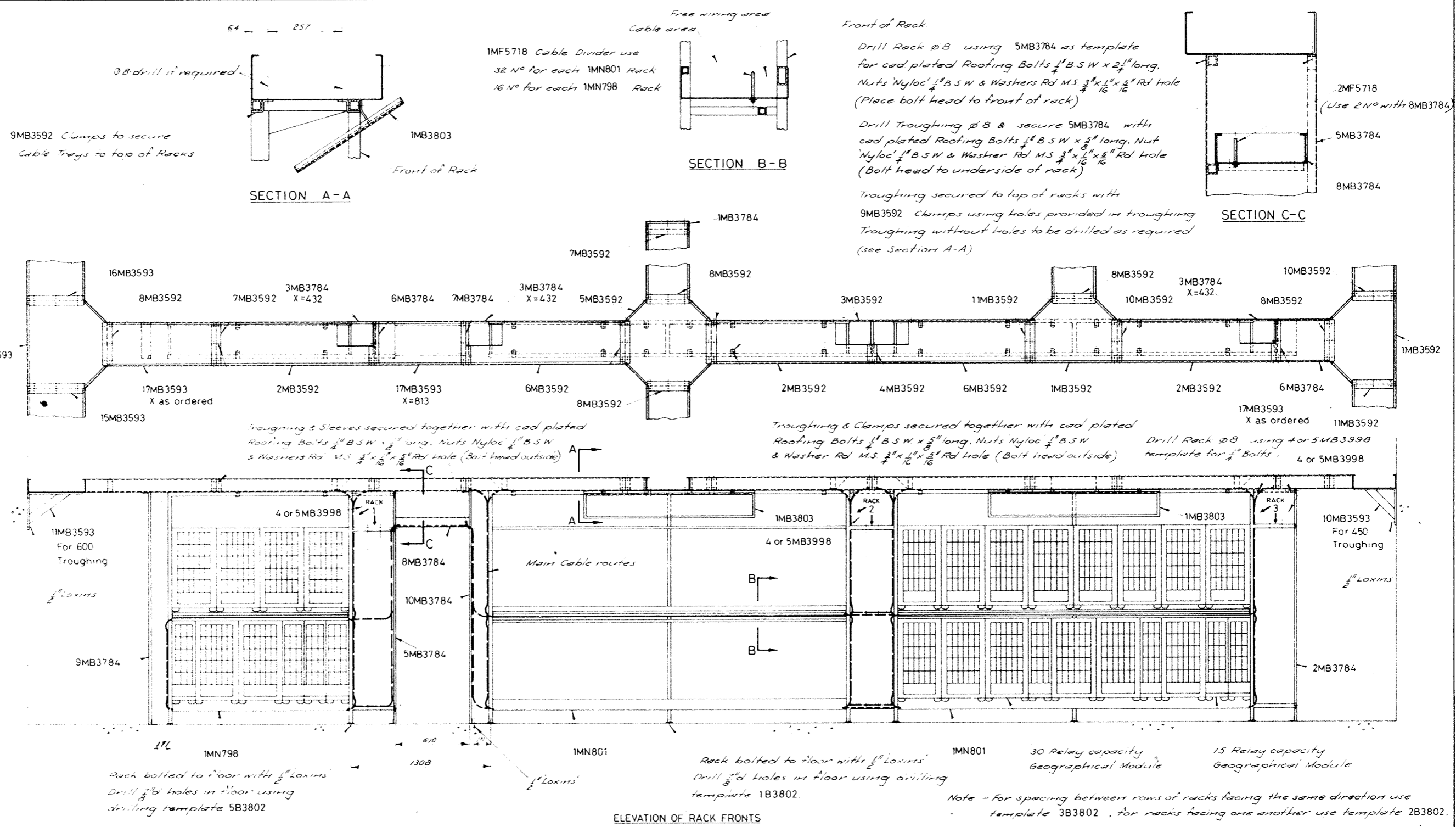
30-11-72 A/c. No 1358

H1970

18-9-75
For a Maximum of 8 way see: - M-B 4260
A
Note: Switchboard used in W. Mc.K. & H. Cabinet mounted on side of NS90 Box see H1964

SWITCH BOARD 110 VOLTS WITH ALTERNATIVE SUPPLY... 2H1970
SWITCH BOARD 110 VOLTS... 1H1970
VICTORIAN RAILWAYS
SWITCH BOARD
110 VOLTS
ASSEMBLY
Scale 6" = 1'-0"
20-11-72.

S & C. Engineer.
E.R.J.
S.D.E. M.E. CKD
J.W. J.G.
Designed
Drawn
B. V.
H 1970



54030

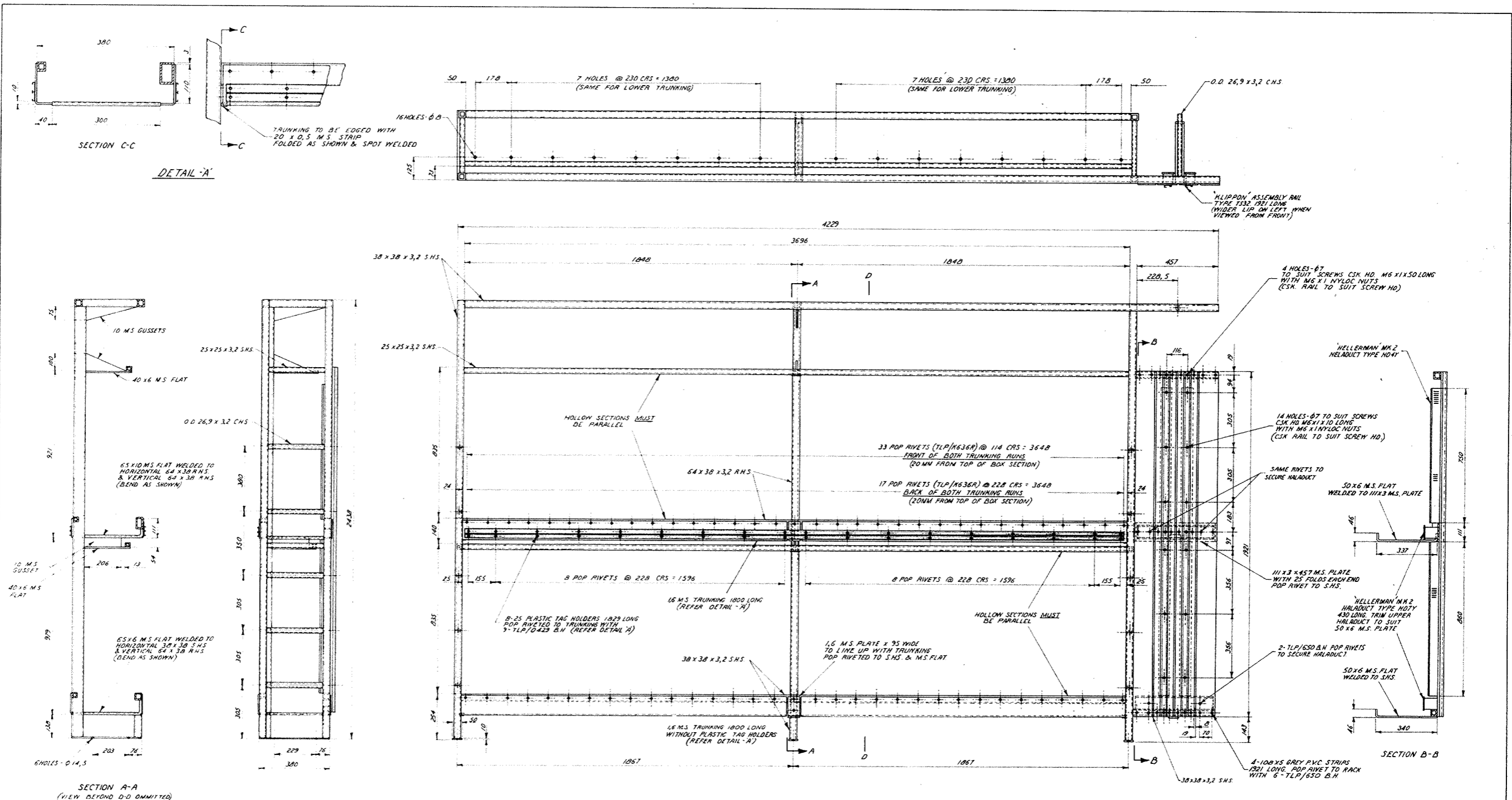
HIS-2

A	14.12.76	GEOGRAPHICAL INTERLOCKING RACKS & TROUGHING TYPICAL ARRANGEMENT	S&C	Designed	Drawn
	PLAN METRICISED.		Engineer	MJR	MJR
	J.B.R.B.	Scale - $\frac{3}{8}$ " = 1'-0"	MB3878	Ckd	IssN
		20-8-74			

SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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S.H.S. SQUARE HOLLOW SECTION
 R.H.S. RECTANGULAR HOLLOW SECTION
 C.H.S. CIRCULAR HOLLOW SECTION

FINISH:- 1 COAT ETCH YELLOW PRIMER
 2 COATS 'BROLITE' PT 26353 HAMMERTONE
 (DO NOT PAINT XLIPPON ASSEMBLY RAIL)

M.S. WELDED CONSTRUCTION RACK

REDRAWN & REVISED TO INCLUDE REVISIONS A & B AND ALTERATION N° 1685 FOR METRICATION SAME TITLE AND NUMBER. ORIGINAL DATED 25-2-74

THIS DRAWING IS TO THE (1:50) METRIC STANDARD. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE STATED. 10.5MM

3RD ANGLE PROJECTION

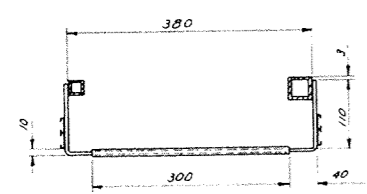
VICTORIAN RAILWAYS
 GEOGRAPHICAL INTERLOCKING
 RACK FOR
 RELAY MODULES
 DETAILS

S. & C. ENGINEER	DESIGNED	DRAWN	1MN801	
M. J. R.	R. B.	R. B.		
S. D. E. M. E.	C. K. D.	P. S. S. M.		
MN801				
			30-9-76	

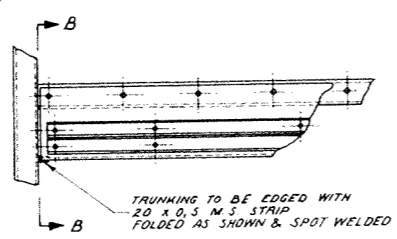


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

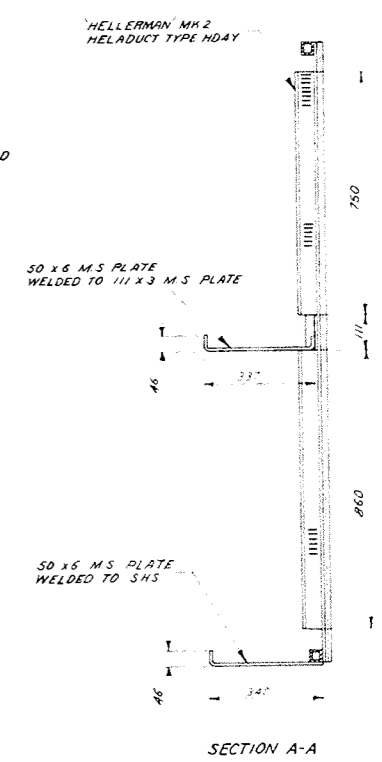
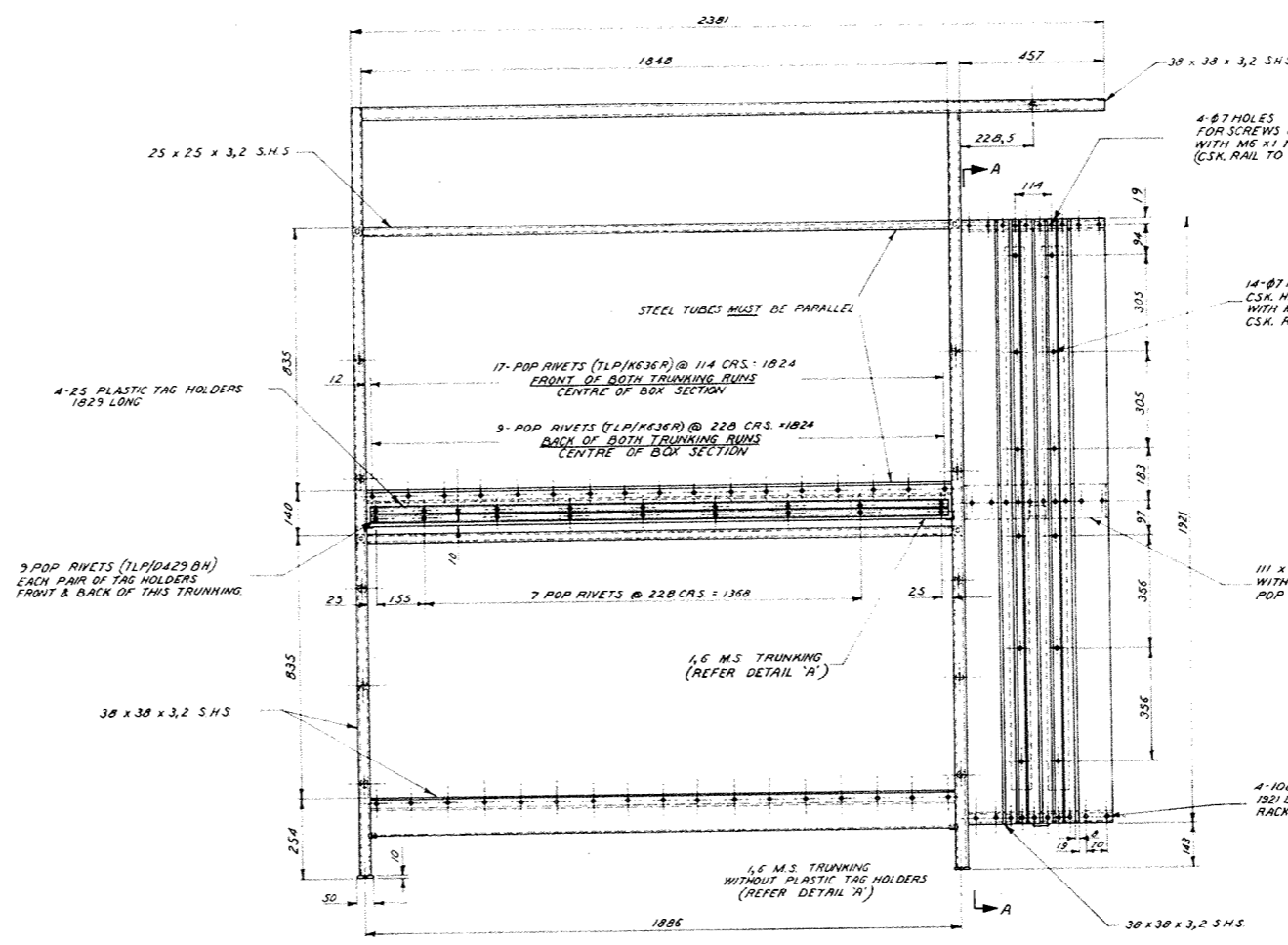
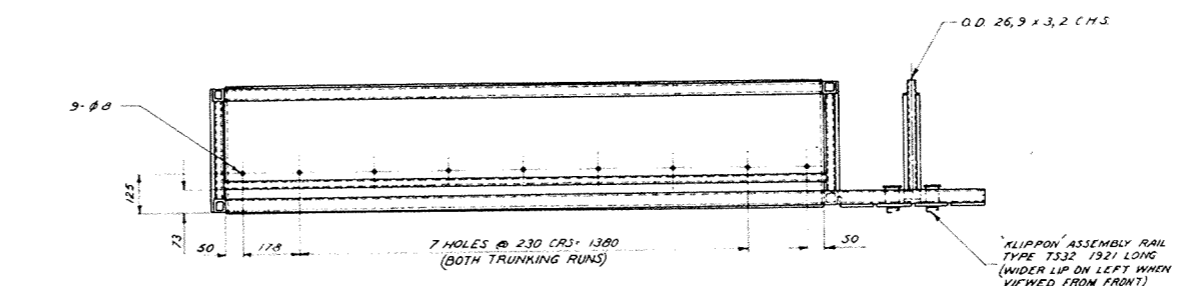
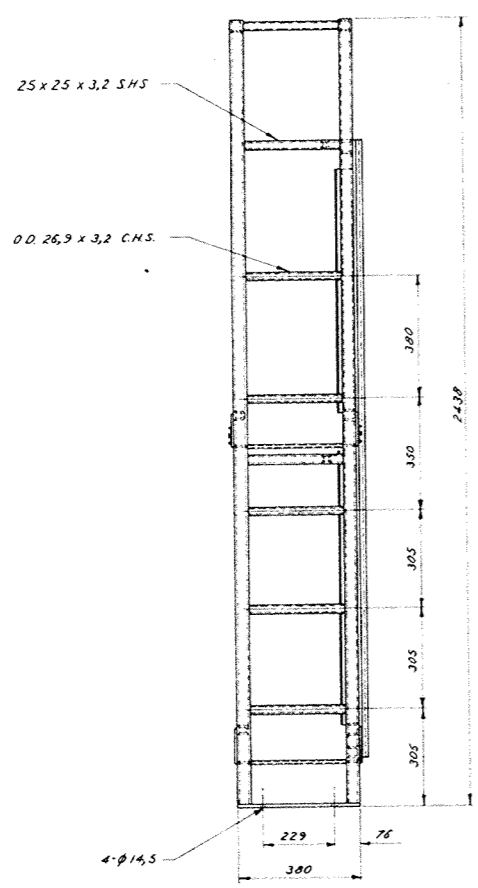
Category	Sheet N°	Rev.
R 5	2	



SECTION B-B



DETAIL A



SECTION A-A

S.H.S SQUARE HOLLOW SECTION
C.H.S CIRCULAR HOLLOW SECTION

FINISH:- 1 COAT ETCH YELLOW PRIMER
2 COATS 'BROLITE' PT 26353 HAMMERTONE
(DO NOT PAINT KLIPPON ASSEMBLY RAIL)

M.S. WELDED CONSTRUCTION RACK

PLAN METRICISED.
THIS PLAN SUPERSEDES
D 3594

THIS DRAWING IS TO THE ISO
METRIC STANDARD.
DIMENSIONS ARE IN
MILLIMETRES.
TOLERANCES UNLESS
OTHERWISE STATED ±0.5MM

3RD ANGLE PROJECTION

VICTORIAN RAILWAYS
GEOGRAPHICAL INTERLOCKING
RACK FOR
RELAY MODULES
DETAILS

11.8.76

S.E.C. ENGINEER	DESIGNED	DRAWN	IMN798
	M.J.R.	P.B.	
	DATE	CHKD	REV. NO.
MN798			



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category	Sheet N ^o	Rev.
R 5	3	

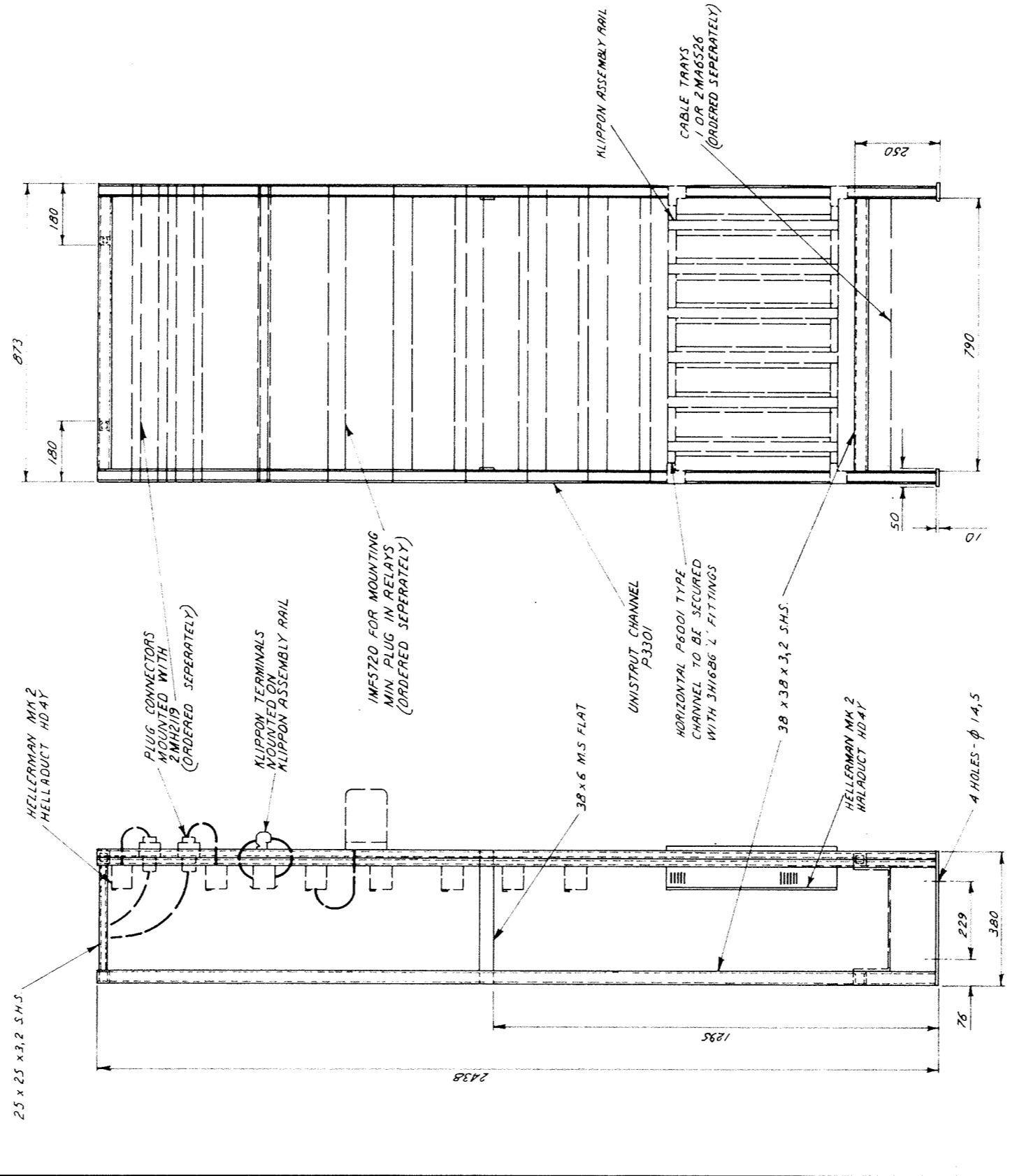
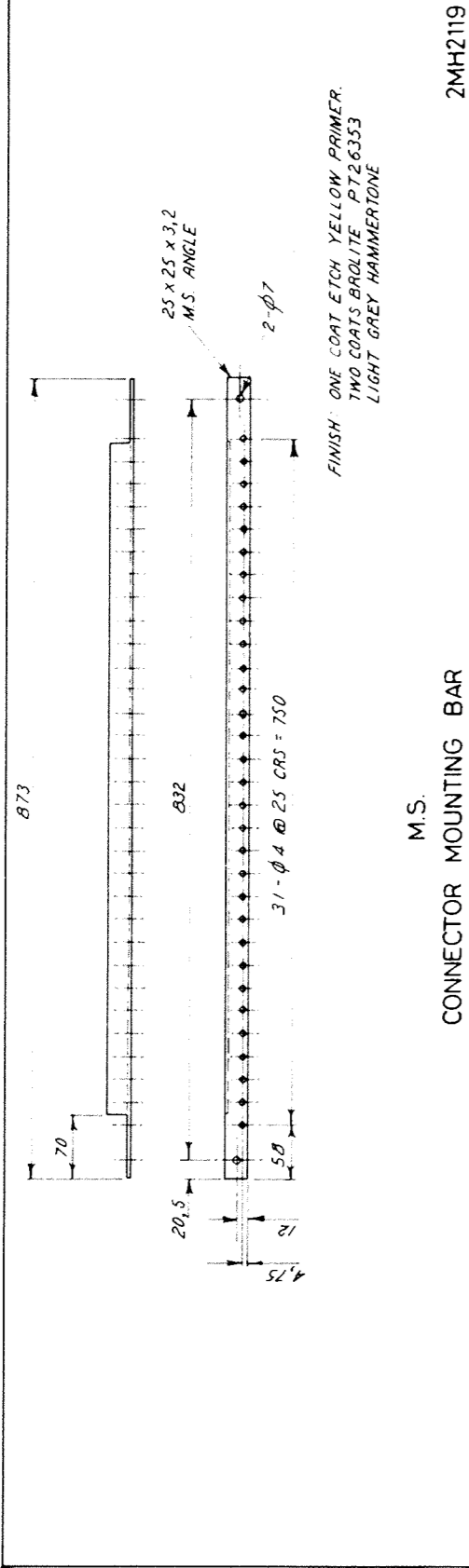


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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4

Rev.
□

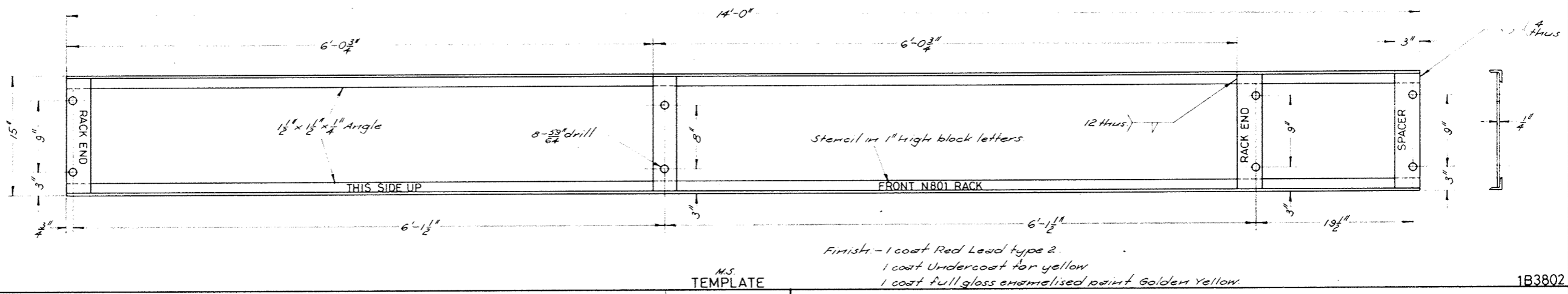


NOTE: 1. RACK TO BE DRESSED TO SUIT LOCATION
USING STANDARD UNISTRUT CONSTRUCTION
TECHNIQUES WITH THE AID OF FITTINGS
SHOWN ON H1686
(SEE B3781 FOR EXAMPLE OF RACK DRESSING)
2. USE HELLA-DUCT ONLY FOR WIRE WAYS

S.H.S. DENOTES SQUARE HOLLOW SECTION
FINISH: ONE COAT ETCH YELLOW PRIMER
TWO COATS 'BROLITE' PT26353
LIGHT GREY HAMMERTONE

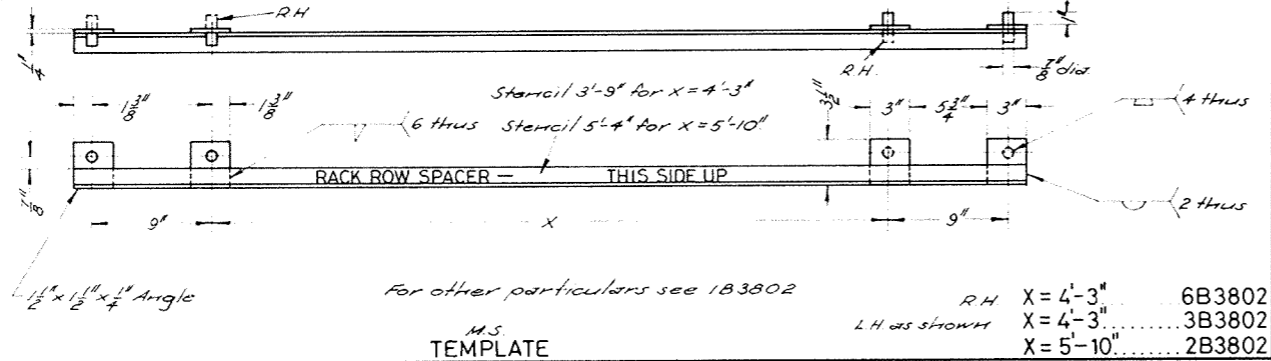
MH2119	DESIGNED M. J. R.	DRAWN R. B.	S.E.C. ENGINEER	1MH2119
VICTORIAN RAILWAYS GEOGRAPHICAL INTERLOCKING GENERAL PURPOSE RACK ASSEMBLY & DETAILS				
27-9-76				

MH2119



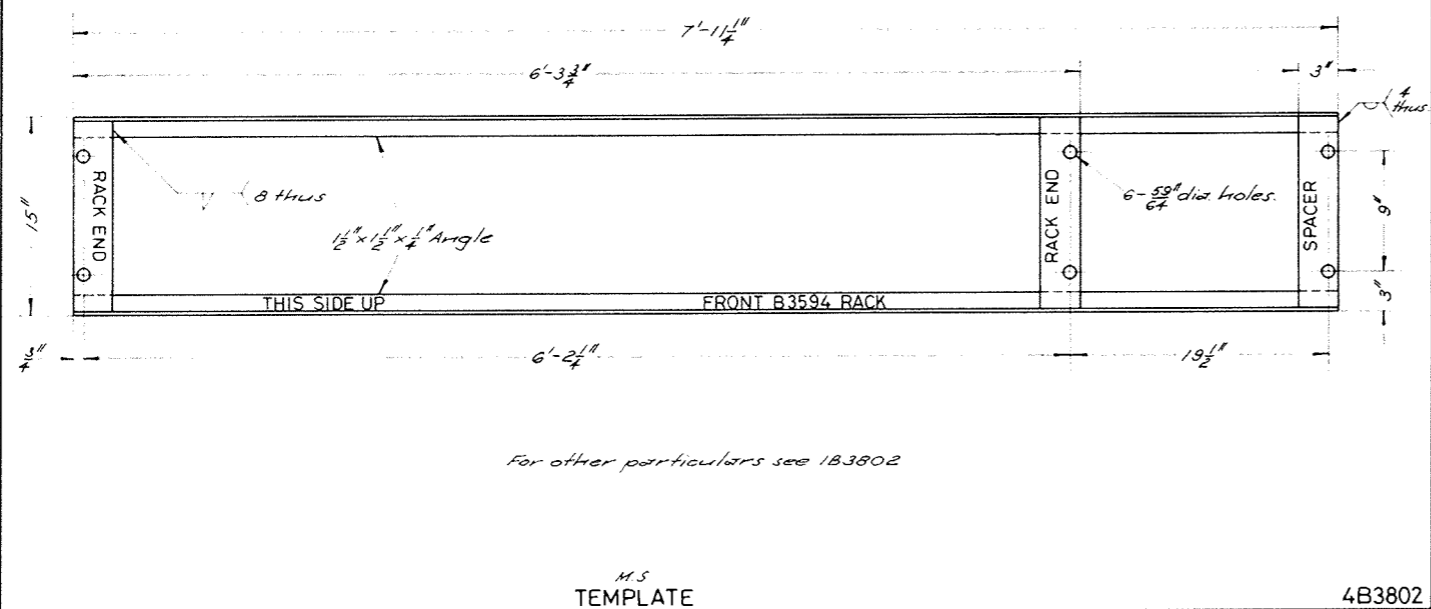
M.S. TEMPLATE

1B3802



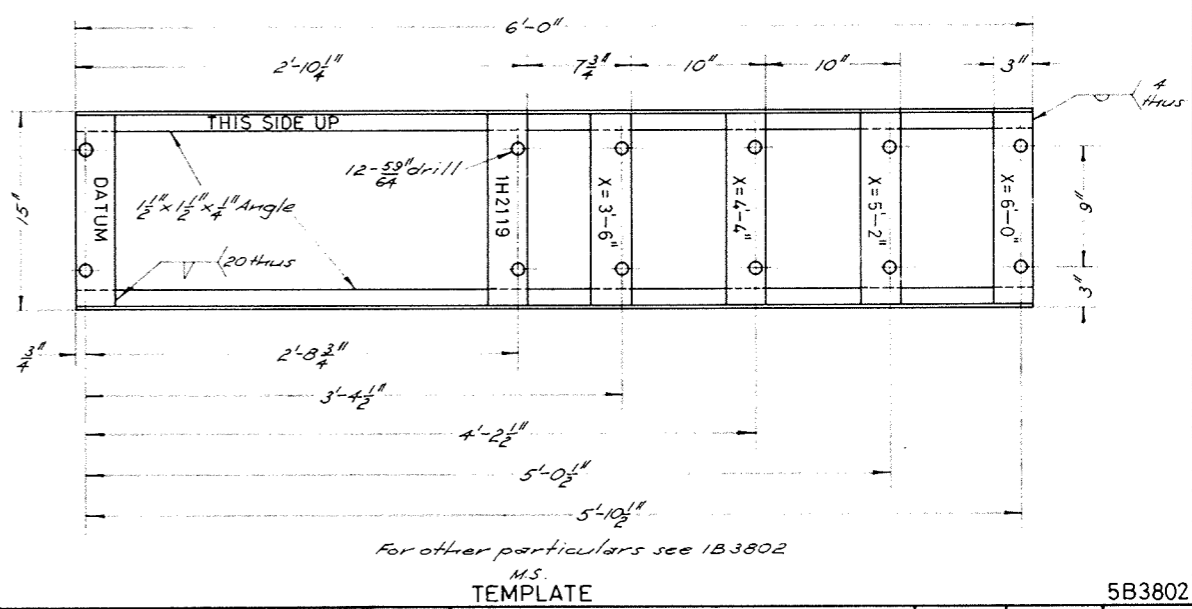
M.S. TEMPLATE

R.H.	X = 4'-3"	6B3802
L.H. as shown	X = 4'-3"	3B3802
	X = 5'-10"	2B3802



M.S. TEMPLATE

4B3802



M.S. TEMPLATE

5B3802

53727
H/2-A

<p>A</p> <p>10-7-74</p> <p>Part</p> <p>6B3802</p> <p>Added</p>	<p>TOLERANCES: - Unless otherwise stated</p> <p>Decimal Dimens. ±0.05</p> <p>Fractional Dimens. ±1/64</p>	<p>VICTORIAN RAILWAYS</p> <p>GEOGRAPHICAL INTERLOCKING</p> <p>INSTALLATION TEMPLATES</p> <p>FOR RACKS</p>		S. & C. Engineer	Designed	Drawn
		<p>29-5-74</p>		M.J.R.	M.J.R.	
		<p>3/2 M.J.R. 3rd ANGLE PROJECTION</p>		S.D.E.M.E.	Ckd.	Iss. No.
<p>B3802</p>						

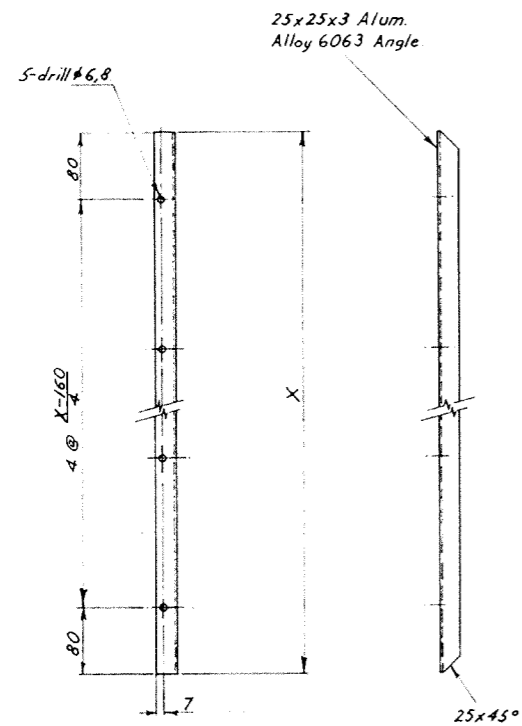


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

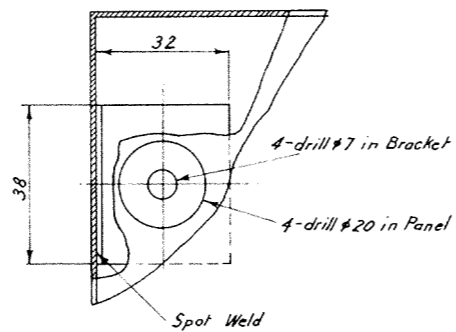
Category
R 5

Sheet No
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A

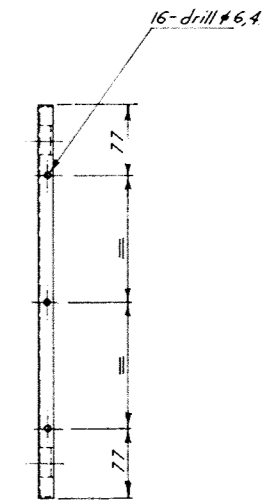
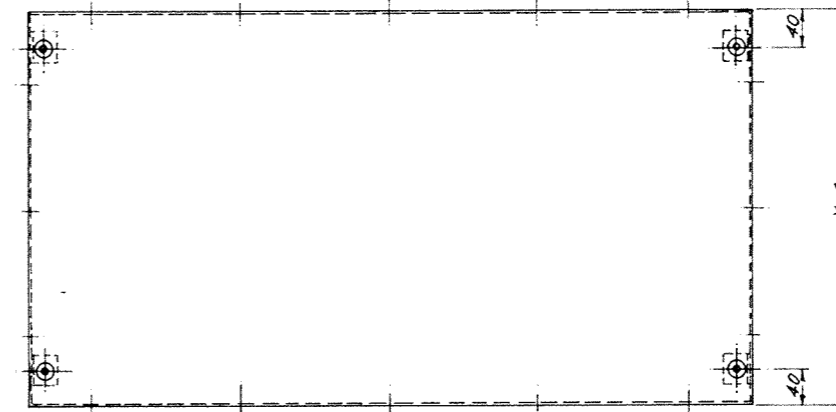
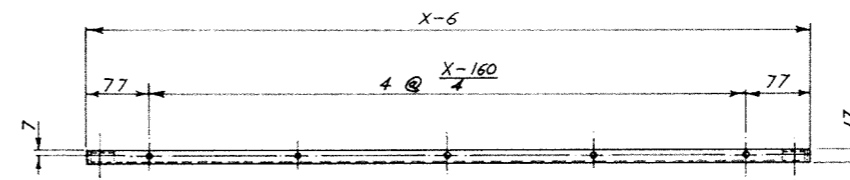


Alloy Alum. RETAINING STRIP 2M-B4350

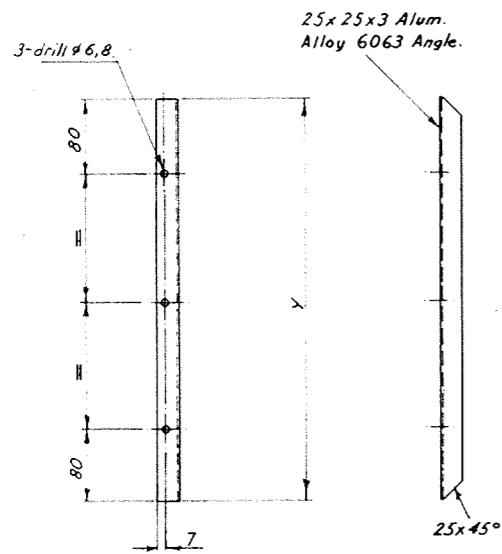


SECTION SHOWING BRACKET

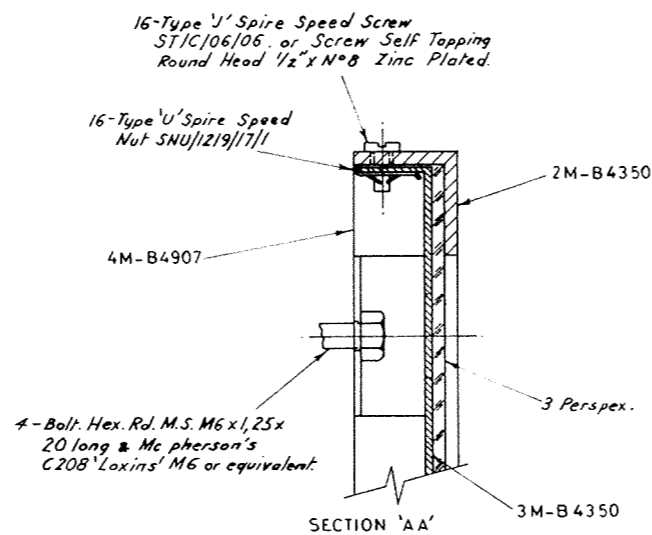
Finish:- 1 Coat Red Lead Type 2.
1 Coat White Undercoat.
1 Coat Full Glass Enamelled Paint. White.



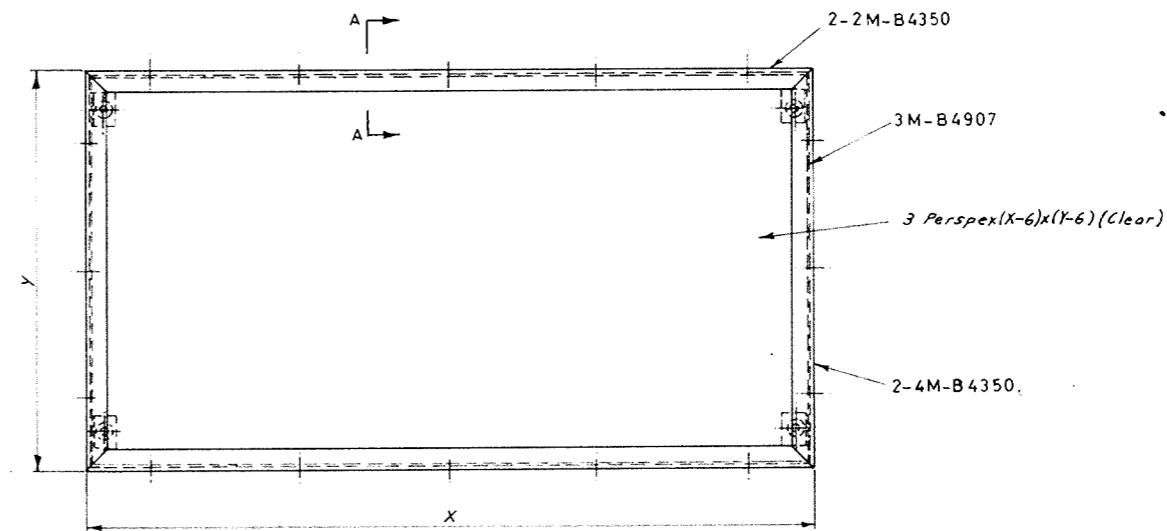
M.S. 16 PANEL 3M-B4350



Alloy Alum. RETAINING STRIP 4M-B4350



SECTION 'AA'



X & Y As reqd. 5M-B4350
X=870 & Y=476. 1M-B4350

ASSEMBLY

Redrawn & converted to Metric Standard.
Part N° 5 M-B4350 added.
Same N° Original dated 14-4-75.

This drawing is to the metric standard (I.S.O.)
Dimensions are in millimetres
Tolerances unless otherwise stated ±0.5
3rd Angle Projection

VICTORIAN RAILWAYS
GEOGRAPHICAL INTERLOCKING
FRAME FOR TERMINATING CHART
ASSEMBLY & DETAILS
SCALE: 1:5 3-3-76

S.&C. Engineer.	Designed B. V.	Drawn B. V.
Checked M. E.	Issued	
M-B4350		

54584
H 14-2

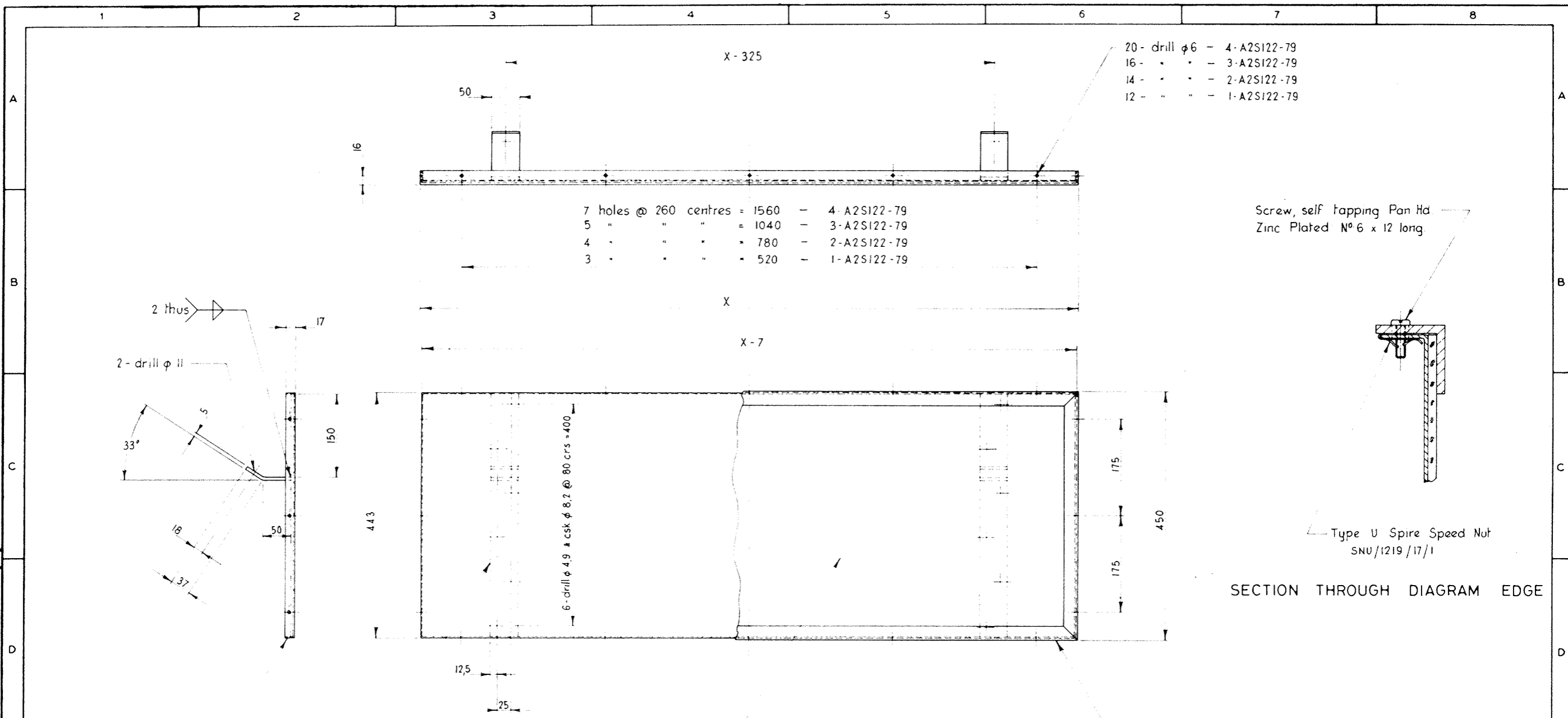


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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□



SIGHT SIZES FOR BLOCK DIAGRAMS

- 1720 x 400 - 4-A2S122-79
- 1140 x 400 - 3-A2S122-79
- 855 x 400 - 2-A2S122-79
- 570 x 400 - 1-A2S122-79

- X = 1770 - 4-A2S122-79
- As shown, X = 1190 - 3-A2S122-79
- X = 905 - 2-A2S122-79
- X = 620 - 1-A2S122-79

This drawing
 supersedes
 MB 3803
 dated 10-6-74

REV'N	DATE	DESCRIPTION	REV'D	C'KD	M.E.	S.D.E.	S&C.E.	DESIGNED NTT	DRAWN NTT	VICTORIAN RAILWAYS GEOGRAPHICAL INTERLOCKING BLOCK DIAGRAMS		S&C ENGINEER	
								CHECKED	CORRES.	DESIGN OFFICE		DATE 5-4-79	
								SIG. DESIGN ENGINEER		SCALE 1:5		INDEX	
										DRAWING NO S122-79		REV N	

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 COMPONENTS & STANDARD PRACTICES

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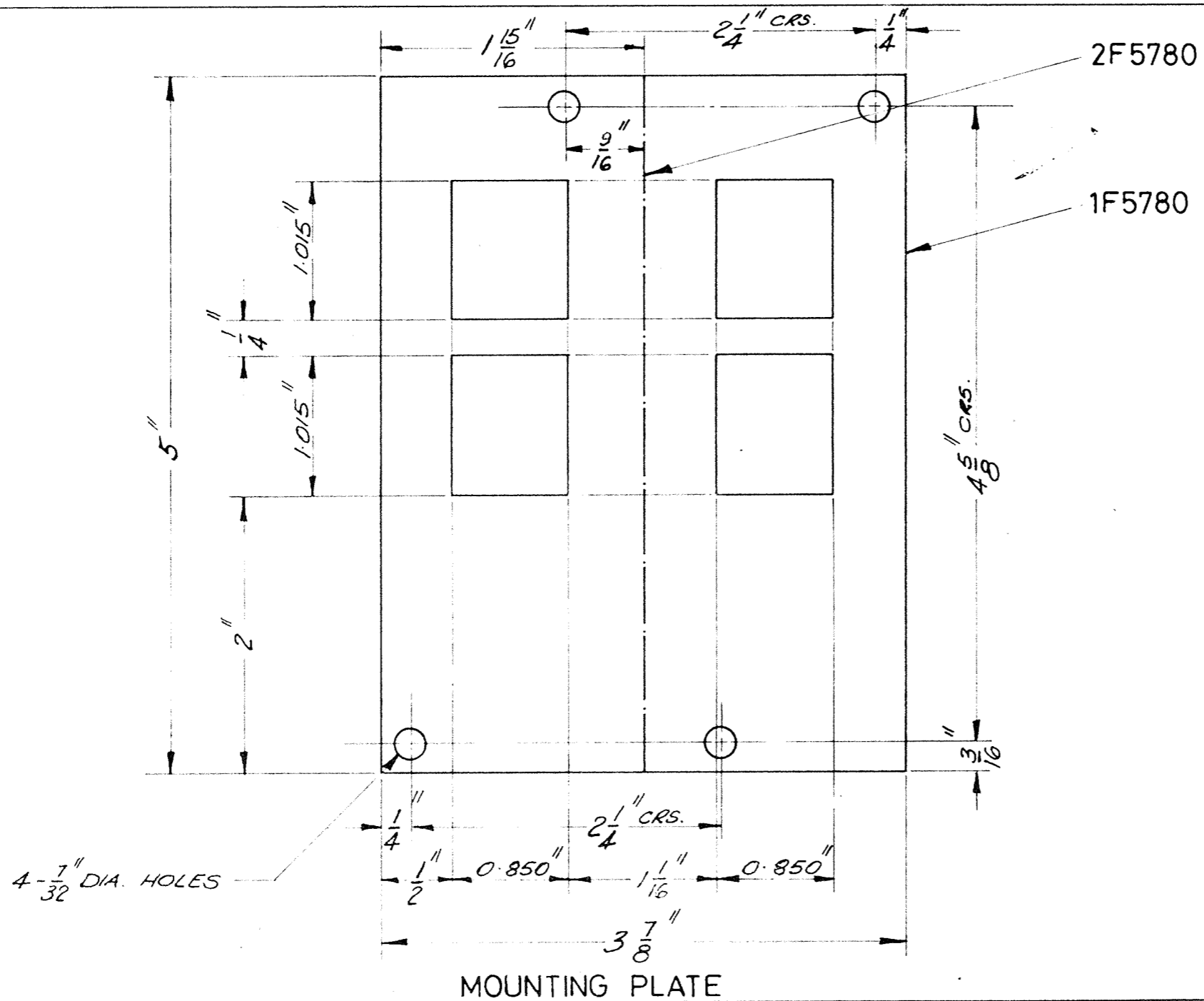


60979

H26-2

55599

C 1-60



MATERIAL:-
16g. MILD STEEL SHEET.

FINISH:-
1 COAT ETCH YELLOW PRIMER.
2 COATS BROLITE P.T. 26353 HAMMERTONE.

FOR 2 RELAYS 2F5780
" 4 " 1F5780

NOTE :- For use on 15 & 30 Relay Modules.	Tolerances except where Indicated. Decimal Dim. $\pm 0.005"$ Fractional Dim. $\pm \frac{1}{64}$	V.R. GEOGRAPHICAL INTERLOCKING MTG. PLATE FOR CRADLE RELAYS SCALE: Full Size 19.6.75	S & C Engineer <i>AB</i>	Designed T.B.	Drawn T.B.	F5780
			S.D.E. <i>AB</i>	M.E. <i>AB</i>	Ckd Iss.No	



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COMPONENTS & STANDARD PRACTICES

Category	Sheet No.	Rev
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4 - 25 x 25 x 3,2 M.S. Square Hollow Section

2 - 38 x 38 x 3,2 M.S. Square Hollow Section

NOTE.
Rack layout is typical only.
Layout and equipment may be varied as required.

'Klippon' Assembly Rail Type T.S.32 & Heloduct 51x51 HD4Y or 76x63 HD7Y 2307 long - as required.
To be mounted at 120 centres, with wider lip on left when viewed from front.

4 - drill ϕ 14,5

Finish:

- 1 Coat Etch Yellow Primer
- 2 Coats Brolite P.T.26353 Hammertone
- ('Klippon' Assembly Rails - when fitted - are not to be painted).

Welded Construction M.S.
RACK

REV'N	DATE	DESCRIPTION	REV'D	C/KO	M.E.	S.D.E.	S&C.E.
A.	4-6-79	HELADUCT 51x51 HD4Y ECT. ADDED	B.V.	EB	EB	EB	EB

DESIGNED
N.T.T.
CHECKED
CORRES.
DESIGN OFFICE
SIG. DESIGN ENGINEER

VICTORIAN RAILWAYS
**RACK FOR TRACK
CIRCUIT EQUIPMENT**
ASSEMBLY &
DETAILS

I-A2S121-78
S&C ENGINEER
DATE 5-2-78
SCALE 1:10
INDEX
A2 DRAWING NO. S121-78 REV'N

59931
16 4 78
H24-A



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

Category

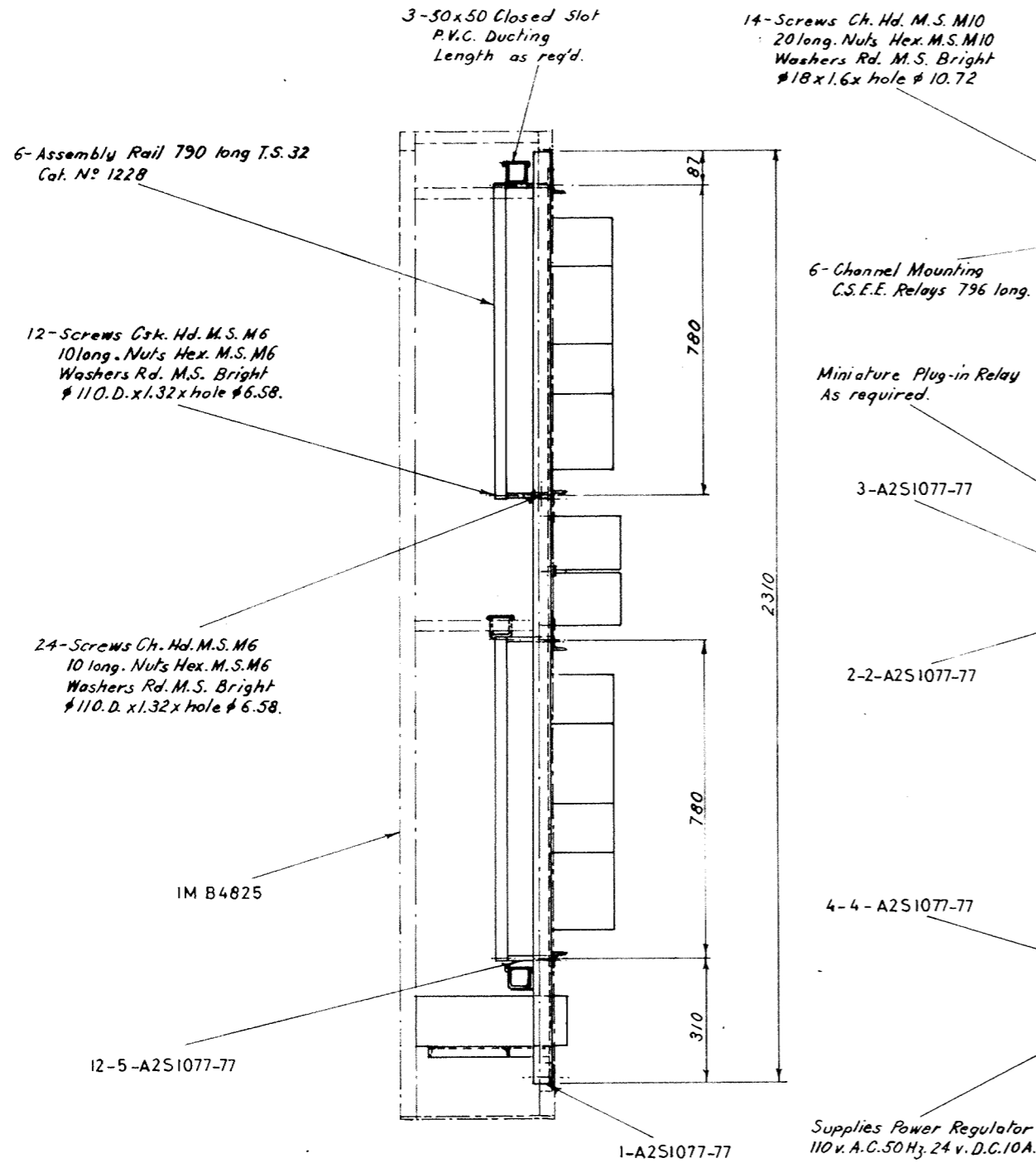
R	5
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 Sheet N^o

1	0
---	---

 Rev

A



MODULE COMPLETE.....I-A2S1076-77

PART N°	NAME	M.T.L.	QTY
1-A2S1077-77	Frame	"	1
2-A2S1077-77	Mounting Rail - Miniature Relay	"	2
3-A2S1077-77	" " " "	"	1
4-A2S1077-77	" " C.S.E.E. Relay	"	4
5-A2S1077-77	" " Klippon	"	12
Stock	Screws Csk. Hd. M6x10 long	M.S.	12
"	" Ch. Hd. " " "	"	24
"	" " " M10x20 long	"	14
"	Nuts Hex. Hd. M6	"	36
"	" " " M10	"	14
"	Washers Rd. #110.D.x1.32x hole #6.58	M.S. Brg.	36
"	" " #18x1.6x hole 10.72	" "	14
"	Assembly Rail 790 long T.S.32 Cat. N°1228	M.S.	6
"	Channel Mounting C.S.E.E. Relay 796 long	-	6
"	Miniature Plug-in Relay	-	As req'd
"	Ducting 50x50 Closed Slot Length as req'd	P.V.C.	3

Finish:- 1 Coat Etch Yellow Primer.
2 Coats 'Bralite' P.T. 26353 Hammer-tone.
(Do not Paint 'Klippon' Assembly Rail)

6-7-78/AIF. N°1803

ASSEMBLY

1-A2S1076-77

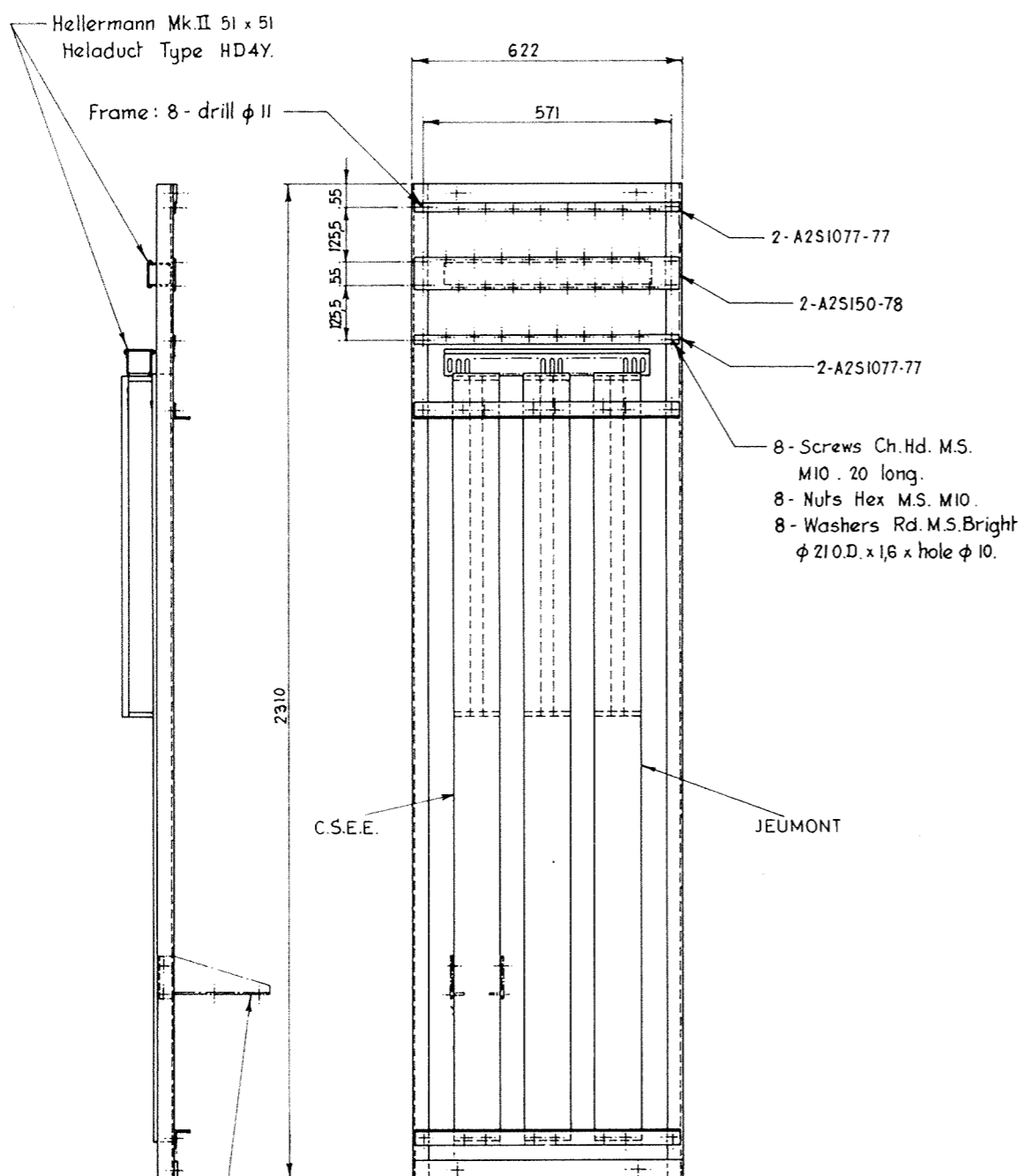
REV'N	DATE	DESCRIPTION	REV'D	C/KD	S.D.E	S&C/E	DESIGNED	DRAWN	VICTORIAN RAILWAYS
							B. V.	B. V.	FRAME TRACK C'CT. EQUIPMENT C.S.E.E. (JOINTLESS) ASSEMBLY
							CHECKED	CORRES	
							DESIGN OFFICE		
							SIG. DESIGN ENGINEER		
									S&C ENGINEER DATE 30-3-78 SCALE INDEX A2 DRAWING NO. S1076-77 REV'N

59839
6 4 78
H-23-2.

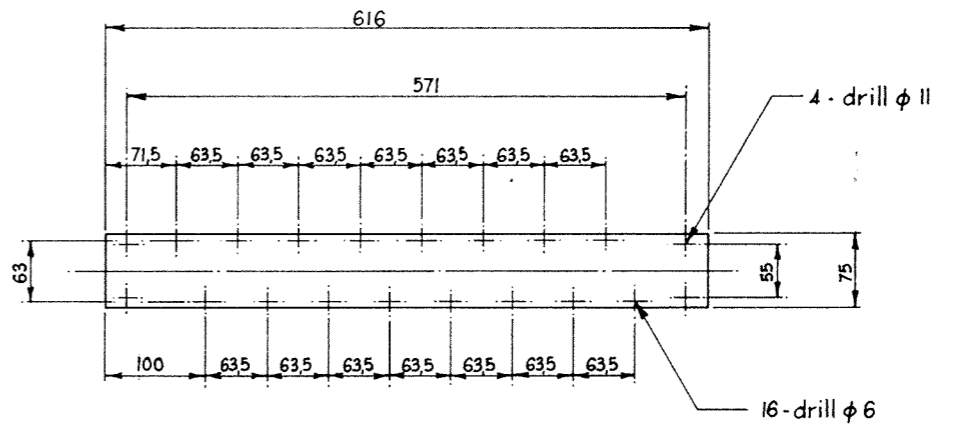


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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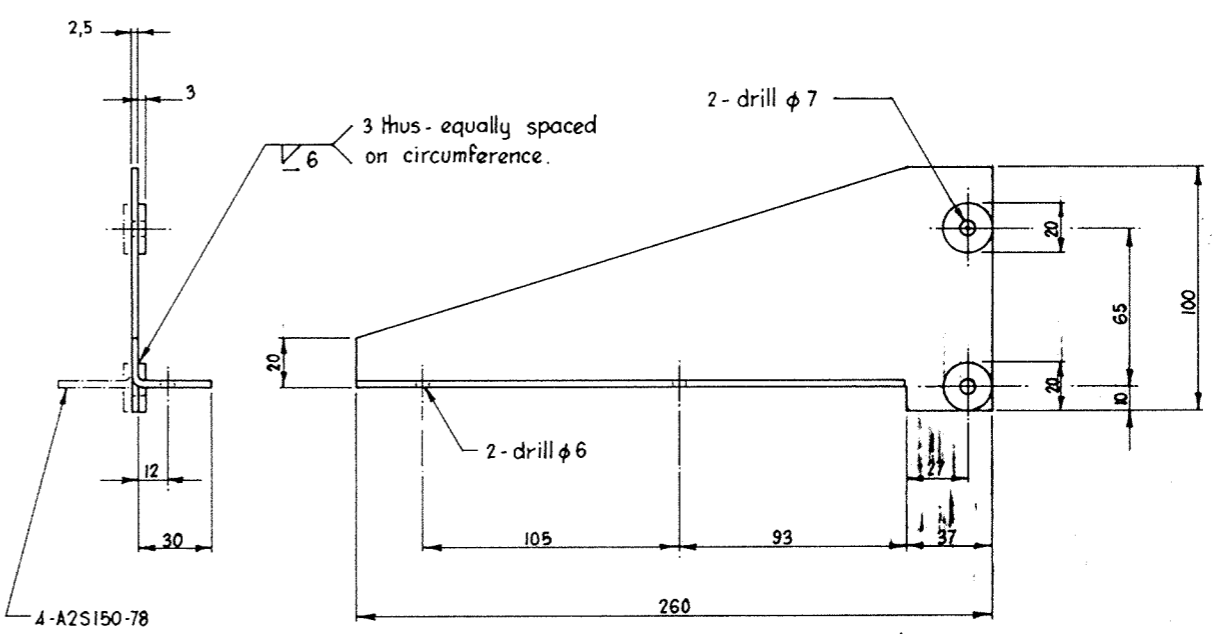


Note:-
 For C.S.E.E. equipment only
 Brackets 3-A2S150-78 and
 4-A2S150-78 - as required - for mounting
 'Advance' Regulated Power Supplies - PMA32
 (110^v AC/24^v DC. 3A.)



Finish:
 1 Coat Etch Yellow Primer
 2 Coats Brolite P.T.26353 Hammerstone.

5 M.S. MOUNTING RAIL 2-A2S150-78



Supply with:
 2 - Bolts Hex M.S. M6 14 long
 2 - Nuts Hex M.S. M6
 2 - Washers Rd. M.S. Bright ϕ 12,5 x 1,2 x hole ϕ 6.

Finish: As for 2-A2S150-78.

M.S. BRACKET Right Hand 4-A2S150-78 Left Hand as shown 3-A2S150-78

6-7-78/A11.N°1803

ASSEMBLY 1-A2S150-78

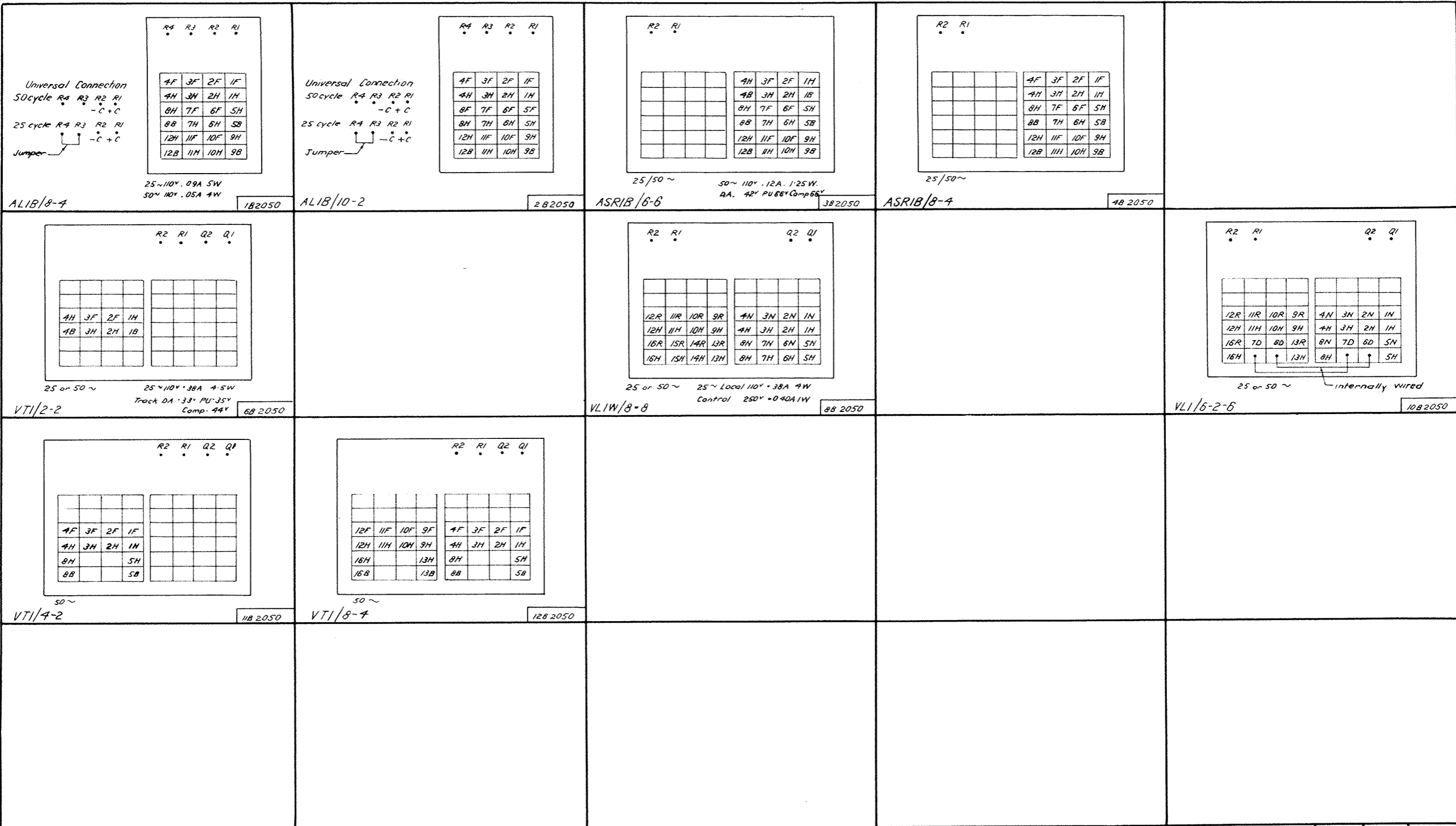
REV	DATE	DESCRIPTION	REV'D	C'KD	S.D.E	S&C.E	DESIGNED N.T.T.	DRAWN N.T.T.	VICTORIAN RAILWAYS FRAME TRACK C'T. EQUIPMENT C.S.E.E. (MONTLESS) JEUMONT (H.V.I.) ASSEMBLY & DETAILS	DATE 5-4-78	SCALE	INDEX	DRAWING NO. S150-78	PRINT

5993a
 16 4 28
 H124-4



SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

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VICTORIAN RAILWAYS
 PLUG-IN RELAYS
 CONTACT CONNECTIONS
 FOR A.C. RELAYS

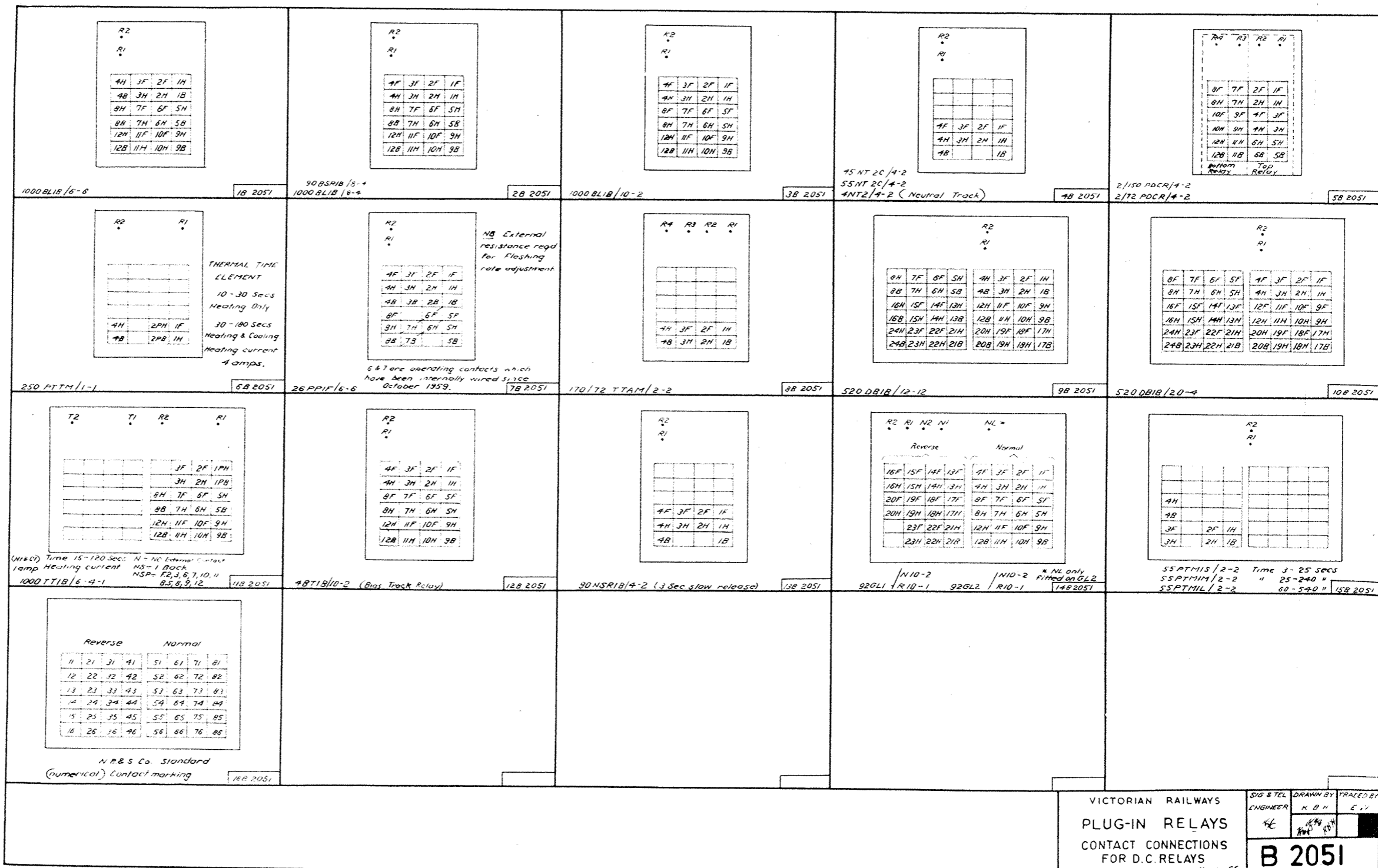
SIG & TEL ENGINEER K.B.H.	DRAWN BY K.B.H.	TRACED BY E.W.
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B 2050
11-1-65



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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K1

VICTORIAN RAILWAYS
 PLUG-IN RELAYS
 CONTACT CONNECTIONS
 FOR D.C. RELAYS

SIG & TEL ENGINEER
 DRAWN BY
 TRAILED BY

B 2051



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

<p>MELDING M2152 24-24-6</p> <p>2 MTG HOLES FOR 2 BA SCREWS (REF ONLY)</p> <p>MOUNTING BASE COMP STYLE "Q" RELAYS</p> <p>CONNECTION M2163 & 2164-47 SUPPLIED LOOSE IN ENVELOPE</p> <p>RETAINING CLIP NOT SHOWN M2164 47-18711-60</p> <p>INDEXING HOLES AS CALLED FOR ON 2 1/8" X 1 1/2" DEEP NOTE: INDEX HOLES X & Y TO BE DRILLED USING TEMPLATE # 11-40</p> <p>NAMEPLATE AS CALLED FOR SEE DRAWING 12</p> <p>FRONT VIEW SHOWING DESIGNATION OF ALL INDEXING HOLES</p> <p>REAR VIEW</p>		<p>Pc M19051 STYLE QBA1 50 VOLTS, 2F-4B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M19079 AN 4881-197</p> <p>MBA12-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M19169 STYLE QBA1 50 VOLTS, 4F-4B CONTACTS Pc M19170 STYLE QBA1 50 VOLTS, 8F-8B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE FOR Pcs M19169- M19170, AN 4881-197 FOR Pcs M19170- M19172, AN 4881-197</p> <p>MBA 8-8 MBA 4-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M23451 STYLE QBBA1 50 VOLTS, 2/4F-4B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE AN 4881-311/4</p> <p>2MBA 4-4, 4-4S OTHERWISE AS MAIN VIEW BASE FOR VITAL RELAY</p>	<p>Pc M18994 STYLE QBH1 50 VOLTS, 2/4F-4B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M18997 AN 4881-197</p> <p>2MBA 4-4, 4-4 OTHERWISE AS MAIN VIEW BASE FOR NON-VITAL RELAY</p>																			
<p>Pc M20399 STYLE QSRA1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M20400 AN 4881-218</p> <p>MSRA 6-6 OTHERWISE AS MAIN VIEW</p>	<p>Pc M18993 STYLE QSRA1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M18994 AN 4881-197</p> <p>MSRA 8-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M20989 STYLE QT1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M20990 AN 4881-218</p> <p>MT 2-2 OTHERWISE AS MAIN VIEW</p>	<p>Pc M23321 STYLE QT1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE AN 4881-197</p> <p>MT 4-2 OTHERWISE AS MAIN VIEW</p>	<p>Pc M23280 STYLE QT2</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE AN 4881-197</p> <p>MT 8-8 OTHERWISE AS MAIN VIEW</p>	<p>Pc M20771 STYLE QPA2 40 VOLTS, 4C 4F-8B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M20772 AN 4881-218</p> <p>MZT 4-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M21049 STYLE QTD3 50 VOLTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M21053 AN 4881-218</p> <p>MNS & MNM OTHERWISE AS MAIN VIEW</p>																		
<p>Pc M21050 STYLE QTR1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M21051 AN 4881-218</p> <p>MZSPA 7-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M23398 STYLE QTD5</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE AN 4881-218</p> <p>MNR 5-2 OTHERWISE AS MAIN VIEW</p>	<p>Pc M20265 STYLE QSFA1</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M20266 AN 4881-218</p> <p>MSPA 8-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M22312 STYLE QTD4</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE AN 4881-218</p> <p>MSX OTHERWISE AS MAIN VIEW</p>	<p>Pc M19295 STYLE QL1 50 VOLTS, 1F-4B CONTACTS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M19317 AN 4881-218</p> <p>MML 11-4 OTHERWISE AS MAIN VIEW</p>	<p>Pc M19960 STYLE QTD1 4 SECS</p> <p>5-INDEXING HOLES</p> <p>NAMEPLATE M19966 AN 4881-218</p> <p>2/T.D.U. (4 SECS) OTHERWISE AS MAIN VIEW</p>																			
<p>THIS DRAWING SUPERSEDES 83543</p>				<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>REV'D</th> <th>CND</th> <th>ME</th> <th>SDE</th> <th>SACE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	REV'D	CND	ME	SDE	SACE									<p>DESIGNED T B</p> <p>CHECKED L R</p> <p>DESIGN OFFICE SIG DESIGN ENGINEER</p>	<p>DRAWN T B</p> <p>CORRES</p>	<p>VICTORIAN RAILWAYS MOUNTING BASES FOR MINIATURE PLUG-IN RELAYS</p>	<p>S&C ENGINEER</p> <p>DATE 3-1-80</p> <p>SCALE</p> <p>INDEX</p> <p>DRAWING NO. REV'N A1 S606-79</p>
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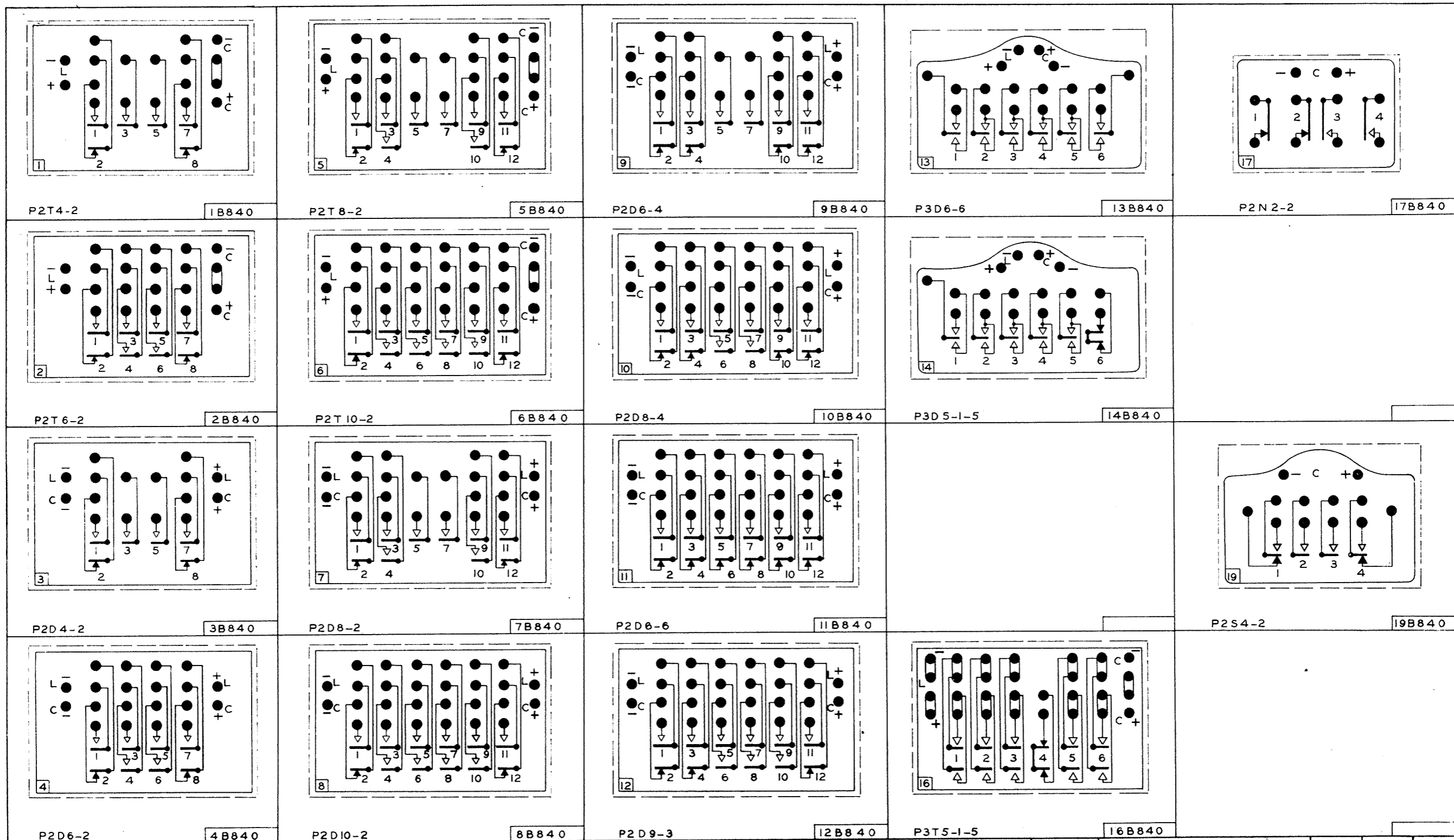


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CONTINUED ON:-
B841 & B842.

VICTORIAN RAILWAYS.
**RELAY DIAGRAMS
TYPES &
CONTACT CONNECT'NS.**
17-2-38.

SIG. & TEL. ENGINEER.	DRAWN BY W.S.-A.H.	TRACED BY W.S.

B 840

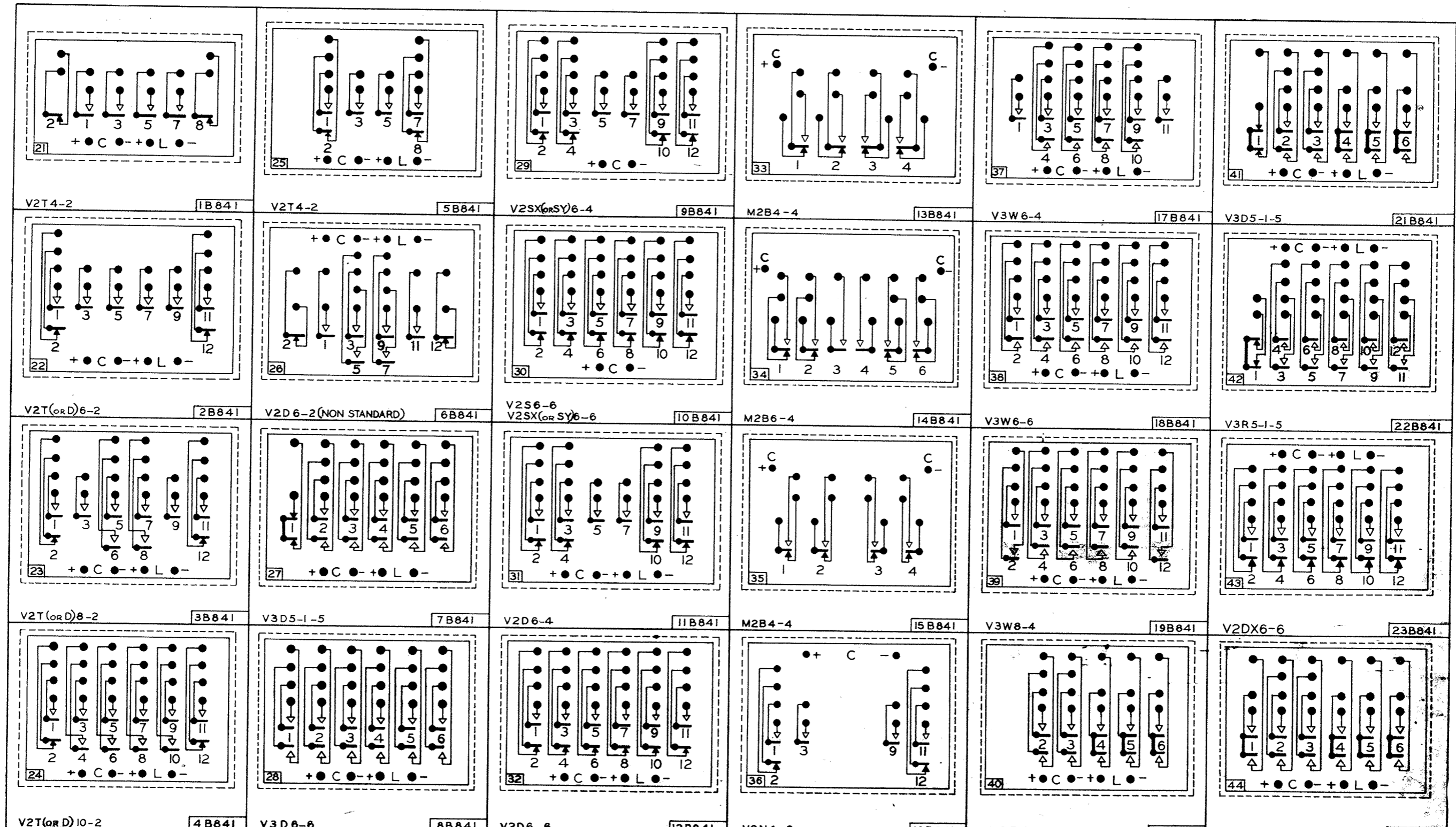


SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category
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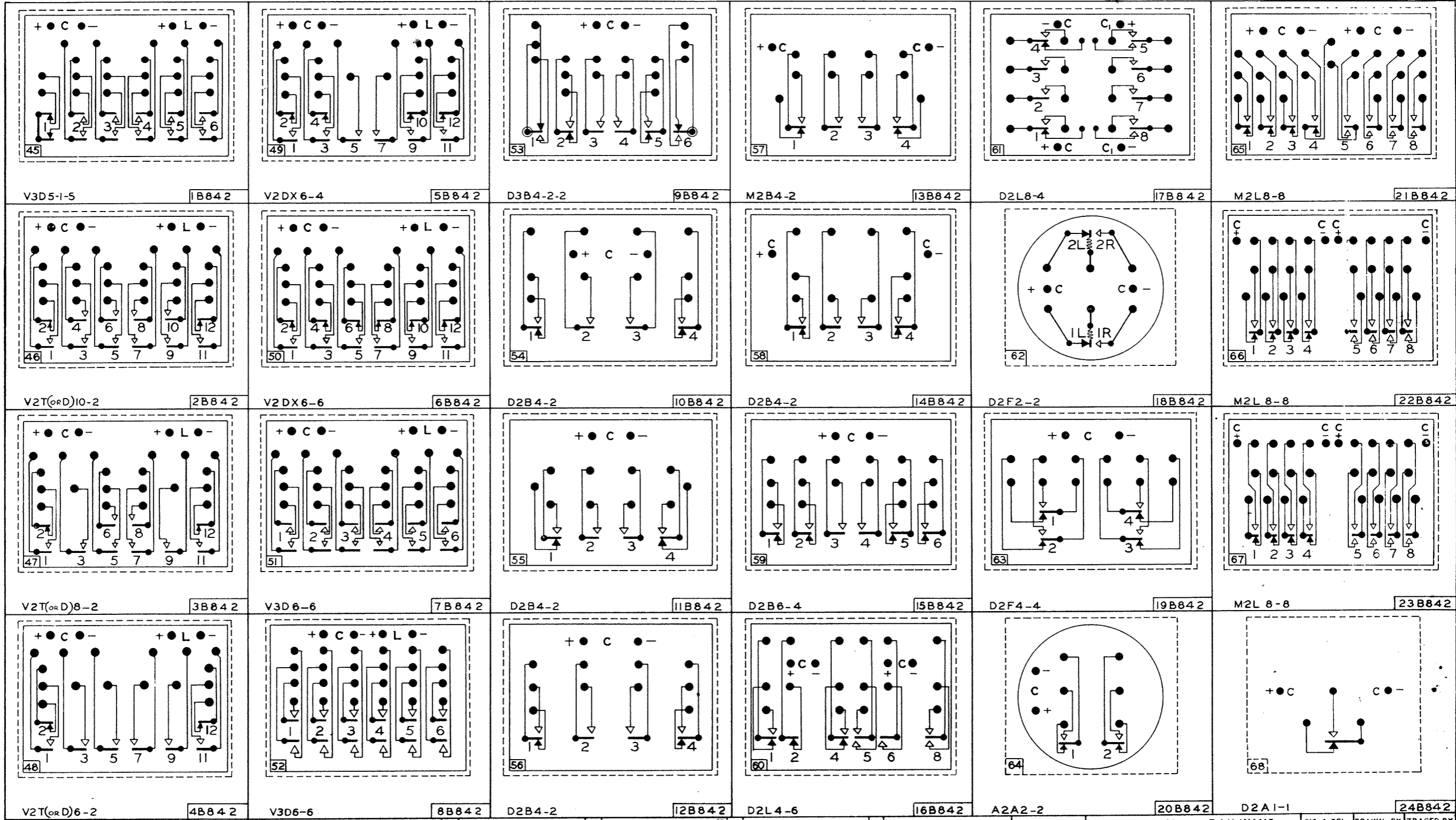
Sheet No
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4	26-9-52	3	19-2-47	Z	10-9-41	1	12-5-41	CONTINUED ON:- B.840 & B.842.	VICTORIAN RAILWAYS. RELAY DIAGRAMS TYPES & CONTACT CONNECTIONS B.841	SIG. & TEL. ENGINEER DRAWN BY W.S.A.R. TRACED BY W.S.
	23B841 previously V2N6-4	15B841 & 16B841 added.	14B841 revised to provide for heavy duty contacts.	13B841 & 14B841 added.						



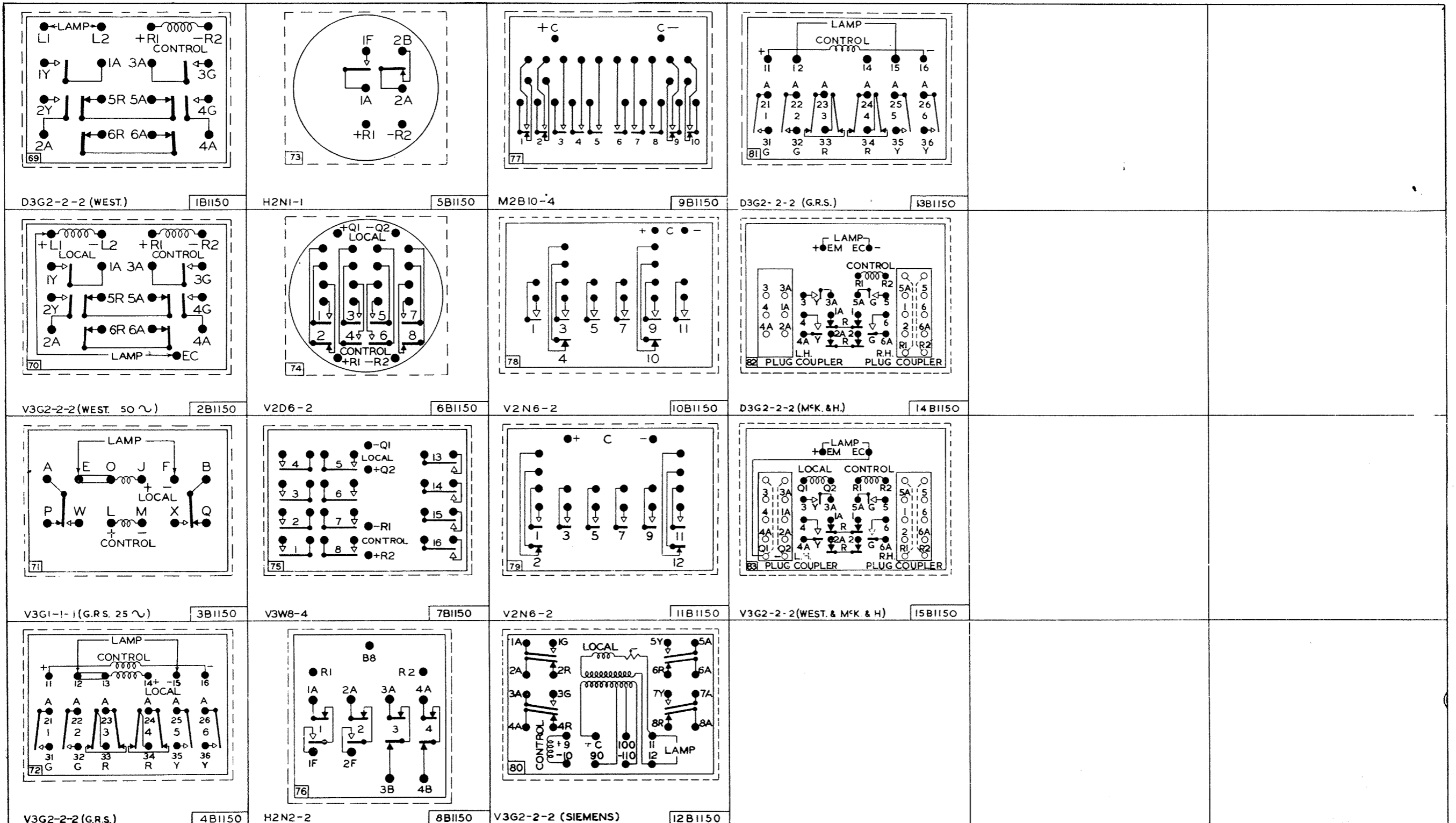
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES



4	24.9.50	3	21-5-48	2	19.12.41	1	4.2.41	CONTINUED ON:- B840 & B841	VICTORIAN RAILWAYS. RELAY DIAGRAMS, TYPES & CONTACT CONNECTIONS 27-6-40	SIG. & TEL. ENGINEER A.H. W.S.	DRAWN BY A.H. W.S.	TRACED BY W.S.	B842
8B842 added.		9B842 amended No.6 Contact altered in accordance with Symbol book		23B842 added. (Heavy duty contacts.)		13B842, 21B842 & 22B842 previously type D.							



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

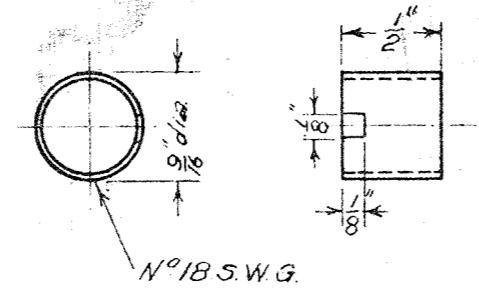


4	2 2-66 3	6-5-58 2	27-9-55 1	24-3-55	CONTINUED ON :- B840 B841 & B842	VICTORIAN RAILWAYS RELAY DIAGRAMS TYPES & CONTACT CONNECTIONS 25-10-54	SIG. & TEL. ENGINEER AGI	DRAWN BY AGI	TRACED BY AGI	B1150
	13B1150, 14B1150 and 15B1150 added.	12B1150 added	11B1150 added.	10B1150 added.						



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

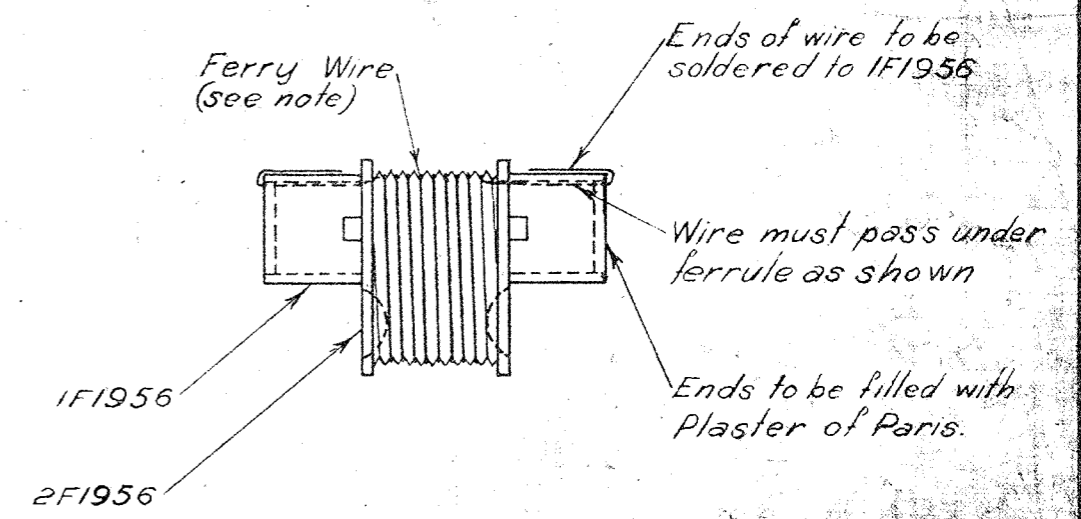
RECORD IN
R 1455
 NEW SERIES
 DATE 17/11/37
Red-68



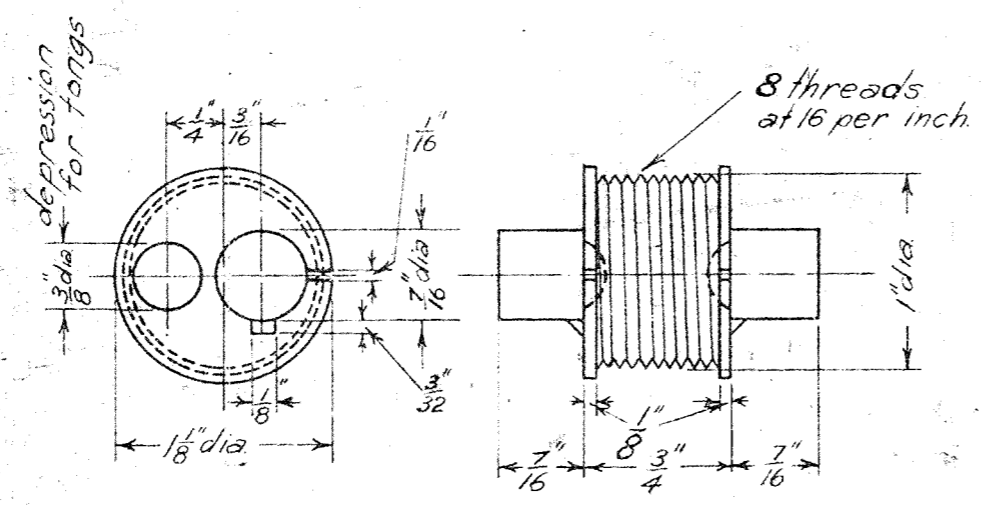
To be stamped $\frac{1}{2}$, $\frac{3}{4}$, 1, or 3 as required
 Brass
FERRULE

17-3-25

1F1956



NOTE.
 3F1956. To have 7 turns (approx. $21\frac{3}{4}$ ") of N°24 S.W.G.
 Ferry wire giving 1.15 ohms - stamped 3.
 4F1956. To have 8 turns (approx. $24\frac{3}{4}$ ") of N°30 S.W.G.
 Ferry wire giving 3.73 ohms - stamped 1.
 5F1956. To have 8 turns (approx. $24\frac{3}{4}$ ") of N°34 S.W.G.
 Ferry wire giving 7.20 ohms - stamped $\frac{1}{2}$.
 6F1956. To have 8 turns (approx. $24\frac{3}{4}$ ") of N°32 S.W.G.
 Ferry wire giving 5.4 ohms - stamped $\frac{3}{4}$.



25-7-26/A.H. No 147
 17-3-25

Porcelain
RESISTANCE INSULATOR.

2F1956

21-3-34/A.H. No 289
 17-3-25

STANDARD RESISTANCE (Assembly)

For 5.4 ohms 6F1956
 " 7.20 ohms 5F1956
 " 3.73 " 4F1956
 " 1.15 " 3F1956

9-9-54 Part 6F1956 added <i>CM</i>	22-6-26 Part 5F1956 added <i>[Signature]</i>	V.R. STANDARD RESISTANCE For A.C. Track Circuits. 17-3-25	Chief Eng of Sigs & Tels. <i>[Signature]</i>	Drawn by L.J.P. <i>[Signature]</i>	Traced by L.J.P. <i>[Signature]</i>	F1956
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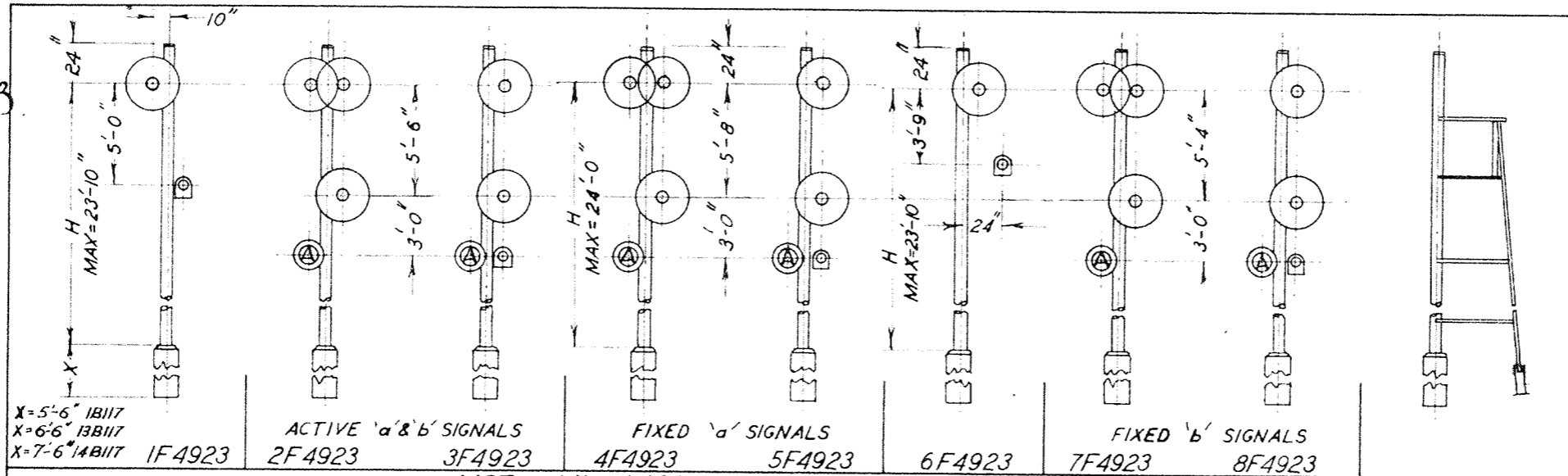


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COMPONENTS & STANDARD PRACTICES

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41283

C1-48.



X=5'-6" 1B117
X=6'-6" 13B117
X=7'-6" 14B117

ACTIVE 'a' & 'b' SIGNALS
2F4923 3F4923

FIXED 'a' SIGNALS
4F4923 5F4923

FIXED 'b' SIGNALS
6F4923 7F4923 8F4923

LIST OF PARTS

N°	NAME	1F4923	2F4923	3F4923	4F4923	5F4923	6F4923	7F4923	8F4923
1B2874	MAST (WITH LADDER & LANDINGS)	/	-	-	-	-	/	-	-
2B2874	MAST (WITH LADDER & LANDINGS)	-	/	/	/	/	-	/	/
1H145	MARKER LIGHT (WITH BACKGROUND) AS	/	-	-	-	-	/	-	-
2H145	MARKER LIGHT (WITHOUT BACKGROUND) Req'd	-	-	-	-	-	-	-	-
1H1037	LOW SPEED SIGNAL	-	-	/	-	/	-	-	/
9A18	ADJ. LAMP BRACKET	/	-	/	-	/	-	-	/
11A18	ADJ. LAMP BRACKET	-	-	-	-	-	/	-	-
* 5N276	LIGHT SIGNAL TYPE 'B' RED LENS	-	-	-	/	/	-	/	/
1F4927	BOTTOM BRACKET-COMplete	-	-	-	/	/	-	/	/
2F4927	TOP BRACKET-COMplete	-	-	-	/	/	-	/	/
STOCK	TYPE K2-SEARCHLIGHT SIGNAL	/	2	2	/	/	/	/	/
2A909	ILLUMINATED LETTER 'A'	-	/	/	/	/	-	/	/
1F4927	BOTTOM BRACKET-COMplete	-	/	/	/	/	-	/	/
2F4927	TOP BRACKET-COMplete	-	/	/	/	/	-	/	/

METHOD OF ORDERING

- STATE PART N° OF SIGNAL
- " " H (see B2874)
- " " PART N° OF FOUNDATION
- " " MARKER LIGHT 1H145 or 2H145
- " " IF ILLUMINATED LETTER 'A' IS REQUIRED

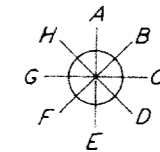
NOTES:-

* LIGHT SIGNAL TYPE 'B'-5N276 is supplied with 2'-10" dia background unless 20" dia. is requested.

• LOW SPEED LIGHT SIGNAL TYPE 'B'-1A1307 is used when Running Low Speed Light Signal is required. Adjustable Lamp Bracket 9A18 to be replaced by Bottom Bracket 1F4927 & Top Bracket 2F4927.

• Extra parts for ILLUMINATED LETTER 'A' (When Ordered)

WIRE INLET PARTICULARS
RADIAL LOCATION



Front of Mast

VERTICAL LOCATION
of WIRE INLETS

All distances to be measured from top of Mast.

APPARATUS SERVED	RADIAL LOCATION	VERTICAL LOCATION
LIGHT SIGNAL TYPE 'K2' 'a' FIXED	A	4'-3"
LIGHT SIGNAL TYPE 'K2' 'b' FIXED	A	3'-8"
LOW SPEED SIG. MARKER LIGHT 1F4923 LIGHT 6F4923 ILL. LETTER 'A'	A	9'-9"
	A	9'-2"
	A	10'-3"
	A	6'-11"
	A	5'-8"
	E	12'-2"
RUNNING LOW SPEED SIGNAL	A	12'-2"

For all Wire Inlets see B2864.

TYPE K2 - Manufacturer: M^cK&H.

A
Revised to conform with B2874 & B2864.
29-10-70 Y.R.
R.M.H.

SIGNAL MAST & FITTINGS
FOR TYPE K2 SEARCHLIGHT SIGNAL
ORDERING LIST
16-10-61

RIG & TEL ENGINEER
E.E.E.

DRAWN BY L.C.E.

TRACED BY L.C.E.

F4923



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COMPONENTS & STANDARD PRACTICES

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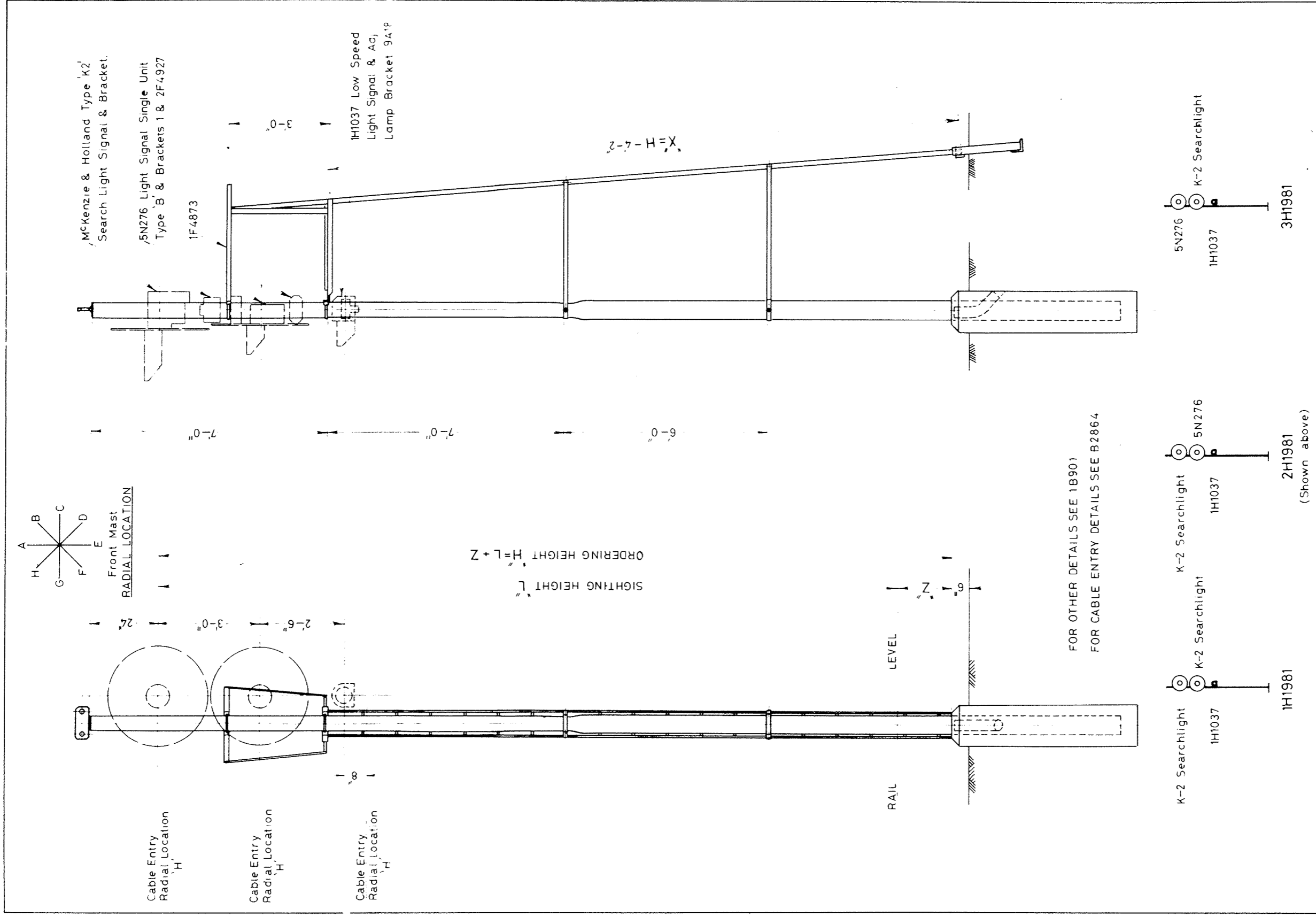
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H 5-3



19-6-75/RL N° 1588

H1981

SIGNAL MAST COMPLETE

For use in Suburban Area only. Standard 5'-6" Light separation required for Country Installations.
Spec. 1-4923

VICTORIAN RAILWAYS
SIGNAL MAST
FOR HOME SIGNALS

S&C. Engineer	Designed P.G.F.	Drawn P.G.F.	Ckd. J.S.N.	H1981
	S.D.E. M.E. / J.B.			

As Required 1, 2 or 3H1981

8-1-73

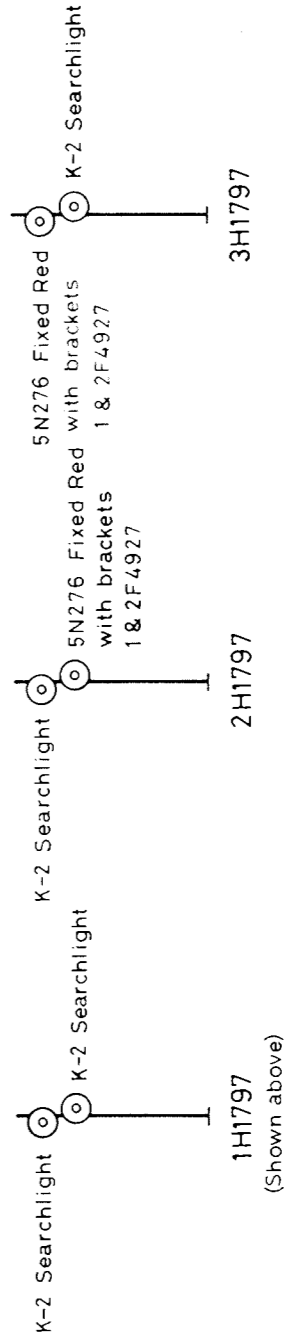
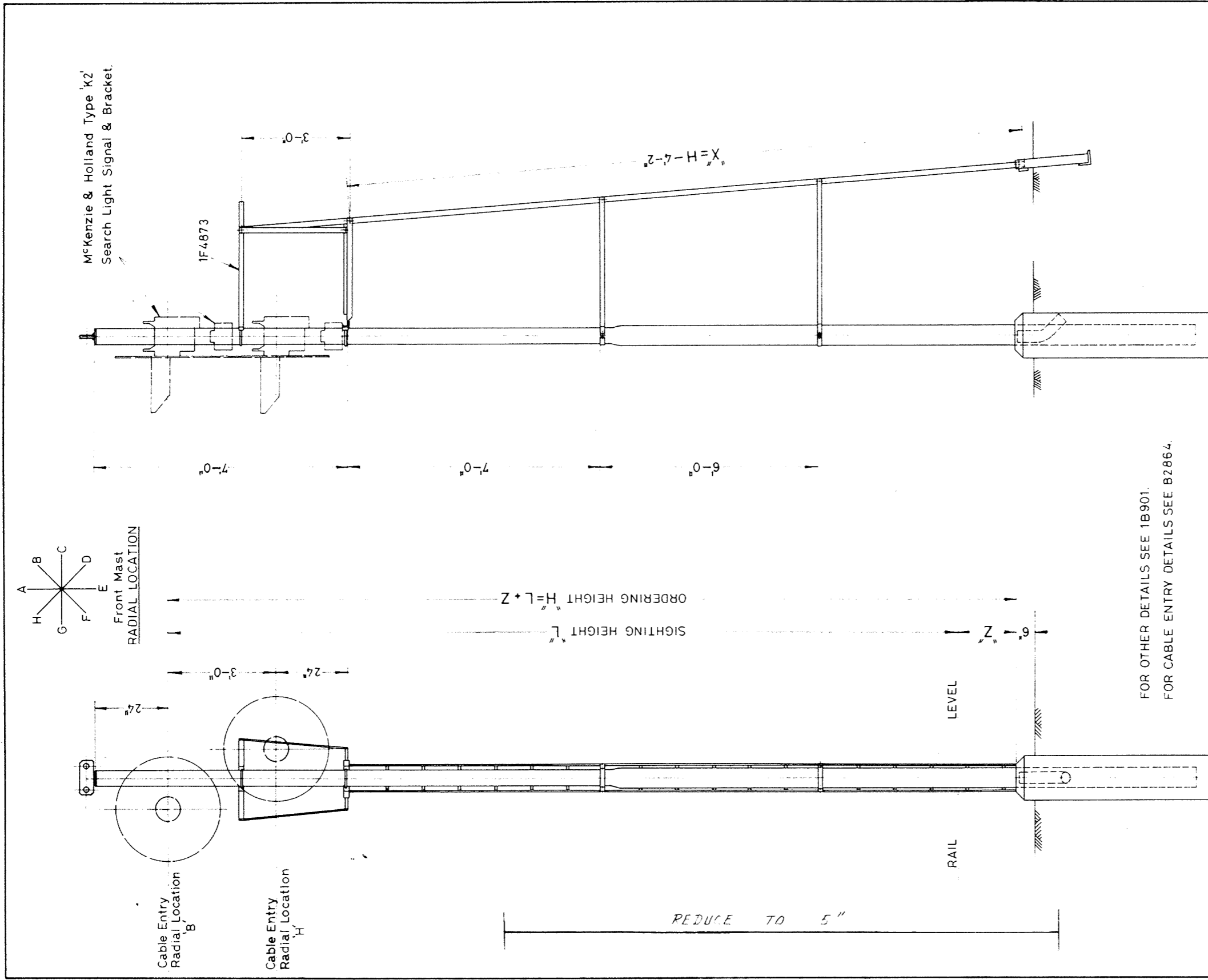


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19-6-75 / M.L. N° 1568

H1797

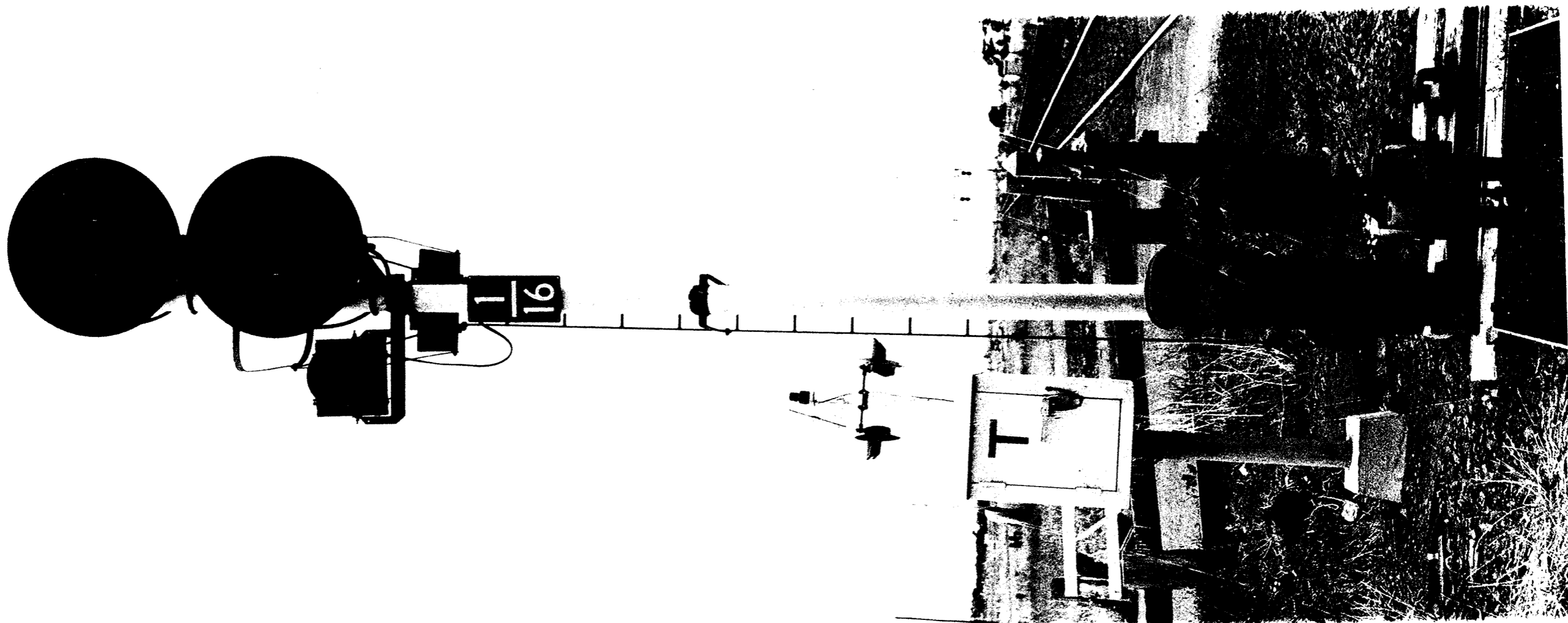
SIGNAL MAST COMPLETE
For use in Suburban Area only. Standard 5'-6" Light separation required for Country Installations.

VICTORIAN RAILWAYS
SIGNAL MAST
FOR AUTO SIGNALS
AT 3'-0" CENTRES

As Required 1, 2 or 3H1797	S.&C. Engineer	Designed	Drawn
		MJR	MJR

H1797

1-2-72



TYPICAL SIGNAL LOCATION



SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

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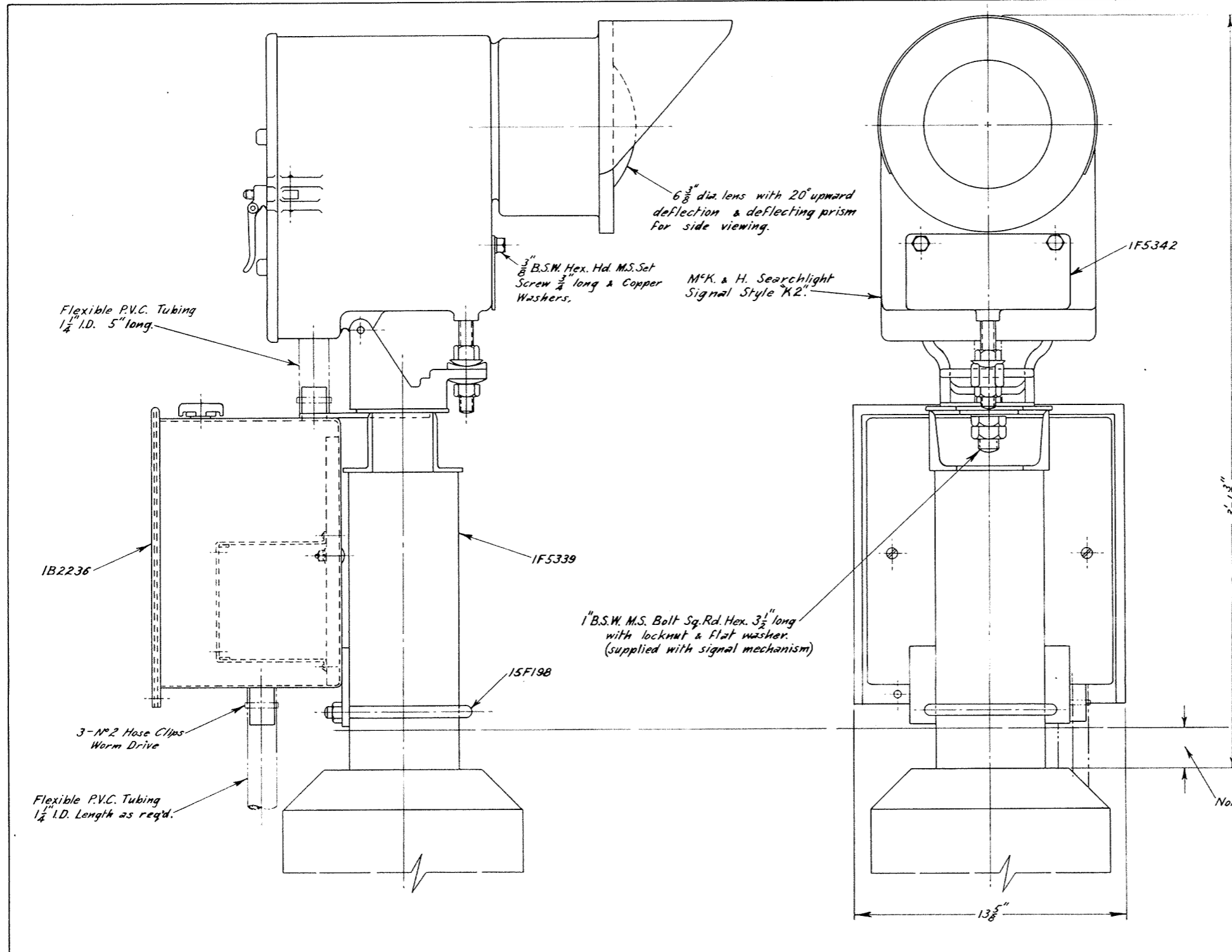
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PART NO.	NAME	MAT'L	Q'TY
1B2236	Box. (For Panel see B2259)	M.S. Galv.	1
IF5339	Mast.		1
15F198	"U" Bolt.	M.S. Galv.	1
* IF5342	Number Plate.		1
Stock	Searchlight Signal M ^o K.A.H. Type "K2".		1
	N ^o 2 Hose Clip Worm Drive.		3
	Flexible P.V.C. Tubing 1/4" I.D.		as req'd.
	3/8" B.S.W. Hex. Hd. Set Screw 3/4" long.	M.S.	2
	Washer 3/4" dia x 7/16" x 7/16" Rd. hole.	Copper	2

NOTE:- BOX, MAST, "U" BOLT & SIGNAL MECHANISM TO BE ORDERED SEPARATELY.

* When ordering, state lettering and number required on plate.

3'-1 1/4" (before focusing)

Rail Level.

Note- When erecting mast, care to be taken to keep base low enough to compensate for focusing of Light Unit.

8129

2A-8-72 Alteration No 1549 P.G.F.	High Dwarf see B2259	VICTORIAN RAILWAYS DWARF SIGNAL SEARCHLIGHT STYLE "K2" ASSEMBLY Scale: 3"=1'-0"	Sig. & Tel. Engineer. KEL	Drawn by B. R. H.P.	Traced by B. R.
			HI562		



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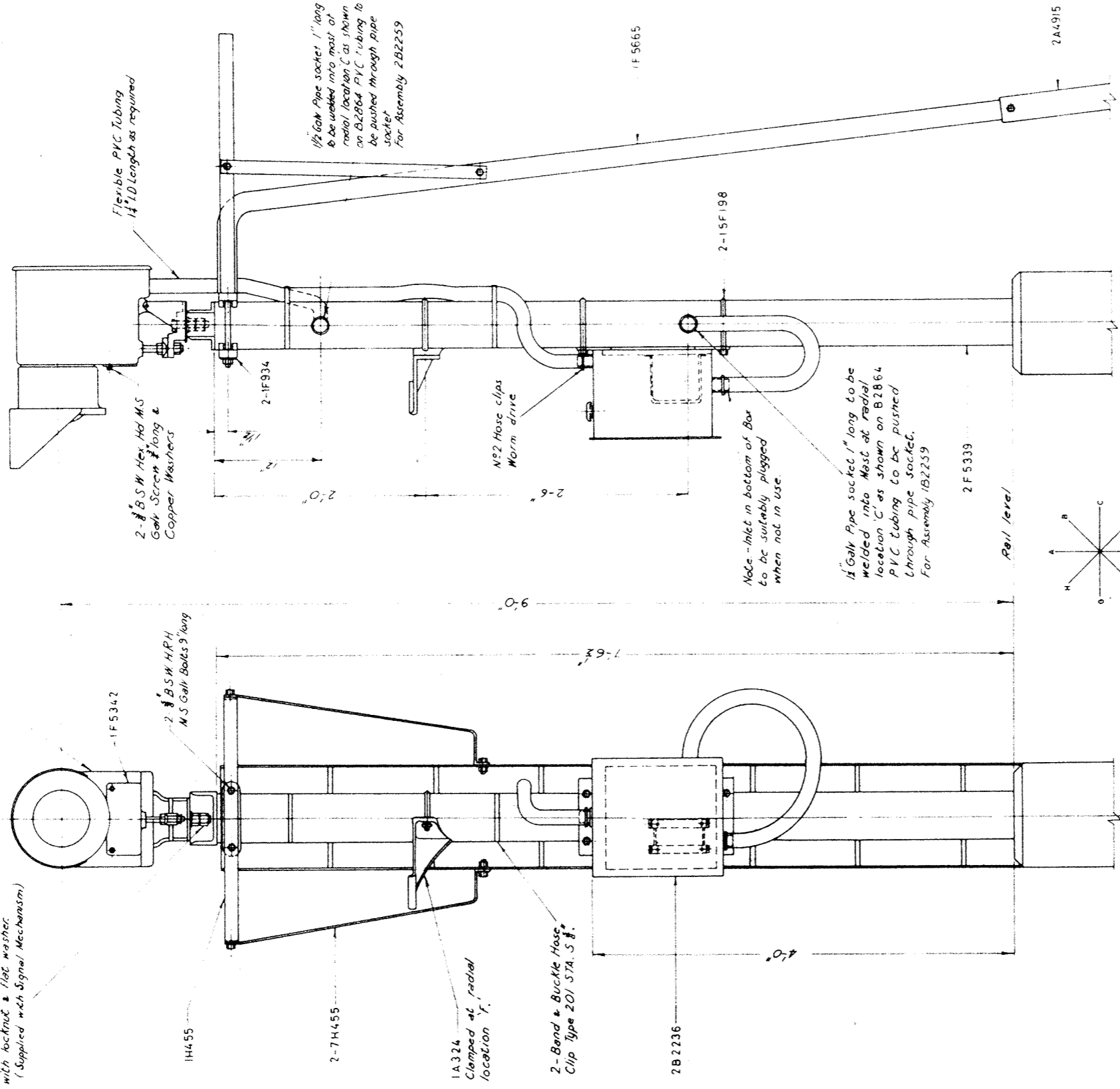
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M&H Searchlight Signal Style "K2" with 6" dia lens with 20" upward deflection & deflecting prism for view viewing

1" B.S.W. M.S. Bolt Sq Rd Hex 3 1/2" long with locknut & flat washer (Supplied with Signal Mechanism)



DWARF SIGNAL WITHOUT BOX 2B2236 ~ 2B2259
DWARF SIGNAL WITH BOX 2B2236 - 1B2259

1B2259/2B2259		1B2259/2B2259	
PART N°	NAME	MAT'L	Q'TY
* 2B2236	Box (For Panel see F5341)	M.S.G.	1
* 2F5339	Mast	"	1
* IF5342	Number Plate	"	1
* 1A324	Step	C.I.	1
* IF5665	Ladder	M.S.	1
* 2A4915	Ladder Foundation	"	1
1H455	Handrail	"	1
TH455	Handrail Stay	"	2
IF934	Clamp	C.I.	2
IF5198	"U" Bolt	M.S.G.	2
"	Band & Buckle Hose Clip 20/1 STA 5 3/8"	"	1
"	Searchlight Signal M&H Style "K2"	M.S.G.	2
"	3/8" B.S.W. Hex Hd Screw 3/4" long	"	2
"	Washer 3/4" dia x 1/8" x 3/16" Rd Hole	Copper	2
"	N°2 Hose Clip Worm Drive	"	1
"	PVC Flexible Tubing 1/4" I.D.	PVC	as required

* When ordering, state lettering & number required on number plate

NOTE :-
ALL FITTINGS SHOWN THUS * TO BE ORDERED SEPARATELY

B2259

Part No 2B2259
Alteration No 1549
24-8-72
8-7-76
Rev. B

Revisions Revised to include all Max. H.S. 143-144 on Low Mast Same Date original dated 18.7.67

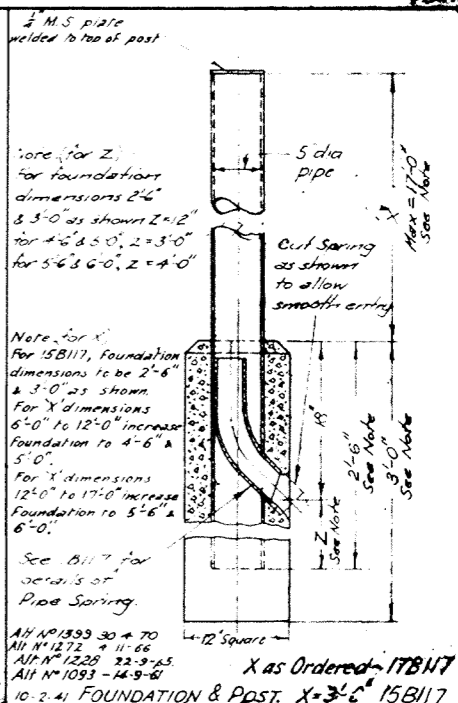
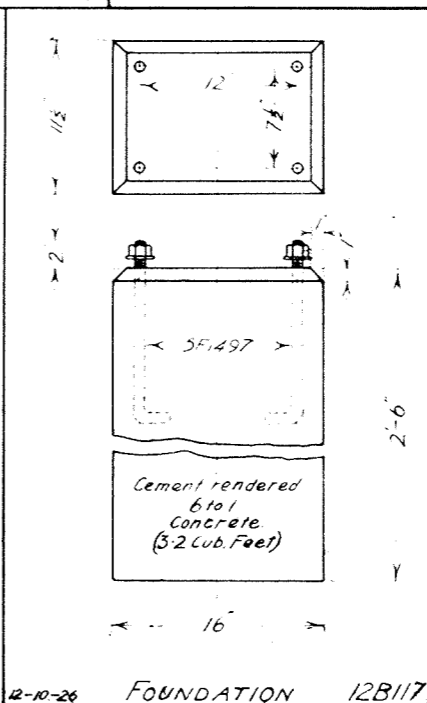
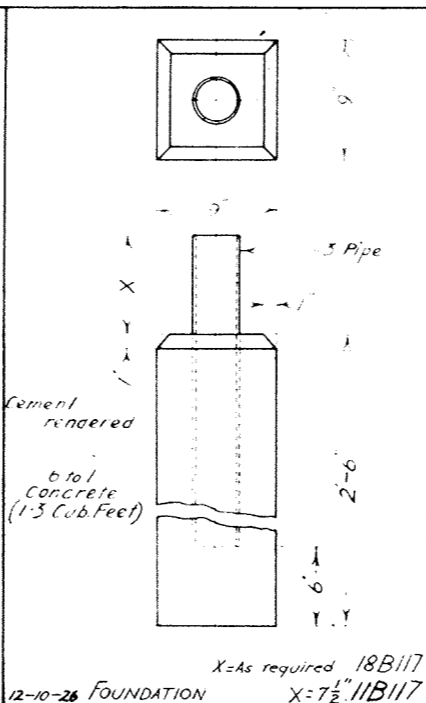
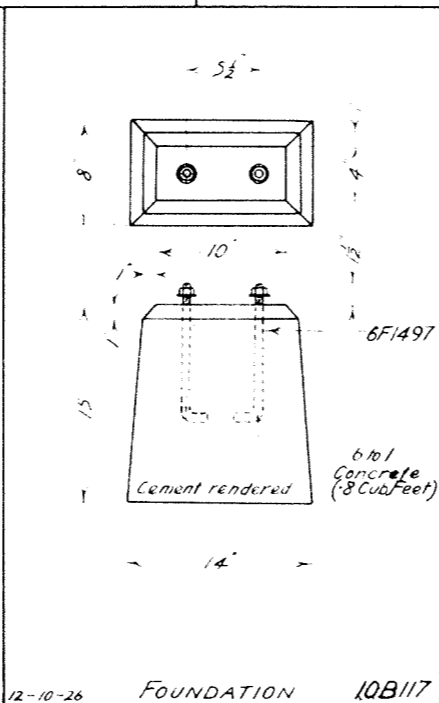
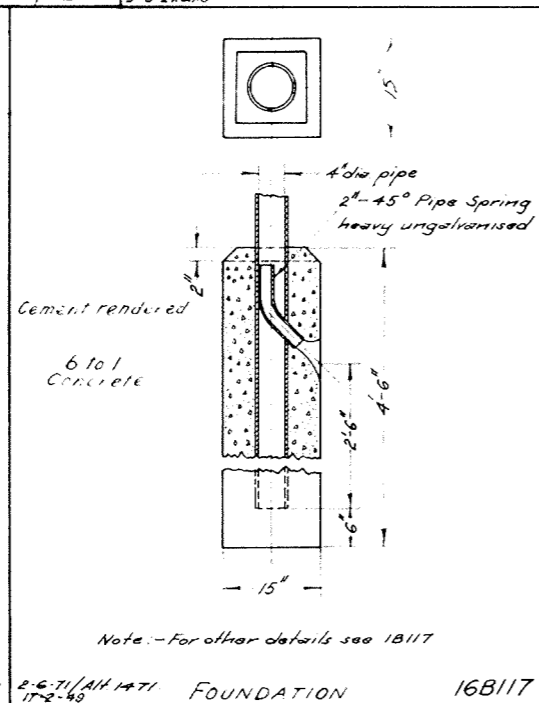
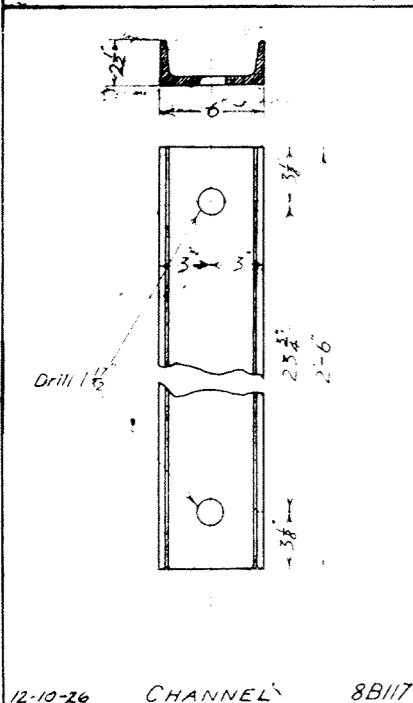
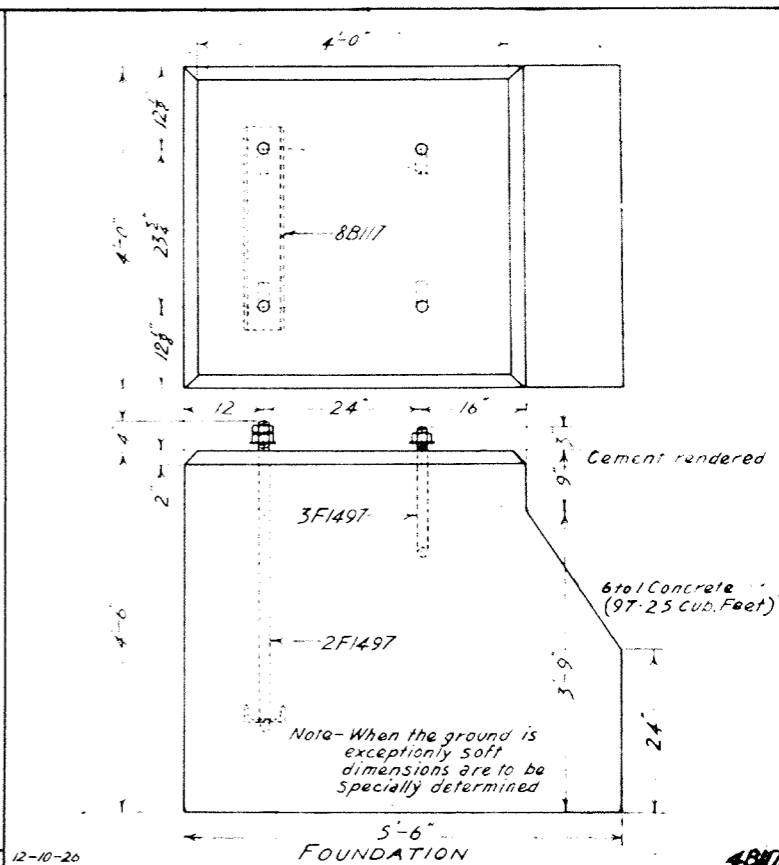
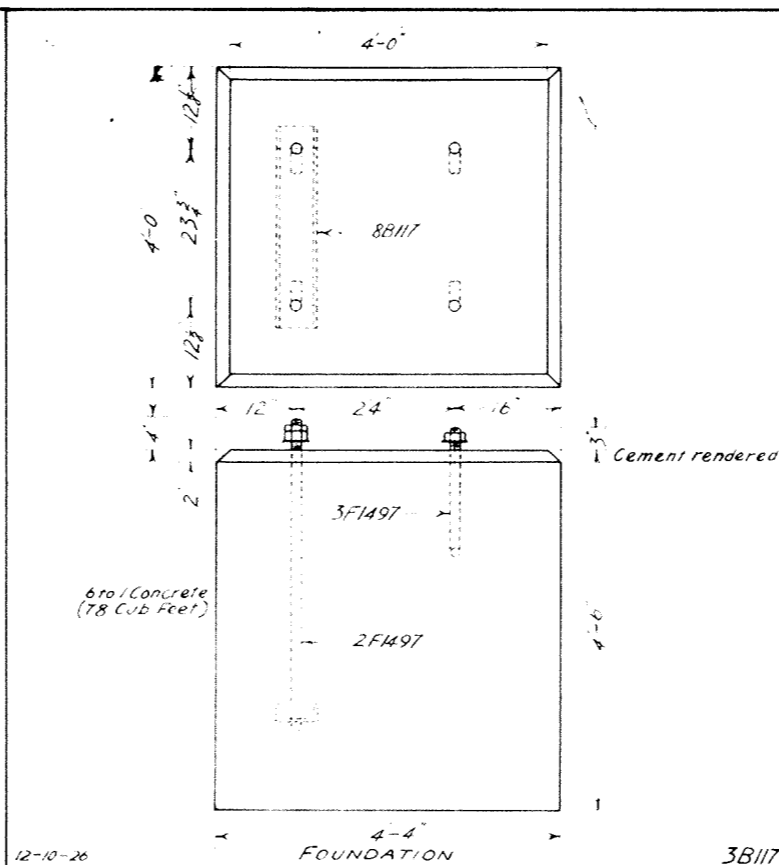
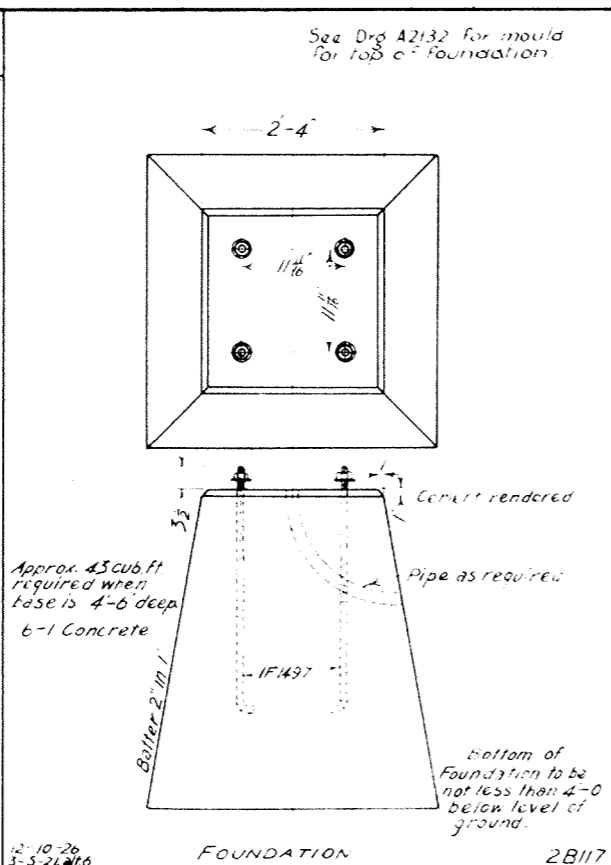
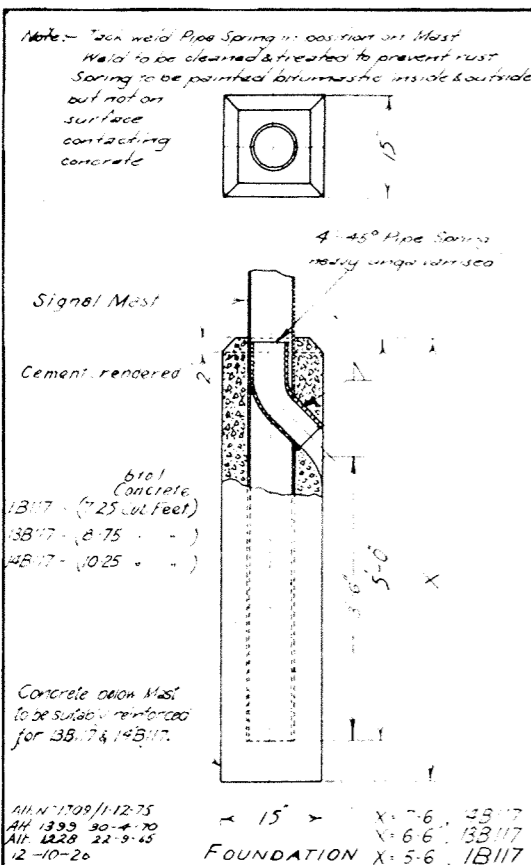
For Dwarf Signal M&H Style "K2" on Low Mast see H1562.

VICTORIAN RAILWAYS
DWARF SIGNAL SEARCHLIGHT STYLE K2 WITH LADDER & FITTINGS ON HIGH MAST
Scale 1/2" = 1'-0"

19-6-72

DWARF SIGNAL WITHOUT BOX 2B2259
DWARF SIGNAL WITH BOX 1B2259

S & C Engineer
S.D.E. M.E. Ckd. Iss. N°
Designed B.V. Drawn B.V.



12-10-26	CHANNEL	8B117	2-6-71/AH 1471 17-2-49	FOUNDATION	16B117	12-10-26	FOUNDATION	10B117	12-10-26	FOUNDATION	12B117	12-10-26	FOUNDATION	12B117
J6-4	Part N° 18B117 added	Part N° 17B117 added	Part 16B117 added	Part 9B117 cancelled	Part 15B117 added	Part 14B117 added Wire Inlet With Concrete Casing from Parts 18B117, 9B117, 3B117 & 4B117.	Part N° 18B117 added	Part N° 18B117 added	Redrawn. Original under same title dated 30-8-17. Parts 11B117 & 12B117 added Part 5B117 transferred. See 1F1497 5B117 7B117	VICTORIAN RAILWAYS FOUNDATIONS FOR SIGNAL MASTS				

29682

A2-67

IF3328
Riveted to Plate

For 1 *Figure X = 9"
 " 2 Figures X = 15"
 " 3 " X = 21"
 " 4 " X = 2'-3"
 " 5 " X = 2'-9"
 " 6 " X = 3'-3"
 *Figure denotes Letter or Numeral.

9"
 16 S.W.G.
 4 1/2"
 6"
 4 1/2"

When X exceeds 2'-3" a third Clip placed centrally must be provided.

NOTE:- Vitreous Enamelled Plate. Black all over with White figures in front.
 Inscription to be specified when ordering.
 Characters to be in accordance with A.S. No. CE.1.-1960 Series "D."
 Supply with 2F3328, Band, as required.
 Outside dia. of Mast to be stated.

19-5-67 Alt. 1301
21-11-40

Enamelling Steel
NUMBER PLATE FOR PIPE MAST

IF3329

For 1 *Figure X = 9"
 " 2 Figures X = 15"
 " 3 " X = 21"
 " 4 " X = 2'-3"
 " 5 " X = 2'-9"
 " 6 " X = 3'-3"
 *Figure denotes Letter or Numeral.

9"
 4 - 1/16" drill
 16 S.W.G.

NOTE:- Vitreous Enamelled Plate. Black all over with White figures in front.
 Inscription to be specified when ordering.
 Characters to be in accordance with A.S. No. CE.1.-1960 Series "D."

19-5-67 Alt. 1301
21-11-40

Enamelling Steel
NUMBER PLATE FOR WOOD OR LATTICE MAST.

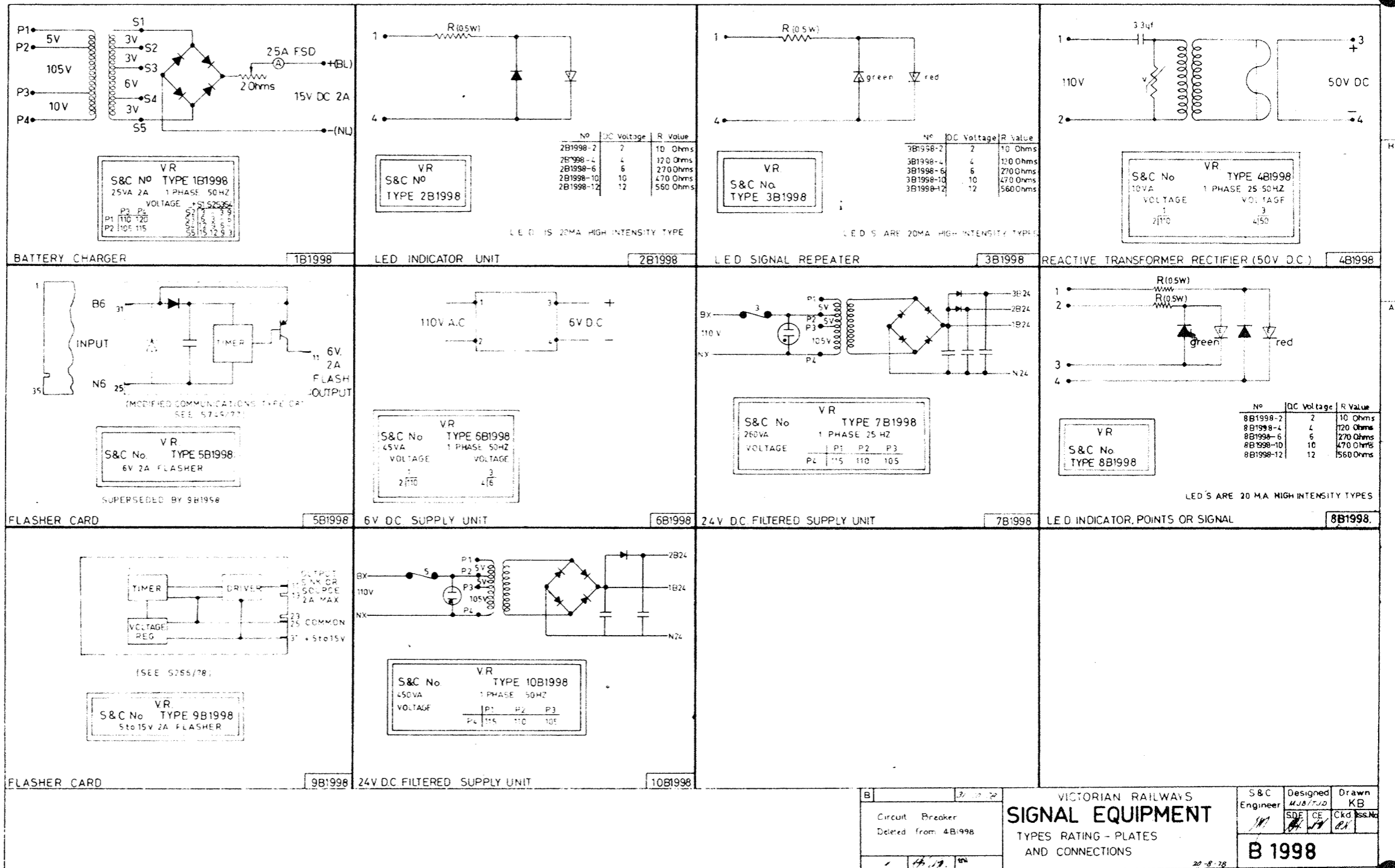
2F3329

For Standard Gauge Number Plates see F3584 20-8-63	V.R. NUMBER PLATE FOR SIGNAL MASTS 21-11-40	Sig. & Tel. Engineer	Drawn by K.C.H.C.	Traced by K.C.H.C.	F3329
		<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category	Sheet No	Rev.
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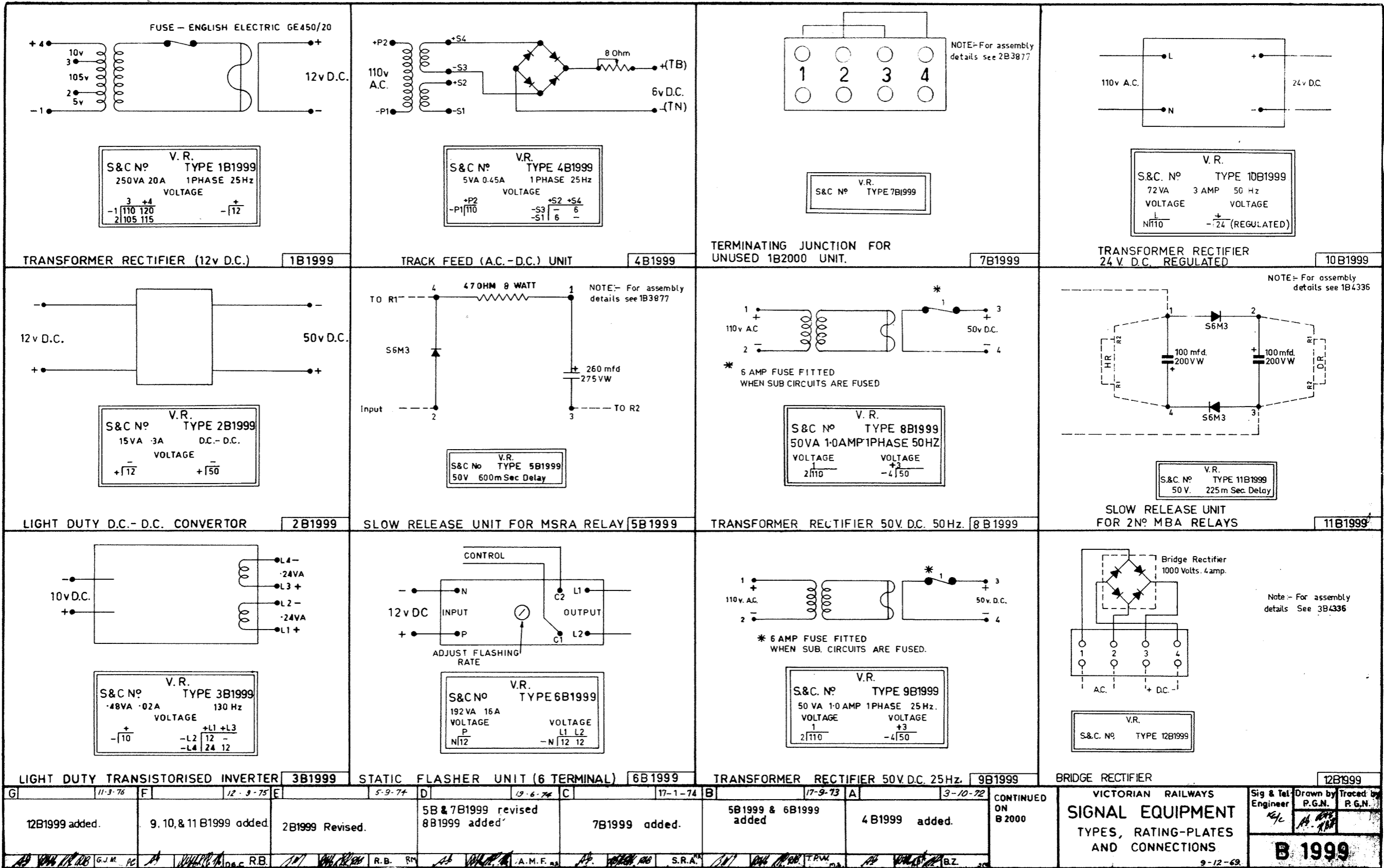
603.24
H.23-3

Circuit Breaker Deleted from 4B1998		VICTORIAN RAILWAYS SIGNAL EQUIPMENT TYPES RATING - PLATES AND CONNECTIONS		S&C Engineer	Designed MJB/TJD	Drawn KB
				B 1998		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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G	11-3-76	F	12-9-75	E	5-9-74	D	19-6-74	C	17-1-74	B	17-9-73	A	3-10-72
	12B1999 added.	9, 10, & 11 B1999 added.	2B1999 Revised.	5B & 7B1999 revised 8B1999 added	7B1999 added.	5B1999 & 6B1999 added	4 B1999 added.						CONTINUED ON B 2000
	G.J.M.	R.B.	R.B.	A.M.F.	S.R.A.	F.R.W.	B.Z.						

VICTORIAN RAILWAYS
SIGNAL EQUIPMENT
 TYPES, RATING-PLATES
 AND CONNECTIONS

Sig & Tel. Engineer *R/C*
 Drawn by P.G.N.
 Traced by P.G.N.

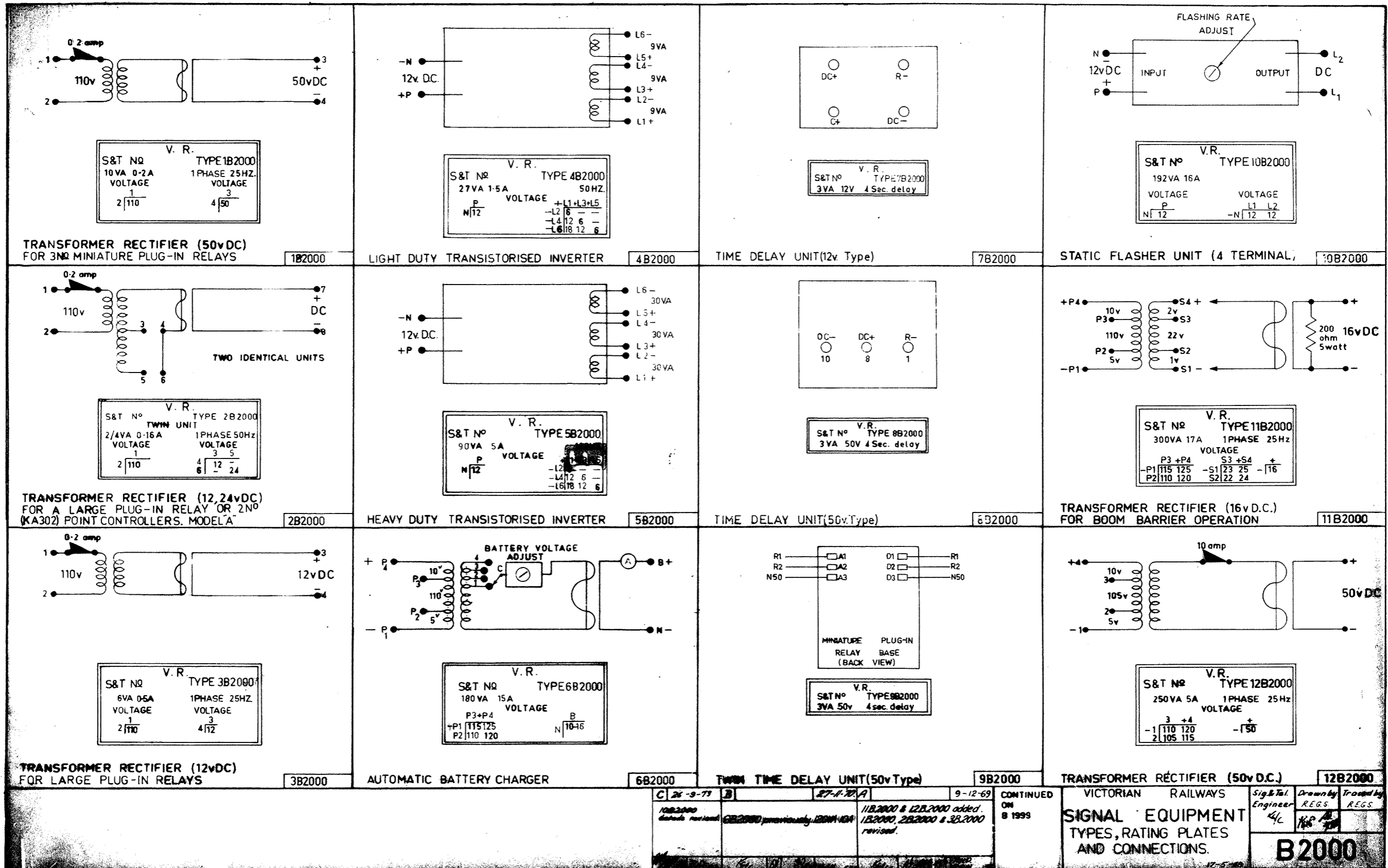
B 1999

9-12-69



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

C 26-9-73 27-1-74 9-12-69 CONTINUED ON 8 1999

10B2000 details revised. 6B2000 previously 120V-12V. 11B2000 & 12B2000 added. 1B2000, 2B2000 & 3B2000 revised.

VICTORIAN RAILWAYS
SIGNAL EQUIPMENT TYPES, RATING PLATES AND CONNECTIONS.

Sig. & Tel. Engineer 4/L
Drawn by REGS
Traced by REGS

B2000





Fuse Cap
Cat. No. 4288.1



Fuse
Non Indicator
250V. 10A. Cat. No. 2453
250V. 13A. Cat. No. 2454



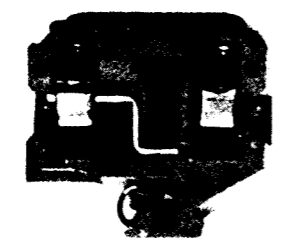
Fuse Cap
Cat. No. 2820.1



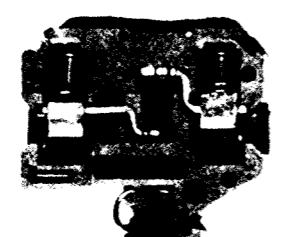
Fuse
Indicator
250V. 1A Cat. No. 2658
250V. 2A Cat. No. 1927
250V. 6A Cat. No. 1929



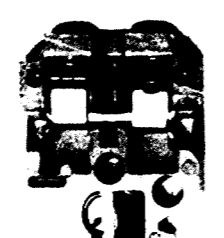
Plug
Cat. No. 4627.0



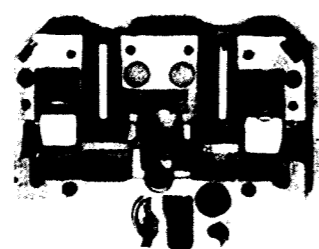
Terminal Fuse
Type SAKS3
Cat. No. 2111.2



Terminal Fuse
Type SAKS1
Cat. No. 1911.2



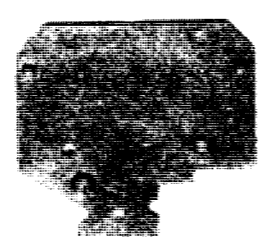
Terminal Feed Through
Type SAK6
Cat. No. 1099.2



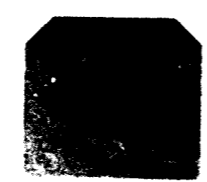
Terminal Disconnect
Type SAKC 10 with plug
Cat. No. 3241.2



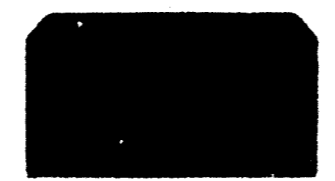
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Cat. No. 1913.2



Section End
Cat. No. 1913.2



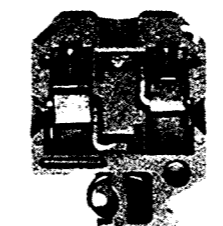
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Cat. No. 1179.2



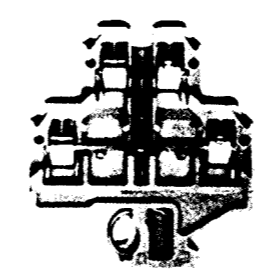
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Cat. No. 1467.2



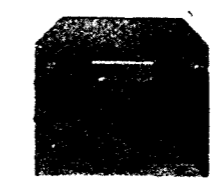
Terminal Feed Through
Type SAK4
Cat. No. 1283.2



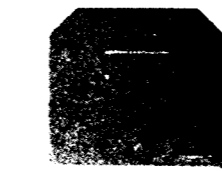
Terminal Disconnect
Type SAKC4 with plug
Cat. No. 3407.2



Terminal
Type DK4 with
Diode fitted
Available with or without diode
Cat. No. 4840.6



Section End
Cat. No. 1179.2



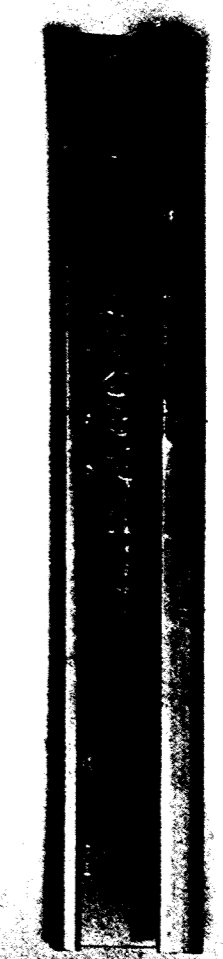
Section End
Cat. No. 1179.2



Section End
Cat. No. 3592.6



Bracket
End
Cat. No. 2061.6



Rail for Rail
Mounted Terminals
Cat. No. 1228.0



Carrier
Group Marking
Cat. No. 2924.6

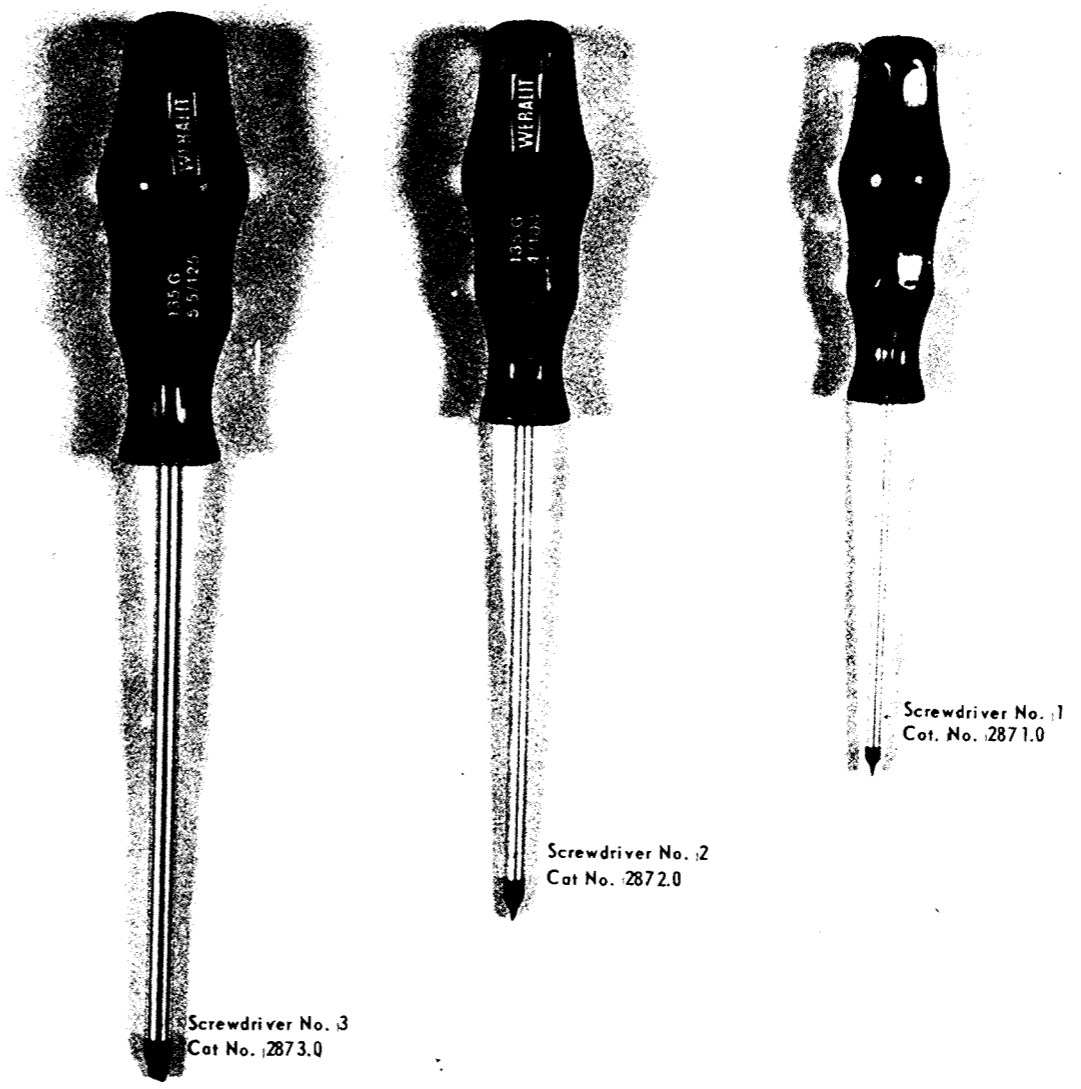
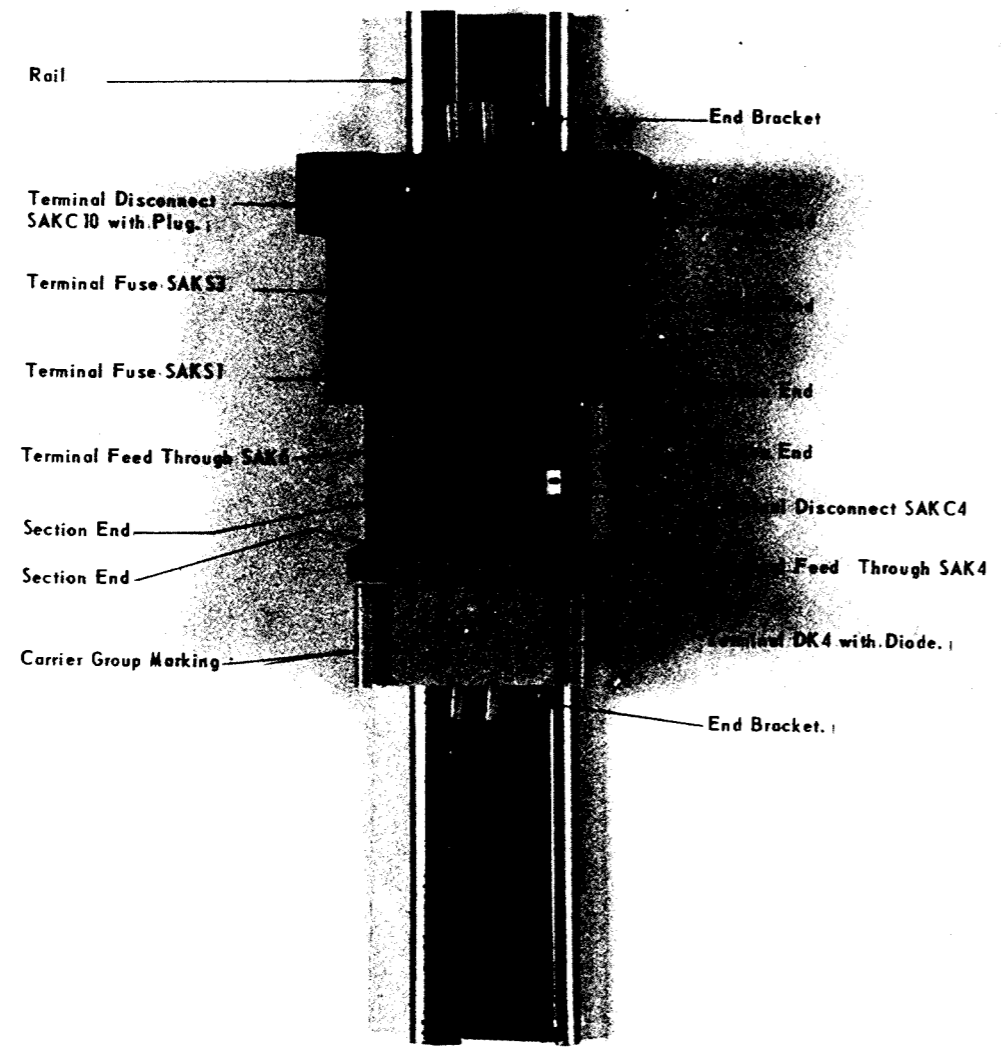
Bars Jumper 10 Pole for SAK6 Cat. No. 4706.0
 Bars Jumper 10 Pole for SAKS1/3 Cat. No. 3388.0
 Screws Jumper Bar for SAKS1/3 Fuse Terminals
 Cat. No. 1997.0
 Screws with capture washer for SAK4/6 Terminals
 Cat. No. 3030.0

NOTE:- Terminals denoted thus * are to be used only on non vital circuits

REVN	DATE	DESCRIPTION	REV'D	C'KD	S.D.E.	SIG.C.E.	DESIGNED	DRAWN	VICTORIAN RAILWAYS TERMINALS & FUSES "KLIPPON" RAIL MOUNTED DETAILS.	S&C ENGINEER DATE 20-12-79 SCALE IN SERVICE A2 DRAWING NO. REVN S 907/79
							I.B.			
							CHECKED	CORRES.		
							J.B.			
							DESIGN OFFICE			
							SIG. DESIGN ENGINEER			



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES



REV	DATE	DESCRIPTION	REV	C	KD	S.O.E.	S&CE	DESIGNED	DRAWN	VICTORIAN RAILWAYS TERMINALS & FUSES "KLIPPON"	
								I.B.		S&C ENGINEER	
								CHECKED	CORRES.	DATE 20-12-79	
								DESIGN OFFICE		SCALE	
								SIG. DESIGN ENGINEER		IN SERVICE	
										DRAWING NO/REV	
										A2 5908/79	

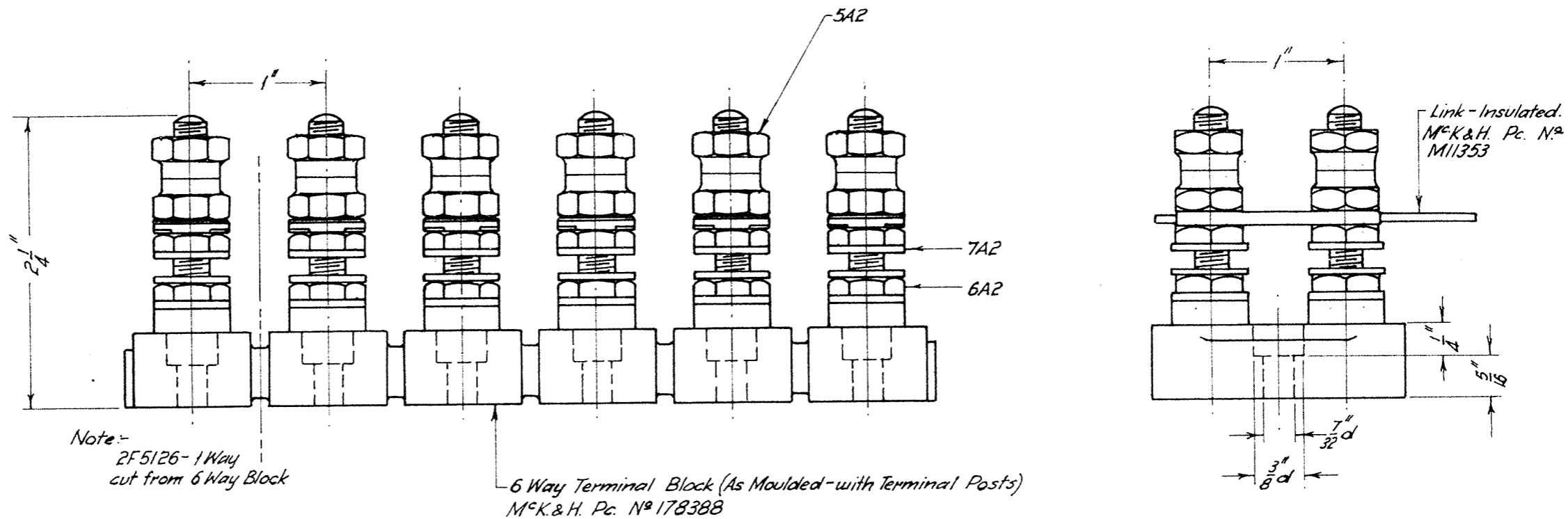
SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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41117

C1-48.



Nº OF WAYS, AS ORDERED—3F5126

1 WAY—2F5126

TERMINAL BLOCK—COMPLETE—6 WAY—1F5126

PART N ^o	NAME	M'TL	1F5126	2F5126
M&H. Pc. N ^o 178388	6 Way Terminal Block (As Moulded)	—	1	1 WAY (SEE NOTE)
M&H. Pc. N ^o M11353	Link - Insulated	—	6	1
5A2	Terminal Nut	Brass	24	4
6A2	Clamp Nut	"	24	4
7A2	Washer	"	36	6

3F5126
2F5126
1F5126

V.R

TERMINAL BLOCK
6 WAY

SCALE: FULL SIZE.

1-8-61

SIG & TEL
ENGINEER

KELC

DRAWN BY
L.C.E.

PHZ

TRACED BY
L.C.E.

PHZ

F5126



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

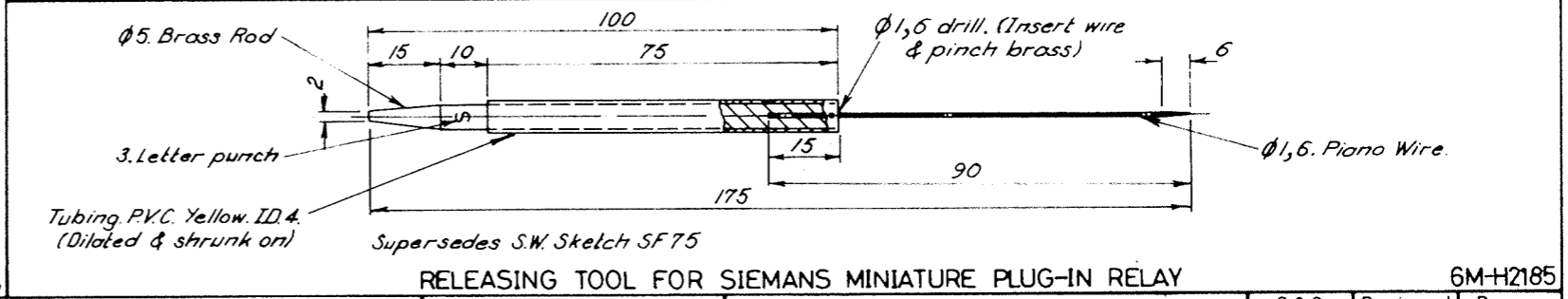
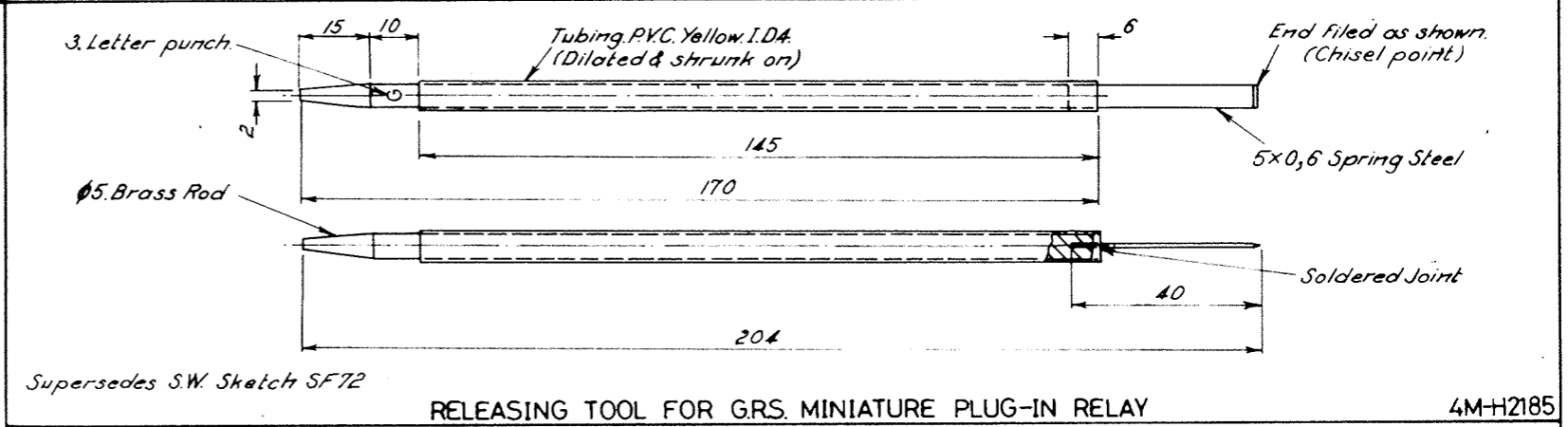
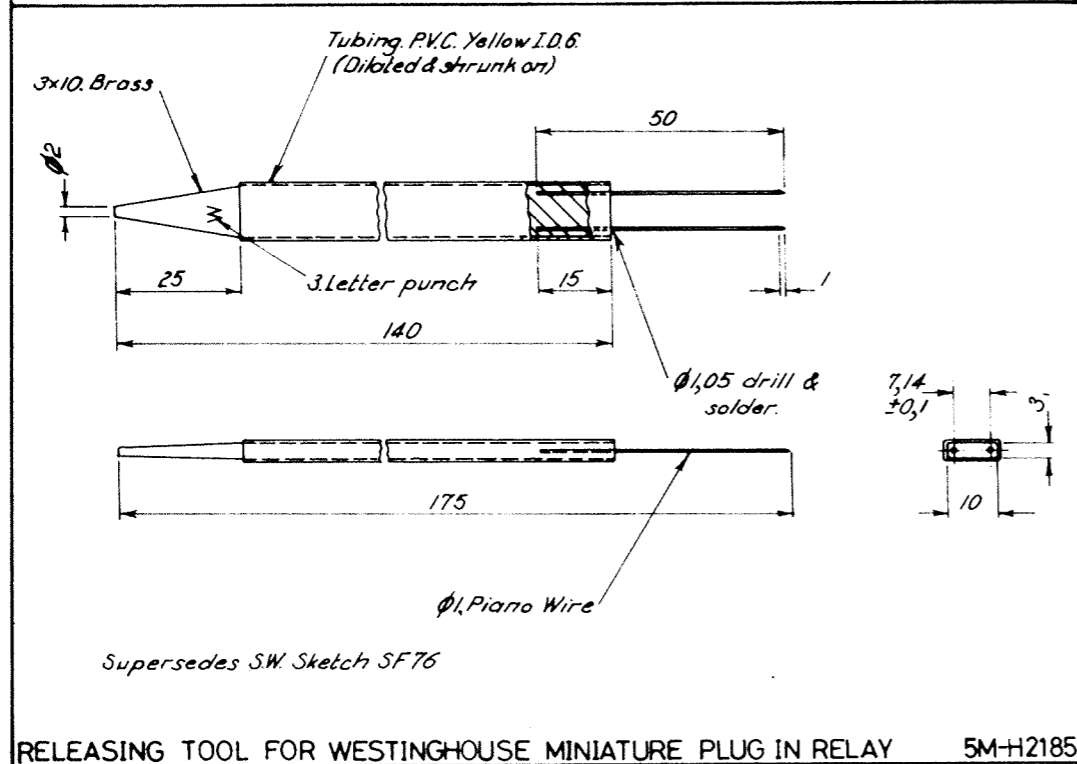
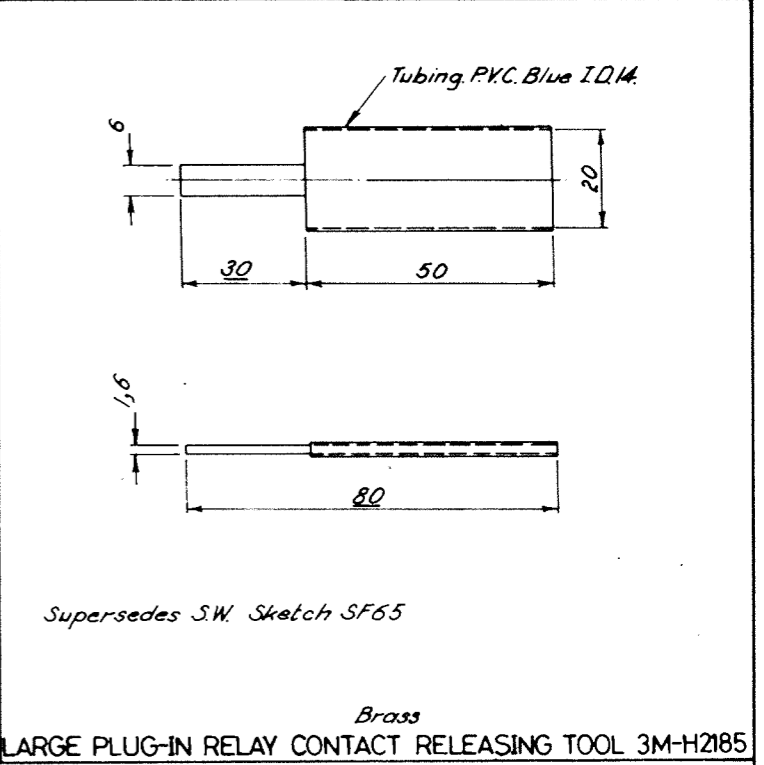
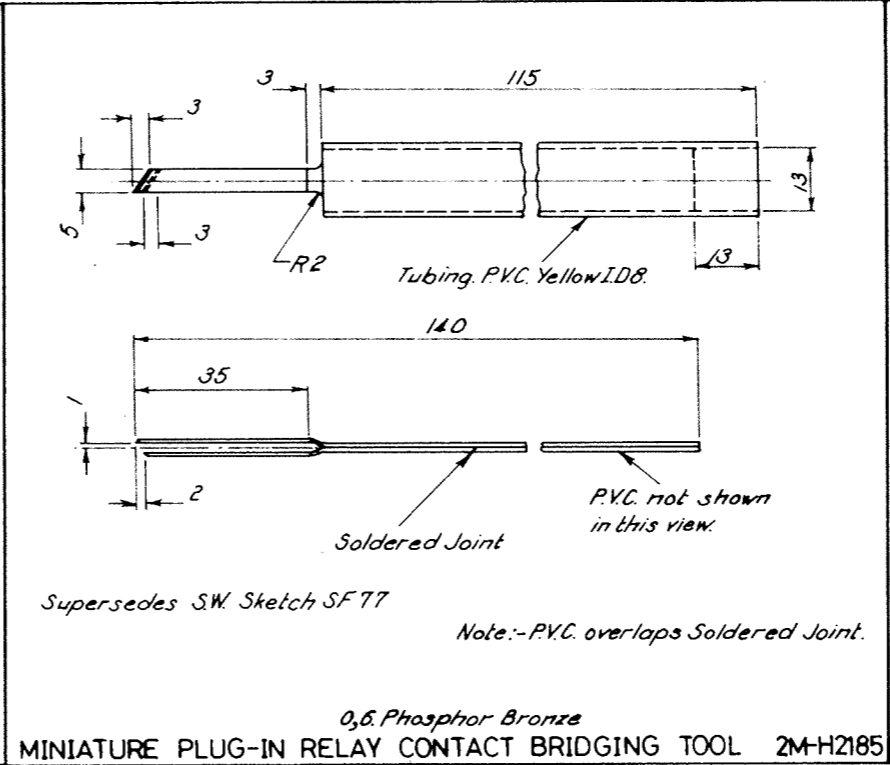
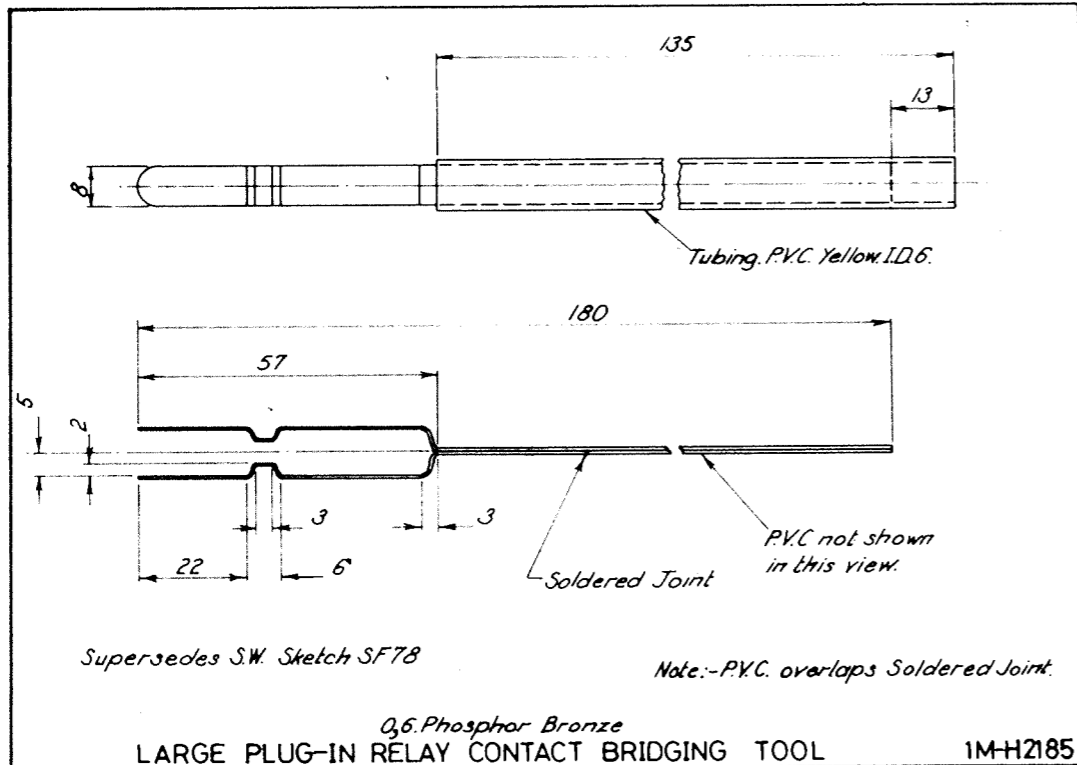
Category

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RECORD PLAN
R 54234
NEW SERIES
DATE
H13-3

This drawing is to the metric standard (I.S.O.)
Dimensions are in millimetres
Tolerances unless otherwise stated $\pm 0,5$
3rd ANGLE PROJECTION

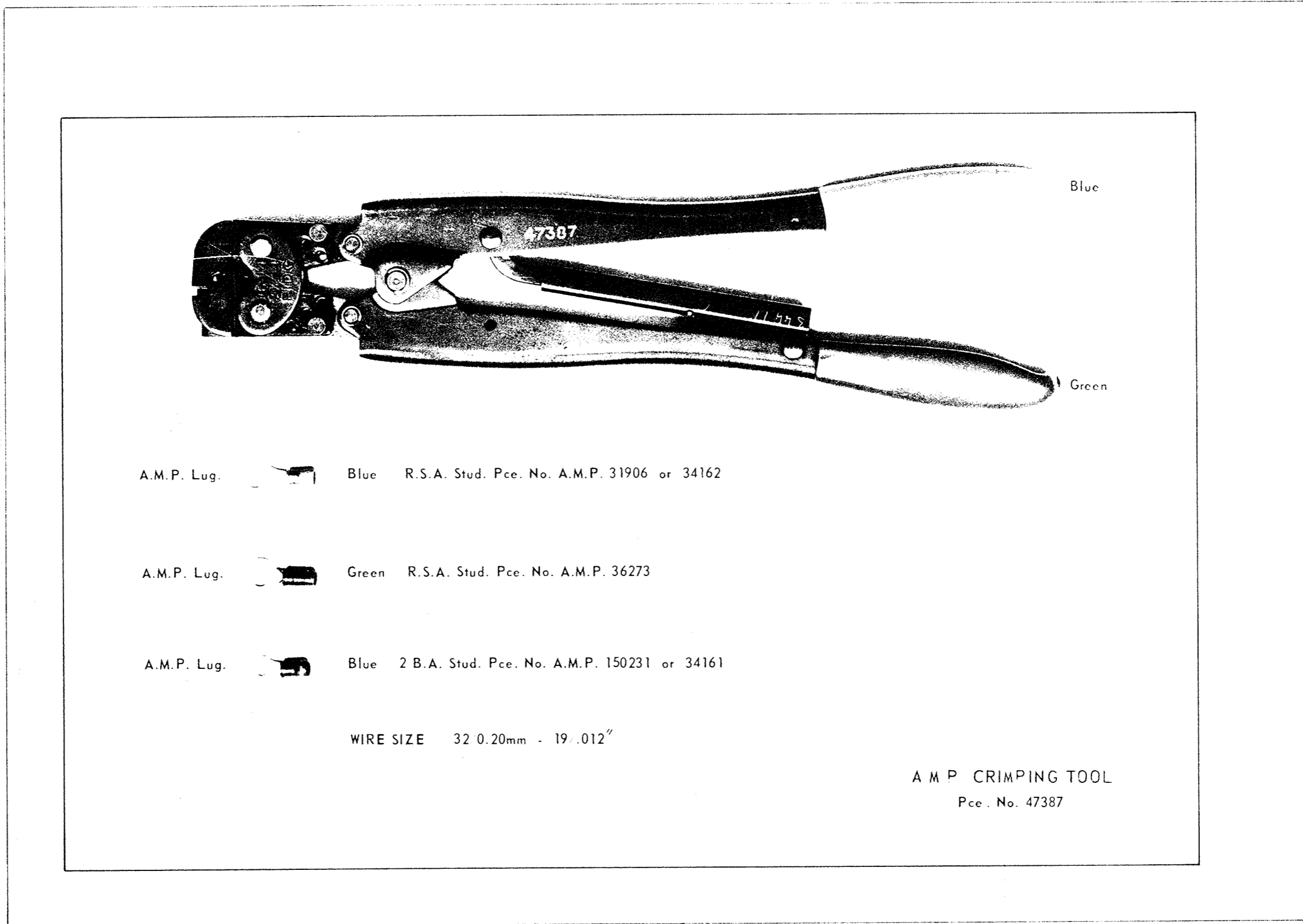
VICTORIAN RAILWAYS
LARGE & MINIATURE
PLUG-IN RELAY TOOLS
25-9-74

S.&C. Engineer.	Designed M.R.M.C.	Drawn M.R.M.C.
	S.D.E.	M.E.
	Ckd.	Iss.N ^o
M-H2185		



SIGNALLING CATALOGUE
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A.M.P. Lug. Blue R.S.A. Stud. Pce. No. A.M.P. 31906 or 34162

A.M.P. Lug. Green R.S.A. Stud. Pce. No. A.M.P. 36273

A.M.P. Lug. Blue 2 B.A. Stud. Pce. No. A.M.P. 150231 or 34161

WIRE SIZE 32 0.20mm - 19 .012"

A M P CRIMPING TOOL
Pce. No. 47387

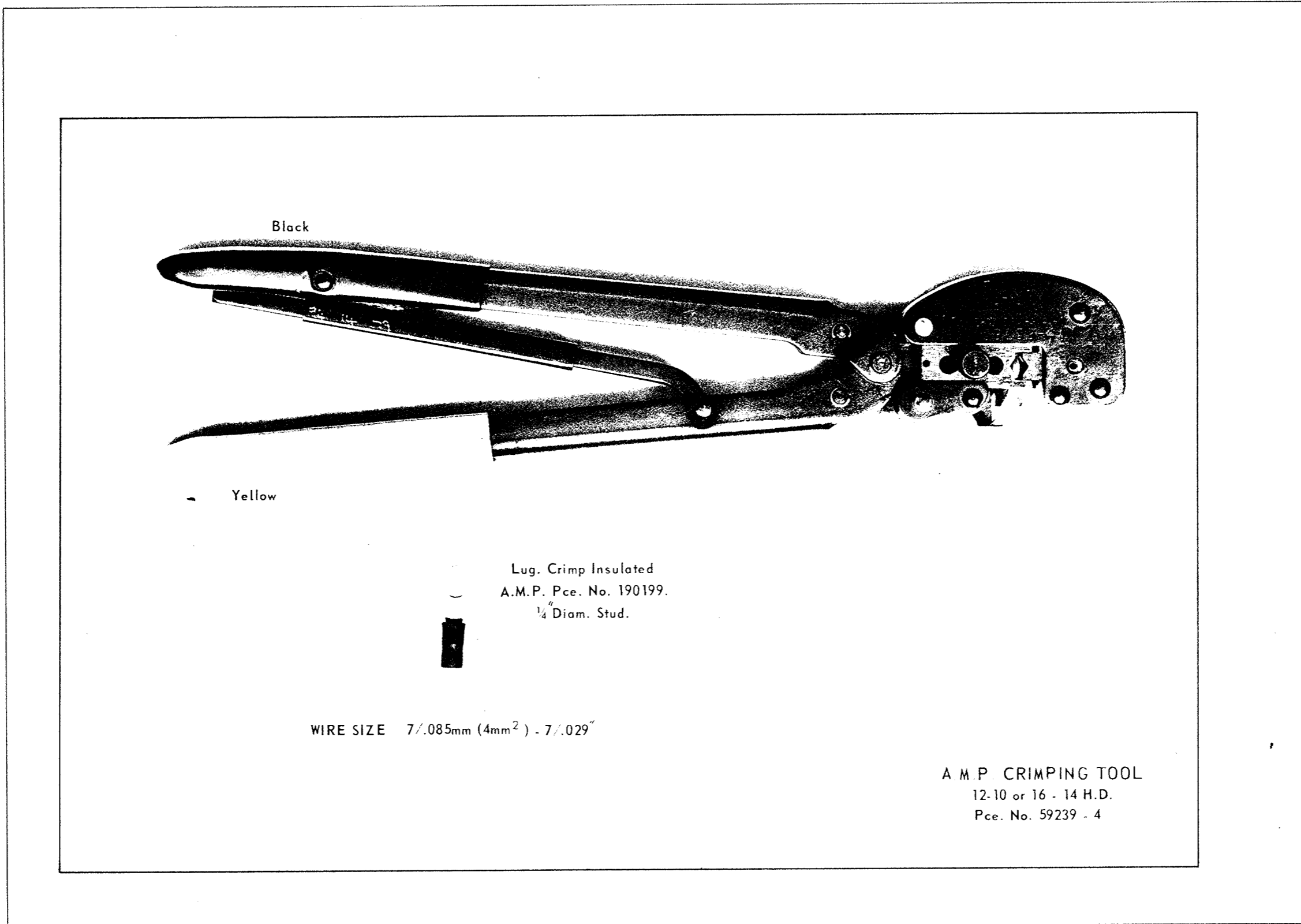


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COMPONENTS & STANDARD PRACTICES

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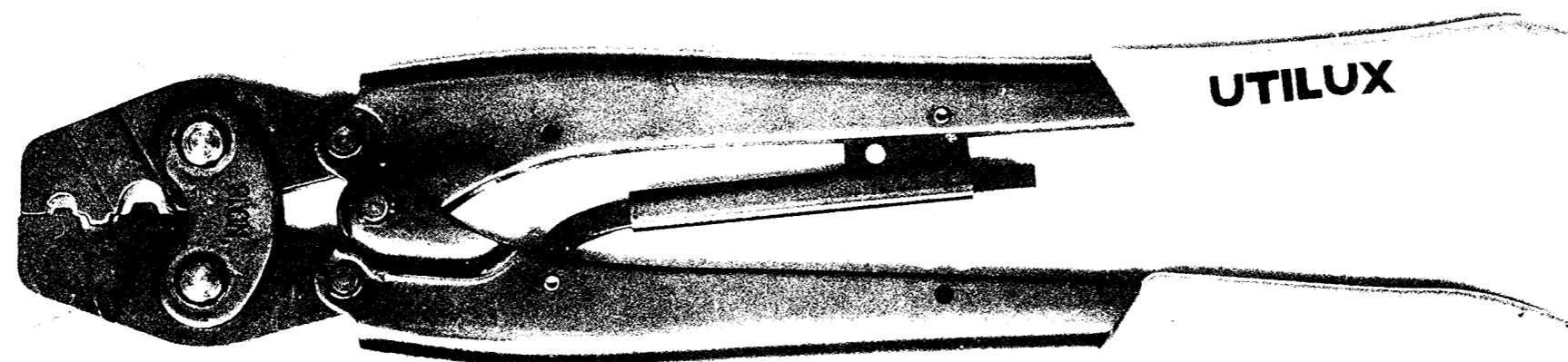


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COMPONENTS & STANDARD PRACTICES

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Link Crimp. Utilux.
Piece No. H1782
(Uninsulated.)

WIRE SIZE 7/19/0.22mm Galv. Steel.
2 Crimps/Side (Die 8)



Link Crimp Utilux
Piece No. 1455
(Uninsulated.)

WIRE SIZE 7/1.70mm (16mm²) - 7/.064"
3 Crimps /Side (Die 14)



Link Crimp Utilux.
Piece No. 1454
(Uninsulated.)

WIRE SIZE 7/1.35mm (10mm²) - 7/.044"
1 Crimp/Side (Die 8)



Lug. Crimp Utilux. 1/4 Stud.
Piece No. H1407
(Uninsulated.)

WIRE SIZE 7/1.70mm (16mm²) - 7/.064"
3 Crimps / Side (Die 14)

UTILUX CRIMPING TOOL
Pce. No. 18

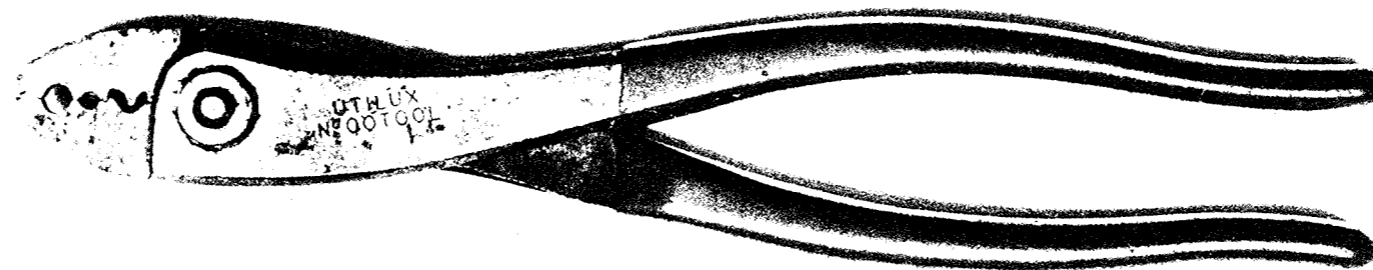


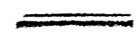
SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

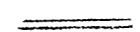
Category
T 3 0

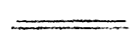
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 Link Crimp Utilux Pce. No. H1453
 WIRE SIZE 7 .044"


 Link Crimp Utilux Pce. No. H1451
 WIRE SIZE 7 0.50mm. (0.5 to 2.5mm²) - 3 .029"


 Link Crimp Utilux. Pce. No. 1467
 WIRE SIZE 7 0.85mm (2.5mm²) - 7 .029"

UTILUX CRIMPING TOOL
 Pce. No. 00 for Un-Insulated Crimp Links



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category

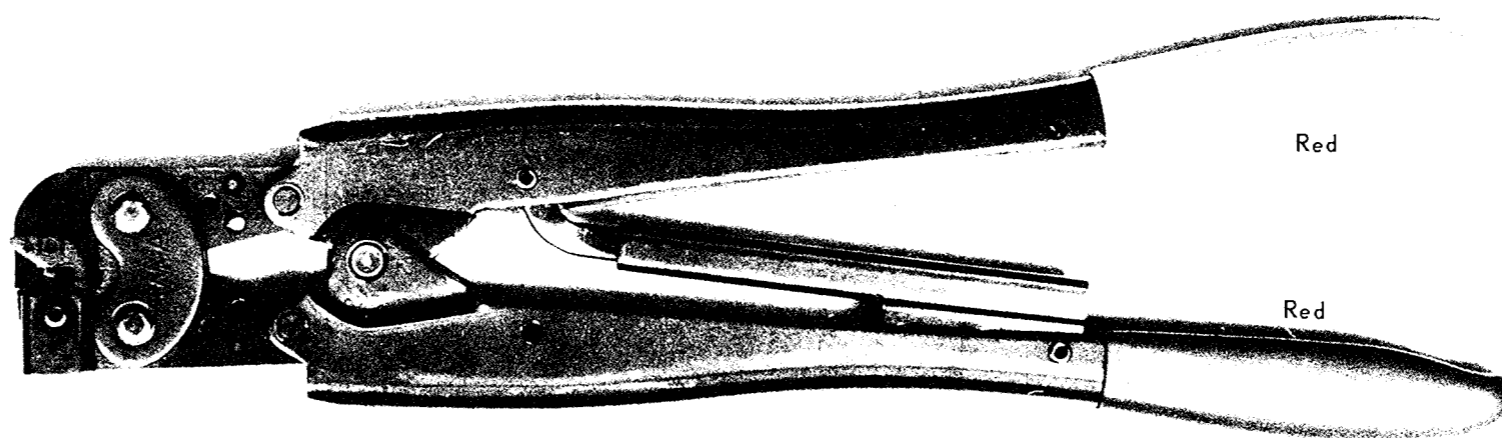
T	3	0
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Window Splice
(Insulated Crimp Link)
A.M.P. Pce No. 320559

Lug. Crimp Insulated
2 B.A. A.M.P. Pce No.
31891 or 34149.

Lug. Crimp Insulated.
Fast - on.
A.M.P. Pce No. 140879-1

WIRE SIZE 16/0.20mm - 14/.0076"
24/0.20mm - 23/.0076"
7/0.50mm - 3/.029"

A.M.P. CRIMPING TOOL
Pce No. 47386

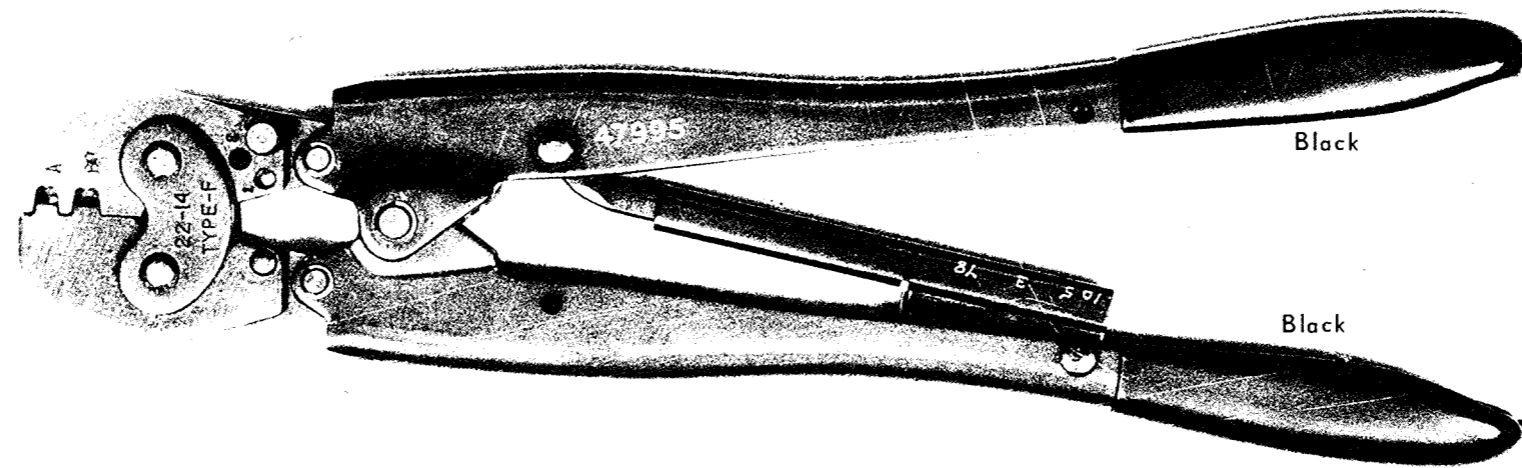


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□



Utilux Receptacle Crimp
Uninsulated. Cat. No. 1148

WIRE SIZE 7/0.20mm - 7/.0076"

Use Die Block "A" (2 Crimps)

A.M.P. CRIMPING TOOL
Pce. No. 47995

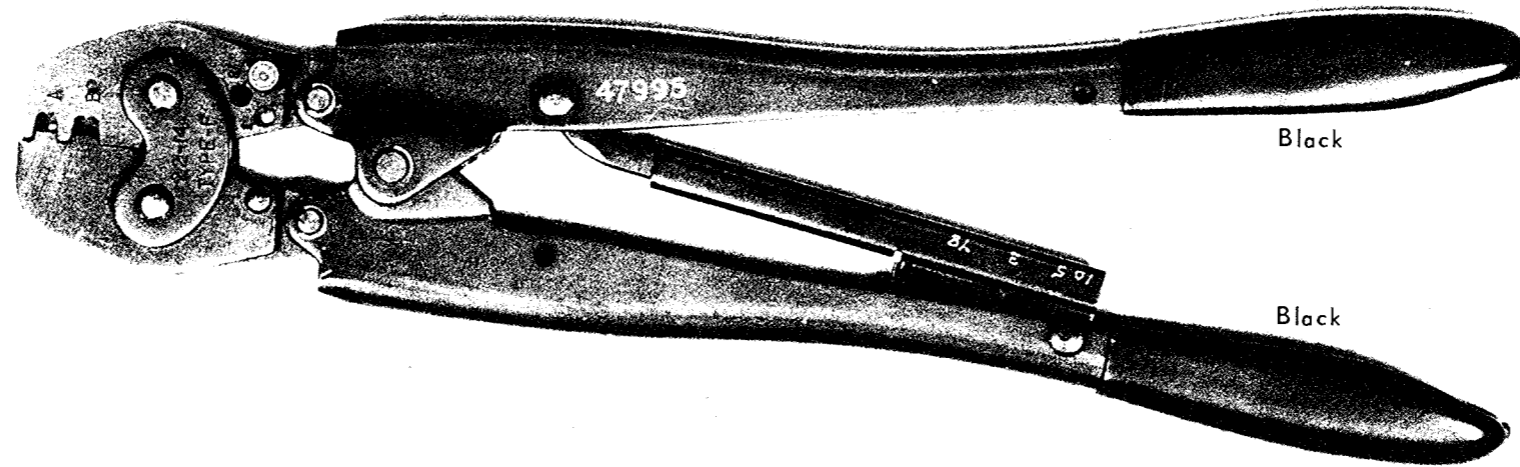


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COMPONENTS & STANDARD PRACTICES

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Black

Black

Utilux Pre tubed
Uninsulated Terminal
Pce. No. H3602B



Utilux. P.V.C. Insulator
Pce. No. H1135



WIRE SIZES 24/0.20mm - 23/.0076"
32/0.20mm - 40/.0076"
7/0.50mm - 3/.029"

Use Die Block "B"

A.M.P. CRIMPING TOOL
Pce No. 47995.

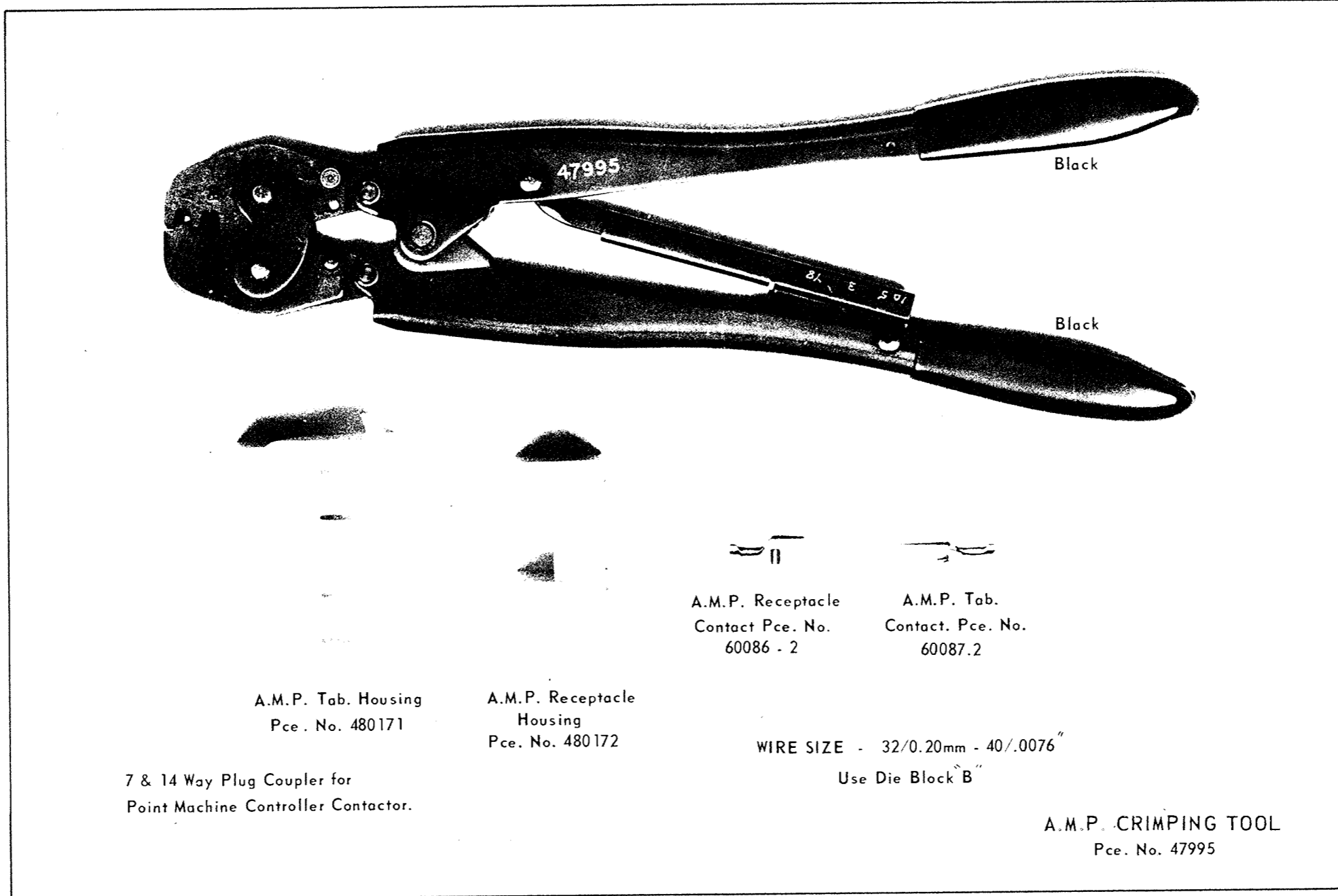


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□



A.M.P. Tab. Housing
Pce. No. 480171
7 & 14 Way Plug Coupler for
Point Machine Controller Contactor.

A.M.P. Receptacle
Housing
Pce. No. 480172

A.M.P. Receptacle
Contact Pce. No.
60086 - 2

A.M.P. Tab.
Contact. Pce. No.
60087.2

WIRE SIZE - 32/0.20mm - 40/.0076"
Use Die Block "B"

A.M.P. CRIMPING TOOL
Pce. No. 47995

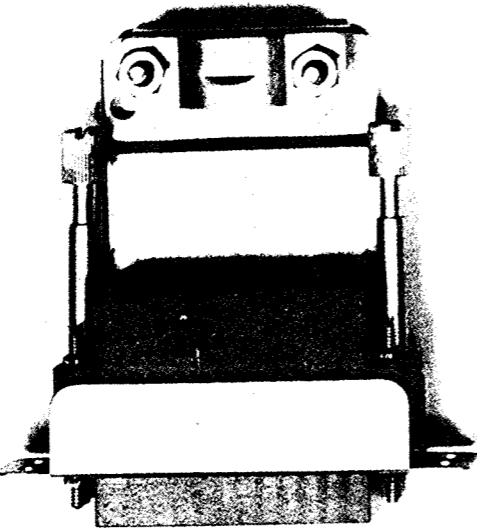
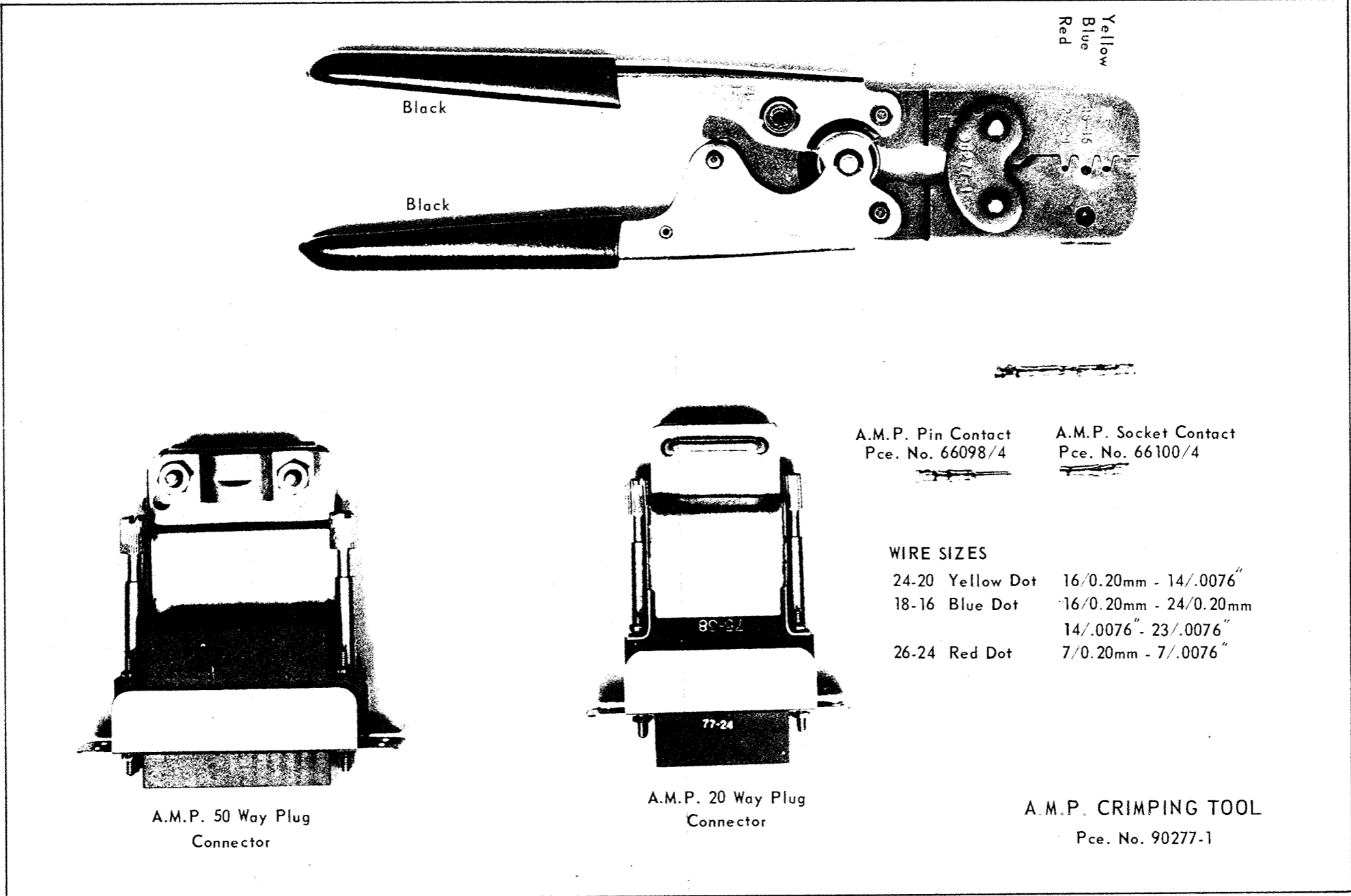


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

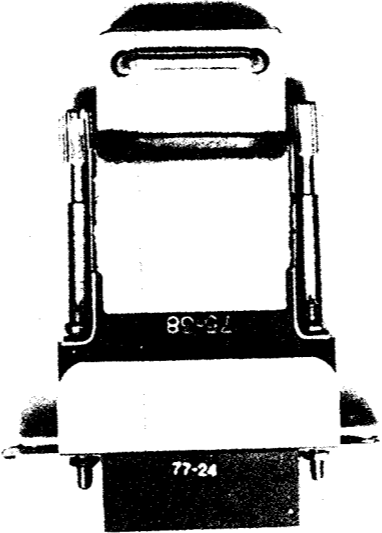
Category
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A.M.P. 50 Way Plug Connector



A.M.P. 20 Way Plug Connector

A.M.P. Pin Contact
Pce. No. 66098/4

A.M.P. Socket Contact
Pce. No. 66100/4

WIRE SIZES

24-20 Yellow Dot	16/0.20mm - 14/.0076"
18-16 Blue Dot	16/0.20mm - 24/0.20mm
26-24 Red Dot	14/.0076" - 23/.0076"
	7/0.20mm - 7/.0076"

A.M.P. CRIMPING TOOL
Pce. No. 90277-1

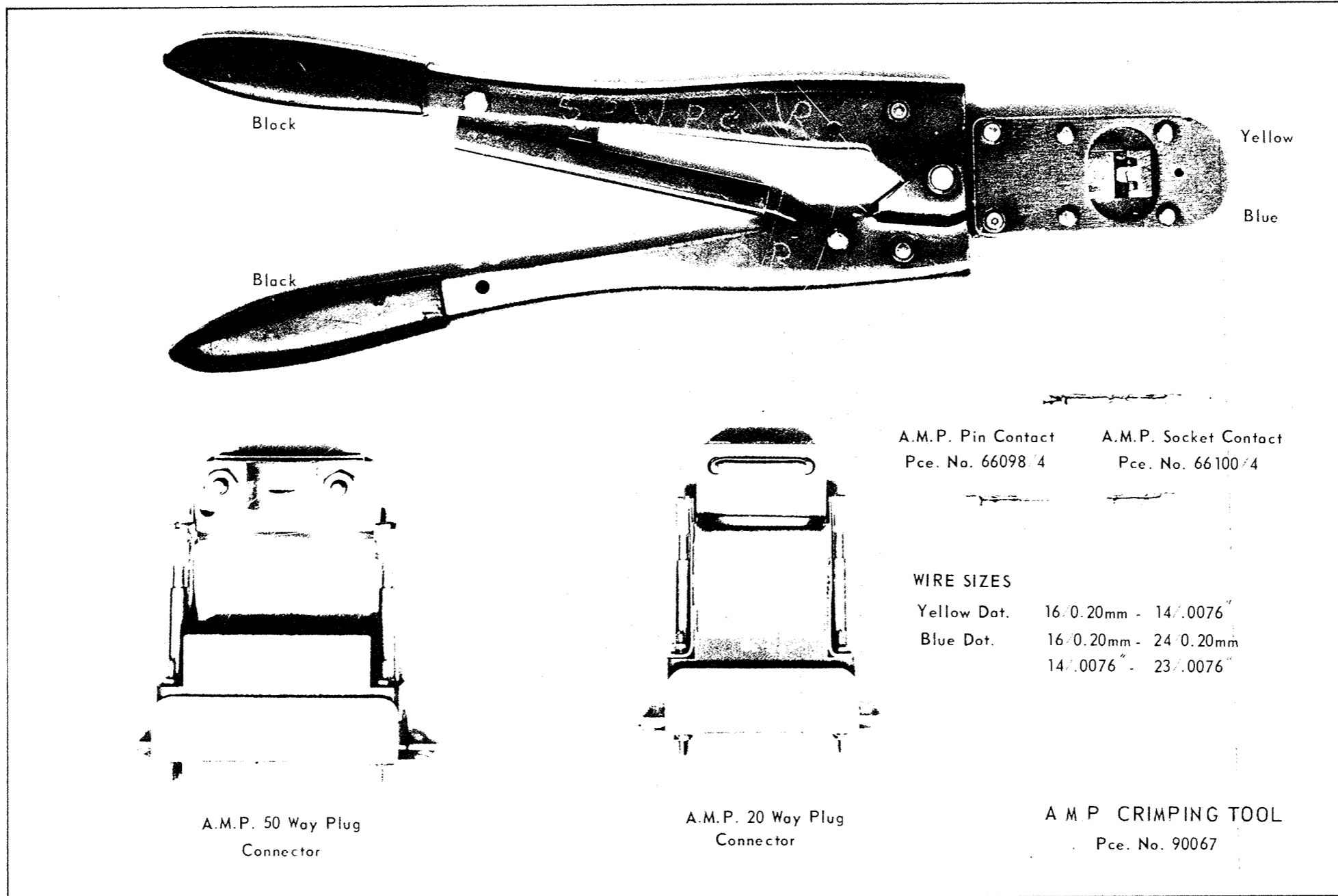


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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A.M.P. 50 Way Plug
Connector

A.M.P. 20 Way Plug
Connector

A M P CRIMPING TOOL
Pce. No. 90067

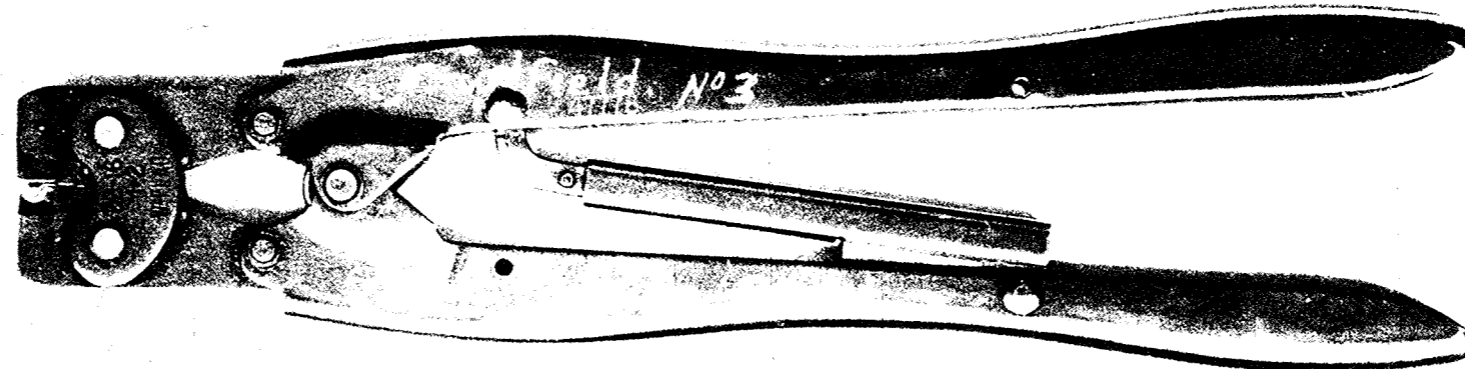


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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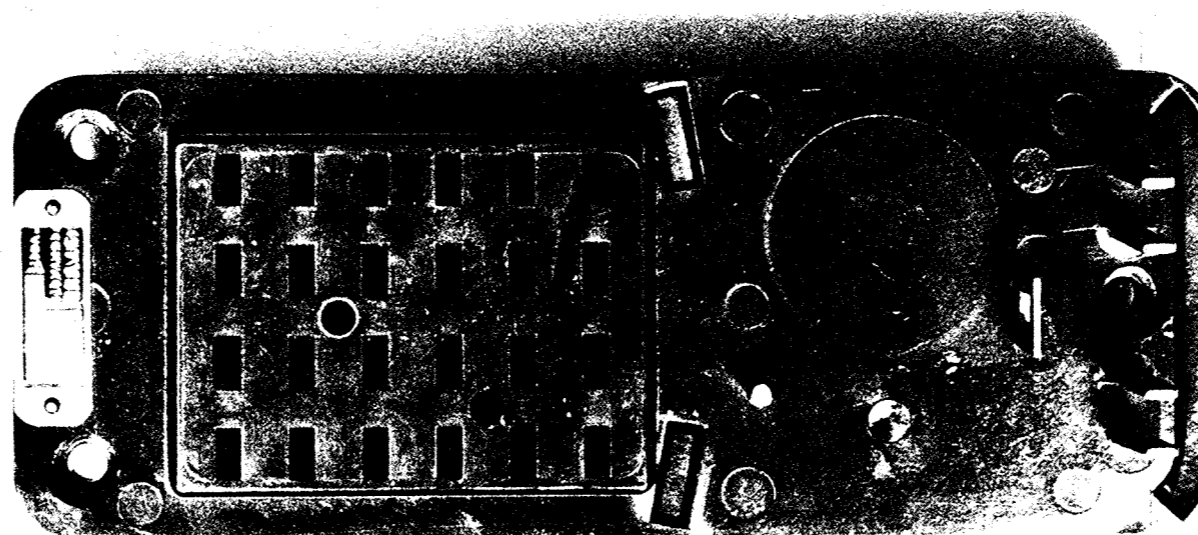
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WIRE SIZE 24/0.20mm - 23/.0076"
30/0.20mm - 19/.012"

Large Plug-in Relay Base



Contact Spring
West. Pce. No.
287691

A M P. CRIMPING TOOL
22-16 Pce. No. 47776.

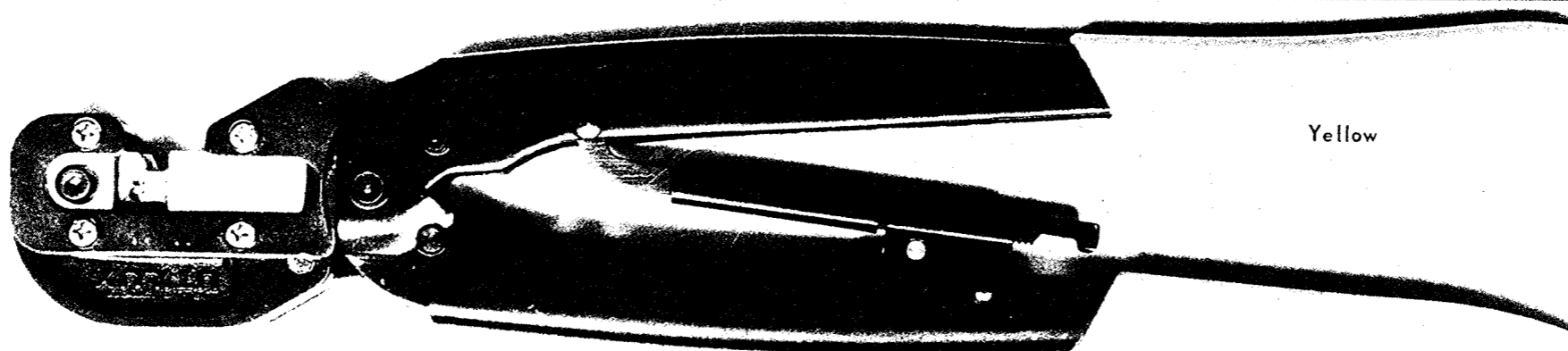


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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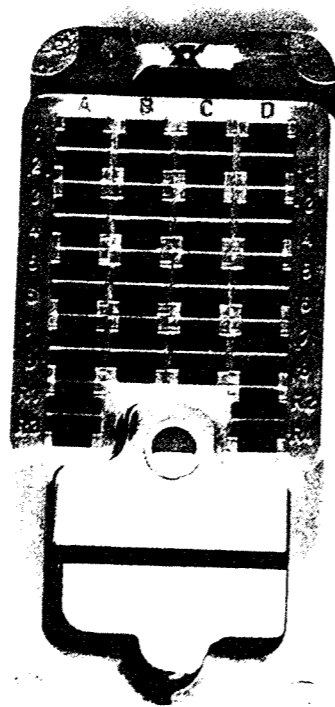
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Yellow

Yellow



Miniature Plug-in
Relay Base.



Utilux Contact Spring
Pce. No. H2698

WIRE SIZE 24/0.20mm - 23/.0076"
or 16/0.20mm (Doubled) - 14/.0076" (Doubled)

UTILUX CRIMPING TOOL
Pce. No. 65/H2698.

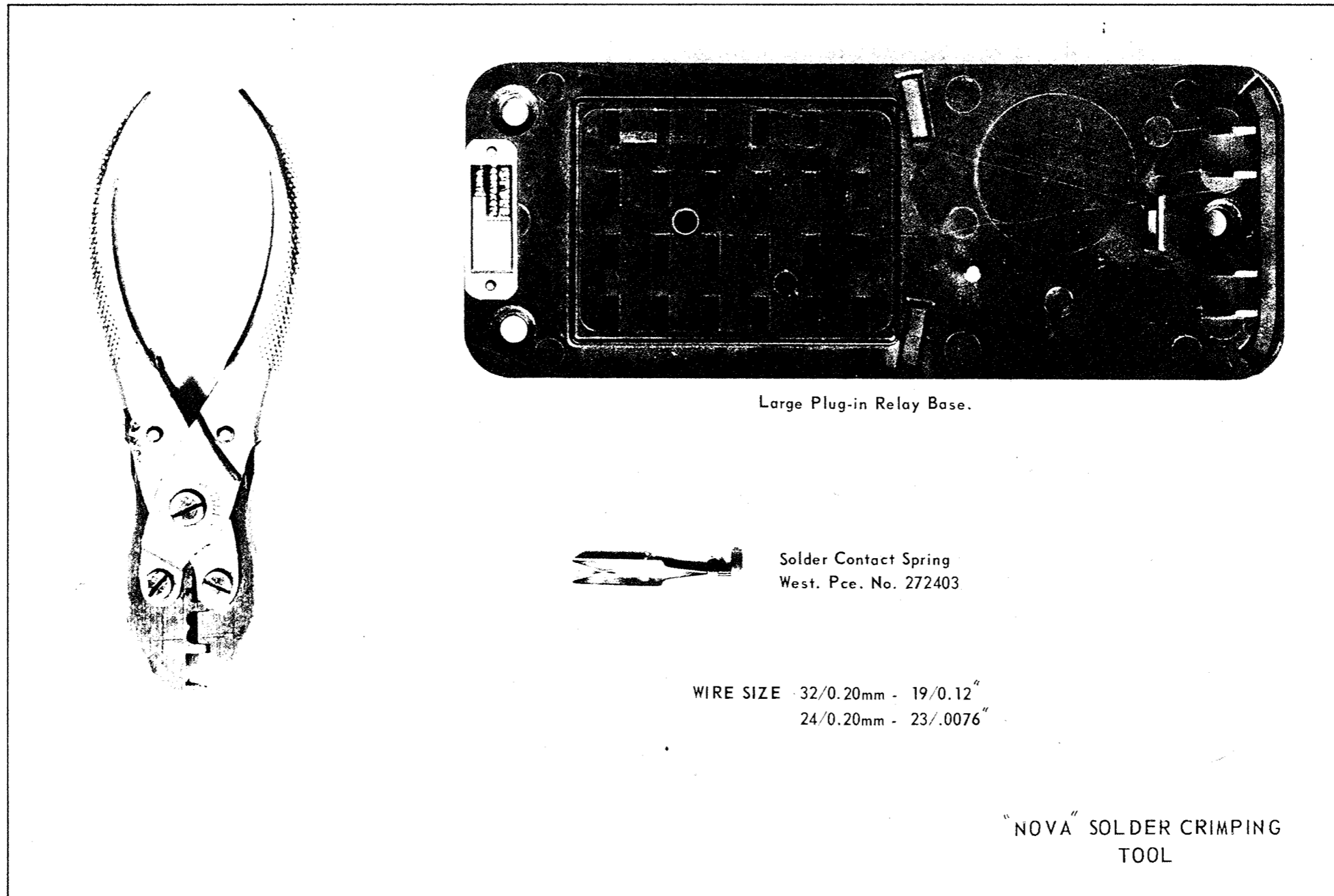


SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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Large Plug-in Relay Base.

Solder Contact Spring
West. Pce. No. 272403

WIRE SIZE : 32/0.20mm - 19/0.12"
24/0.20mm - 23/.0076"

"NOVA" SOLDER CRIMPING
TOOL

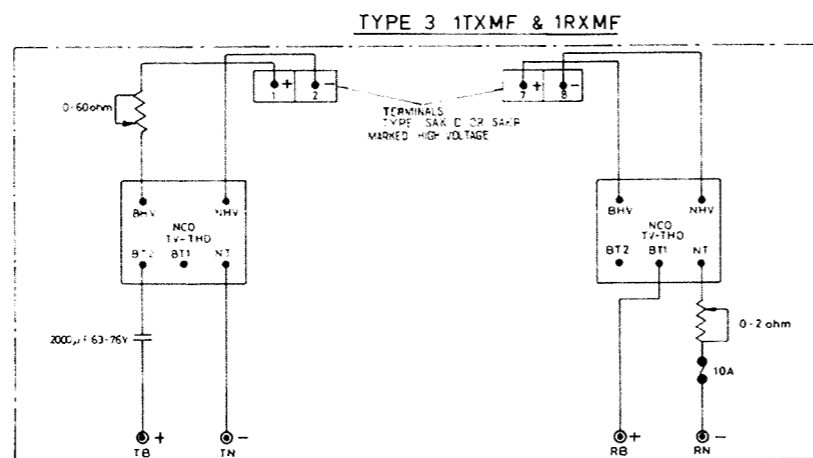
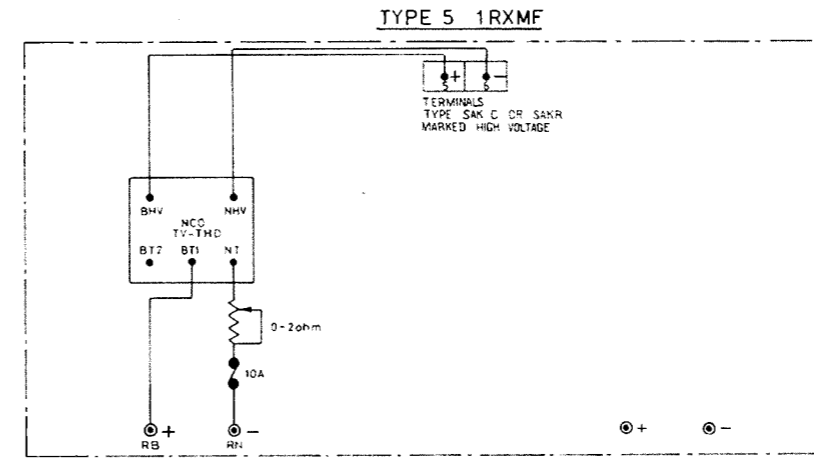
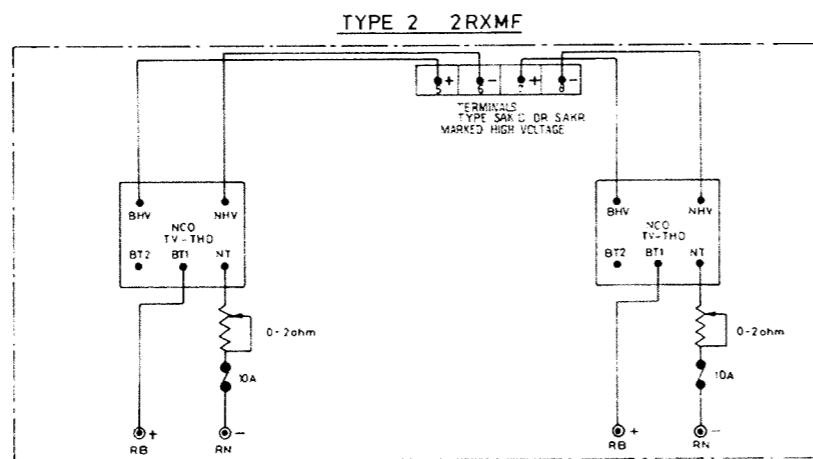
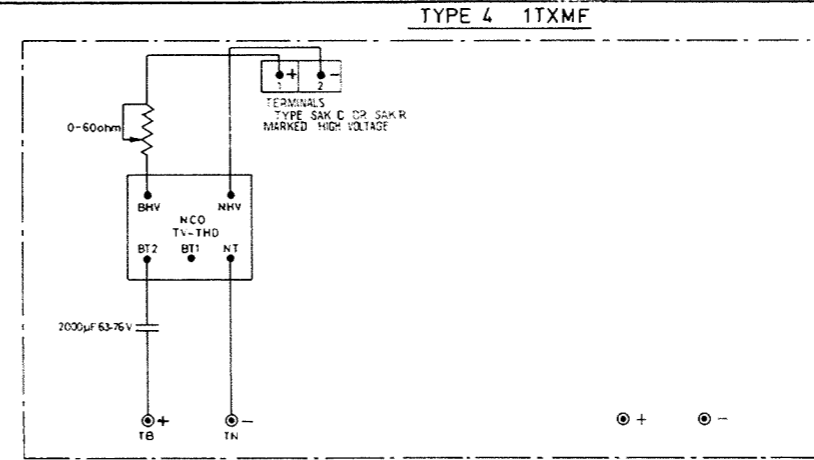
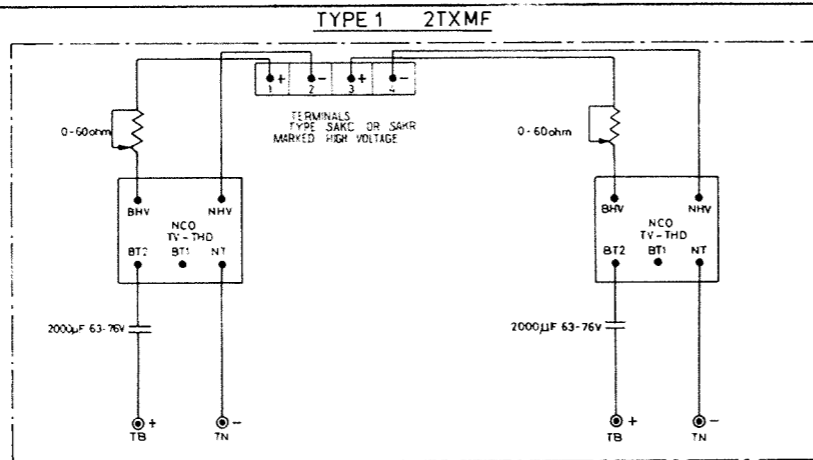


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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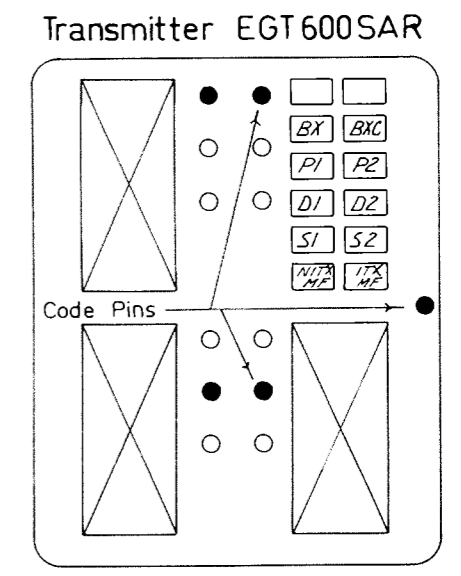
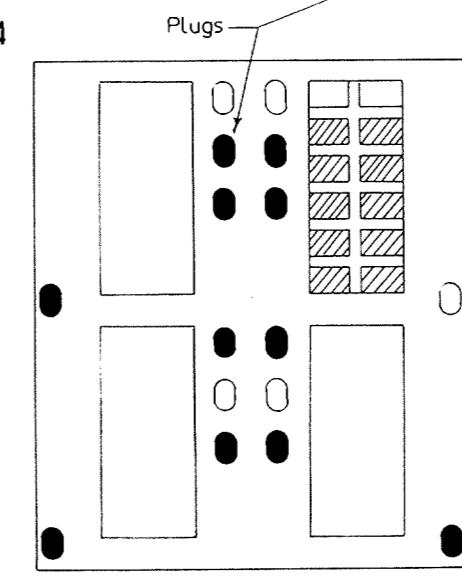
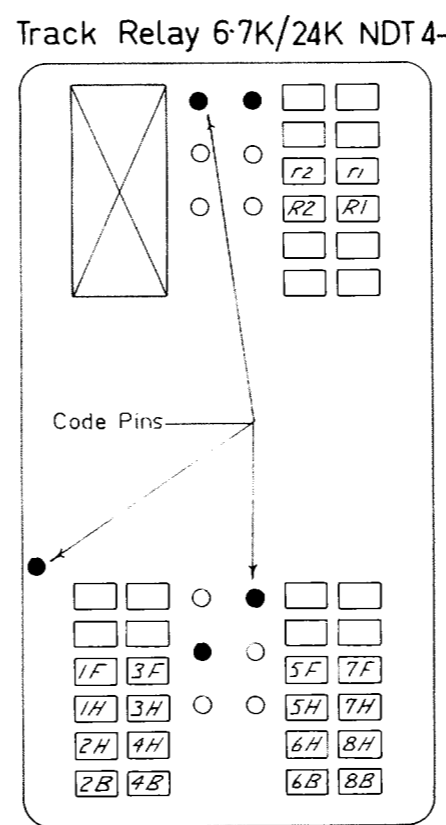
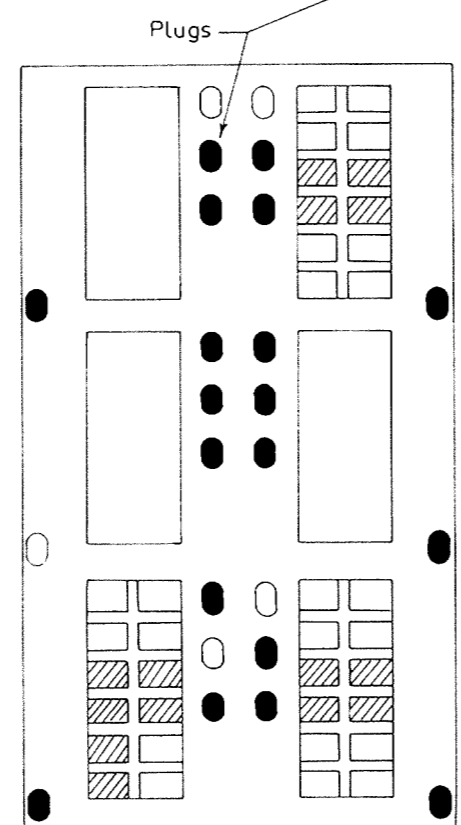
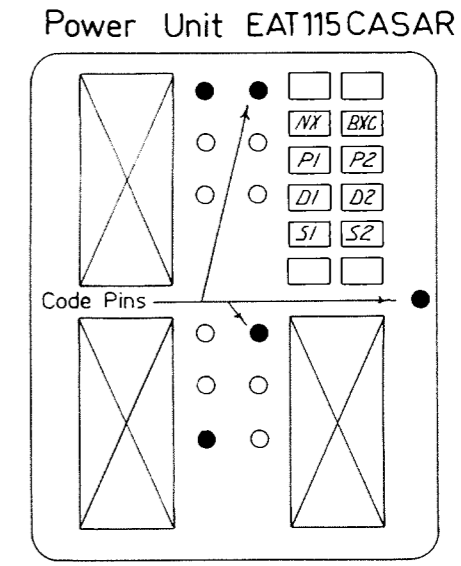
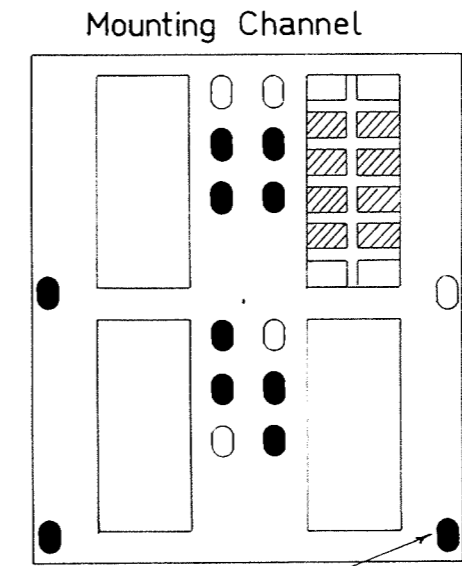
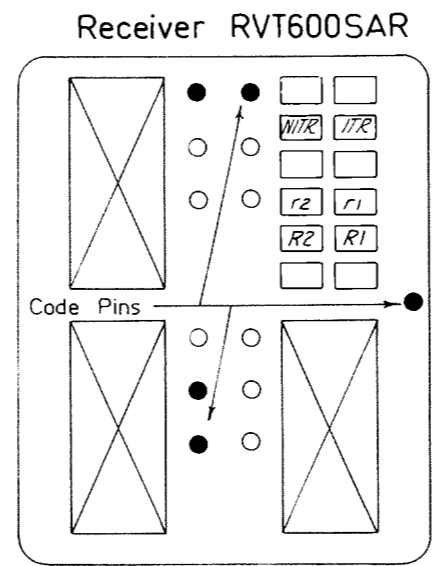
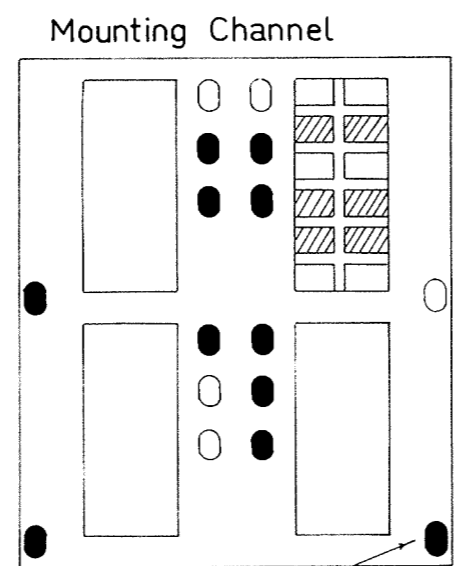
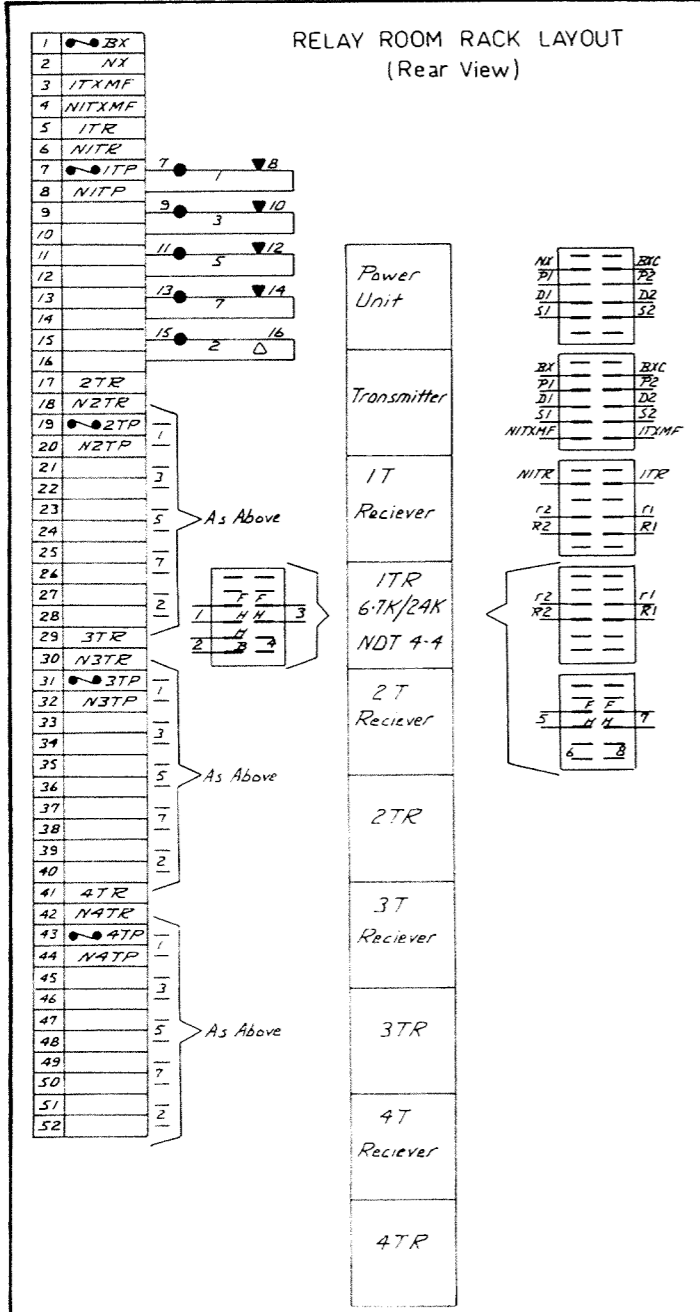


VICTORIAN RAILWAYS		S & C	Designed	Drawn
JEUMONT HIGH VOLTAGE		Engineer	G. J. M.	
IMPULSE TRACK CIRCUIT.		S.D.E.	C.F.	Ckd. Iss. No.
TYPES OF TRACK SIDE BOXES & WIRING.				
2-9-78.		B 4480		



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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REAR VIEW

REAR VIEW

NOTE-WIRE CONNECTION MADE ONLY TO CONTACTS SHOWN THUS:

CONTACT POSITIONS AS SHOWN ARE NOT SHOWN ON EQUIPMENT.

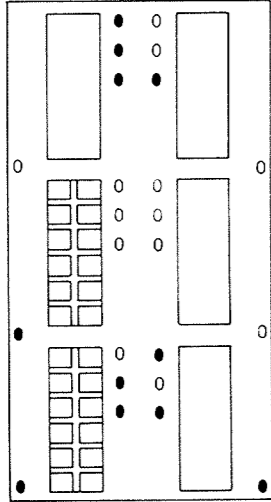
VICTORIAN RAILWAYS
H.V. IMPULSE TRACK
UNITS. (Rear View)

S&C Engineer	Designed J.A.R.	Drawn J.A.R.
	SPF	CF
	Ckd	IssNo
B 4801		

2-9-76

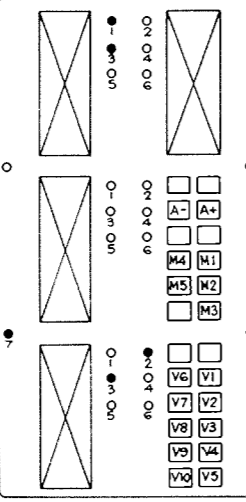


MOUNTING CHANNEL
FREQUENCY 1700Hz



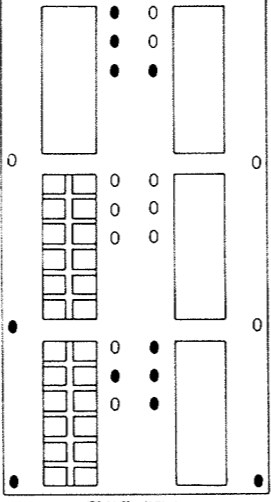
FRONT VIEW

TRANSMITTER EM-UM71
FREQUENCY 1700Hz (CODE 13 7 23)



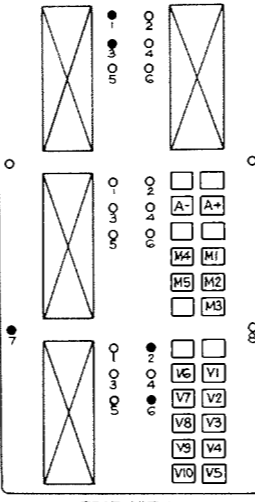
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2000Hz



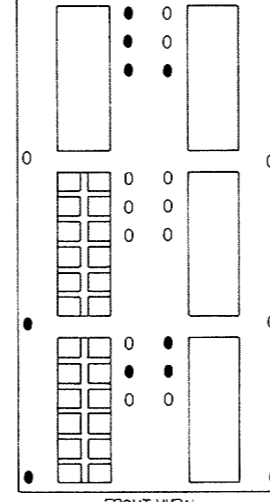
FRONT VIEW

TRANSMITTER EM-UM71
FREQUENCY 2000 Hz (CODE 13 7 26)



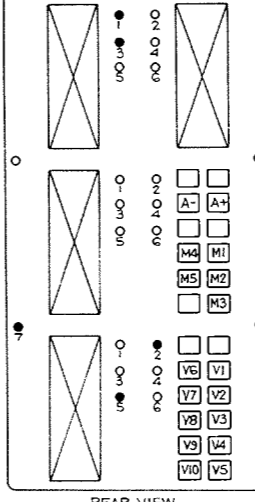
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2300Hz



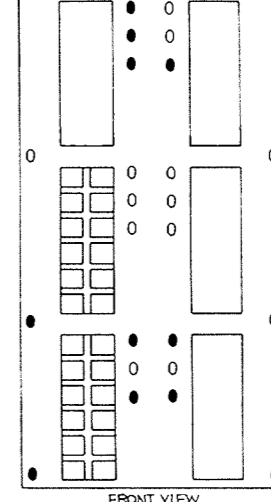
FRONT VIEW

TRANSMITTER EM-UM71
FREQUENCY 2300 Hz (CODE 13 7 25)



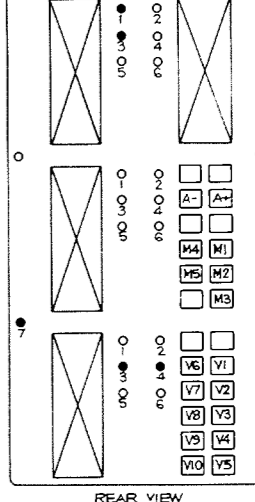
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2600 Hz



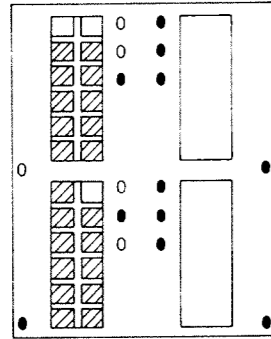
FRONT VIEW

TRANSMITTER EM-UM71
FREQUENCY 2600 Hz (CODE 13 7 34)



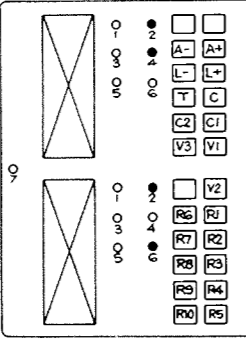
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 1700Hz



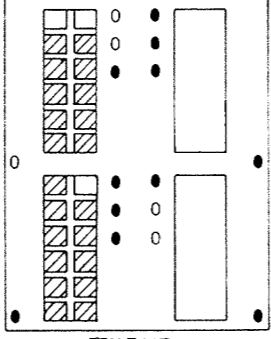
FRONT VIEW

RECEIVER RE-UM71
FREQUENCY 1700Hz (CODE 24 8 26)



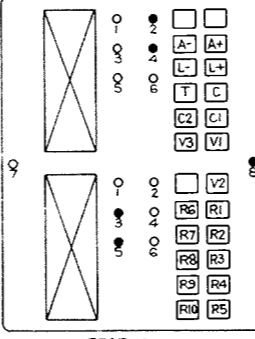
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2000Hz



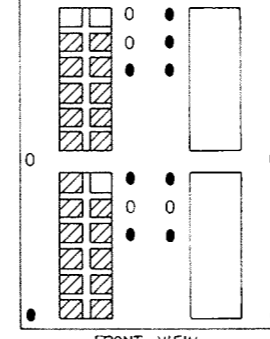
FRONT VIEW

RECEIVER RE-UM71
FREQUENCY 2000 Hz (CODE 24 8 35)



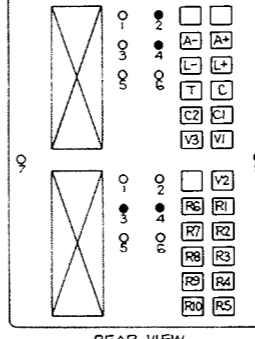
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2300Hz



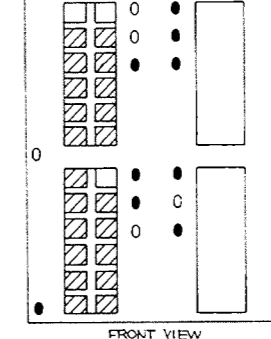
FRONT VIEW

RECEIVER RE-UM71
FREQUENCY 2300Hz (CODE 24 8 34)



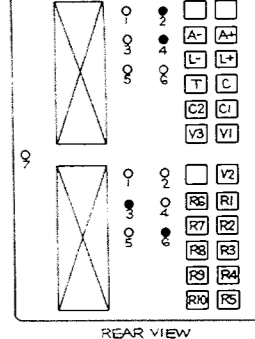
REAR VIEW

MOUNTING CHANNEL
FREQUENCY 2600 Hz



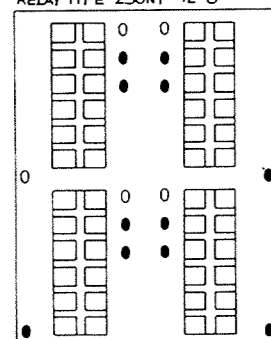
FRONT VIEW

RECEIVER RE-UM71
FREQUENCY 2600Hz (CODE 24 8 36)



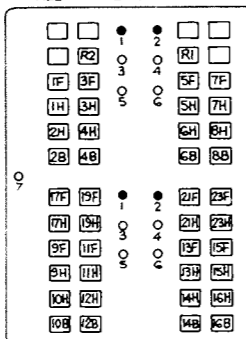
REAR VIEW

MOUNTING CHANNEL
RELAY TYPE 250NT 12-8



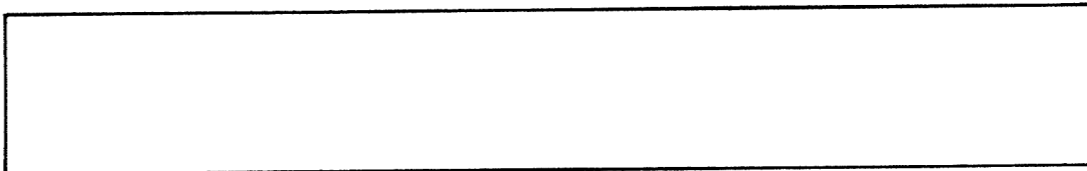
FRONT VIEW

RELAY TYPE 250NT 12-8 (CODE 12-8-12)



REAR VIEW

- NOTES:
- CONTACT POSITIONS AS SHOWN ARE NOT SHOWN ON EQUIPMENT.
 - SYMBOL INDICATES RUBBER PLUG FITTED
 - SYMBOL INDICATES CODE PIN FITTED.

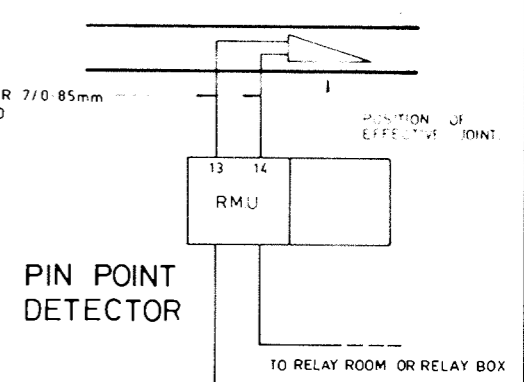
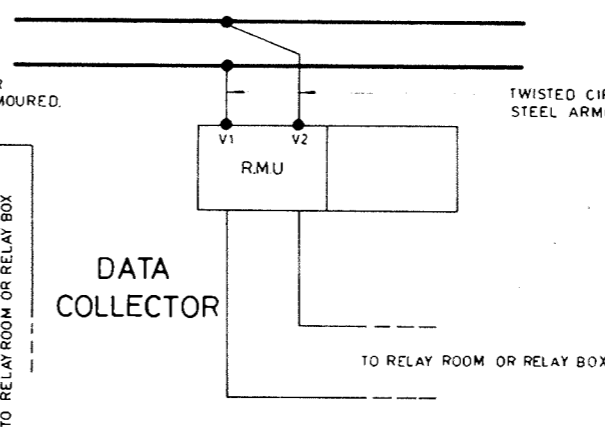
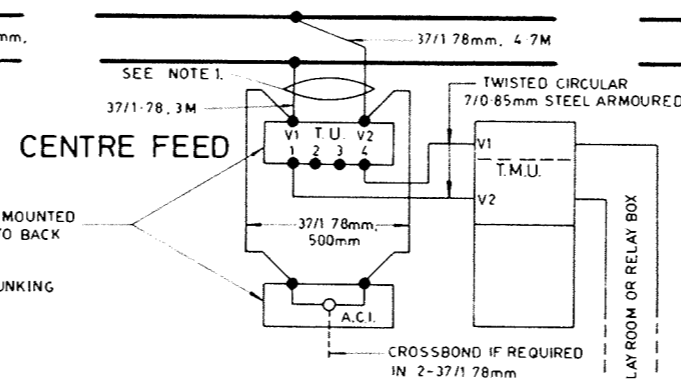
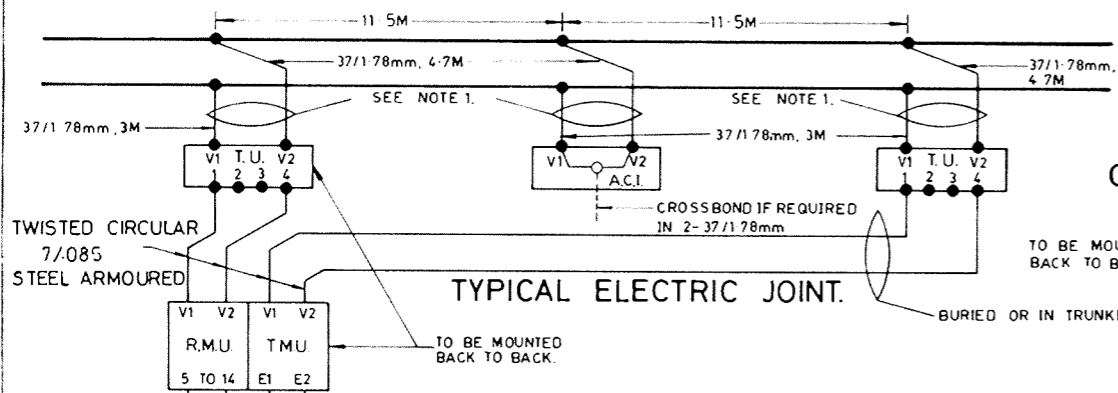


VICTORIAN RAILWAYS		S&C Engineer	Designed	Drawn
C.S.E.E. TRACK UNITS		SDE	CE	Ckd
CONNECTION & CODING DETAILS.		B 5521		



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES

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TYPICAL ELECTRIC JOINT.

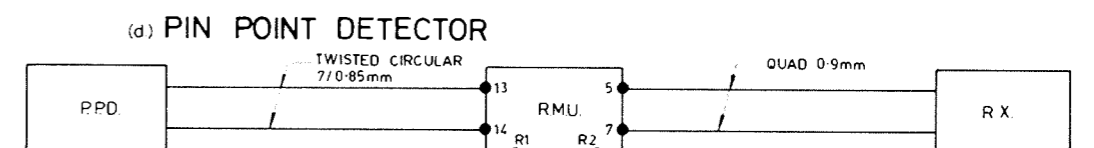
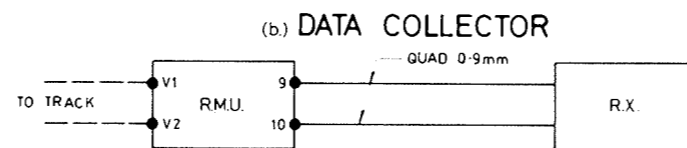
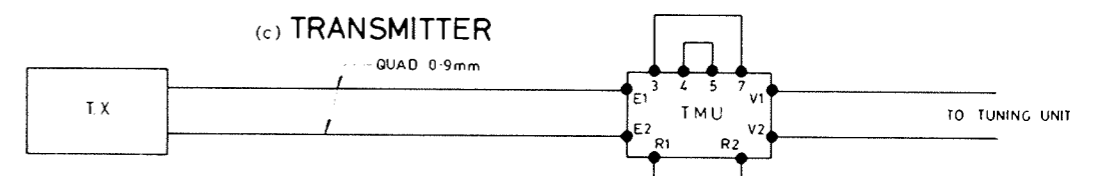
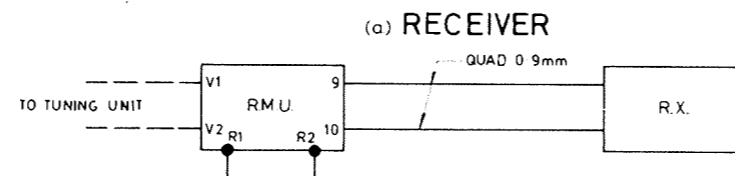
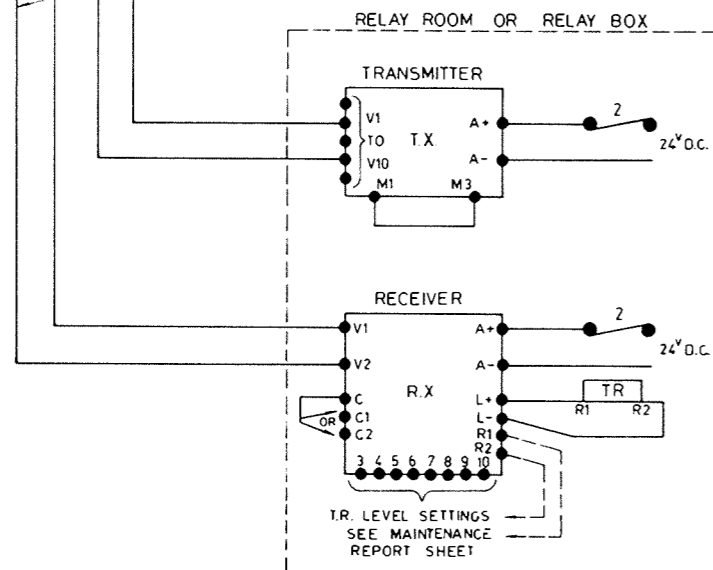
CENTRE FEED

DATA COLLECTOR

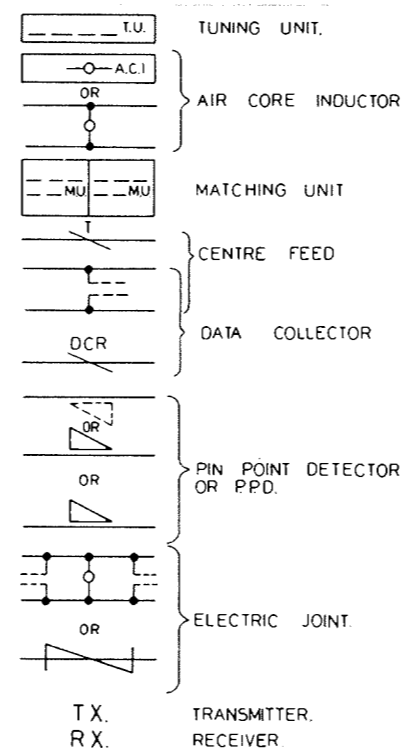
PIN POINT DETECTOR

QUAD 0.9mm with ALUMINIUM SCREEN (using pairs BLUE & WHITE or RED & BLACK.) & screen earthed at TRANSMITTER & RECEIVER end when specified.

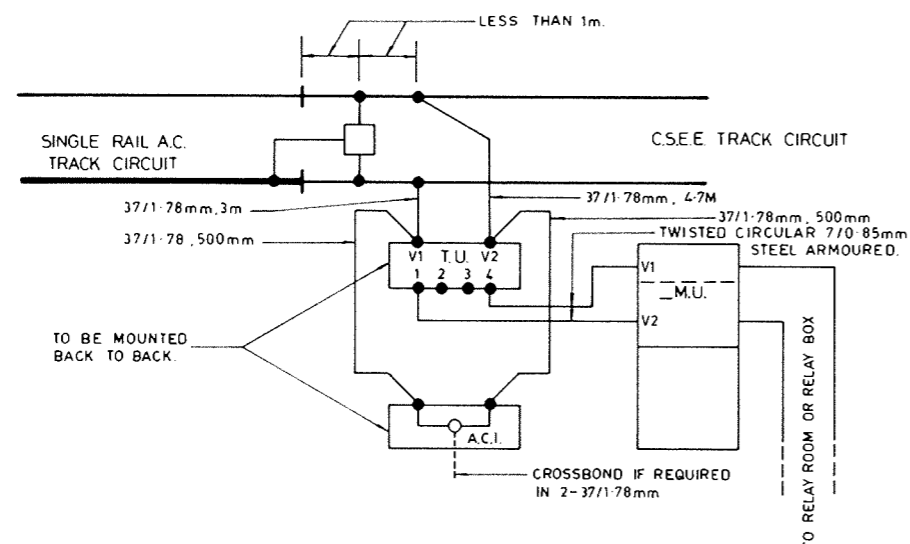
DETAILS OF MATCHING UNIT CONNECTIONS.



SYMBOLS



C.S.E.E. TRACK CIRCUIT ADJACENT TO A SINGLE RAIL TRACK CIRCUIT



NOTES:

1. Connections to rails from tuning units and air core inductors are to be in 37/1.78mm PVC insulated, PVC sheathed, black core. They should be laid parallel to each other i.e. must NOT be crossed and are NOT to be enclosed in metal pipes.

2. POSSIBLE JUMPERING.

END FEED	1700Hz	OUTPUT	V2-V7	JUMPER	V3 to V4 & V5 to V6.
"	"	2000Hz	"	V1-V7	"
"	"	2300Hz	"	V7-V8	"
"	"	2600Hz	"	V1-V8	JUMPER V2 to V7.
CENTRE FEED	1700Hz	"	V2-V7	"	V3 to V4 & V5 to V6.
"	"	2000Hz	"	V1 V7	"
"	"	2300Hz	"	V1 V8	"
"	"	2600Hz	"	V2 V8	"

(b) Matching Unit (jumpers are independent of frequency)

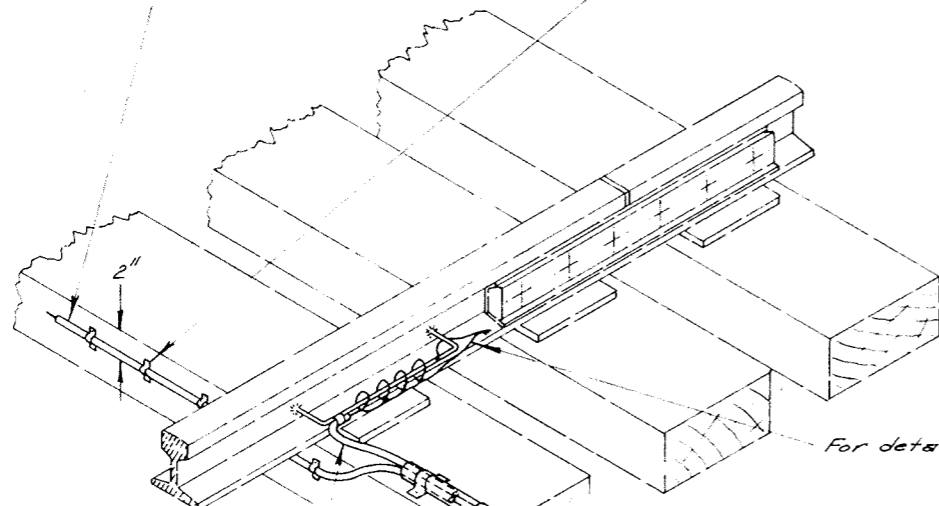
Connections being as above on diagrams a, b, c & d

DESIGNED	DRAWN M.S.	VICTORIAN RAILWAYS	S&E ENGINEER
CHECKED	CORRES	C.S.E.E. TRACK CIRCUIT CONNECTION DETAILS.	DATE 17-11-78
DESIGN OFFICE	SIG. DESIGN ENGINEER	SCALE NOT TO SCALE	INDEX
		DRAWING NO. PRINT	A2 S1952/78

1/2" Black plastic hose, 8'-0" long carrying single conductor to other rail & attached to dilldoll with hose clip size '00' see detail 'B'.

10 - 5/8" Saddle clips to be nailed to sleeper at approx 9" centres with 20 nails clout galv. 1" x 12g.

1/2" Black plastic hose, 8'-0" long carrying single conductor to other rail & attached to dilldoll with hose clip size '00' see detail 'A'.



For details of rail connection see F3064.

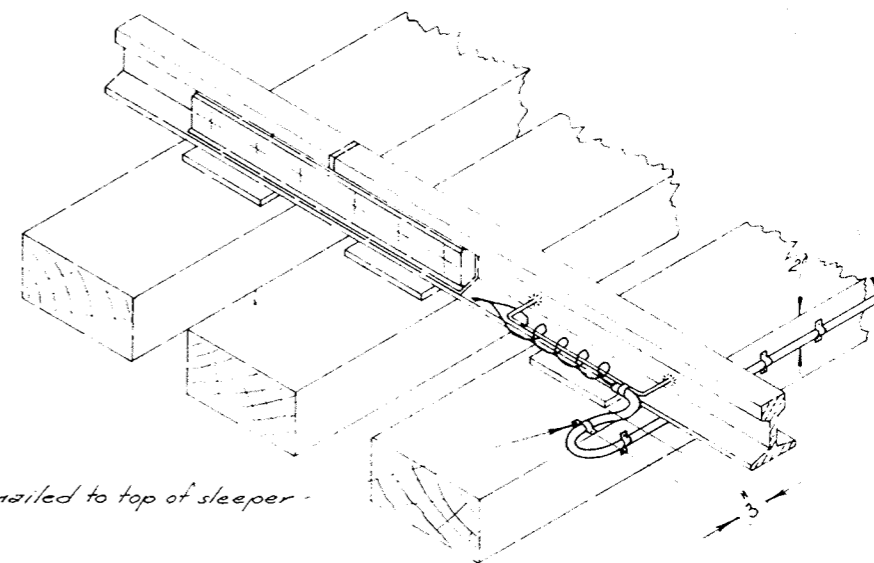
1/2" Black plastic hose 18" long, clipped to dilldoll with 2-hose clips size '00'.

1 1/2" I.D. Black PVC tubing 3'-0" long.

2 - 1 1/2" Conduit saddle clips nailed to sleeper with 4-Nails spring head 2 1/4" x 9g.

1" G.I. water pipe.

DETAIL 'A'



5/8" Saddle clip nailed to top of sleeper.

DETAIL 'B'

PART N°	NAME	M'T'L.	QTY.
Stock	Tubing black 1 1/2" I.D.	PVC	3'-0"
"	Hose water black 1/2"	Plastic	10'-0"
"	Saddles conduit 5/8"	M.S.	10
"	Clips beaded galv 1 1/2"	"	2
"	Nails clout galv. 1" x 12g	M.S.	20
"	Nails spring head 2 1/4" x 9g.	"	4
"	Clip hose size '00'	"	2
"	Cable 2 core copper 7/029 PVC over PVC.	25 reqd.	

300 nails/lb
60 nails/lb.

50143
" 571
H.5-1

VICTORIAN RAILWAYS
RELAY & TRACK FEED
CONNECTION TO RAIL
TYPICAL APPLICATION
11-5-71

Sig & Tel Engineer
M.J.R.
Drawn by
M.J.R.
Traced by
M.J.R.

H1731



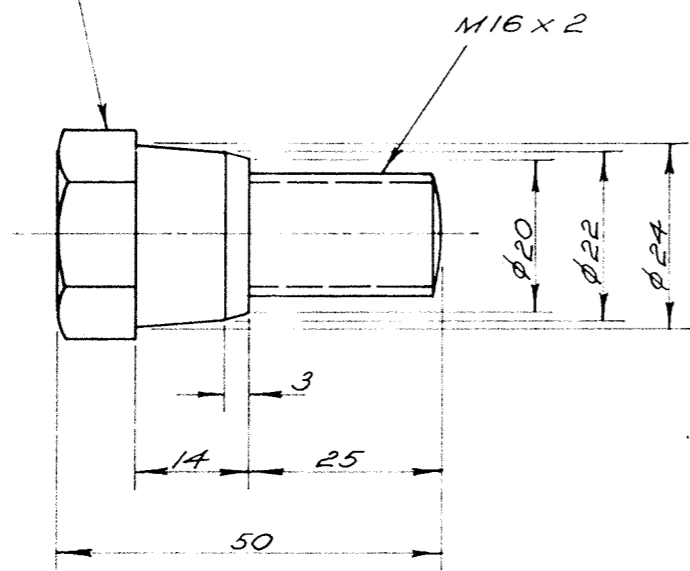
SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

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HEXAGONAL SECTION 24 A.F.

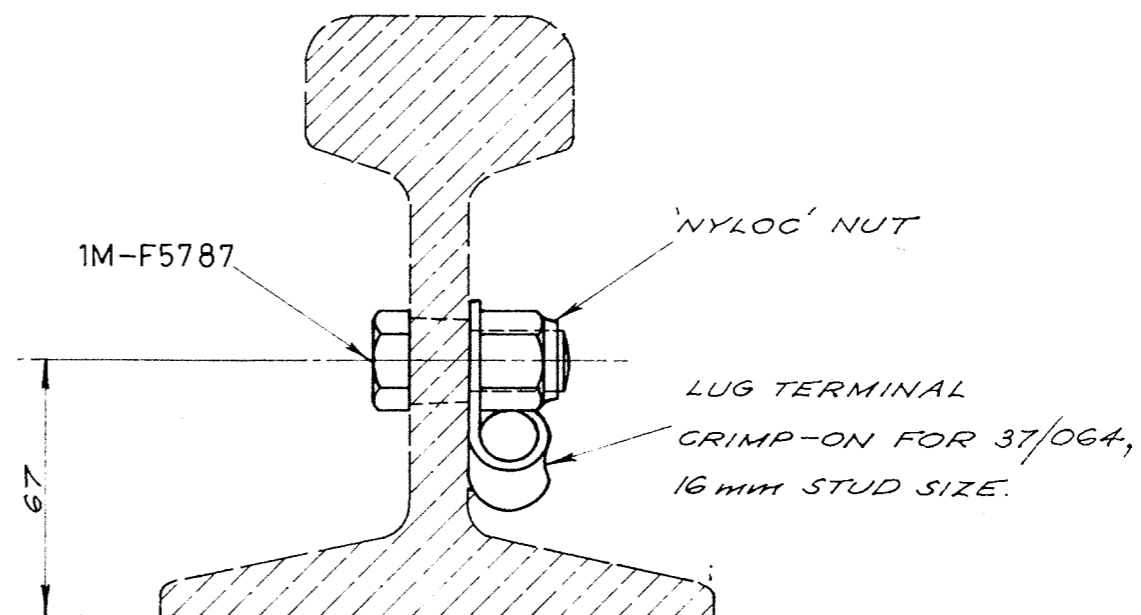


SUPPLY WITH :- 'NYLOC' NUT M16 x 2
CADMIUM PLATED.

FINISH :- CADMIUM PLATED.

M.S.
STUD

1M-F5787



NOTE :- RAIL WEB TO BE DRILLED $\phi 22$ & 1M-F5787 DRIVEN
INTO HOLE FROM RUNNING EDGE SIDE OF RAIL.

APPLICATION TO RAIL

THIS DRAWING IS TO THE METRIC
(I.S.O) STANDARD. DIMENSIONS ARE
IN MILLIMETRES. TOLERANCES UNLESS
OTHERWISE STATED $\pm 0,5$.

V.R.

CABLE TERMINATION
RAIL CONNEXION STUD

22-1-76

S.&C.
Engineer.

AB

Designed
M. J. R.

S.D.E. M.E. *AB*

Drawn
M. J. R.

Ckd. Iss.No

M-
F5787



SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

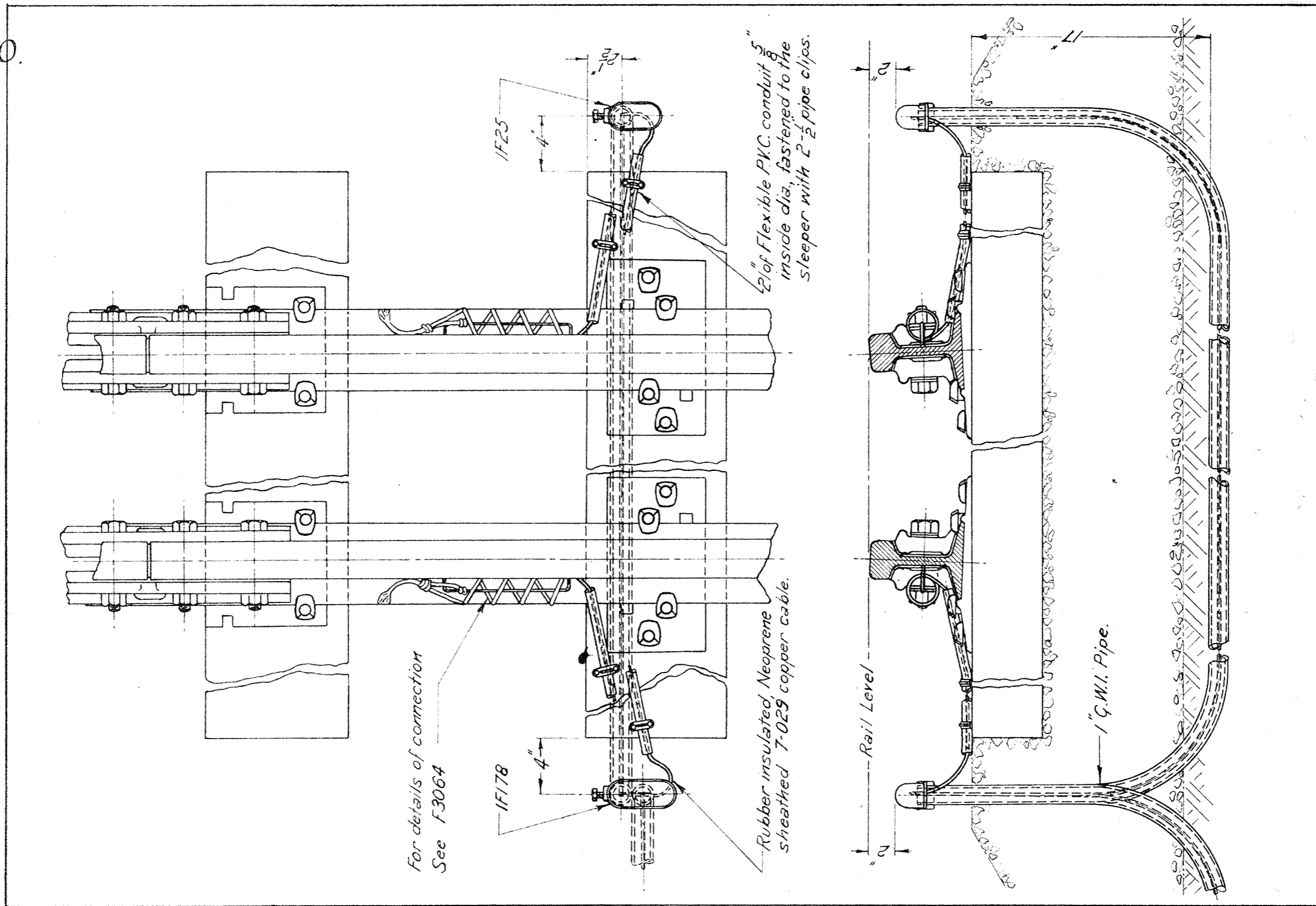
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□

40030.

C1-45.



V.R. TRACK FEED UNDERGROUND PIPES 20-7-59 Drawn by E.R.J. Traced by W.J.H.		Sig. & Tel. Engineer 	F4930
		This drawing supersedes F4846.	F4930



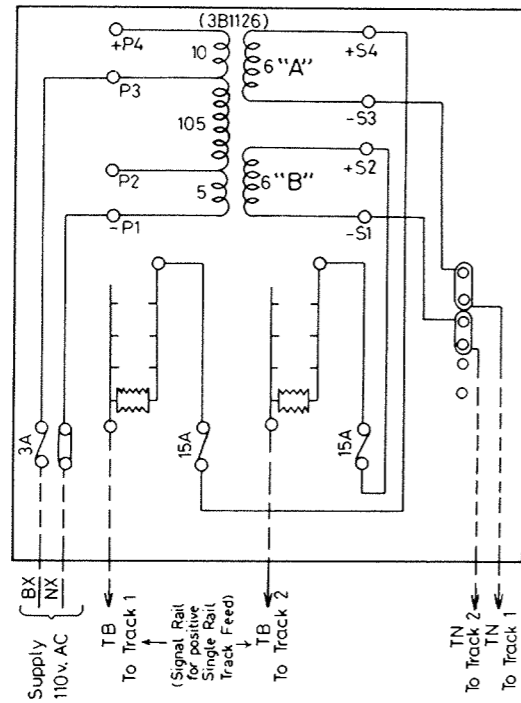
SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

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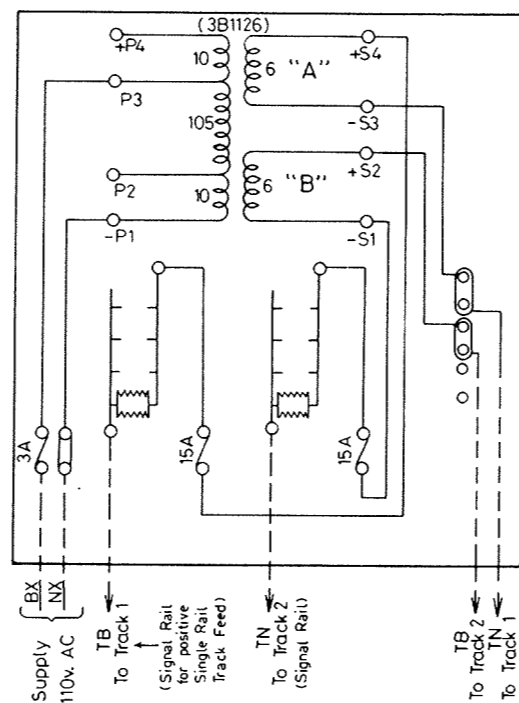
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3	

Rev.

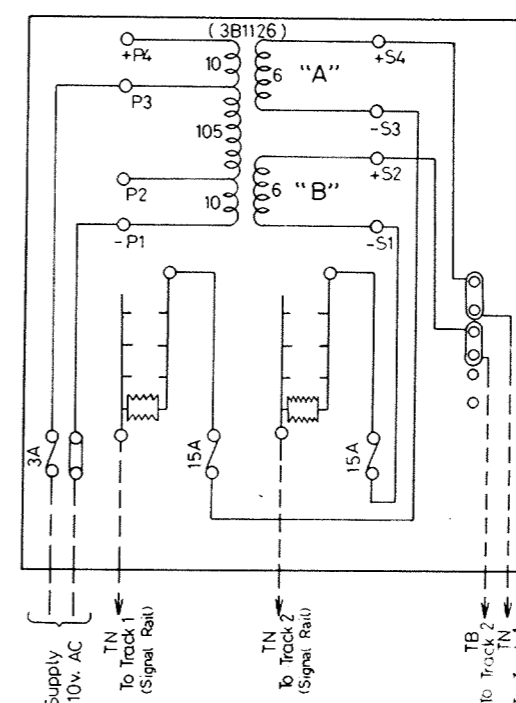
Windings "A" and "B"-Double Rail or Positive Single Rail Track Feeds.



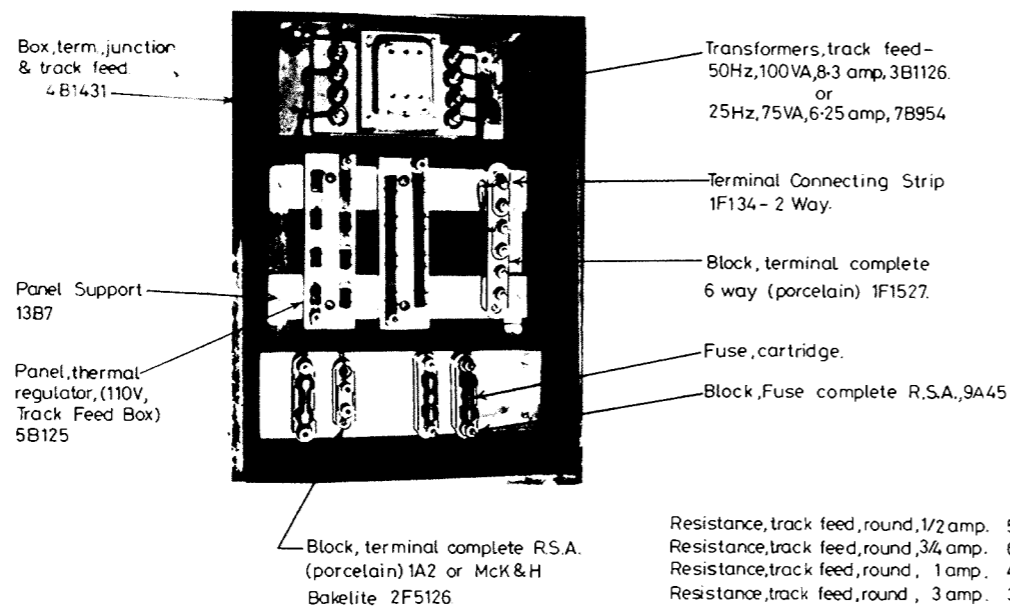
Winding "A"-Double Rail or Positive Single Rail Track Feed
Winding "B"-Negative Single Rail Track Feed.



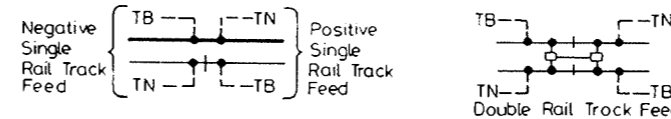
Windings "A" and "B"-Negative Single Rail Track Feeds.



Note: Internal Wiring to be 2.5mm²-1/1.78mm or 7/0.67mm [1/064" or 3/036"]



Methods of Connections



Allowable Combinations for Track Connections

$\frac{R+I-R}{-I+}$	$\frac{F+I-F}{-I+}$
$\frac{F+I-R}{-I+}$	$\frac{F+I-F}{-I+}$

Feed & Relay Leads shall be wired with 7/0.85mm (7/029") unless otherwise specified. All feed & relay pairs shall be piped in separate pipes.

Fuse size at relay end will be a 5 or 6amp.

Note: For Single Rail Track Feeds irrespective whether positive or negative feed, regulator base always appears in Signal Leg.

Max. resistance of feed & relay leads (Loop)

Single Rail	Feed Leads	.25Ω max.
	Relay	1.5Ω max.
Double Rail	Feed Leads	.25Ω max.
	Relay	.75Ω max.

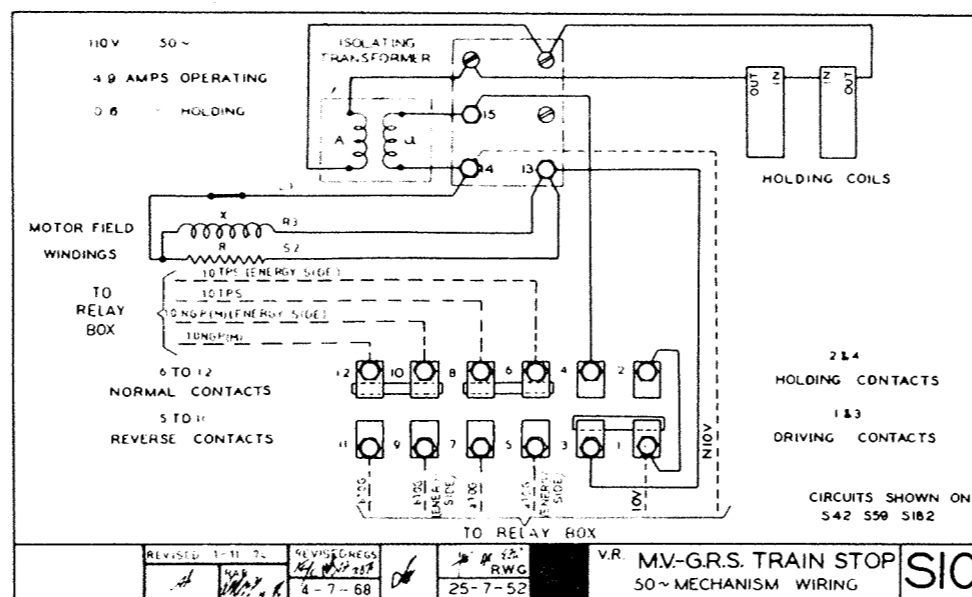
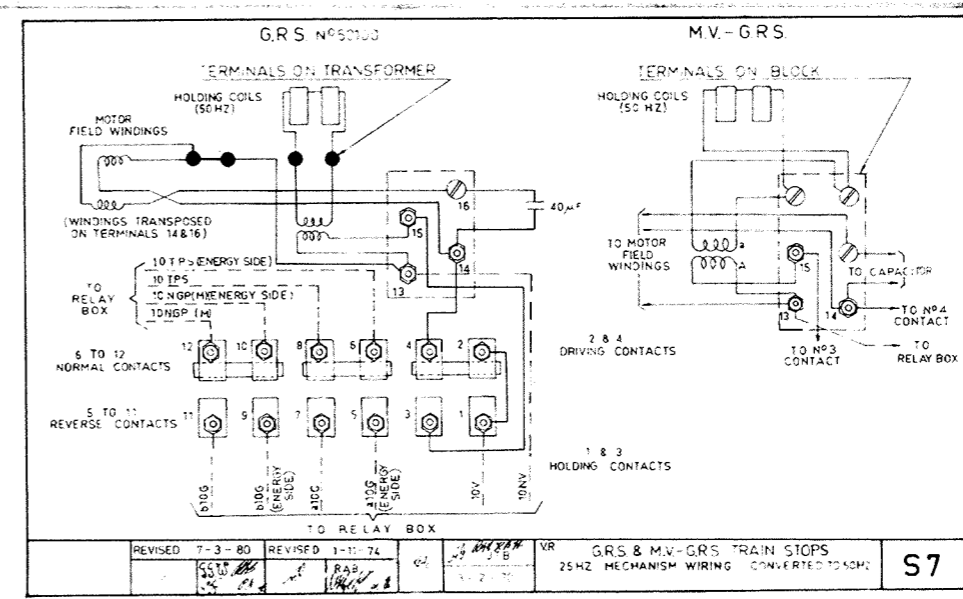
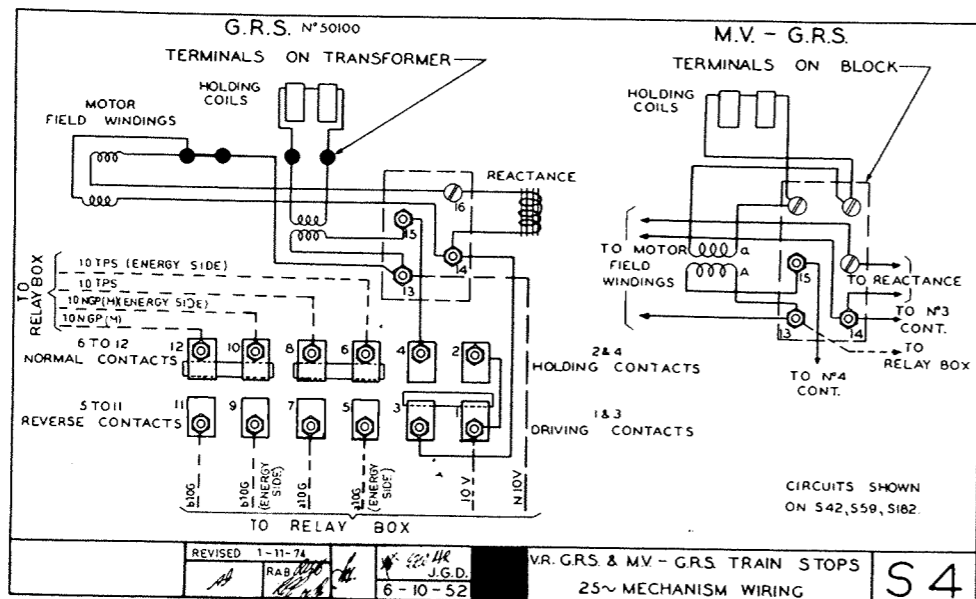
	Wire Size	Imperial		Metric	
		7/029"	7/044"	7/085mm	7/104mm
Track Feed Leads	Single Rail	22m	50m	28m	41m
	Double Rail	22m	50m	28m	41m
Relay Leads	Single Rail	127m	294m	166m	248m
	Double Rail	64m	147m	83m	125m

Voltage Supply to Lamps fed from Track Transformer

The voltage applied to lamps lit from this transformer may be varied as shown in table. 115V. supply gives approximately .25V. higher. Full load gives approximately .3V. lower.

TO OBTAIN	CONNECT 110V. SUPPLY TO.
5.5V.	-P1 & +P4
5.75V.	-P2 & +P4
6V.	-P1 & +P3
6.3V.	-P2 & +P3

REV	DATE	DESCRIPTION	REV'D	CXO	S.O.E	S&C E	DESIGNED	DRAWN	VICTORIAN RAILWAYS	
							J.A.R.	K.G.	A.C. TRACK FEED	
							CHECKED	CORRES	WIRING DIAGRAMS	
									110V./6V. - 6V.	
							DESIGN OFFICE		S&C ENGINEER	
							SIG DESIGN ENGINEER		DATE 29.4.80	
									DRAWING NO 5346/80	



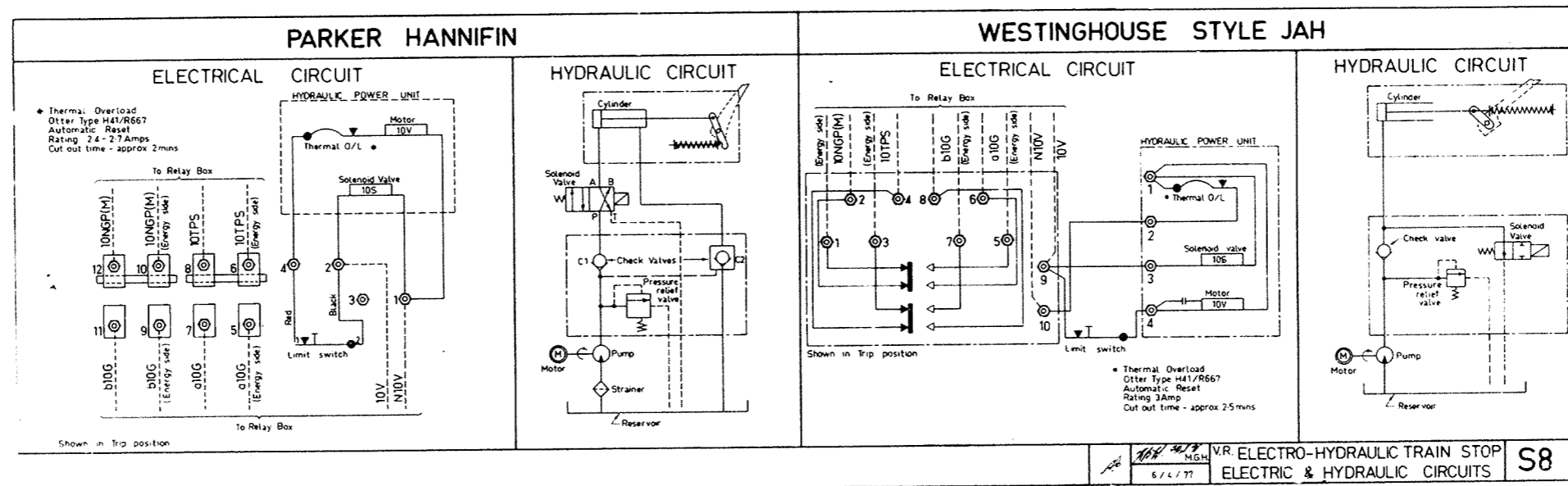
SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category
T 5 0

Sheet N°
1

Rev.
□



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category

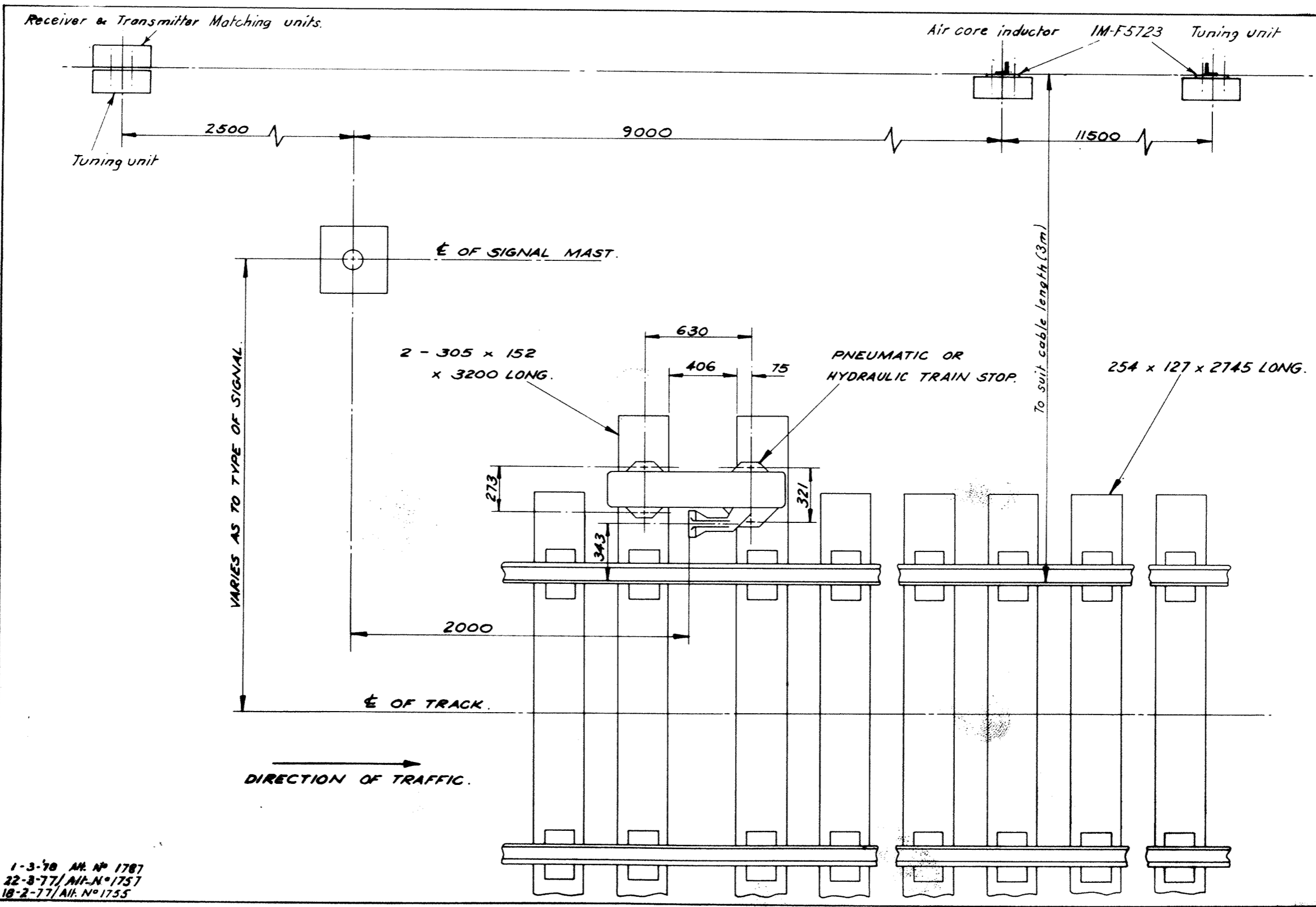
T	5	2
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Rev.

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1-3-78 AM. N° 1787
 22-3-77/AM-N° 1757
 18-2-77/AM. N° 1755

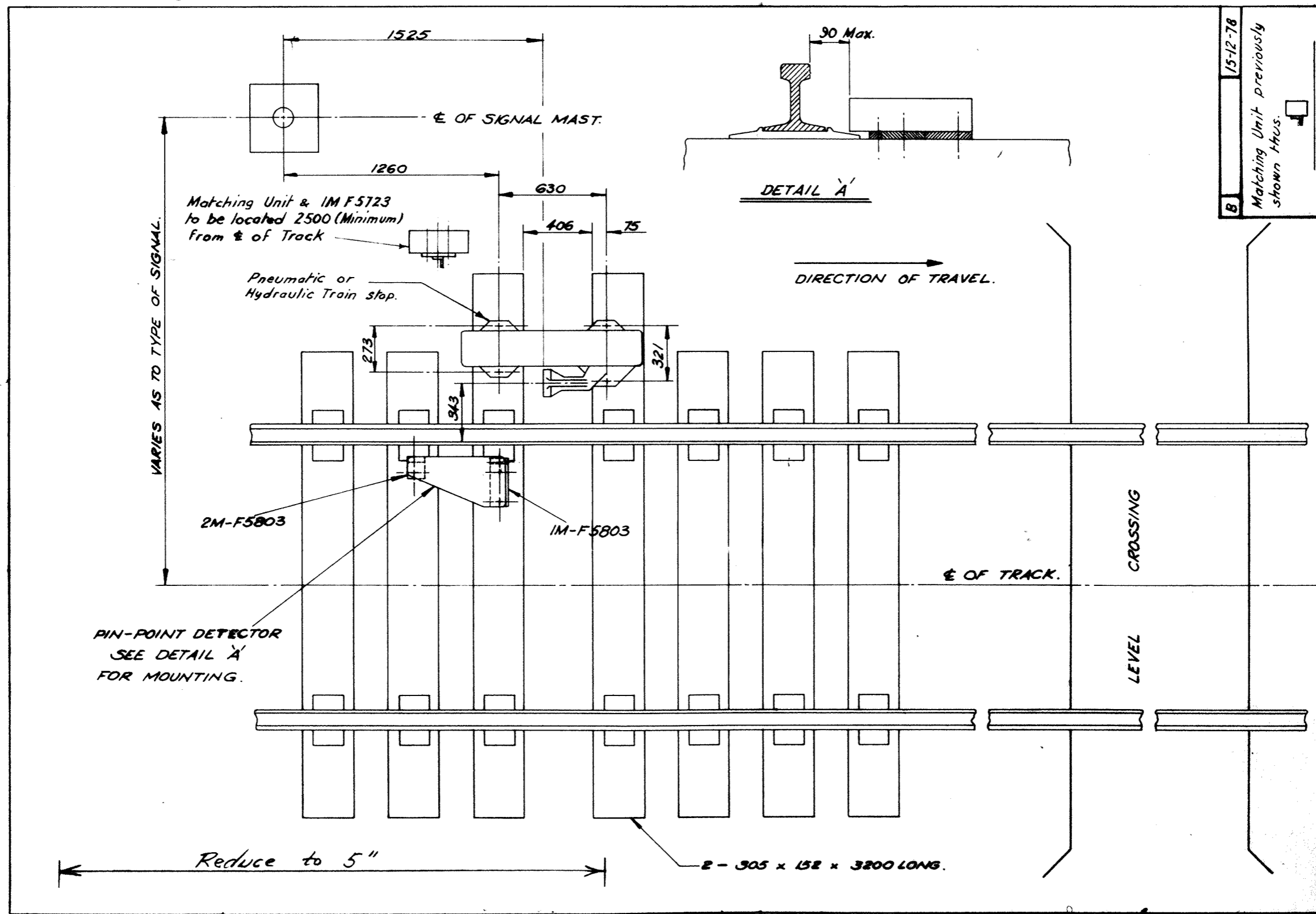
A	15-12-78	G.S.E.E. Equipment previously shown thus. Tuning Receiver Air core Trans.	B.V.	M-A6470
VICTORIAN RAILWAYS LAYOUT OF TRAIN STOP & SIGNAL JOINTLESS TRACK CIRCUIT WITH RECEIVER & TRANSMITTER UNIT				
				Scale: 1:20
				12-10-76



SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category	Sheet N°	Rev
T 5 3	2	A



B	15-12-78	Matching Unit previously shown Hhus.	A	B. V.	Drawn
	S. & C. Engineer				T. A.
			S. O. E. M. E. C. I. D. I. S. T. R. I. B. U. T. I. O. N.		

VICTORIAN RAILWAYS
 LAYOUT OF TRAIN STOP & SIGNAL
 JOINTLESS TRACK CIRCUIT WITH
 PIN-POINT DETECTOR
 AT PROTECTED ROAD CROSSING

A	18-2-77	Matching Unit added to Layout
M-A6471		



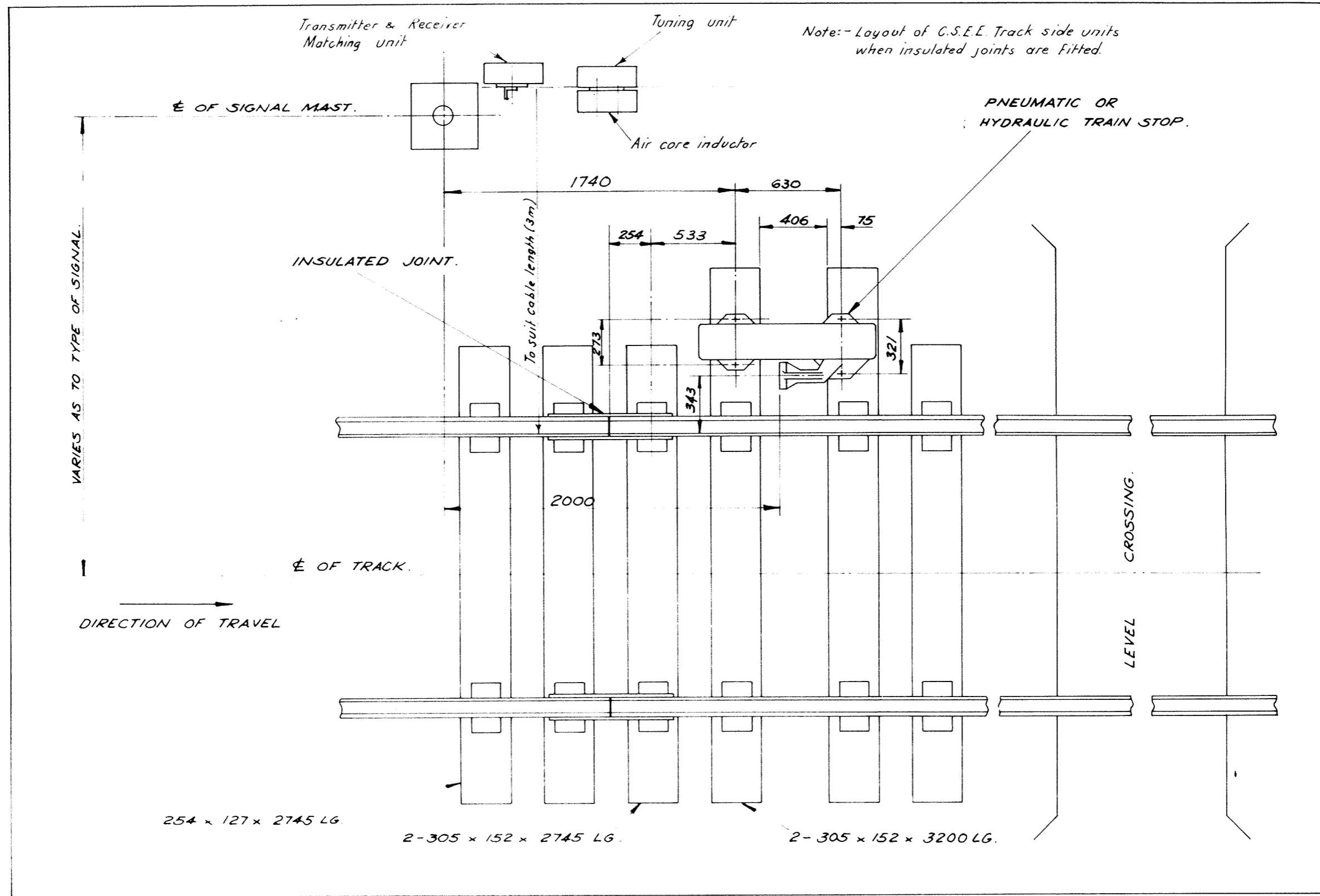
SIGNALLING CATALOGUE

COMPONENTS & STANDARD PRACTICES

Category	T	5	3
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Sheet No	3
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Rev.	A
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S. & C. Engineer.	Designed.	Drawn.
	T. B.	T. B.
S.D.E. M.E. C'kd. Iss. No.	M-A6474	
	15-12-78	
VICTORIAN RAILWAYS		
LAYOUT OF TRAIN STOP & SIGNAL		
AT INSULATED JOINTS		
AT PROTECTED ROAD CROSSING		
Scale :- 1 : 20		
12-10-76		
C.S.E.E. Equipment Included.		
B. V.		
M-A6474		

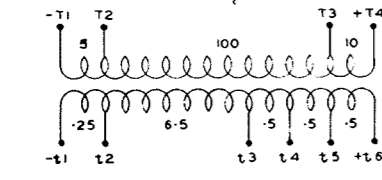


SIGNALLING CATALOGUE
COMPONENTS & STANDARD PRACTICES

Category
T 5 3

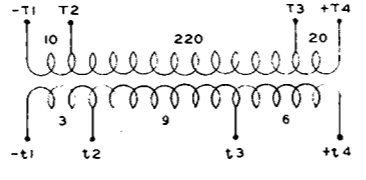
Sheet No
4

Rev.
A



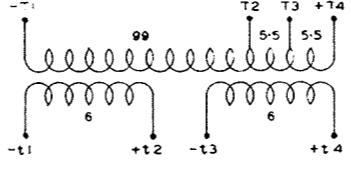
V. R.	
S&T N ^o	TYPE 1B954
18.5 V.A. 2 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
T3 +T4	t3 t4 t5 +t6
T2	100 110 t2 6.5 7.0 7.5 8.0
-T1	105 115 -t1 6.75 7.25 7.75 8.25

FOR TYPE 'SA' SEARCHLIGHT SIGNAL **1B954**



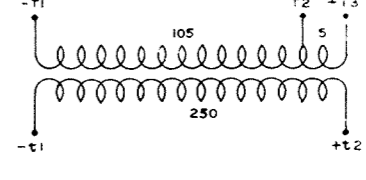
V. R.	
S&T N ^o	TYPE 4B954
25 V.A. 1.4 AMP. 1 PHASE 50 CYCLES	
VOLTAGE	
T3 +T4	t2 t3 +t4
T2	220 240 t3 - 6
-T1	230 250 t2 - 9 15
-t1	3 12 18

FOR TRICKLE CHARGING **4B954**



V. R.	
S&T N ^o	TYPE 7B954
75 V.A. 6.25 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
T2 T3 +T4	+t2 +t4
-T1	99 104.5 110 -t3 - 6
-t1	6

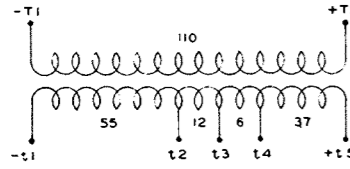
FOR TRACK FEED **7B954**



V. R.	
S&T N ^o	TYPE 10B954
10 V.A. .04 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
T2 +T3	+t2
-T1	105 110 -t1 250

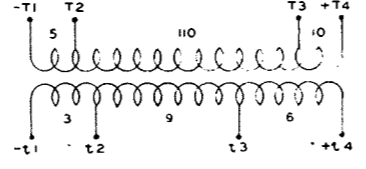
OBsolete. SEE 7B1390

FOR POINT DETECTION **10B954**



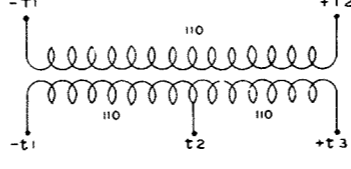
V. R.	
S&T N ^o	TYPE 2B954
25 V.A. .23 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
+T2	t1 t2 t3 t4 t5
-T1	110 +t5 110 55 43 37
-t1	55 67 73 110

FOR DIMMING LIGHT SIGNAL **2B954**



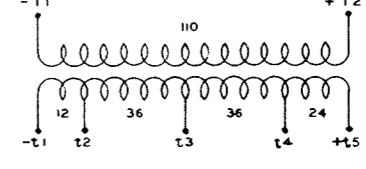
V. R.	
S&T N ^o	TYPE 5B954
25 V.A. 1.4 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
T3 +T4	t2 t3 +t4
T2	110 120 t3 - 6
-T1	115 125 t2 - 9 15
-t1	3 12 18

FOR TRICKLE CHARGING **5B954**



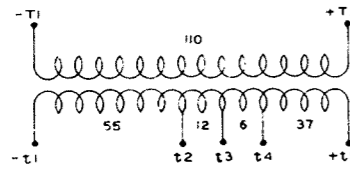
V. R.	
S&T N ^o	TYPE 8B954
30 V.A. .14 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
+T2	t2 +t3
-T1	110 t2 - 110
-t1	110 220

FOR POLE CHANGING **8B954**



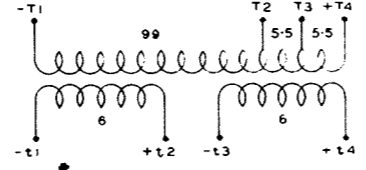
V. R.	
S&T N ^o	TYPE 11B954
25 V.A. .23 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
+T2	t4 t2 t3 t4 +t5
-T1	110 t3 - 36 60
-t1	36 72 96
-t1	12 48 96 108

FOR BELL RINGING **11B954**



V. R.	
S&T N ^o	TYPE 3B954
75 V.A. .88 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
+T2	t1 t2 t3 t4 t5
-T1	110 +t5 110 55 43 37
-t1	55 67 73 110

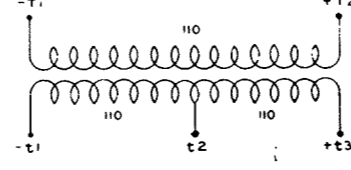
FOR DIMMING LIGHT SIGNAL **3B954**



V. R.	
S&T N ^o	TYPE 6B954
50 V.A. 4.16 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
T2 T3 +T4	+t2 +t4
-T1	99 104.5 110 -t3 - 6
-t1	6

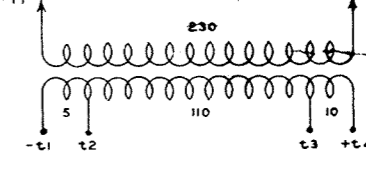
OBsolete. SEE 7B954

FOR TRACK FEED **6B954**



V. R.	
S&T N ^o	TYPE 9B954
150 V.A. .88 AMP. 1 PHASE 25 CYCLES	
VOLTAGE	
+T2	t2 +t3
-T1	110 t2 - 110
-t1	110 220

FOR POLE CHANGING **9B954**



V. R.	
S&T N ^o	TYPE 12B954
150 V.A. 1.2 AMP. 1 PHASE 50 CYCLES	
VOLTAGE	
+T2	t3 +t4
-T1	230 t2 110 120
-t1	115 125

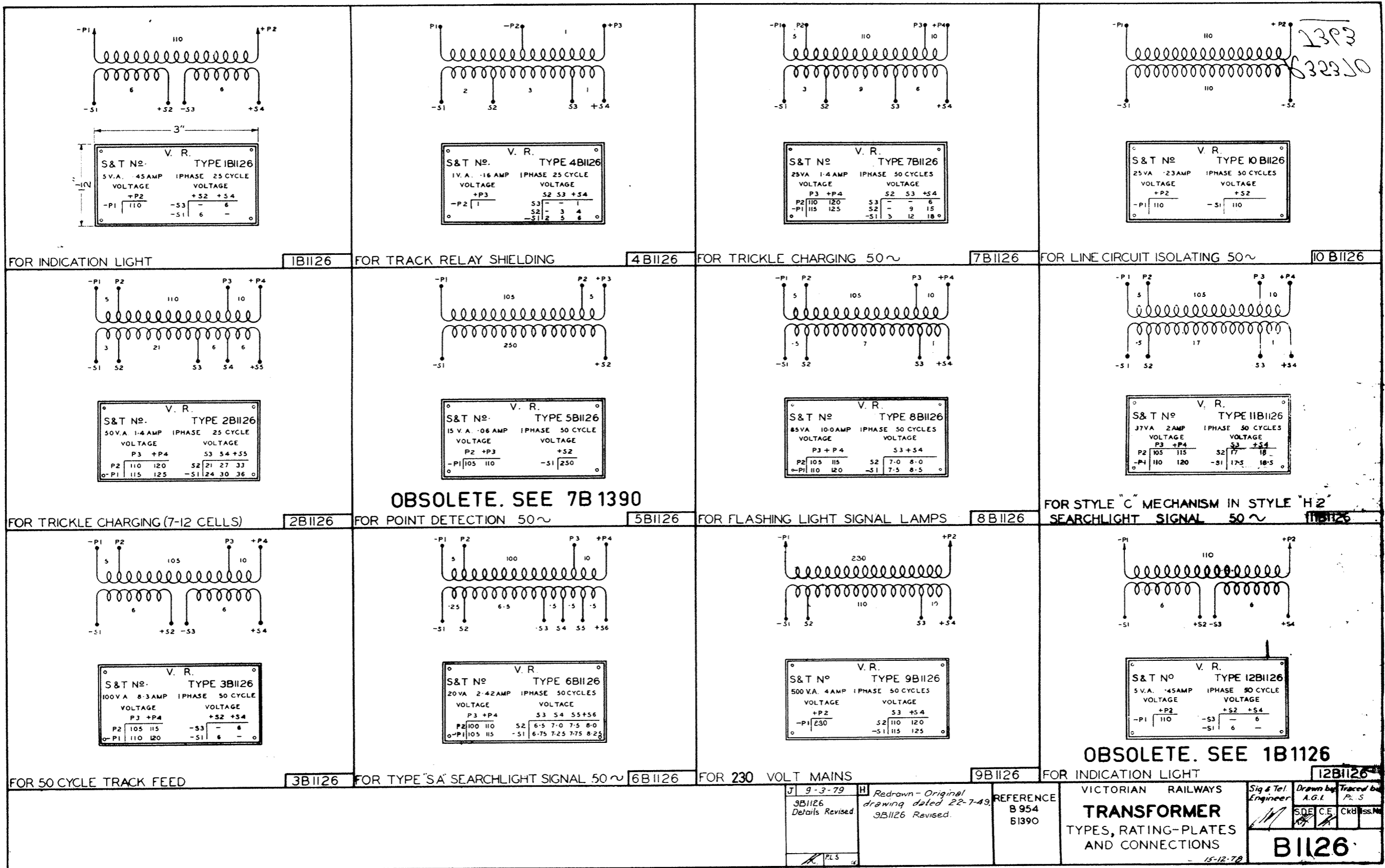
FOR ~~240~~ 230 VOLT MAINS **12B954**

C	1-4-68	REFERENCE	2	15-4-48	1	8-6-43
6B954 and 10B954 shown obsolete		B1126	12B954 added.		8B954, 9B954, 10B954 and 11B954 added.	
G.F.W.		G.F.W.		G.F.W.		

VICTORIAN RAILWAYS
TRANSFORMER TYPES, RATING-PLATES AND CONNECTIONS.
 12-B-42
B954



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES



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632310

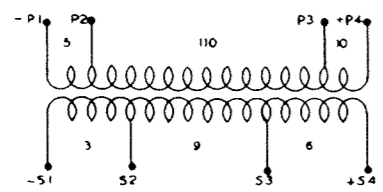
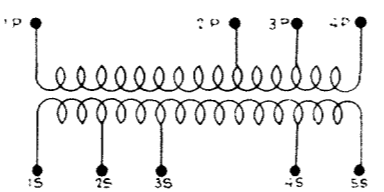
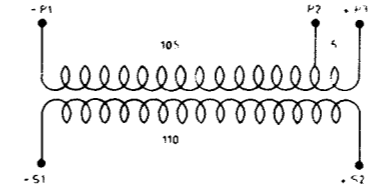
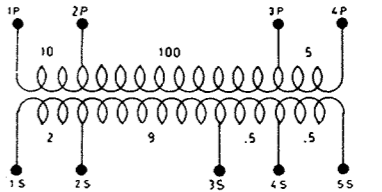
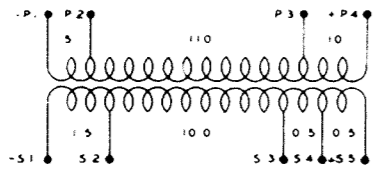
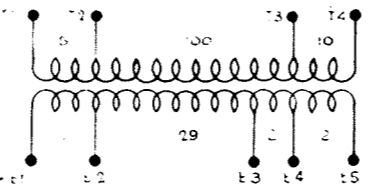
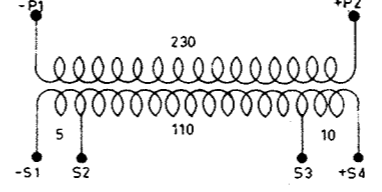
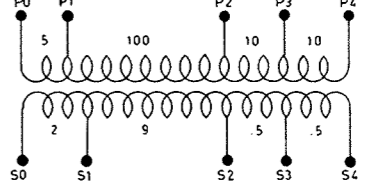
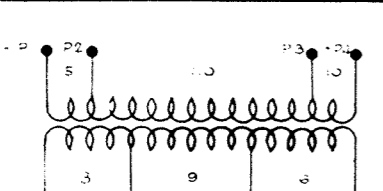
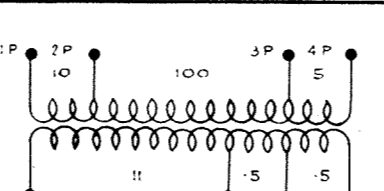
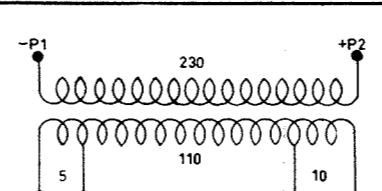
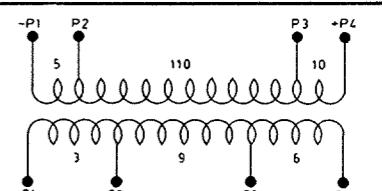
OBSOLETE. SEE 7B 1390

OBSOLETE. SEE 1B1126

J	9-3-79	H	Redrawn - Original drawing dated 22-7-49. 9B1126 Revised.	REFERENCE	B 954 B1390	VICTORIAN RAILWAYS TRANSFORMER TYPES, RATING-PLATES AND CONNECTIONS 15-12-78	Sig & Tel Engineer	Drawn by A.G.I.	Traced by P.S.	S.D.E.	C.E.	CRB	SSM
										B1126			

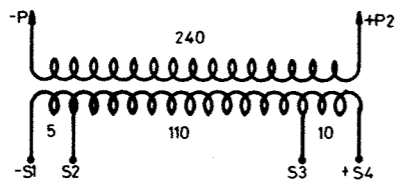
SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES



 <p>S & T N° V. R. TYPE 1B1390 90VA 5 AMP 1PHASE 50Hz VOLTAGE VOLTAGE P3 +P4 52 53 +54 P2 110 120 53 - - 6 -P1 115 125 52 - 9 15 51 3 12 18</p> <p>FOR HEAVY DUTY BATTERY CHARGING 1B1390</p>	 <p>S & T N° V. R. TYPE 4B1390 25VA 2AMP 1PHASE 25Hz VOLTAGE VOLTAGE MIN MAX P1 105 110 51 110 P2 105 110 51 110 P3 105 110 51 110 P4 105 110 51 110</p> <p>COLOR LIGHT SIGNAL STYLE "R" 4B1390</p>	 <p>S & T N° V. R. TYPE 7B1390 5 V A C 0.45 AMP 1PHASE 25Hz VOLTAGE VOLTAGE P2 +P3 +5.2 -P1 105 110 -51 110</p> <p>FOR POINT DETECTION (H & W) 7B1390</p>	 <p>S & C N° V. R. TYPE 10B1390 30 VA 2.5AMP 1PHASE 25Hz VOLTAGE VOLTAGE P3 4P 35 45 55 P2 100 105 25 9 9.5 10 -P1 110 115 +15 11 11.5 12</p> <p>FITTED WITH OCTAL BASE</p> <p>FOR COLOUR LIGHT SIGNAL STYLE "R" WITH LAMP FILAMENT PROVING. 10B1390</p>	
 <p>S & T N° V. R. TYPE 2B1390 125VA 100A 1PHASE 50Hz VOLTAGE VOLTAGE P3 +P4 53 54 +55 P2 110 120 52 100 105 110 -P1 115 125 51 115 120 125</p> <p>FOR FLASHING LIGHTS 2B1390</p>	 <p>S & T N° V. R. TYPE 5B1390 85VA 2.5AMP 1PHASE 25Hz VOLTAGE VOLTAGE T3 T4 23 24 25 T2 100 110 22 29 31 33 -T1 105 115 -E1 30 32 34</p> <p>SEARCHLIGHT SIGNAL STYLE "K"2 5B1390</p>	 <p>S & T N° V. R. TYPE 8B1390 1500 VA 12AMP 1PHASE 50Hz VOLTAGE VOLTAGE +P2 +S3 +S4 -P1 230 -S2 110 120 -S1 115 125</p> <p>FOR 230 VOLT MAINS 8B1390</p>	 <p>S & C N° V. R. TYPE 11B1390 35 V.A. 2AMP 1PHASE 50Hz VOLTAGE VOLTAGE P2 P3 +P4 S2 S3 +S4 P1 100 110 120 S1 90 9.5 10.0 -P1 105 115 125 -S1 110 11.5 12.0</p> <p>SUPERSEDED BY 10B1390</p> <p>FOR COLOUR LIGHT SIGNAL STYLE "RM1" & "RD1" 11B1390</p>	
 <p>S & T N° V. R. TYPE 3B1390 90VA 5AMP 1PHASE 25Hz VOLTAGE VOLTAGE P3 +P4 52 53 +54 P2 110 120 53 - - 6 -P1 115 125 52 - 9 15 51 3 12 18</p> <p>FOR HEAVY DUTY BATTERY CHARGING 3B1390</p>	 <p>S & T N° V. R. TYPE 6B1390 25 VA 2.5 AMP 1PHASE 50Hz VOLTAGE VOLTAGE 3P 4P 25 45 55 2P 100 105 +15 11 11.5 12</p> <p>SEARCHLIGHT SIGNAL STYLE "K"2 6B1390</p>	 <p>S & T N° V. R. TYPE 9B1390 3000 VA 24AMP 1PHASE 50Hz VOLTAGE VOLTAGE P2 S3 +S4 -P1 230 -S2 110 120 -S1 115 125</p> <p>FOR 230 VOLT MAINS 9B1390</p>	 <p>S & C N° V. R. TYPE 12B1390 40VA. 2AMP 1PHASE 50Hz VOLTAGE VOLTAGE P3 +P4 52 53 +54 P2 110 120 53 - - 6 -P1 115 125 52 - 9 15 51 3 12 18</p> <p>FOR BATTERY CHARGING 12B1390</p>	
<p>10B1390 11B1390 & 12B1390 added</p>		<p>8B1390 & 9B1390 added. Rating plates 1-7 ins. Frequency now in Hertz in lieu of cycles per second.</p>	<p>7B1390 added.</p>	<p>REFERENCE B954 B1126</p> <p>VICTORIAN RAILWAYS TRANSFORMER TYPES, RATING - PLATES AND CONNECTIONS 8-10-59</p> <p>B1390</p>



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES



V.R.	
S&T N ^o	TYPE B1521
750 V.A. 4 Amp	1PHASE 50 CYCLE
VOLTAGE	
+P2	+S4
-P1 240	-S1 115 12.5
	S2 110 12.0
	S3 10

FOR 240 VOLT MAINS

B1521

6/07/5

H-16-3

VICTORIAN RAILWAYS
TRANSFORMER
 TYPES, RATING - PLATES
 & CONNECTIONS.

S&C Engineer	Designed P.L.S.	Drawn P.L.S.
<i>M</i>	<i>S.D.E.</i>	<i>C.E.</i>

B1521

9-3-79

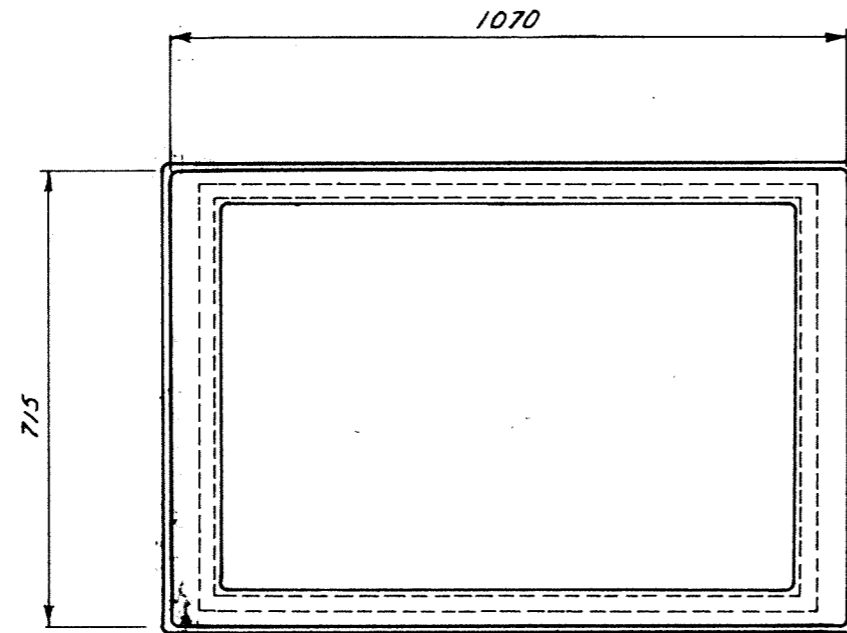


SIGNALLING CATALOGUE
 COMPONENTS & STANDARD PRACTICES

Category
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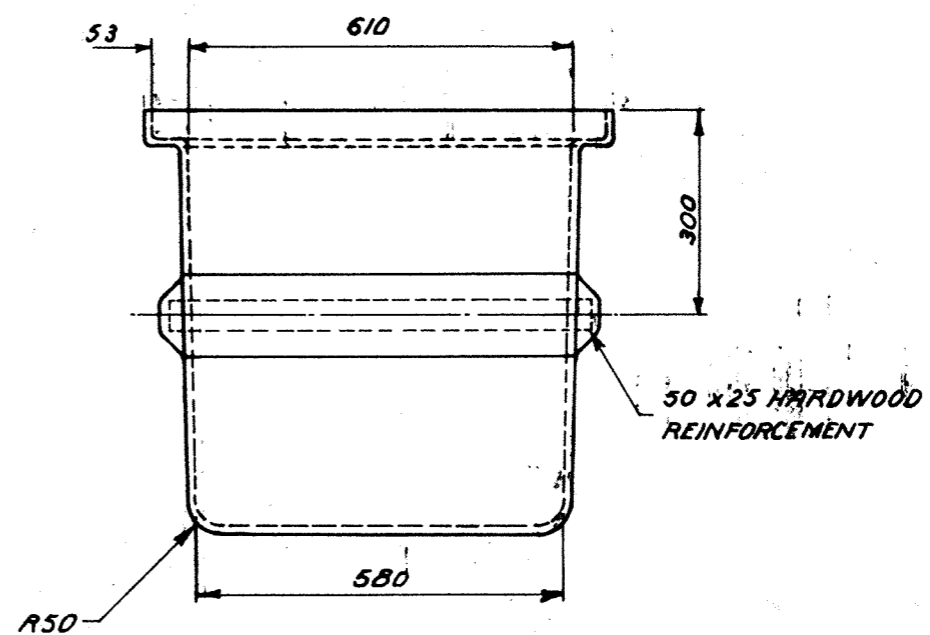
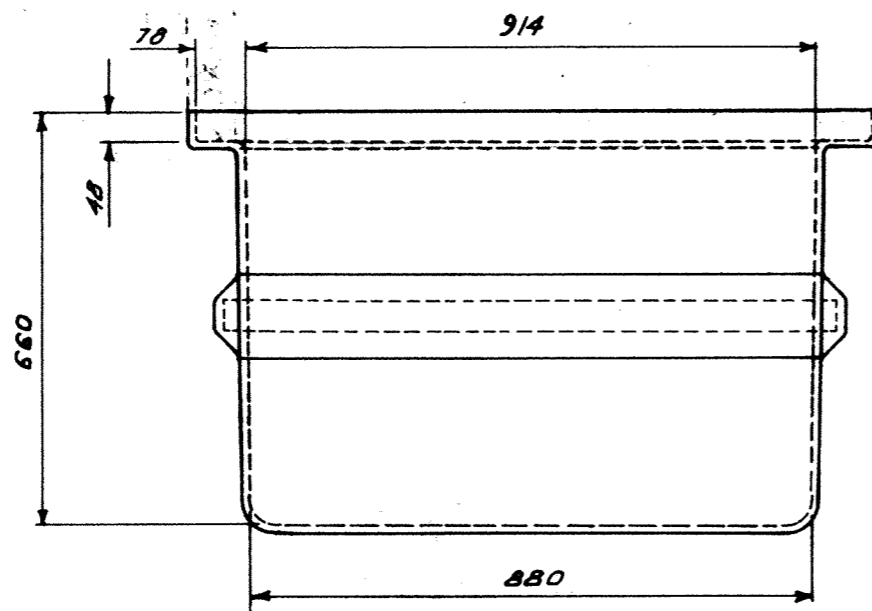


NOTE:

MATERIAL - 3 MM FIBRE GLASS CHOPPED STRAND MAT.
FINISH - INSIDE, GELCOAT FINISH.

OUTSIDE, GELCOAT FINISH.

ALL RADIUS 10 UNLESS OTHERWISE STATED.
THIS PIT HAS BEEN DESIGNED FOR USE WITH
LIGHT WEIGHT GATTIC SINGLE PART COVER
900 x 600 PART N° E108



CABLE PIT

VICTORIAN RAILWAYS
CABLE PIT
FOR USE ON
PLATFORMS

7-7-76.

THIS DRAWING IS TO THE
METRIC STANDARD (I.S.O.)
DIMENSIONS ARE IN MILLIM-
ETRES. TOLERANCES: UNLESS
OTHERWISE STATED = Q, S
3RD ANGLE PROJECTION

MA5989

S. & C. Engineer	Designed R.B.	Drawn R.B.	S.P.E. M.E. C.K.D.	Iss. No.

MA5989

RECORD PLAN
R 50858
NEW SERIES
DATE

H 18-1

1MA5989

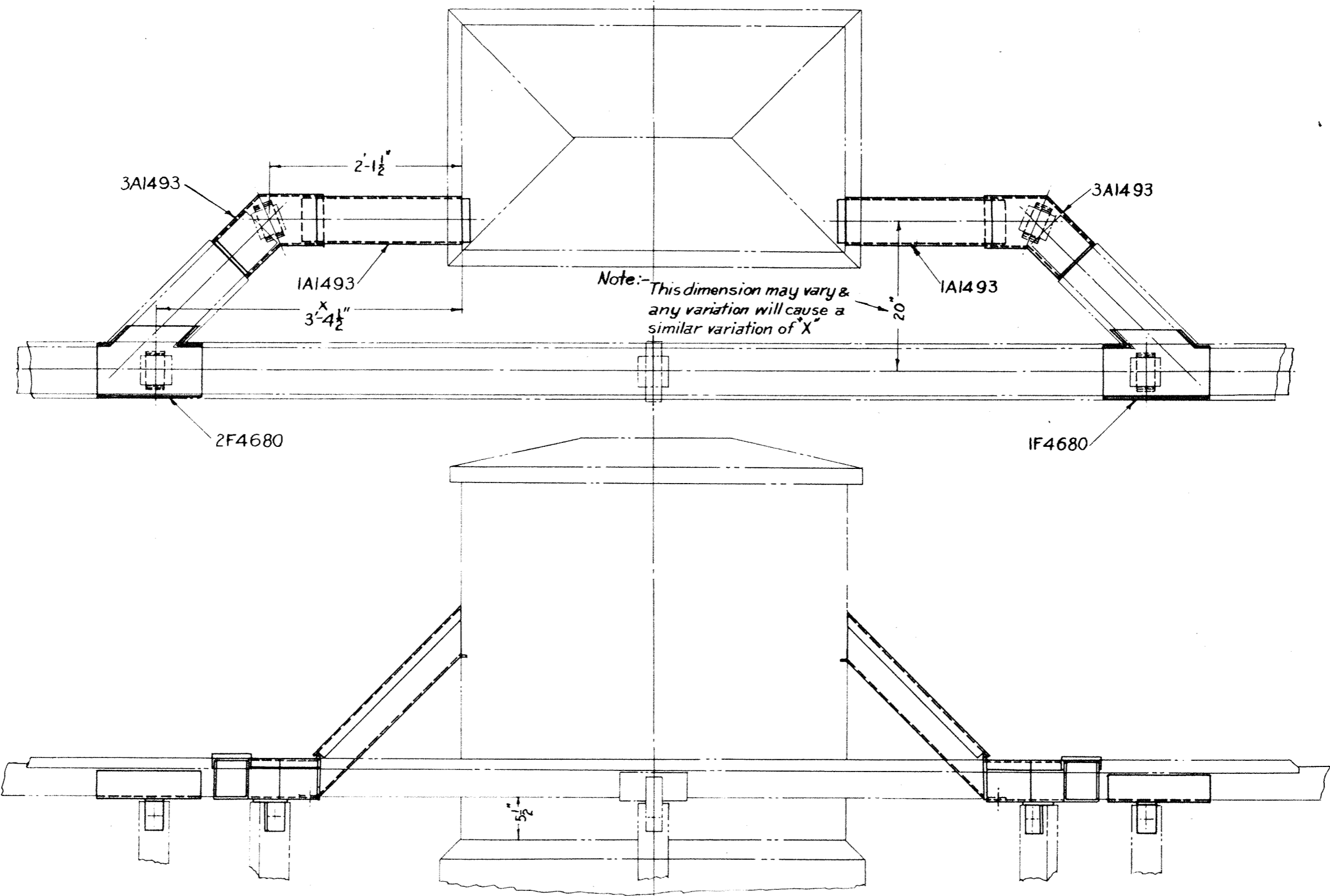


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Drawn By W.A.S	Traced By W.A.S
Engineer S.W.	

A1397

VICTORIAN RAILWAYS
LAYOUT OF TRUNKING
 FOR
 POWER DISTRIBUTION BOX
 1-10-57

For use with
 M4 Box

A1397

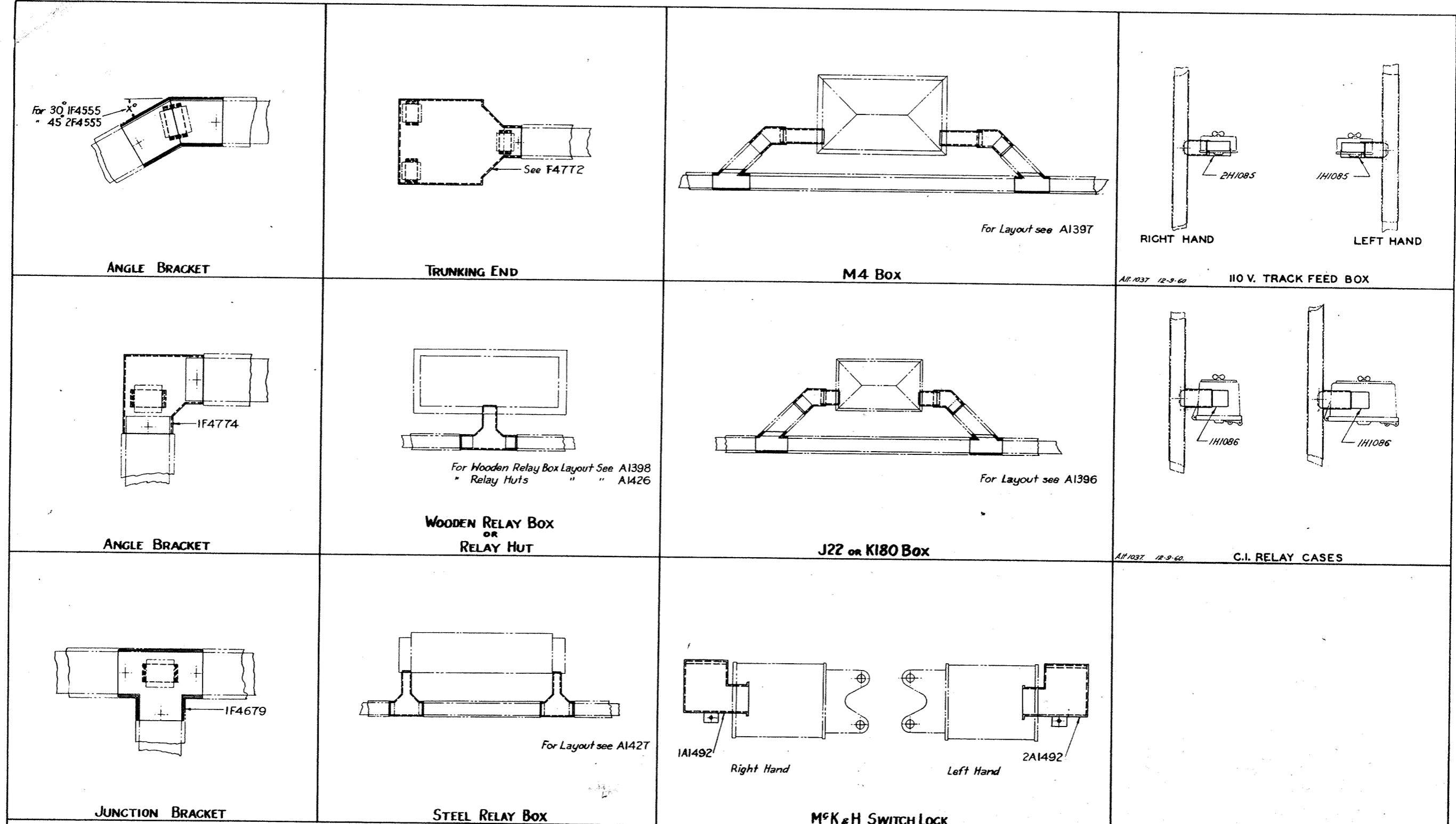


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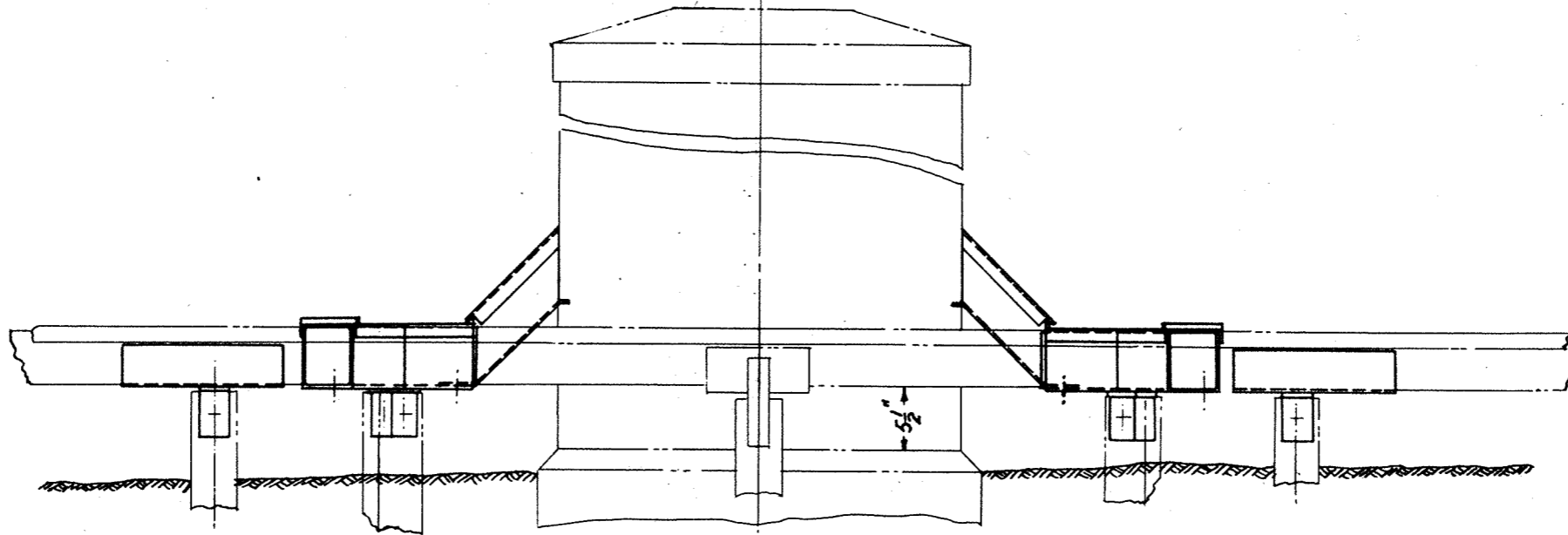
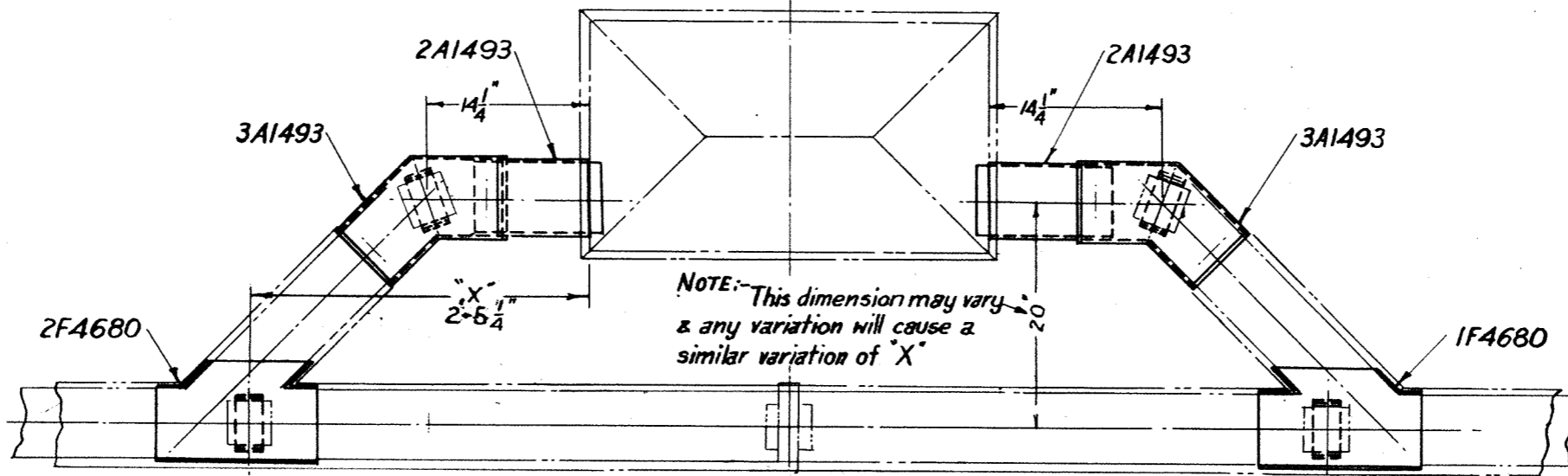
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1	2-3-60	VICTORIAN RAILWAYS	SIG & TEL ENGINEER	DRAWN BY W.A.S.	TRACED BY W.A.S.
Typicals of 110V. Track Feed Box, & C.I. Relay Cases added.		SIGNAL TRUNKING SUPPORTS & WIRE INLETS		BI297	
		TYPICAL APPLICATION		1-10-57	



SIGNALLING CATALOGUE COMPONENTS & STANDARD PRACTICES



Drawn By Traced By
 W.A.S. W.A.S.
 Sig & Tel Engineer
 W.A.S.

A1396

VICTORIAN RAILWAYS

LAYOUT OF TRUNKING FOR

2200' TRACK FEED BOX

I-10-57

For Use with Boxes:-

J 22

K 180

A1396

30003

F504



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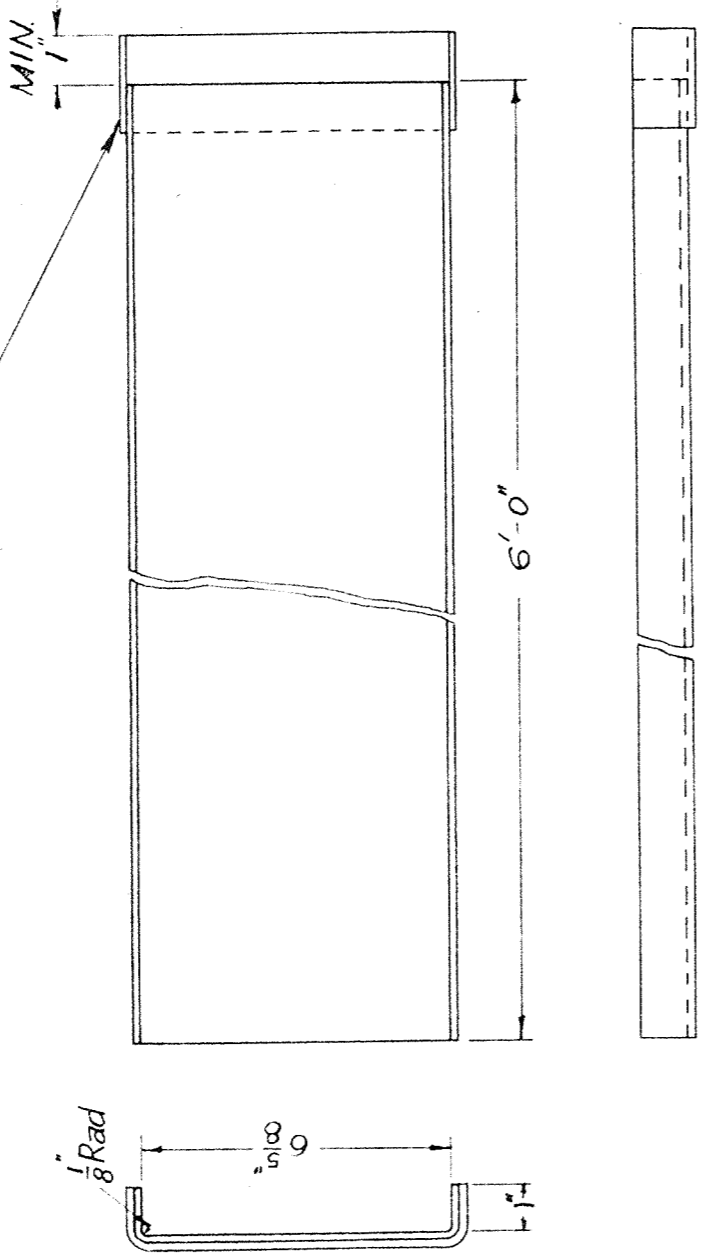
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C1-43

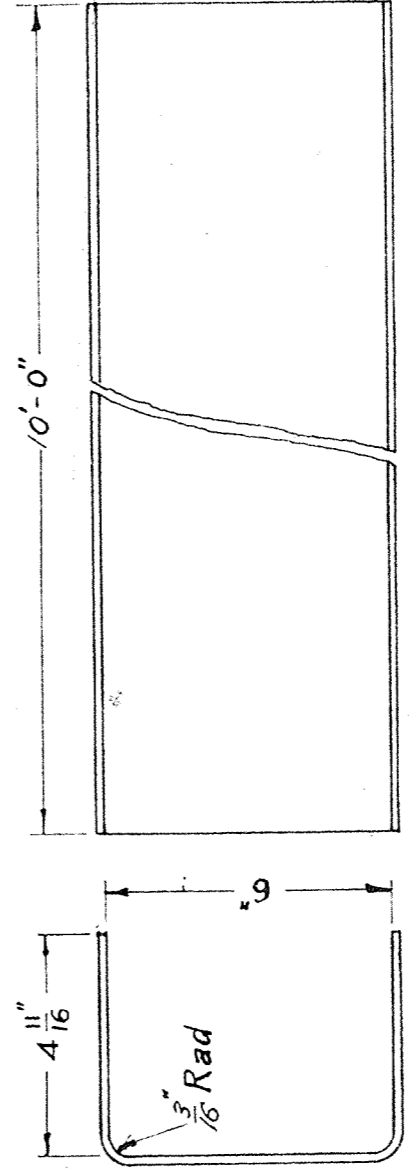
NOTE :- Overlap of 1" to be provided at one end for interlocking of covers. This may be done by forming the end or by welding on a cover strip. In each case it will be additional to the 6'-0" dimension as shown.



1/8" M.S. COVER

3F4822

17-5-63. AIF. N° 1136. v
6-9-62. AIF. N° 109.



1/8" M.S. TRUNKING

2F4822

6-4-62. AIF. N° 109. w

F4822

2 Overlap added to Cover. - 3F4822

28.5.59

Length increased from 6'-0" to 10'-0"

13.2.58

MILD STEEL TRUNKING STANDARD

2-9-57

SIG & TEL ENGINEER

G.W. G.A.

F4822

Complete with Cover



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CABLE PIT MOUNTED UNDER RELAY BOX



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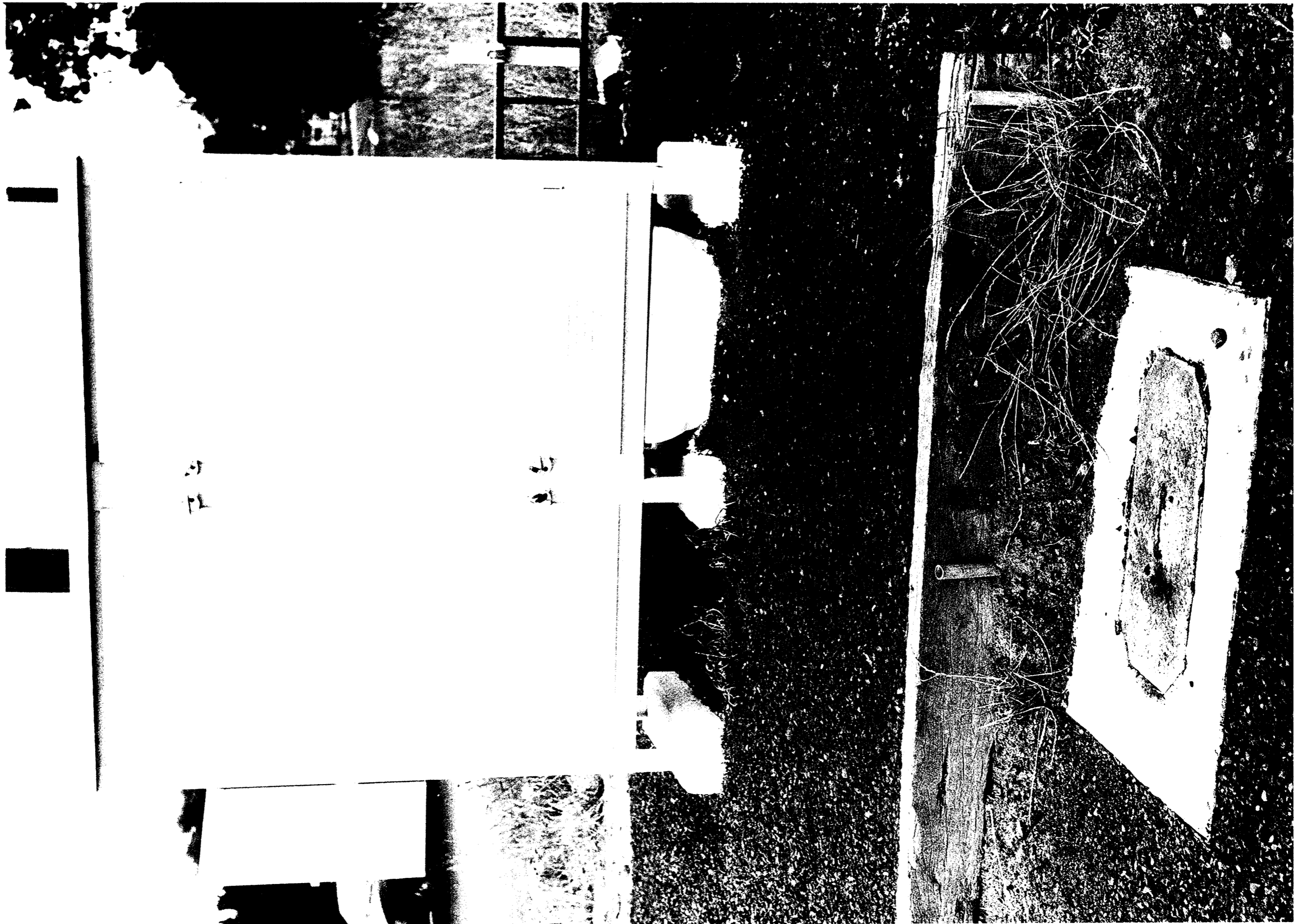
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TYPICAL EXAMPLE OF PIT LAYOUT AT RELAY BOX

Jan 80



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STANDARD CABLE PIT ARRANGEMENT AT RELAY BOX LOCATIONS

Jan 80



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TRUNKING PIT ARRANGEMENT

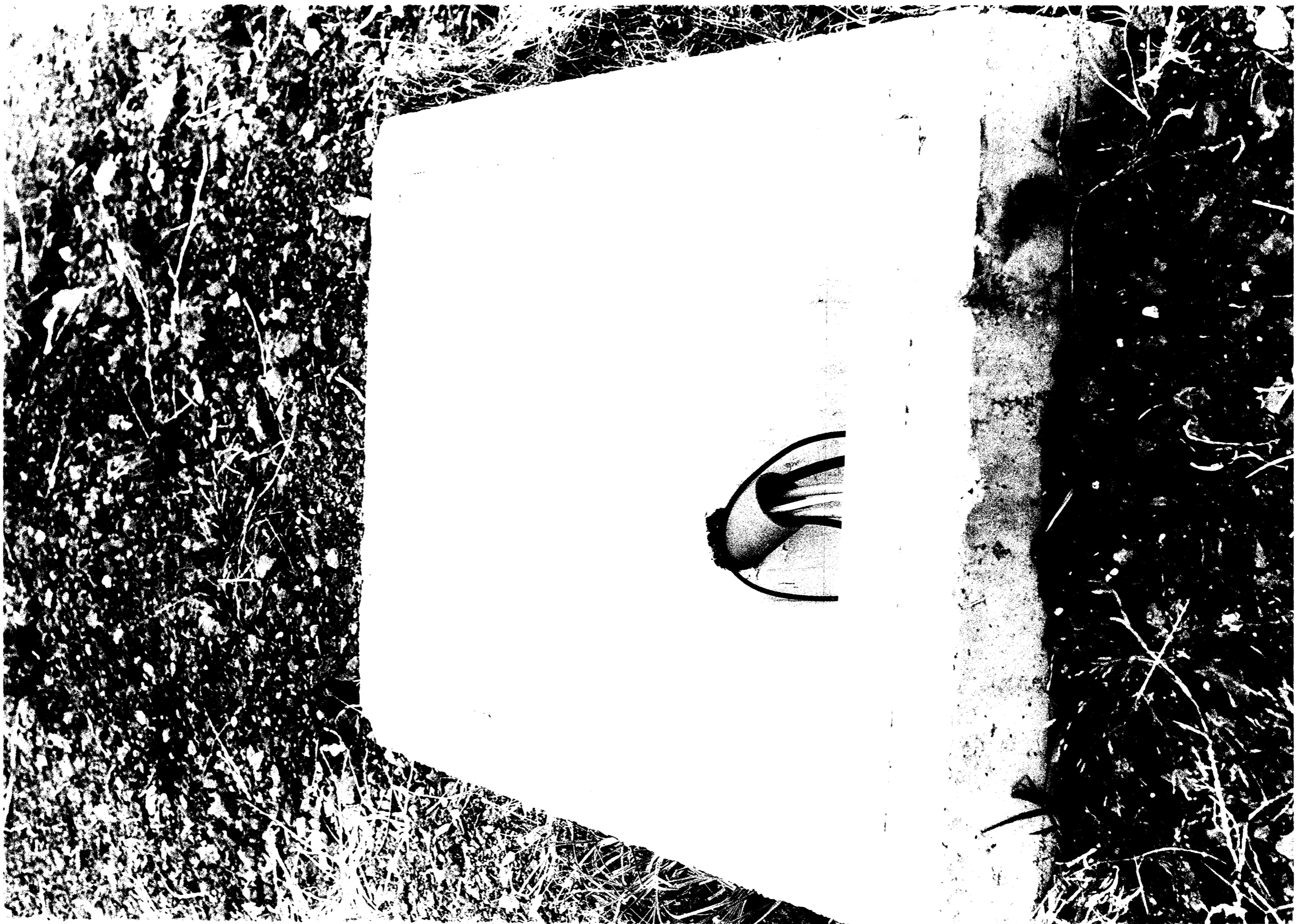


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FIBRE GLASS PIT WITH CONCRETE SURROUNDS

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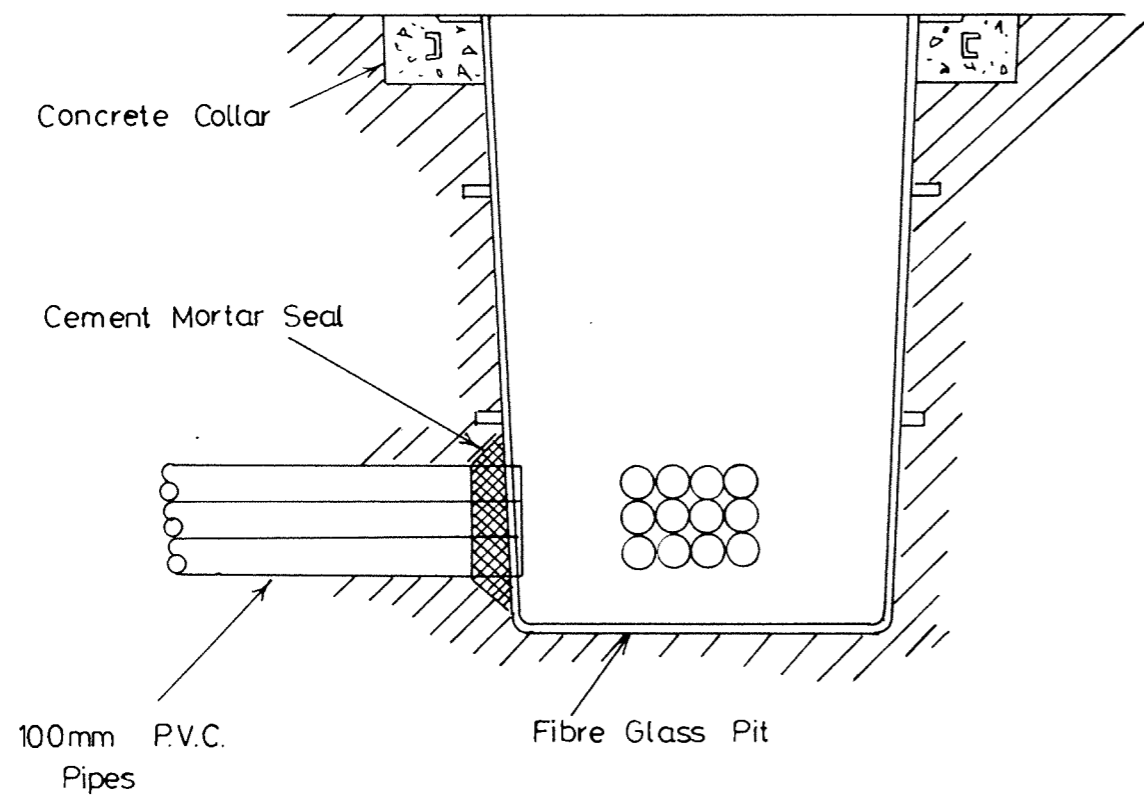


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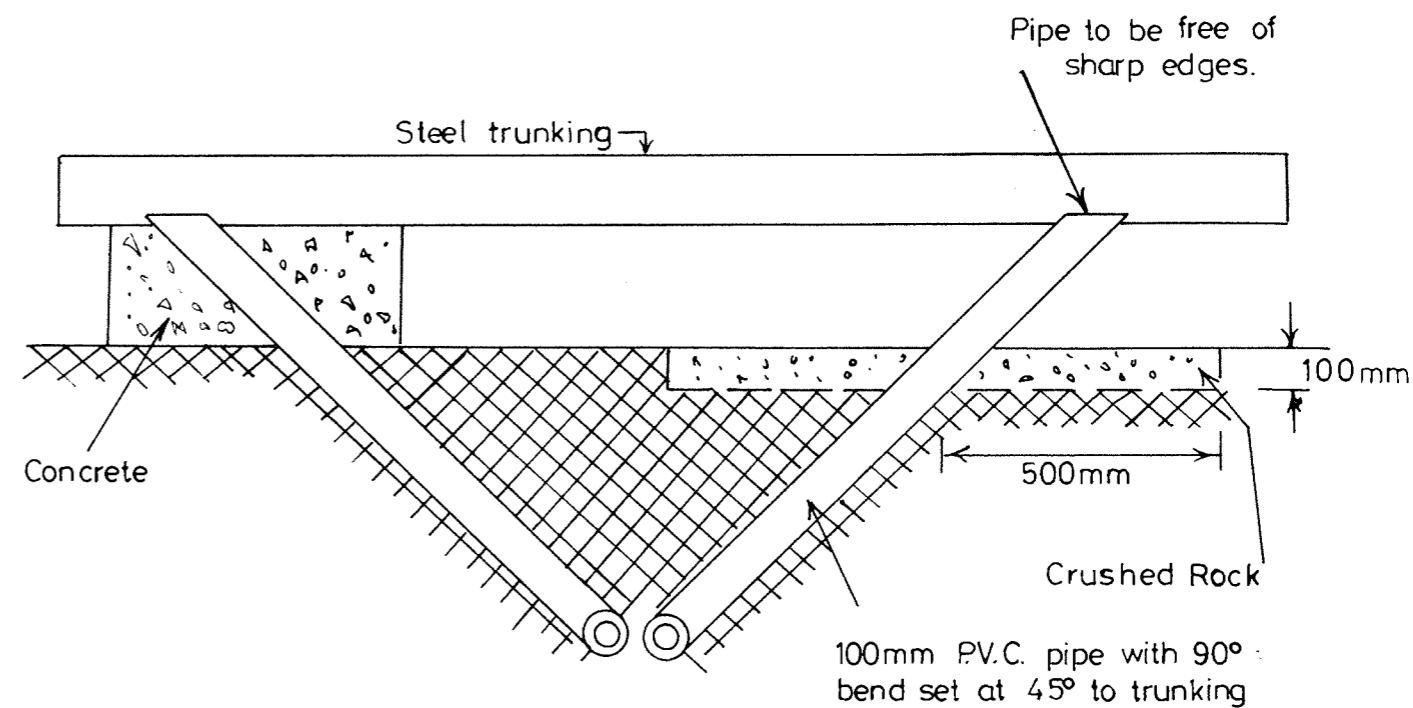
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CABLE PIT



P.V.C. PIPES projecting above ground must be protected from fire hazard by concrete or crushed rock.

PIPE AND TRUNKING HEADER



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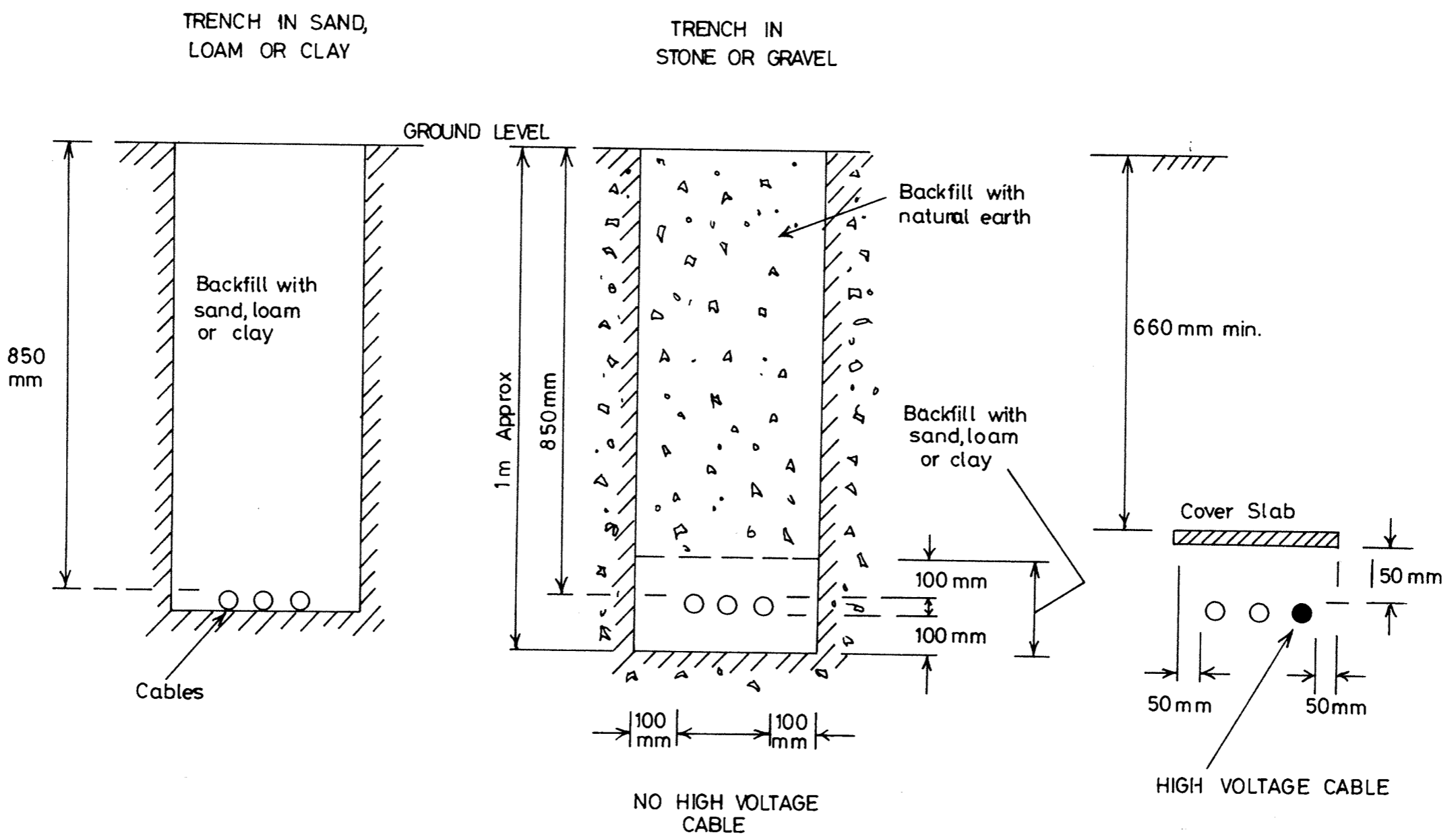
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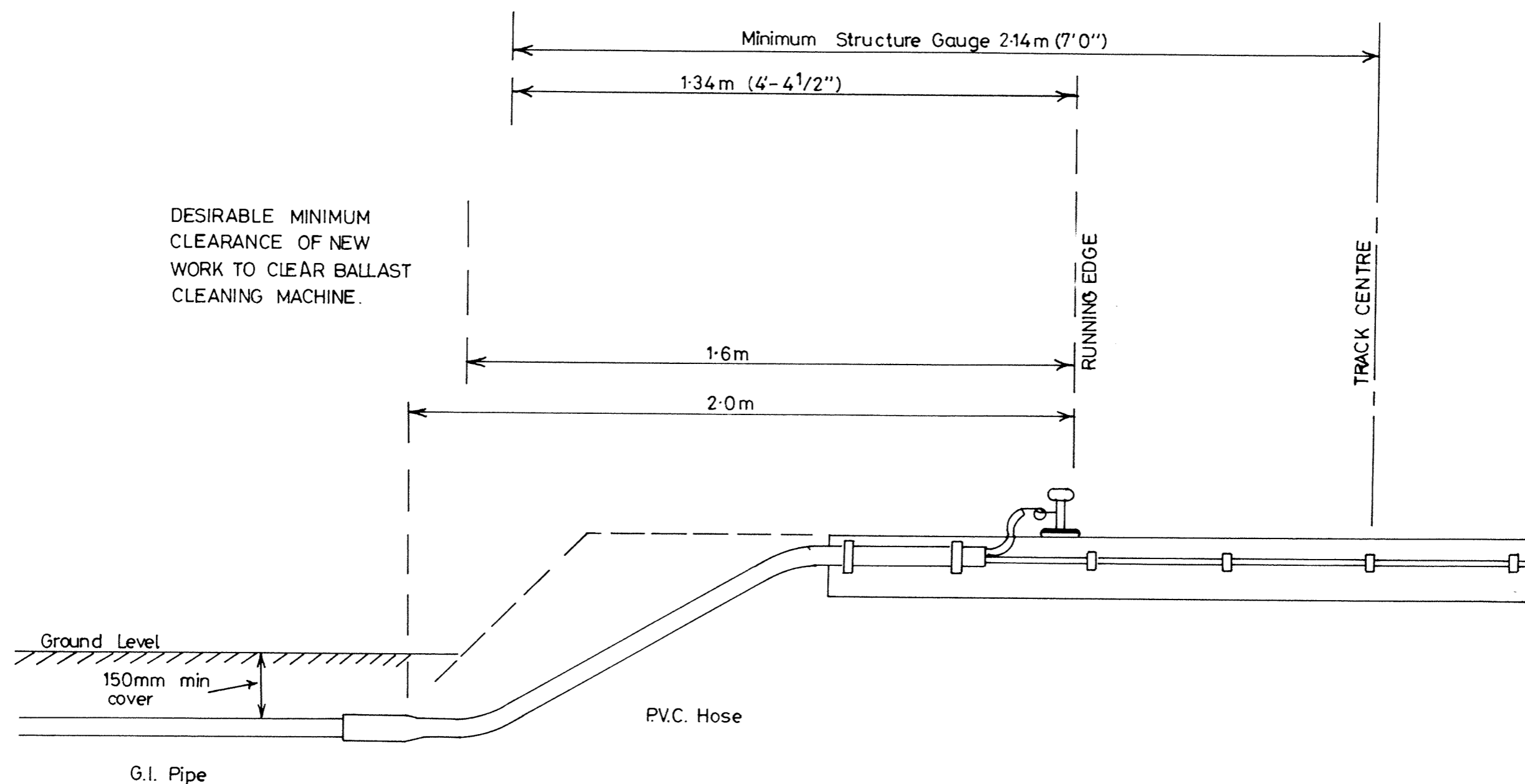
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DIRECT BURIAL OF CABLES





CLEARANCES OF SIGNALLING EQUIPMENT TO CLEAR BALLAST CLEANING MACHINE

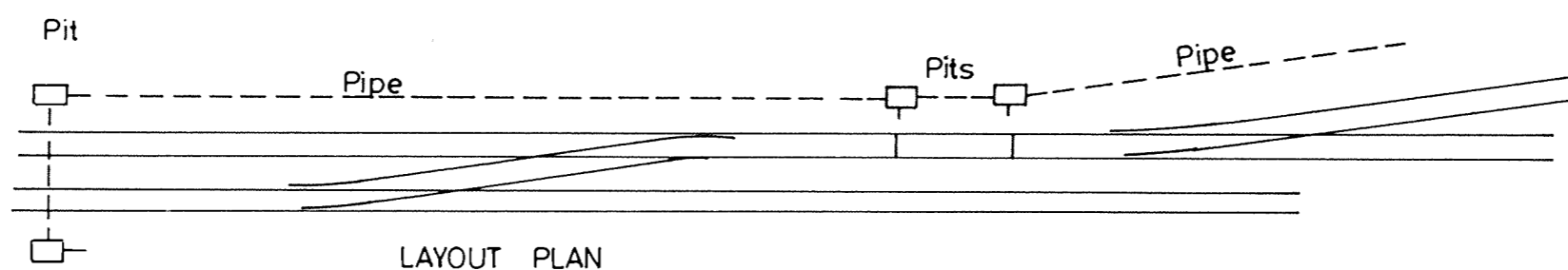
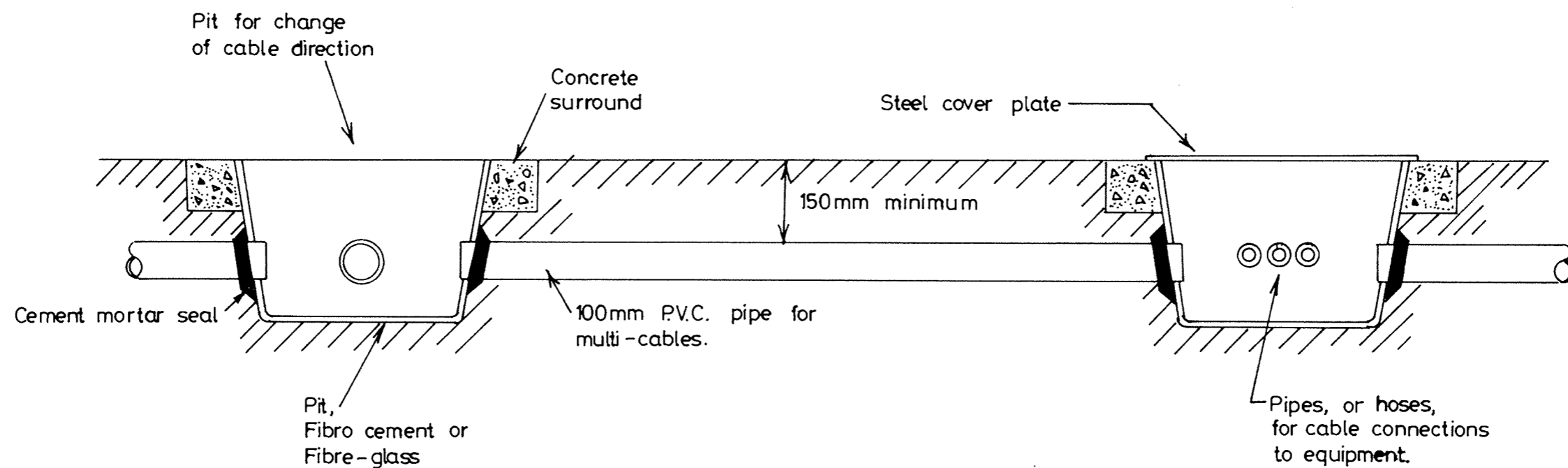


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UNDER GROUND PIT & PIPE CONSTRUCTION FOR LOCAL CABLES PARALLEL TO TRACKS.

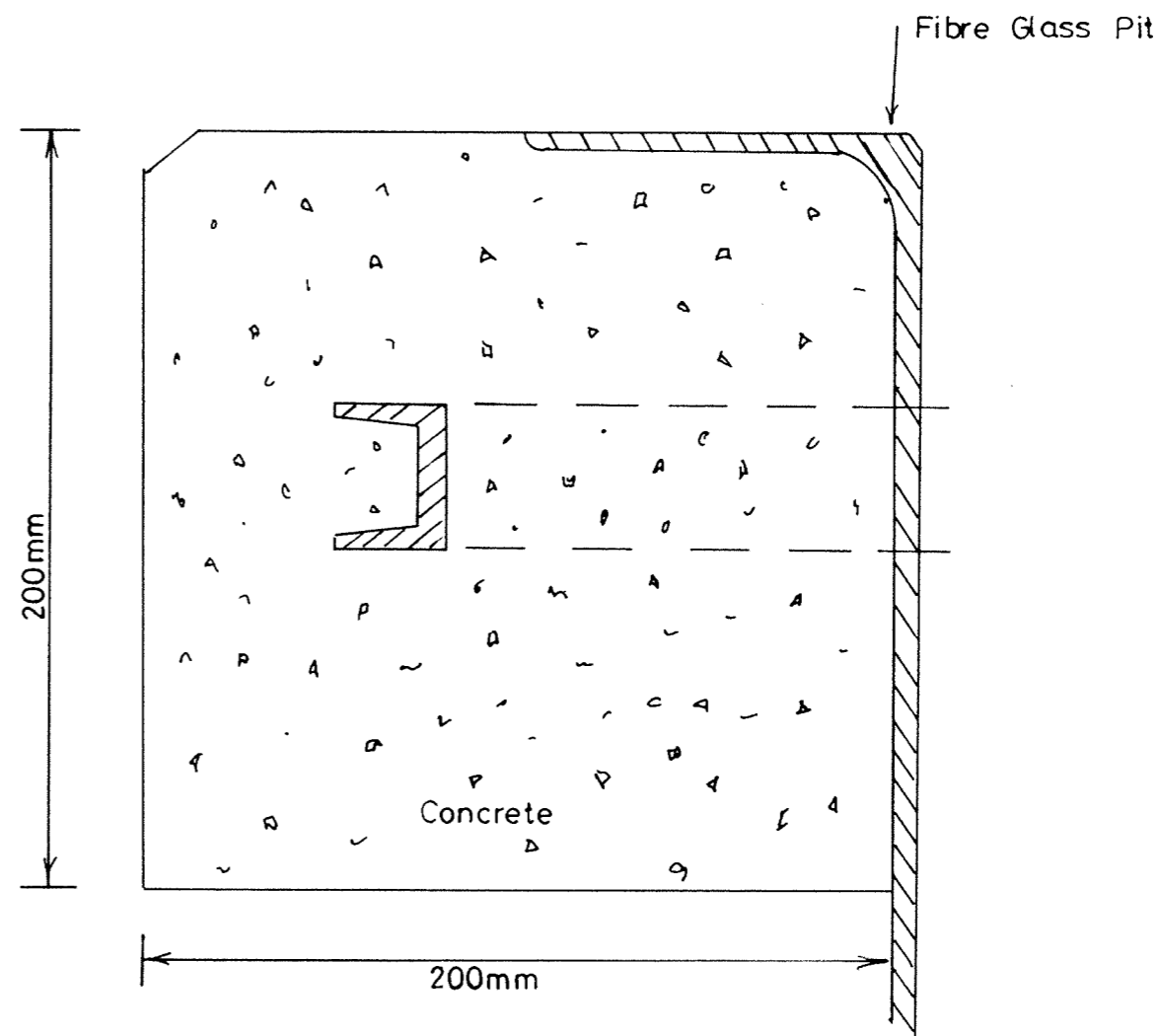
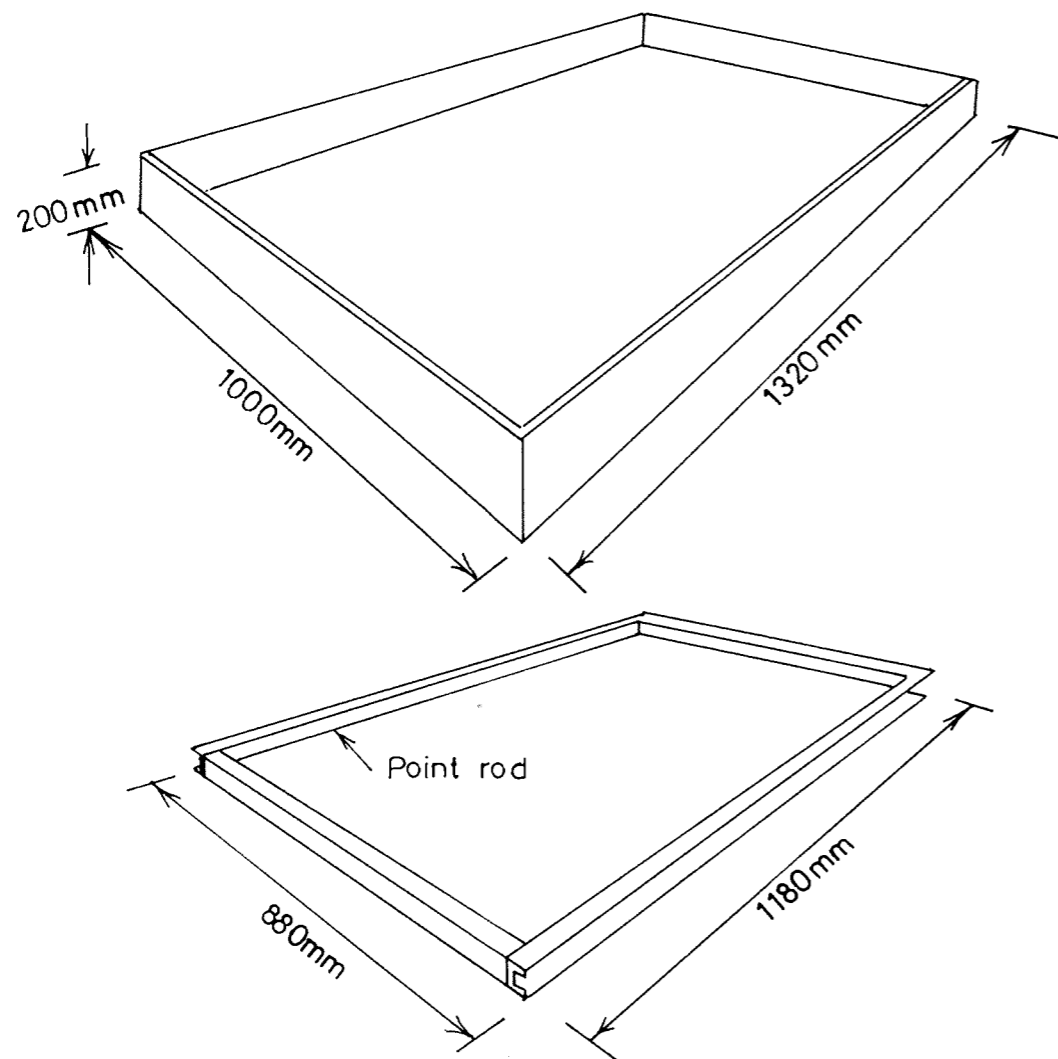


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CABLE PIT (900mm x 600mm)

Concrete collar and point rod re-inforcement.



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