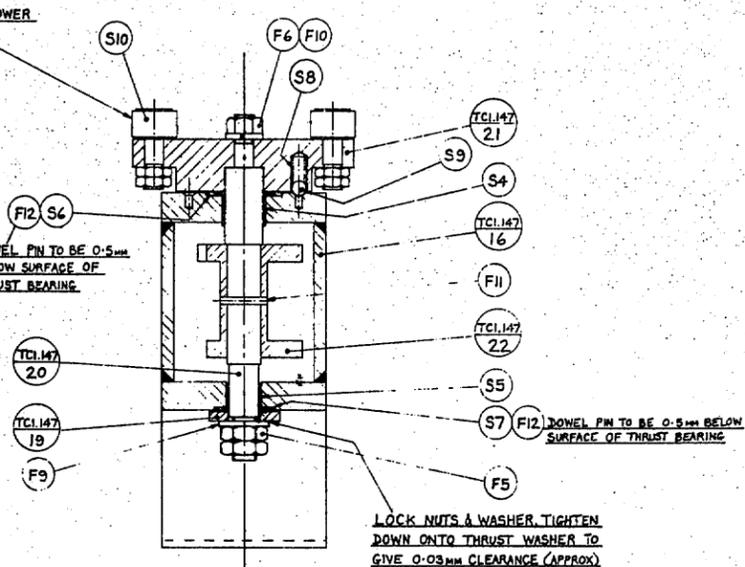
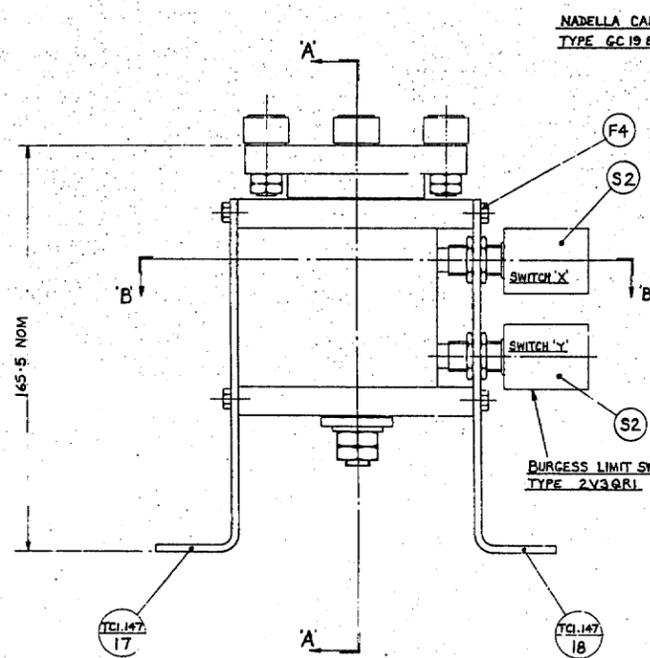
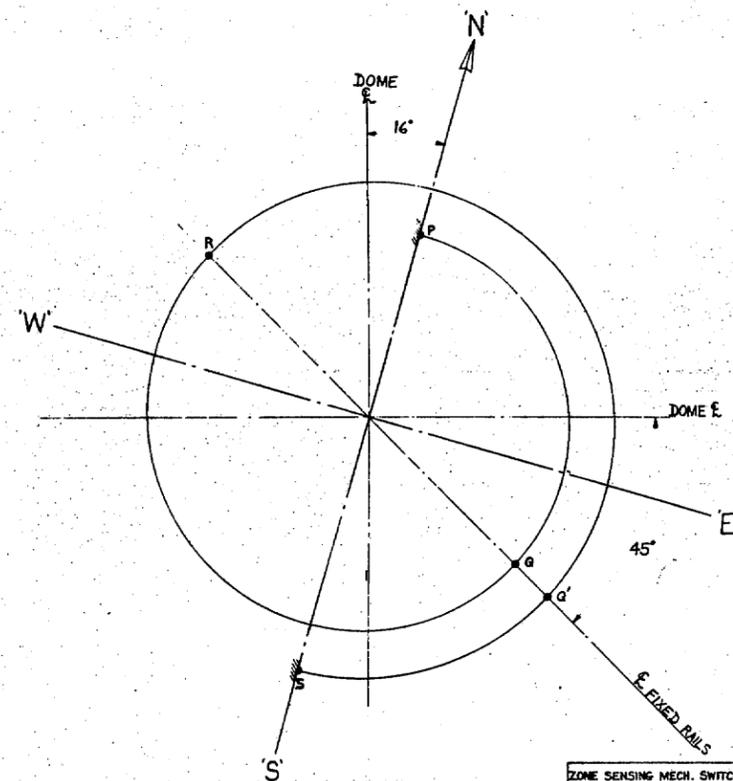


ADJUST SWITCHES TO ENSURE THAT A SWITCHING ACTION OCCURS EVERY 90°
(i.e. AT POSITIONS 'S') BALL LATCH POSITIONS ARE TO BE MID WAY BETWEEN SWITCHING POSITIONS.

SECTION 'B-B'



SECTION 'A-A'

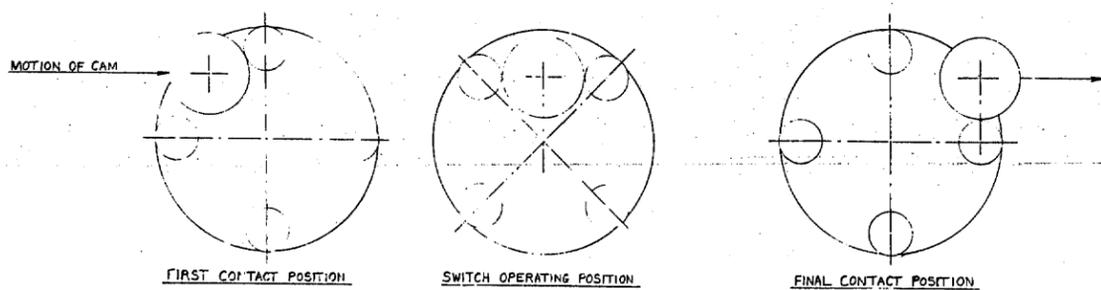


± 270° AZIMUTH ROTATION OF RAILS ABOUT WEST
(NOTE:- THIS IS EQUIVALENT TO ± 270° AZIMUTH ROTATION OF TUBE ABOUT EAST)

ZONE	SWITCH 'X'	SWITCH 'Y'
P TO Q	OFF	OFF
Q TO R	DN OFF	DN ON
R TO S	ON	ON
Q TO S	DN ON	DN OFF

NOTE:- SWITCH 'Y' IS ALSO USED TO IDENTIFY WHICH SET OF LIMIT SWITCHES ARE OPERATIONAL

- i.e. LIMIT SWITCHES AT 'P' FOR ZONE P TO Q TO R
- LIMIT SWITCHES AT 'S' FOR ZONE R TO Q TO S
- HENCE, SWITCH 'Y' AND THE SQUARE-D LIMIT SENSE SWITCH SHOWN ON SHEET 2, PROVIDE A DOUBLE LEVEL OF PROTECTION ON LIMIT SENSE



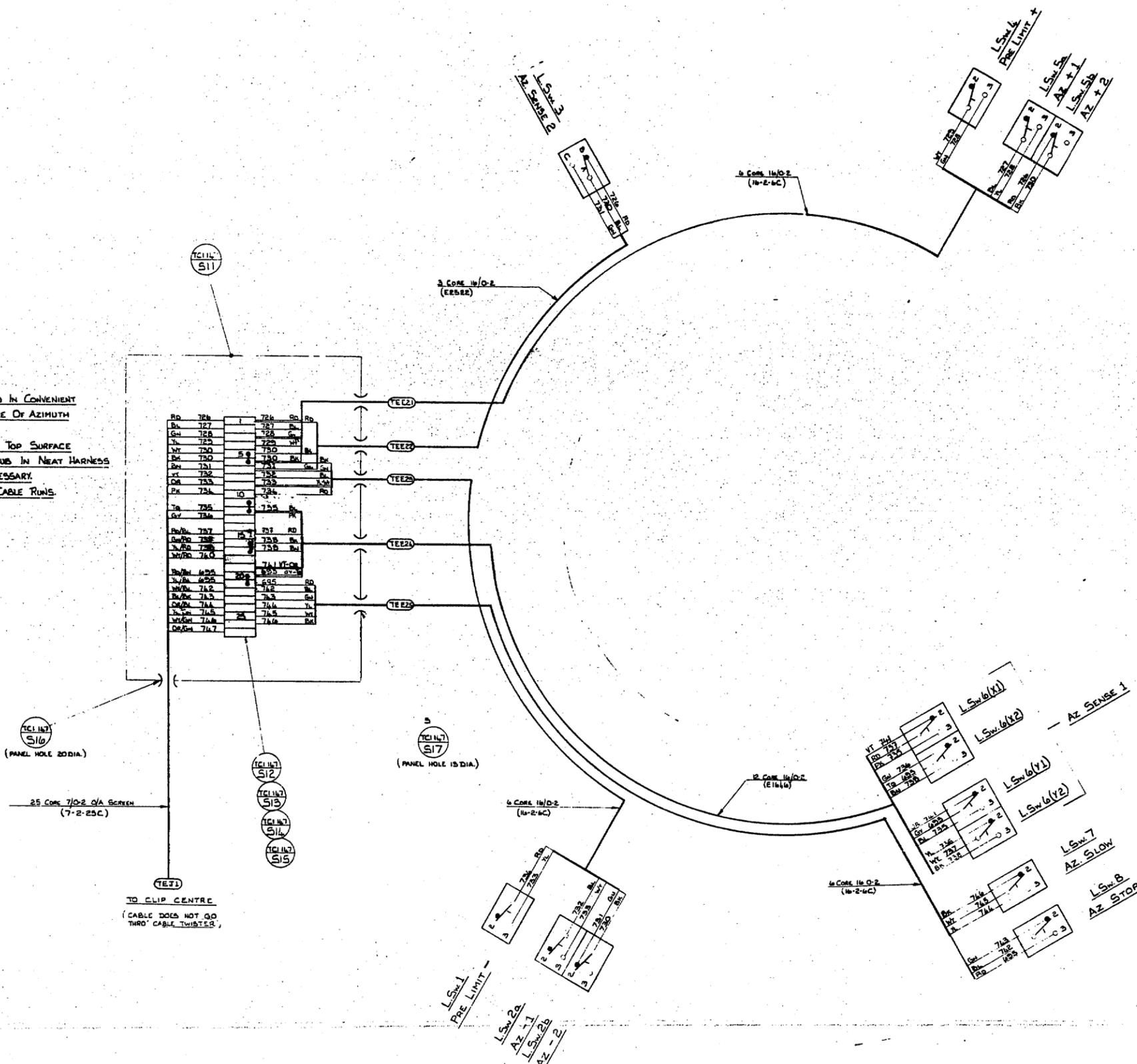
CAM OPERATING SEQUENCE

AS BUILT DRAWINGS
This drawing shows all revisions to this work

APPROVED
DATE

42 METRE WILKIN RAIL - TELESCOPE

NOTE
 BOX TO BE MOUNTED IN CONVENIENT PLACE ON INSIDE FACE OF AZIMUTH GEAR HUB.
 RUN CABLES AROUND TOP SURFACE OF AZIMUTH GEAR HUB IN NEAT HARNESS CLIPPING WHERE NECESSARY.
 DRILL BOX TO SUIT CABLE RUNS.



AS BUILT DRAWINGS
 This drawing shows all revisions to this work.

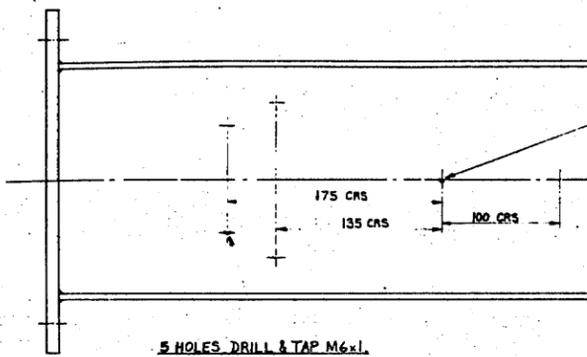
Royal Greenwich Observatory
 Ex-Polus Station
APPROVED
 No. 701.02.15 Rev. B
 Date 18.5.75 by JCB

Royal Greenwich Observatory
 Ex-Polus Station
APPROVED
 No. 701.02.15 Rev. A
 Date 17.04.75 by JCB

CIRCUIT REF TCI 550 01

DATE OF MOD. 11-8-81	DATE OF MOD. 20-6-81	FIRST MADE OR No. 118764	MATERIAL
MODIFIED BY: JCB	MODIFIED BY: JCB	FIRST ISSUE DATE	FINISH
VARIOUS OTHER ATTRIBUTIONS RELEVANT TO AS. SENSE 1	FORM, PBT Laminated On Lamin. Ap. 728 Or L.S.w. 40 HAS AP. 727.	COST ACCOUNT 147	PART No.
DATE OF MOD. MODIFIED BY:	DATE OF MOD. 11-8-81 MODIFIED BY: JCB	TITLE	UNIT No.
	NAME OF L.S.L. & T. ALUMINUM	REINFORCED AXIS L.S.W. WIRING	SCALE
		PROJECT No. TCI.16702 A	NO. OFF PER SET

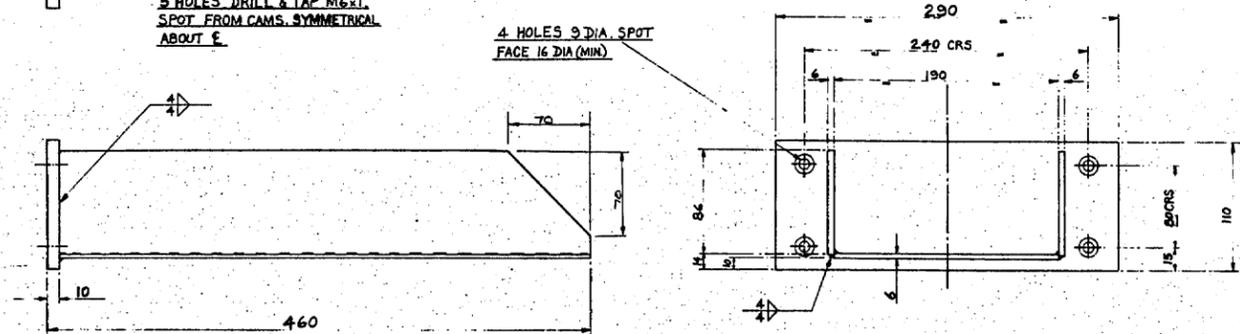
SURFACE FINISH EQUIVALENTS FINISHED 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 THIS DRAWING CONFORMS TO B.S. 308	SURFACE FINISH SYMBOLS DENOTES NOT NECESSARILY MACHINED DENOTES MACHINED	WELD SYMBOLS TO BS 499 PART 2 1969	FABRICATION TOLERANCES DIMENSIONS UP TO 250 ± 0.30 DIMENSIONS FROM 250 TO 2500 ± 0.30 ANGLES ± 1: 600 STRAIGHTNESS/FLATNESS 1: 600	THIS DRAWING IS THE PROPERTY OF HEI PARSONS LTD. AND MUST NOT BE COPIED OR DISCLOSED TO A THIRD PARTY WITHOUT GRUBB PARSONS WRITTEN CONSENT.	GENERAL MACHINING TOLERANCES UNLESS OTHERWISE SPECIFIED UNFINISHED DIMENSIONS ± 0.4 DIMENSIONS WITH OVER ± 0.1 DIMENSIONS WITH UNDER ± 0.1	ALL DIMENSIONS ARE IN MILLIMETRES ANGLES : SCREW THREADS TO B.S. 3643 PART 3 MEDIUM FIT MACHINED DIA CONCENTRIC TO 0.1 T.I.R.	PROJECTION CHECKED 3RD ANGLE APPROVED DATE 8/10/82	DRAWN BY JCB DATE 8/10/82	SCALE TCI.16702 A	GRUBB PARSONS NEWCASTLE UPON TYNE NE6 2YB AZIMUTH AXIS LIMIT SWITCH WIRING	SHEET 1 of 1 TCI.16702.D
								DATE 8/10/82	SCALE TCI.16702 A	GRUBB PARSONS NEWCASTLE UPON TYNE NE6 2YB AZIMUTH AXIS LIMIT SWITCH WIRING	SHEET 1 of 1 TCI.16702.D



NOTES
 1. FABRICATION IN ACCORDANCE WITH BS 5135:1974
 NO STRESS RELIEF IS REQUIRED
 2. GRIT BLAST & PAINT TO PURCHASE SPEC N° 8

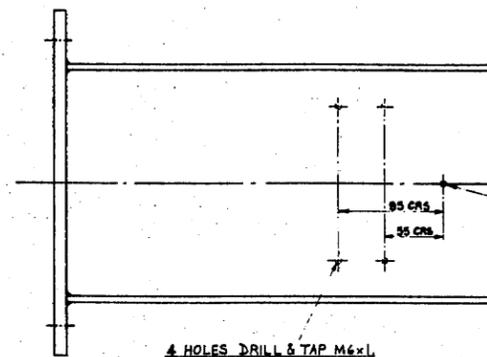
5 HOLES DRILL & TAP M6x1.
 SPOT FROM CAMS. SYMMETRICAL
 ABOUT E

4 HOLES 9 DIA. SPOT
 FACE 16 DIA (MIN)



APPROVED
 No. TCI.147-6 Rev. A
 Date 6.10.82

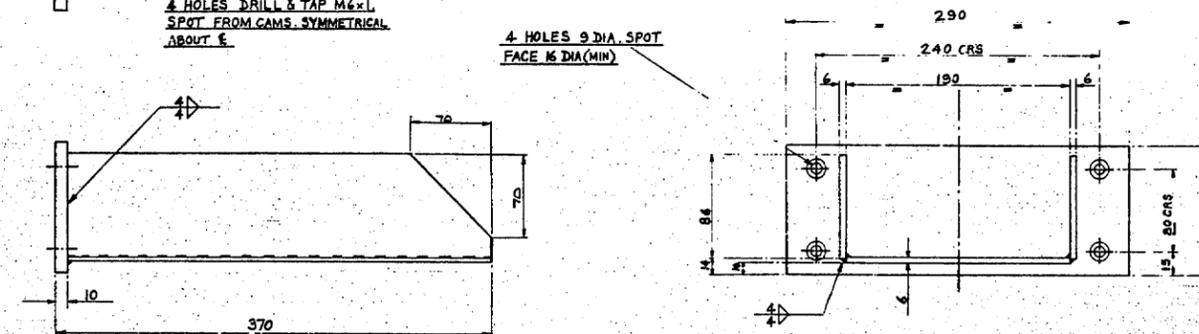
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE CAM BRACKET		
		WEIGHT 13.8 lb	SCALE 1:2	UNIT No. TCI.147.03
		No. OFF PER SET		ISSUE A



NOTES
 1. FABRICATION IN ACCORDANCE WITH BS 5135:1974
 NO STRESS RELIEF IS REQUIRED
 2. GRIT BLAST & PAINT TO PURCHASE SPEC N° 8

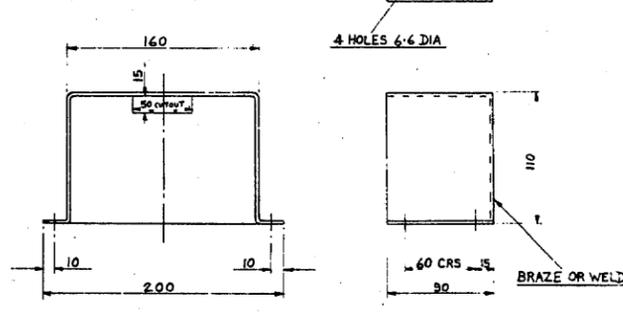
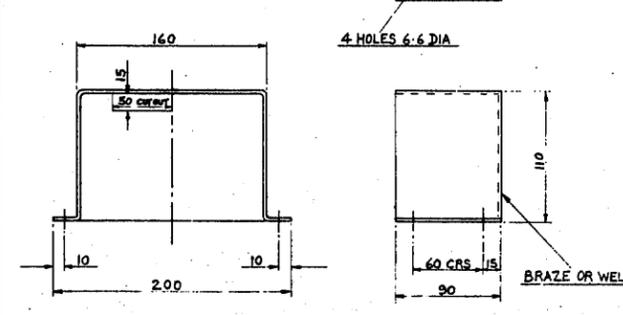
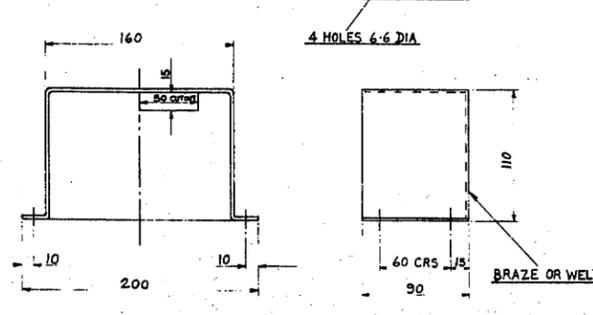
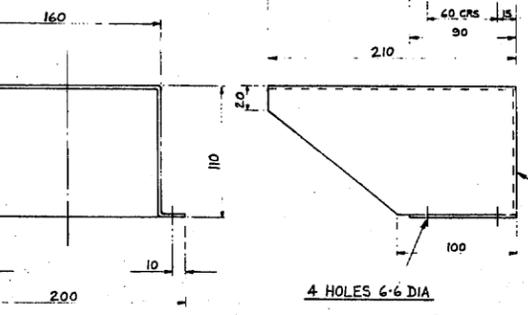
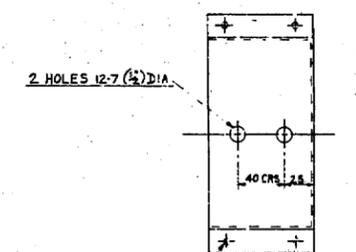
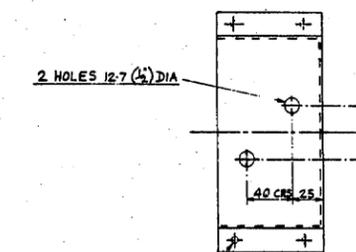
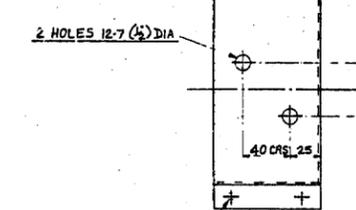
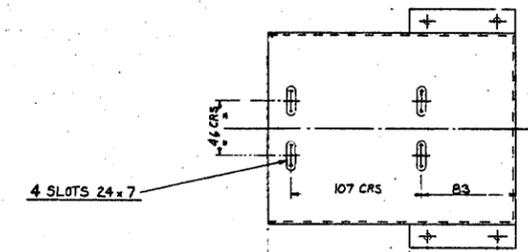
4 HOLES DRILL & TAP M6x1.
 SPOT FROM CAMS. SYMMETRICAL
 ABOUT E

4 HOLES 9 DIA. SPOT
 FACE 16 DIA (MIN)



APPROVED
 No. TCI.147-6 Rev. A
 Date 6.10.82

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE CAM BRACKET		
		WEIGHT 13.8 lb	SCALE 1:2	UNIT No. TCI.147.04
		No. OFF PER SET		ISSUE A



APPROVED
 No. TCI.147-5 Rev. A
 Date 6.10.82

APPROVED
 No. TCI.147-7 Rev. A
 Date 6.10.82

AS BUILT DRAWINGS
 This drawing shows all revisions to this work

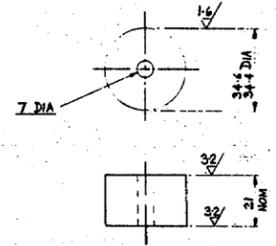
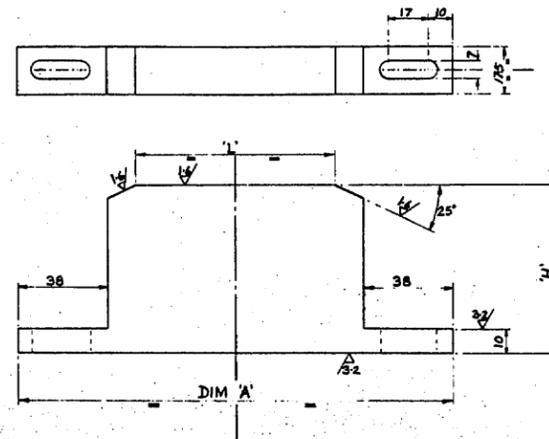
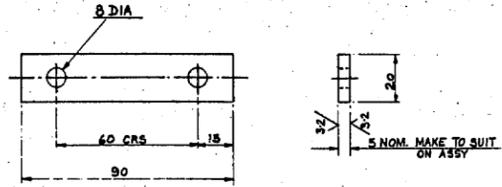
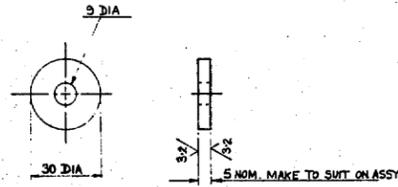
APPROVED
 No. TCI.147-7 Rev. A
 Date 6.10.82

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SWITCH BRACKET (UNIT SENSE)		
		WEIGHT 14.8 lb	SCALE 1:2	UNIT No. TCI.147.05
		No. OFF PER SET		ISSUE A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SWITCH BRACKET (0' LIMIT)		
		WEIGHT 13.3 lb	SCALE 1:2	UNIT No. TCI.147.06
		No. OFF PER SET		ISSUE A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SWITCH BRACKET (100' LIMIT)		
		WEIGHT 13.3 lb	SCALE 1:2	UNIT No. TCI.147.07
		No. OFF PER SET		ISSUE A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL	STYL. BS 5135-43A
		FIRST ISSUE DATE	FINISH	
		COST ACCOUNT 147	PART No.	
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SWITCH BRACKET (PWR)		
		WEIGHT 13.3 lb	SCALE 1:2	UNIT No. TCI.147.08
		No. OFF PER SET		ISSUE A



UNIT N°	CAM FUNCTION	DIM L' (TRACK LENGTH)	HEIGHT 'H'	DIM A'
TCL.147.11A	0° PRE-LIMIT & 180° PRE-LIMIT	84	62	184
TCL.147.12A	-2° ULT LIMIT & 182° ULT LIMIT	84	55	184
TCL.147.13A	119° PARK - SLOW	84	62	184
TCL.147.14A	119° PARK - STOP	4	62	134

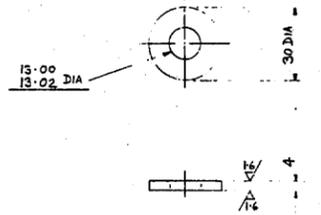
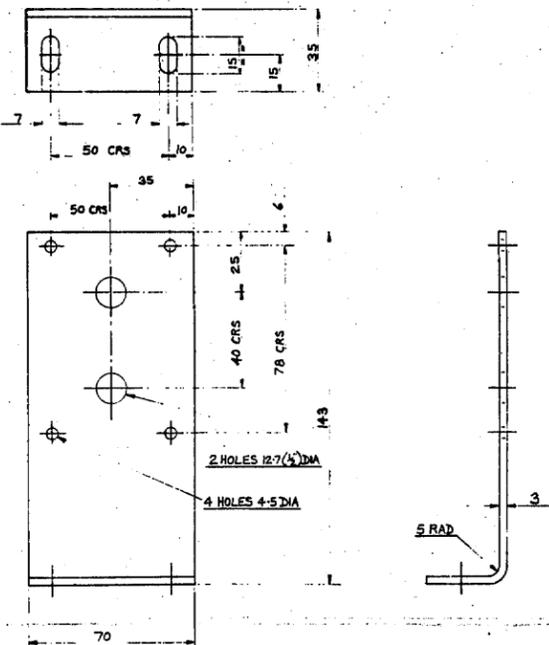
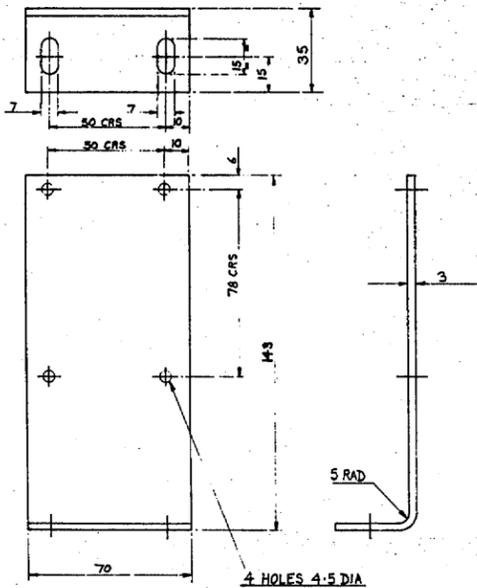
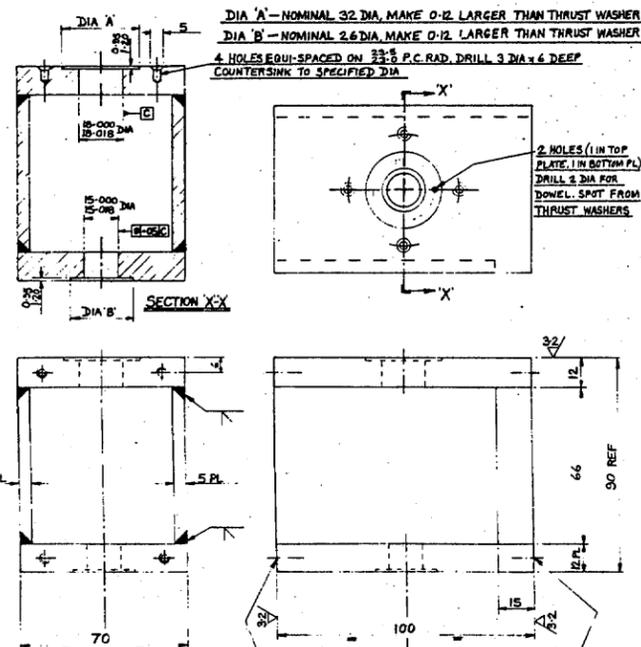
HARDEN TO R-55-58 AFTER SHOP ASSEMBLY & ADJUSTMENT.

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SHM	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 8	1:1 TCL.147.09 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SHM	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 8	1:1 TCL.147.10 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SWITCHING CAM	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 1	1:1 TCL.147.11-14 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE SENSING CAM	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 3	1:1 TCL.147.15 A



REMOVE SHARP EDGES

AS BUILT DRAWINGS
This drawing shows all relations to the work

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE ZONE SENSING MECH. BODY	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 1	1:1 TCL.147.16 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE BRACKET	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 1	1:1 TCL.147.17 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE BRACKET	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 1	1:1 TCL.147.18 A

DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	FIRST MADE ORD No. 118764	MATERIAL STEEL
		FIRST ISSUE DATE	FINISH
		COST ACCOUNT 147	PATT No.
DATE OF MOD MODIFIED BY	DATE OF MOD MODIFIED BY	TITLE THRUST WASHER	
		WEIGHT	SCALE UNIT No. ISSUE
		No. OFF PER SET 1	1:1 TCL.147.19 A

4.2 METRE WILLIAM HERSCHEL TELESCOPE
OBSERVATORY DEL. MOUNTING OF THE TELESCOPE
RALPH GREENWICH OBSERVATORY

