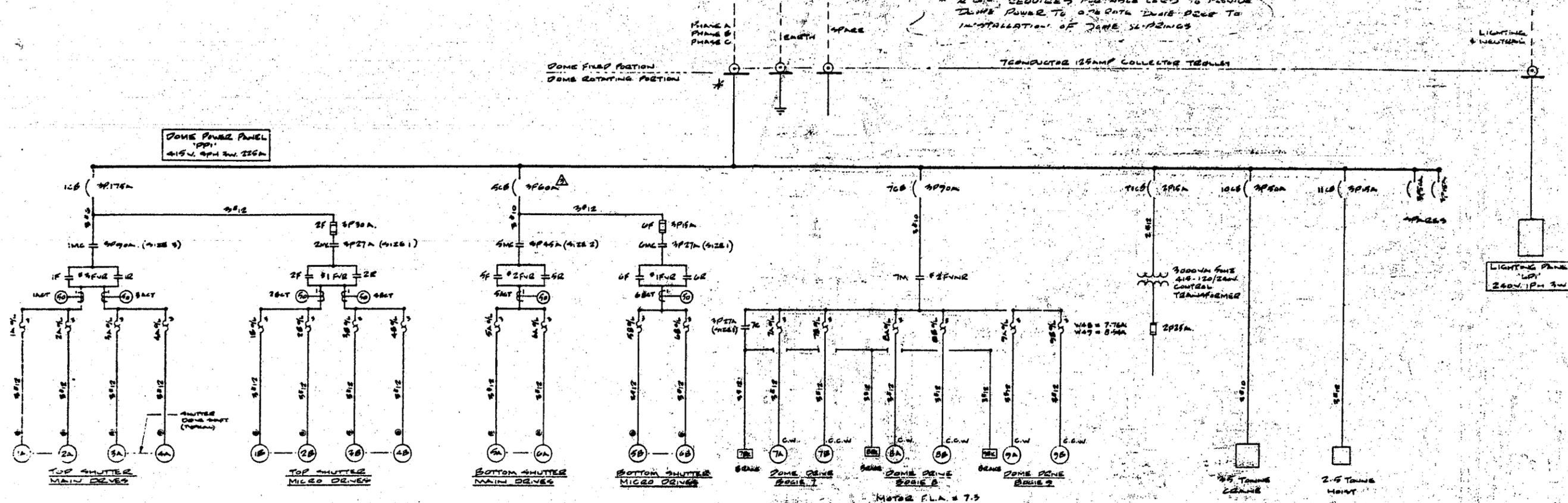


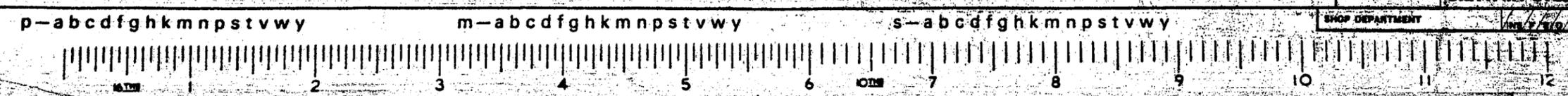
CONSTRUCTION NOTE  
 \* 2 C.B. REQUIRES 5 PLATEABLE CABLES TO PROVIDE  
 DOME POWER TO 0.75 TONNE DRIVE BESS TO  
 INSTALLATION OF JUNE SLIDINGS



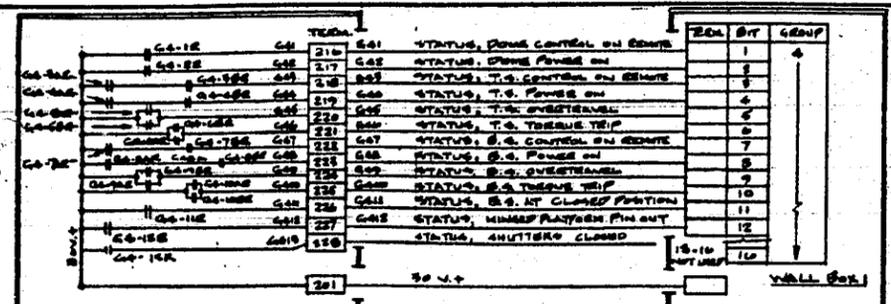
SHUTTER DRIVES PROTECTION RATINGS & SETTINGS			
<b>MAIN DRIVES</b>		<b>MICRO DRIVES</b>	
MOTOR FULL LOAD AMPs	17.2	MOTOR FULL LOAD AMPs	3.8
MOTOR OPERATING AMPs 150% (LIMITED BY DEVICE 50)	8.6	MOTOR OPERATING AMPs 150% (LIMITED BY DEVICE 50)	1.9
DEVICE 50 @ 15% F.L.A. X2	22.4	DEVICE 50 @ 15% F.L.A. X2	9.8
DEVICE 50 ADJUST. RANGE	10.4-30.0	DEVICE 50 ADJUST. RANGE	2.1-6.1
OVERLOAD @ 75% F.L.A.	12.7 (W50-13)	OVERLOAD @ 75% F.L.A.	2.1 (W50-216)

- LEGEND**
- ⊖ CIRCUIT BREAKER
  - FUSE
  - ⊕ MOTOR CONTACTOR
  - ⊕ FULL VOLTAGE NON-REVERSING STARTER
  - ⊕ FULL VOLTAGE REVERSING STARTER
  - ⊕ MOTOR OVERLOAD ELEMENT
  - ⊕ INSTANTANEOUS CURRENT TRIP RELAY
  - ⊕ DRIVE MOTOR
  - ⊕ DOME FIXED TO ROTATING COLLECTOR TROLLEY
  - ⊕ SHUTTER CABLE CARRIER

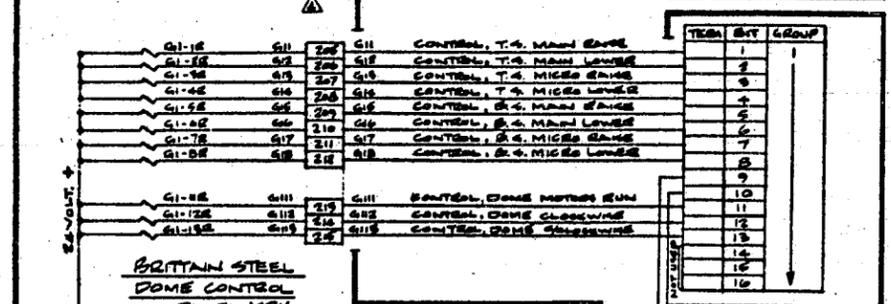
- DRAWING LIST**
- Y1 ONE LINE DIAGRAM
  - Y2 INTERFACER
  - Y3 SCHEMATICS
  - Y4 PANEL LAYOUTS
  - Y5 CONTROL PANEL LAYOUT
  - Y6 WIRING & POWER PANELS WIRING
  - Y7 CONTROL PANEL WIRING
  - Y8 INTERCONNECTION DIAGRAM
  - Y9 PLAN OF DOME
  - Y10 ELEVATION OF DOME



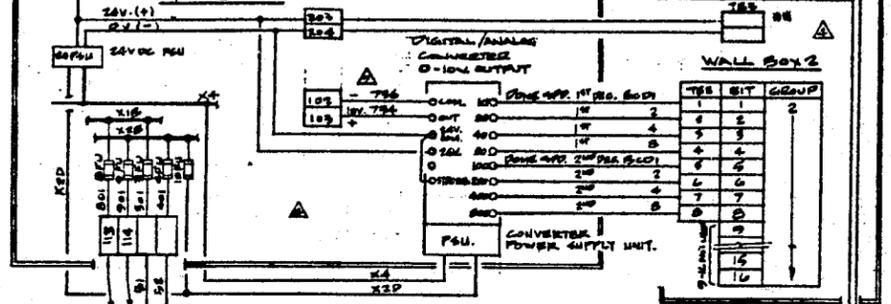
	MATERIAL: G4021 (40W) 1/2"	DETAILS: ELECTRICAL
	REF. SPEC: STD.	SEE MEMO
OPEN NOTES: 5/1/57		FOR 4.2 TELESCOPE DOME LA DRAWING
DRAWN: Y	DATE: 27/1/57	REV: 2
BRITAIN STEEL LTD. 401 SALTS AVE. NEW WESTMINSTER, B.C.		SHOP DEPARTMENT



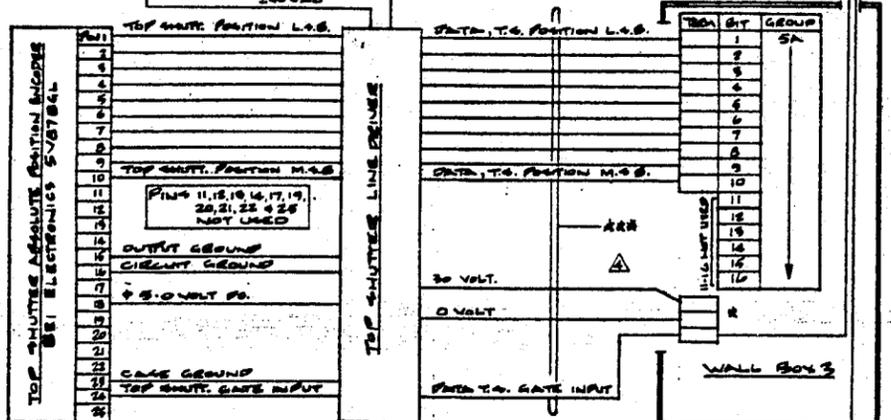
INTERFACE  
STATUS  
SIGNALS



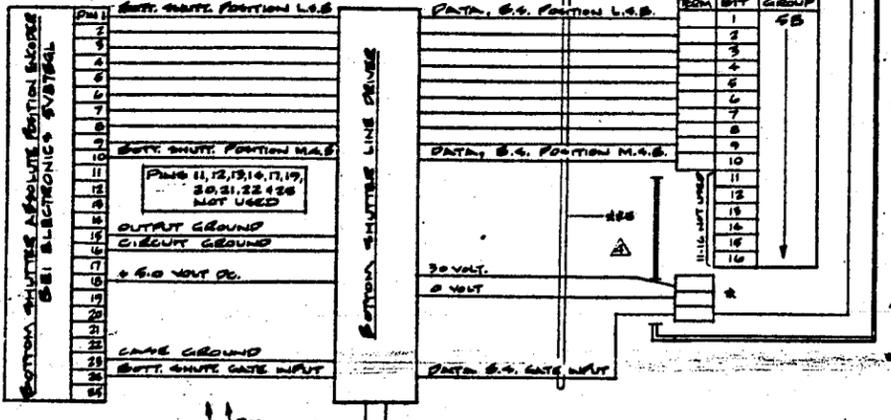
INTERFACE  
CONTROL  
SIGNALS



INTERFACE  
DOME  
SPEED



INTERFACE  
TOP SHUTTER  
POSITION



INTERFACE  
BOTTOM SHUTTER  
POSITION

\* THESE TERMINALS  
CONNECT TO SPACE TERMINALS  
TO L.V. LINE

10 COPS 16/25 MM, SCOTCHD 45MM,  
OUTER PVC ANCHORED CABLES TO BS  
SUPPLIED & CONNECTED BY B.G.S.  
INSTALLED BY BRITAIN.

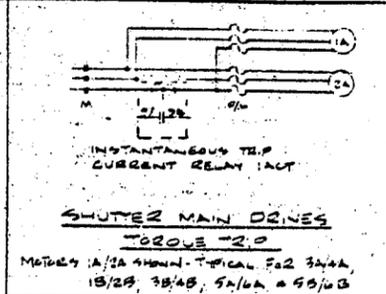
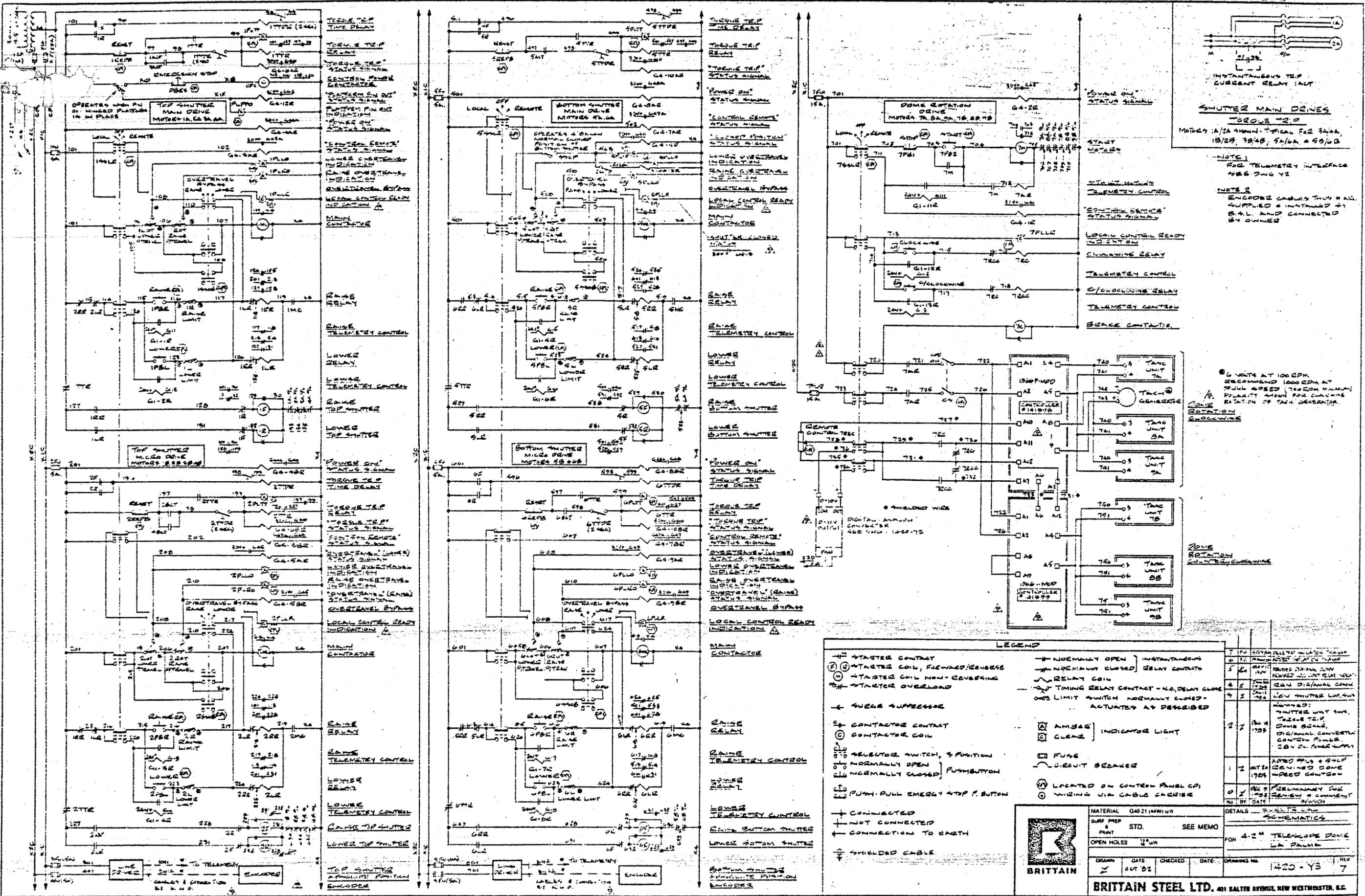
REV	DATE	BY	DESCRIPTION
6	20/11/82	WJ	CHANGED WIRE TO 100.010
5	19/11/82	WJ	CHANGED WIRE TO 100.010
4	19/11/82	WJ	ADDED 24VDC & T.S. CONTROLLED SHUTTER & 24VDC CONTROLLED SHUTTER TO LINE CABLE AND 30V TO LINE CABLE AND 30V TO LINE CABLE
3	19/11/82	WJ	REMOVED ORIGINAL CONNECTOR
2	19/11/82	WJ	REMOVED ORIGINAL CONNECTOR FROM D.C. GATE INPUTS WIRE W.B.S.
1	19/11/82	WJ	REMOVED DOME SPEED CONTROL. ADDED GA-112 & GA-113
0	19/11/82	WJ	PRELIMINARY FOR REVIEW & COMMENT

**BRITAIN**

MATERIAL: G421 (400) WJ  
SURF. PREP. & PAINT: STD.  
OPEN HOLES: 3/16"

SEE MEMO  
FOR 4.2M TELESCOPE DOME  
LA PALMA

BRITAIN STEEL LTD. 401 SALTERS AVENUE, NEW WORTHINGTON, L.C.



**SHUTTER MAIN DRIVES TORQUE TRIP**  
 MODEL 1A/2A 486MM TYPICAL FOR 3/4IN 15/20, 35/40, 50/60 & 60/60

NOTE 1 FOR TELEMETRY INTERFACE 486 DWS Y2

NOTE 2 ENCODED CABLES THIS FAC SUPPLIED & INSTALLED BY B.S.L. AND CONNECTED BY OWNER

6 VOLTS AT 1000 RPM RECOMMEND 1000 RPM AT FULL SPEED (TACHOMETER) POLARITY MUST BE CHECKED AT POSITION OF TACH GENERATOR

ZONE ROTATION COUNTERS, CLOCKWISE

**LEGEND**

STARTER CONTACT	NORMALLY OPEN	INSTANTANEOUS
STARTER COIL, FORWARD/REVERSE	NORMALLY CLOSED	RELAY CONTACTS
STARTER COIL NON-REVERSE	RELAY COIL	RELAY CONTACT - NO DELAY CLOSE
STARTER OVERLOAD	STOP LIMIT SWITCH NORMALLY CLOSED	ACTUATES AS DESCRIBED
FUSE SUPPRESSOR	AMPS	INDICATOR LIGHT
CONTACTOR CONTACT	CLEAR	
CONTACTOR COIL	FUSE	CIRCUIT BREAKER
SELECTOR SWITCH, 3 POSITION		
NORMALLY OPEN PUSHBUTTON		
NORMALLY CLOSED PUSHBUTTON		
PUSH-PULL EMERGENCY STOP BUTTON		
CONNECTED		
NOT CONNECTED		
CONNECTION TO EARTH		
SHIELDED CABLE		

**BRITAIN**

MATERIAL	G4021 (44W) UN	DETAILS	SEE LIST OF SCHEMATICS
SURF PREP & PAINT	STD.	SEE MEMO	
OPEN HOLES	12" UN		
DRAWN	DATE	CHECKED	DATE
Z	OUT 82		
DRAWING NO. 1420-Y3		REV. 7	

**BRITAIN STEEL LTD.** 401 SALTER AVENUE, NEW WESTMINSTER, E.C.

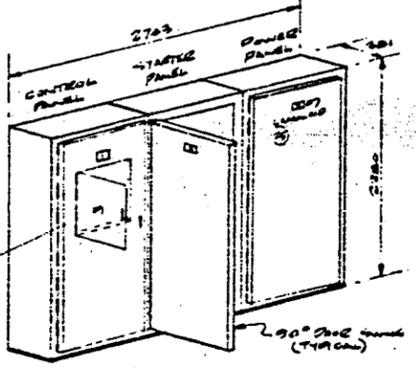
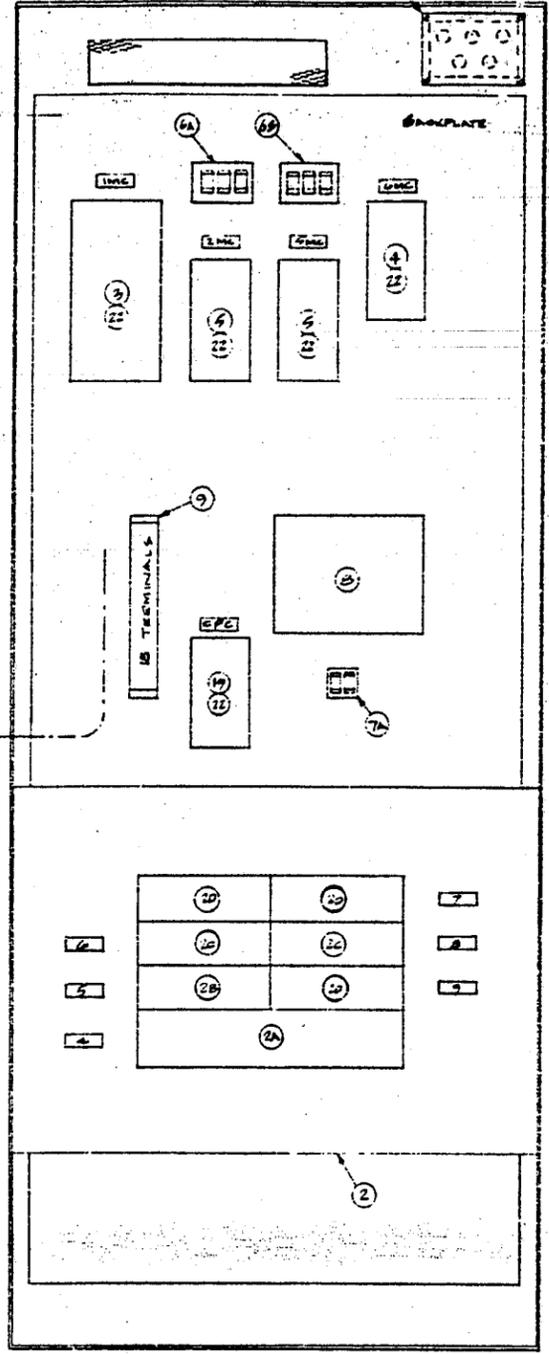
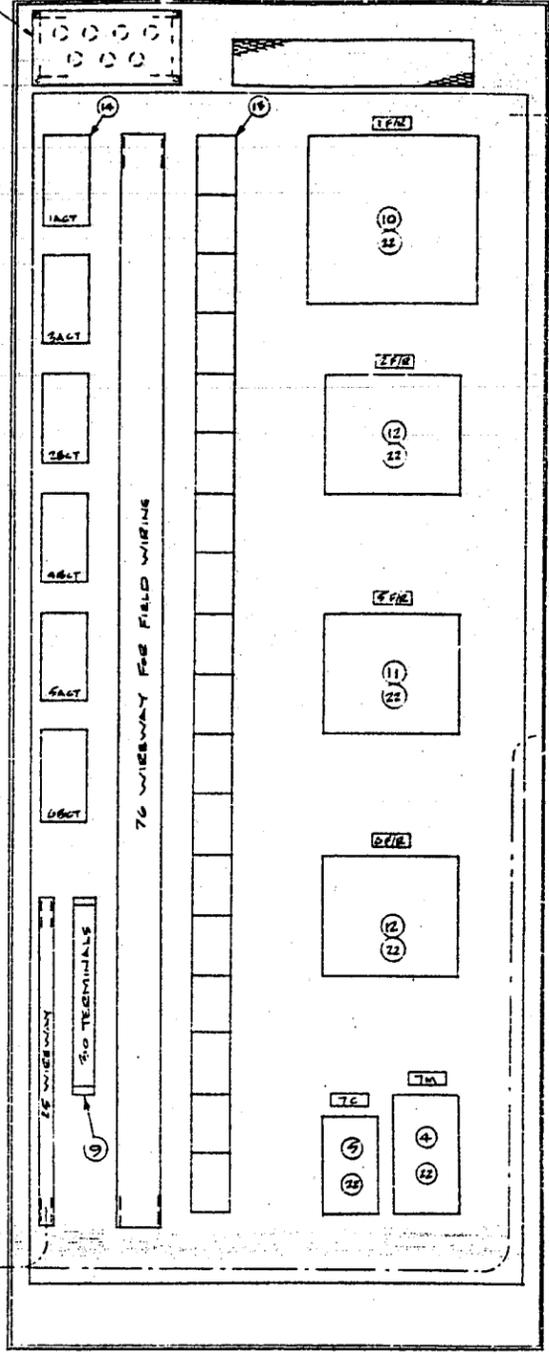
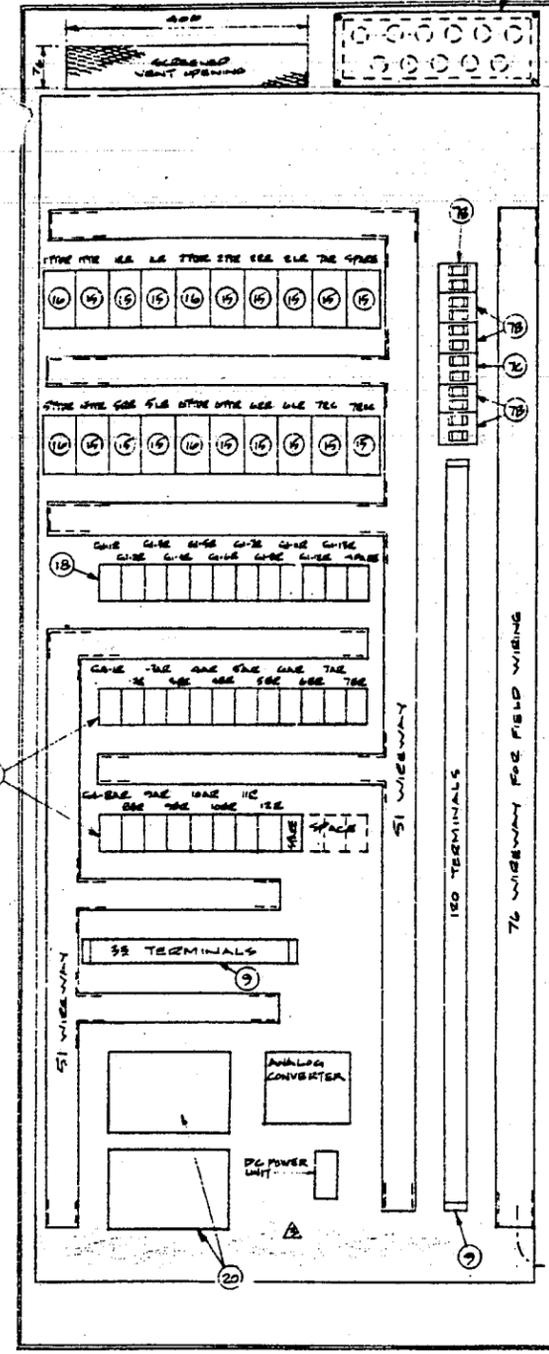
CUT-OUT & REMOVABLE PLATE WITH 11-25KΩ FOR CABLE CONNECTORS.

CUT-OUT AND REMOVABLE PLATE WITH 7-25KΩ FOR CABLE CONNECTORS.

CUT-OUT AND REMOVABLE PLATE WITH 6-25KΩ FOR CABLE CONN.

BILL OF MATERIAL

ITEM QTY	DESCRIPTION	CATALOGUE NO.
1 9	STEEL ENCLOSURE 1500MM HIGH X 1000MM DEEP C/W FINISHED DOOR & BACKPLATE	VENTILATION COP TYPE
2 1	CIRCUIT BREAKER DISTRIBUTION ASSEMBLY 415V 3PH 3W 225 AMP 50HZ	
2A 1	175 AMP 3P CIRCUIT BREAKER	ALLEN BRADLEY BUL 702
2B 1	90 AMP 3P CIRCUIT BREAKER	ALLEN BRADLEY BUL 702
2C 2	40 AMP 3P CIRCUIT BREAKER	ALLEN BRADLEY BUL 702
2D 2	15 AMP 3P CIRCUIT BREAKER	ALLEN BRADLEY BUL 702
3 1	415V 4 MOTOR CONTACTOR 415V 50HZ 3P COIL VOLTAGE 110V 50HZ	ALLEN BRADLEY BUL 702
4 2	415V 2 MOTOR CONTACTOR 415V 50HZ 3P COIL VOLTAGE 110V 50HZ	ALLEN BRADLEY BUL 702
5 3	415V 1 MOTOR CONTACTOR 415V 50HZ 3P COIL VOLTAGE 110V 50HZ	ALLEN BRADLEY BUL 702
6A 1	000V 3P FUSEHOLDER C/W 30A MCB FUSES	BRITANNIA BUL 702
6B 1	000V 3P FUSEHOLDER C/W 15A MCB FUSES	BRITANNIA BUL 702
7A 1	120V 2P FUSEHOLDER C/W 25A FUSES	BRITANNIA BUL 702
7B 1	120V 2P FUSEHOLDER C/W 15A FUSES	BRITANNIA BUL 702
7C 1	20V 2P FUSEHOLDER C/W 2A FUSES	BRITANNIA BUL 702
8 1	3000VA CONTROL TRANSFORMER 415-110/220V 50HZ	HAMMUND
9 4	TERMINAL BLOCK ASSEMBLY	ALLEN BRADLEY BUL 702
10 1	SIZE 3 FULL VOLTAGE REV TAPER 415V 50HZ 3PH WITHOUT LOADS COIL 110V 50HZ	ALLEN BRADLEY BUL 702
11 1	SIZE 2 FULL VOLTAGE REV STARTER 415V 50HZ 3PH WITHOUT LOADS COIL 110V 50HZ	ALLEN BRADLEY BUL 702
12 2	SIZE 1 FULL VOLTAGE REV STARTER 415V 50HZ 3PH WITHOUT LOADS COIL 110V 50HZ	ALLEN BRADLEY BUL 702
13 10	3 POLE BLOCK TYPE OVERLOADS SIZE 1 OPEN TYPE MANUAL RESET	ALLEN BRADLEY BUL 702
14 6	INSTANTANEOUS TRIP CURRENT RELAY OPEN TYPE 415V 50HZ	ALLEN BRADLEY BUL 702
15 16	CONTROL RELAY 110V 50HZ COIL	ALLEN BRADLEY BUL 702
16 4	TIMING RELAY - DELAY UPON ENERGATION 110V 50HZ COIL	ALLEN BRADLEY BUL 702
17 21	CONTROL RELAY PLUG-IN TYPE 110V 50HZ COIL	ALLEN BRADLEY BUL 702
18 12	CONTROL RELAY PLUG-IN TYPE 24V DC COIL	ALLEN BRADLEY BUL 702
19 1	30AMP 3 POLE CONTACTOR COIL 110V 50HZ	ALLEN BRADLEY BUL 702
20 2	DOVE DRIVE CONTROL PANEL	SUPPLIED BY OTHERS
22 11	SURGE SUPPRESSOR FOR 110V 50HZ	ALLEN BRADLEY BUL 702
23 24	PVC WIREWAY 200 SLOTTED TYPE	
24 1	12 SET 200V 10PH PANELBOARD SURFACE MOUNTED C/W 6-1 POLE 15A CIRCUIT BREAKERS	VENTILATION COP TYPE
25 9	LAMACOID NAMEPLATE WHITE WITH BLACK LETTERING	

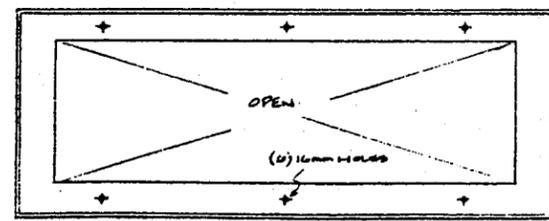


- 1 DOVE CONTROL PANEL C/P
- 2 DOVE TAPER PANEL 415V 50HZ 3PH 225A
- 3 DOVE POWER PANEL P/P

CONTROL PANEL 'CPI'

STARTER PANEL 'SPI'

POWER PANEL 'PPI'

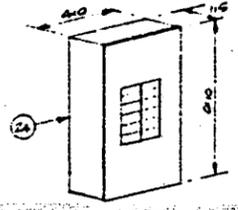


TYPICAL BASE

NOTE 1  
PANELS ARE TO BE BOLTED TOGETHER FOR SHOP TEST BUT SHIPPED IN 3 PIECES. PROVIDE BOLTS FOR FIELD MOUNTING

NOTE 2  
SUPPLY & INSTALL ALL MOTOR OVERLOAD ELEMENTS.

- TOP SHUTTER DEVICES
- BOTTOM SHUTTER DEVICES
- DOVE DEVICES
- CONTROL TRANSFORMER
- 45 TONNE CRANE
- 2.5 TONNE HOIST

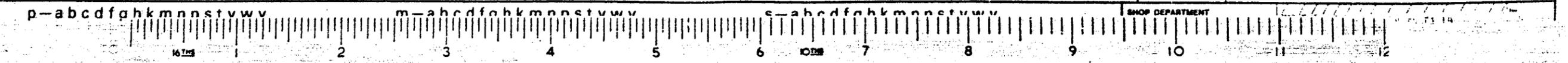


LIGHTING PANEL

ASSEMBLY



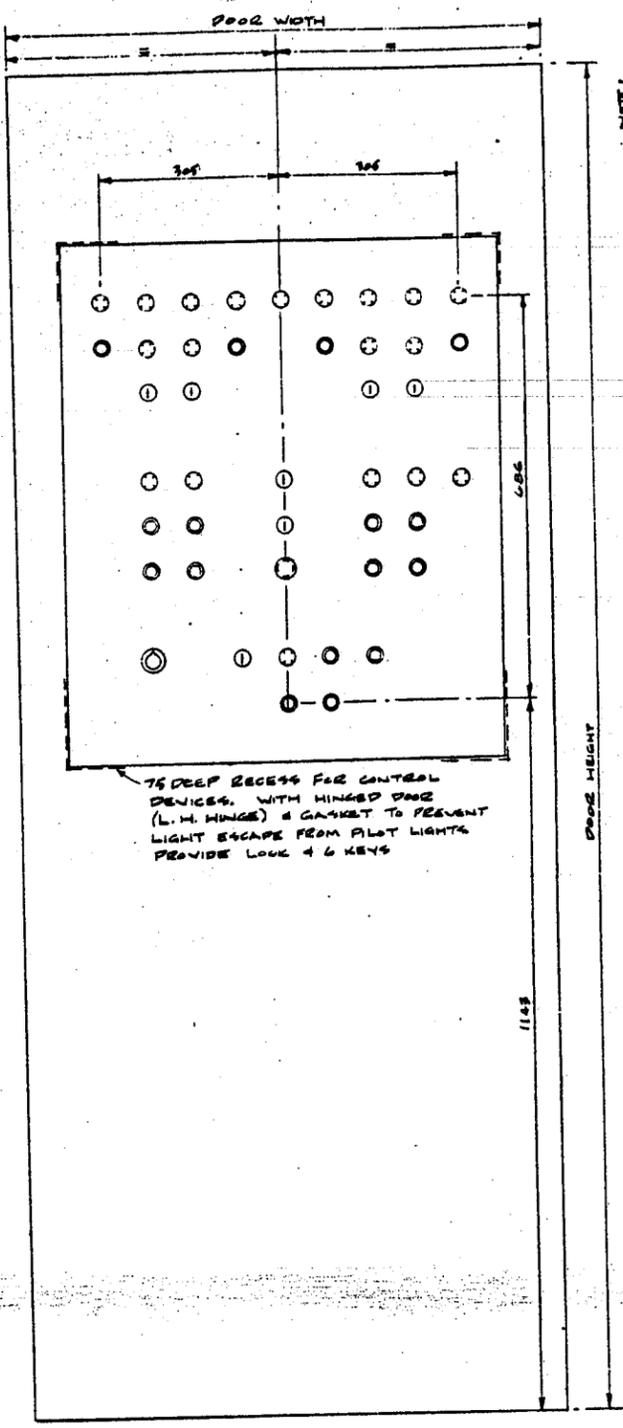
MATERIAL	GR21444104	DETAILS	ELECTRICAL
SKD PREP & PART	STD.	SEE MEMO	PANEL LAYOUTS
OPEN HOLES	1/2"	FOR	4.2" TELESCOPE DOVE
DRAWN	DATE	CHECKED	DATE
BRITANNIA STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.			DRAWING NO. 1420-Y4



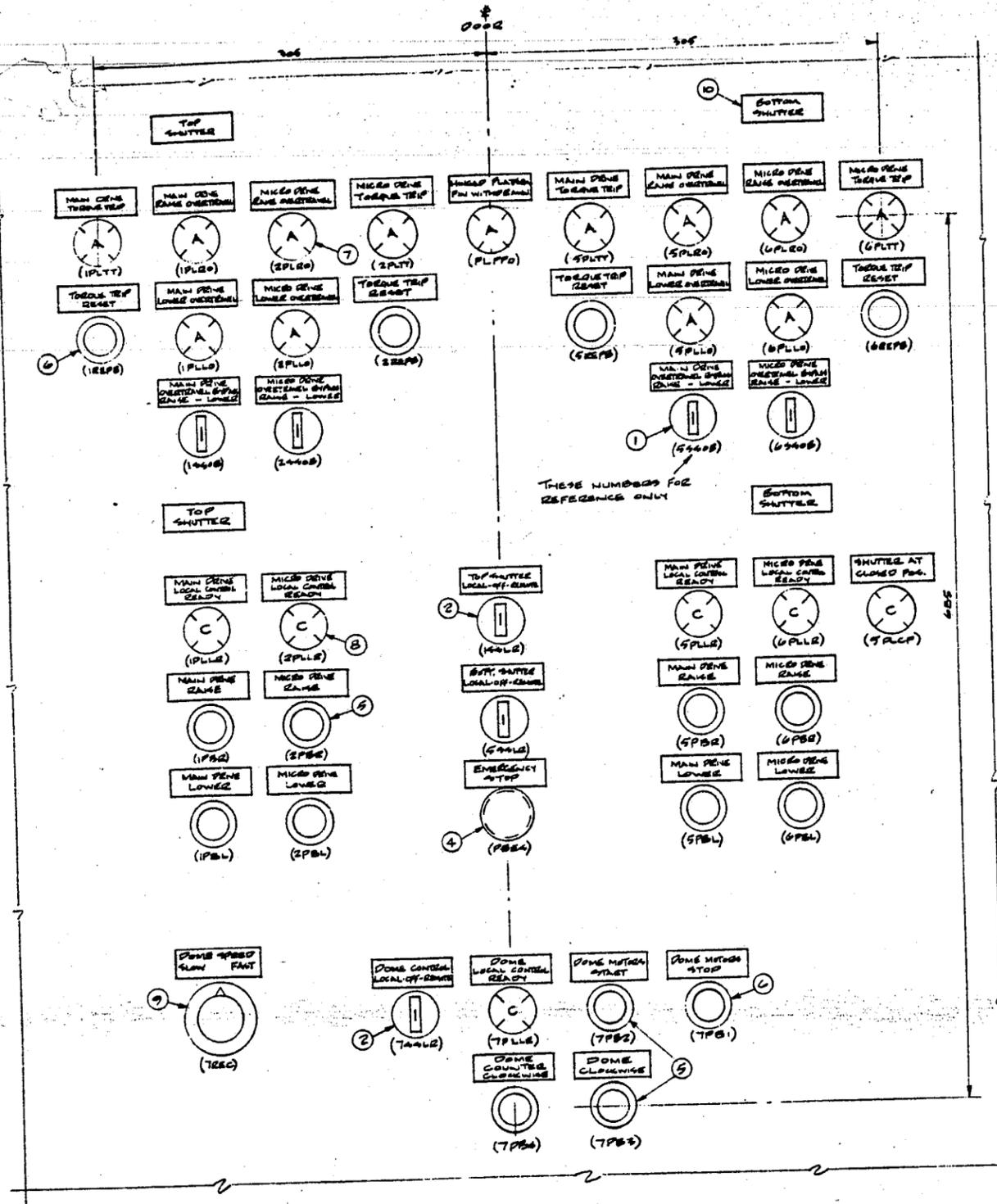
ITEM QTY		DESCRIPTION	CATALOGUE NO.
1	4	3 POSITION KEY-OPERATED SELECTOR SWITCH, 3 CIRCUIT SPRING RETURN TO CENTER.	ALLEN BRADLEY BOOT-JG314
2	3	3 POSITION KEY-OPERATED SELECTOR SWITCH, 6 CIRCUIT MAINTAINED LOCK IN 3 POSITIONS	ALLEN BRADLEY BOOT-
4	1	MAINTAINED CONTACT MUSHROOM HEAD PUSHBUTTON, 1 CIRCUIT RED JUMBO CAP	ALLEN BRADLEY BOOT-FJ104
5	11	MOMENTARY CONTACT PUSHBUTTON, BLACK OPERATOR, I.N.O., FLUSH HEAD.	ALLEN BRADLEY BOOT-A201
6	5	MOMENTARY CONTACT PUSHBUTTON, BLACK OPERATOR, I.N.O., FLUSH HEAD.	ALLEN BRADLEY BOOT-A202
7	13	110 VOLT NEON PILOT LIGHT, AMBER LENS	ALLEN BRADLEY BOOT-G1A
8	6	110 VOLT NEON PILOT LIGHT, CLEAR LENS	ALLEN BRADLEY BOOT-G1B
9	1	DOME SPEED CONTROL	SUPPLIED BY TORNAC
10	48	LAMACOID NAMEPLATE WHITE WITH BLACK LETTERING	-

NOTE 1  
SELECTOR SWITCHES TO BE KEYPED ALIKE PROVIDE 6 KEYS.

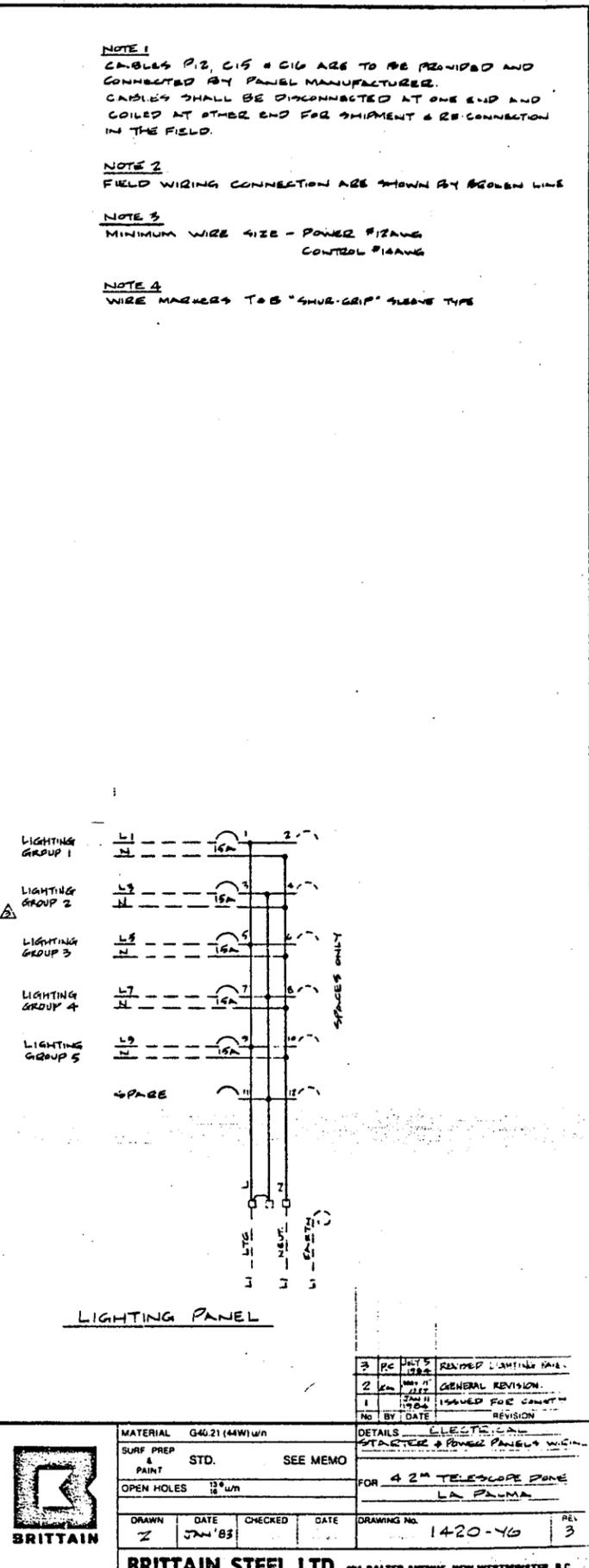
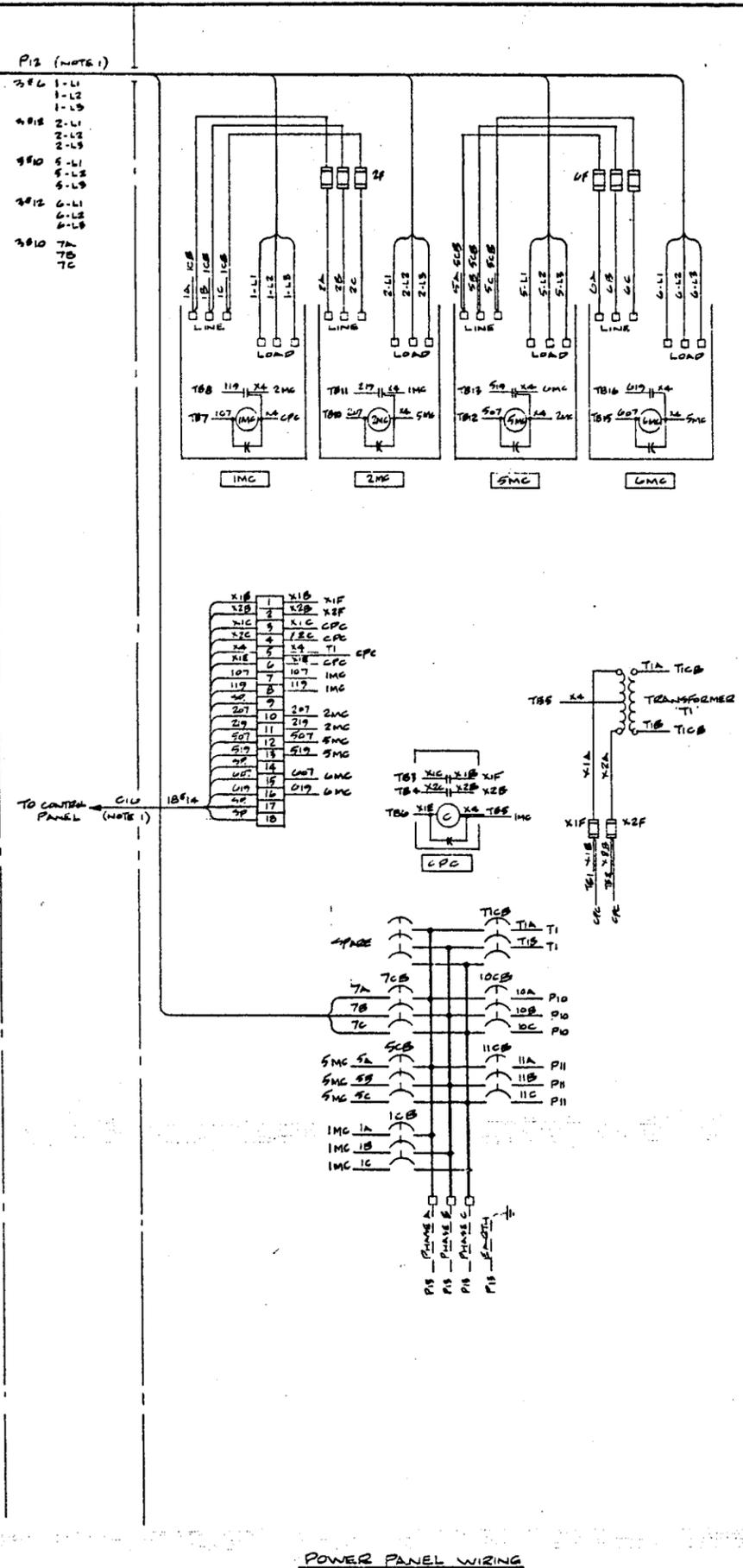
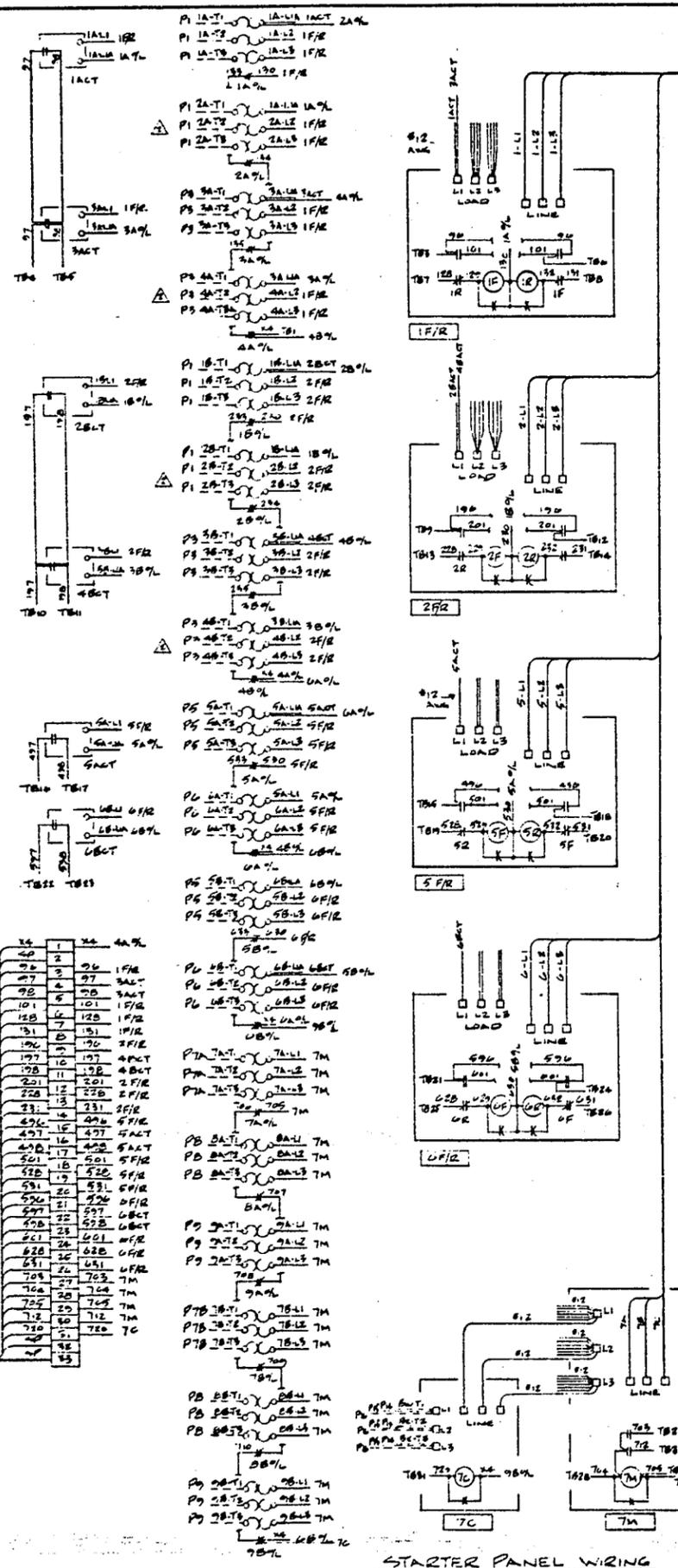
NOTE 2  
FOR RELAY PORTION OF 'CPI' 466 DWG Y4



CONTROL PANEL DOOR  
SCALE 1:5



CONTROL LAYOUT  
SCALE 1:2



**NOTE 1**  
CABLES P.2, C.15 & C.16 ARE TO BE PROVIDED AND CONNECTED BY PANEL MANUFACTURER. CABLES SHALL BE DISCONNECTED AT ONE END AND COILED AT OTHER END FOR SHIPMENT & RE-CONNECTION IN THE FIELD.

**NOTE 2**  
FIELD WIRING CONNECTION ARE SHOWN BY BROWN LINE

**NOTE 3**  
MINIMUM WIRE SIZE - POWER WIRING  
CONTROL WIRING

**NOTE 4**  
WIRE MARKERS TO BE "SHUR-GRIP" GLEBE TYPE

To CONTROL PANEL (NOTE 1)

To CONTROL PANEL (NOTE 1)

LIGHTING PANEL

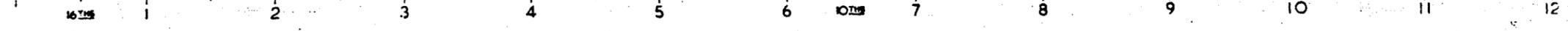
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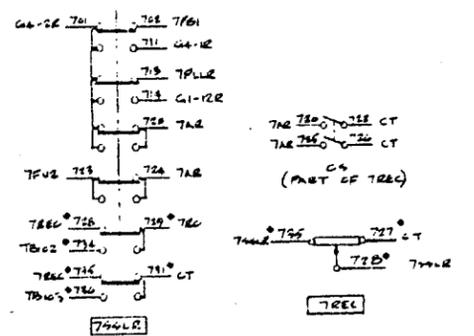
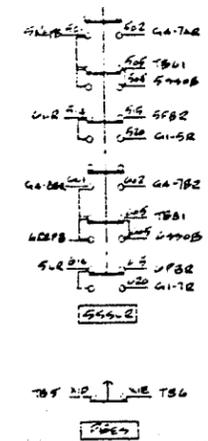
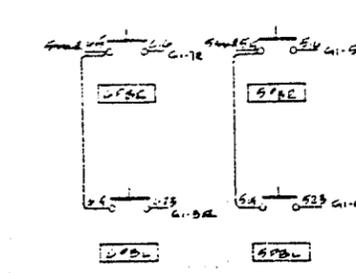
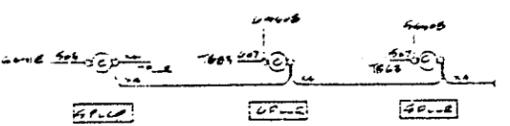
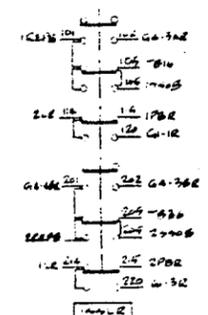
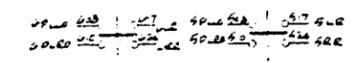
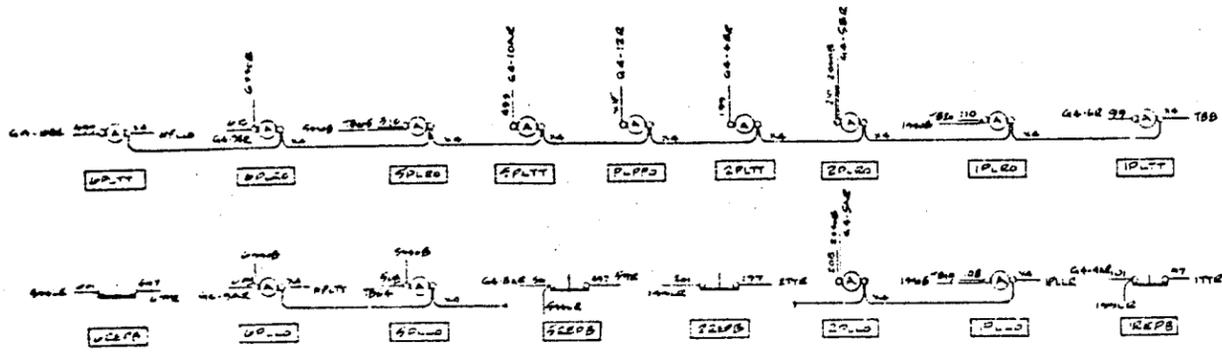
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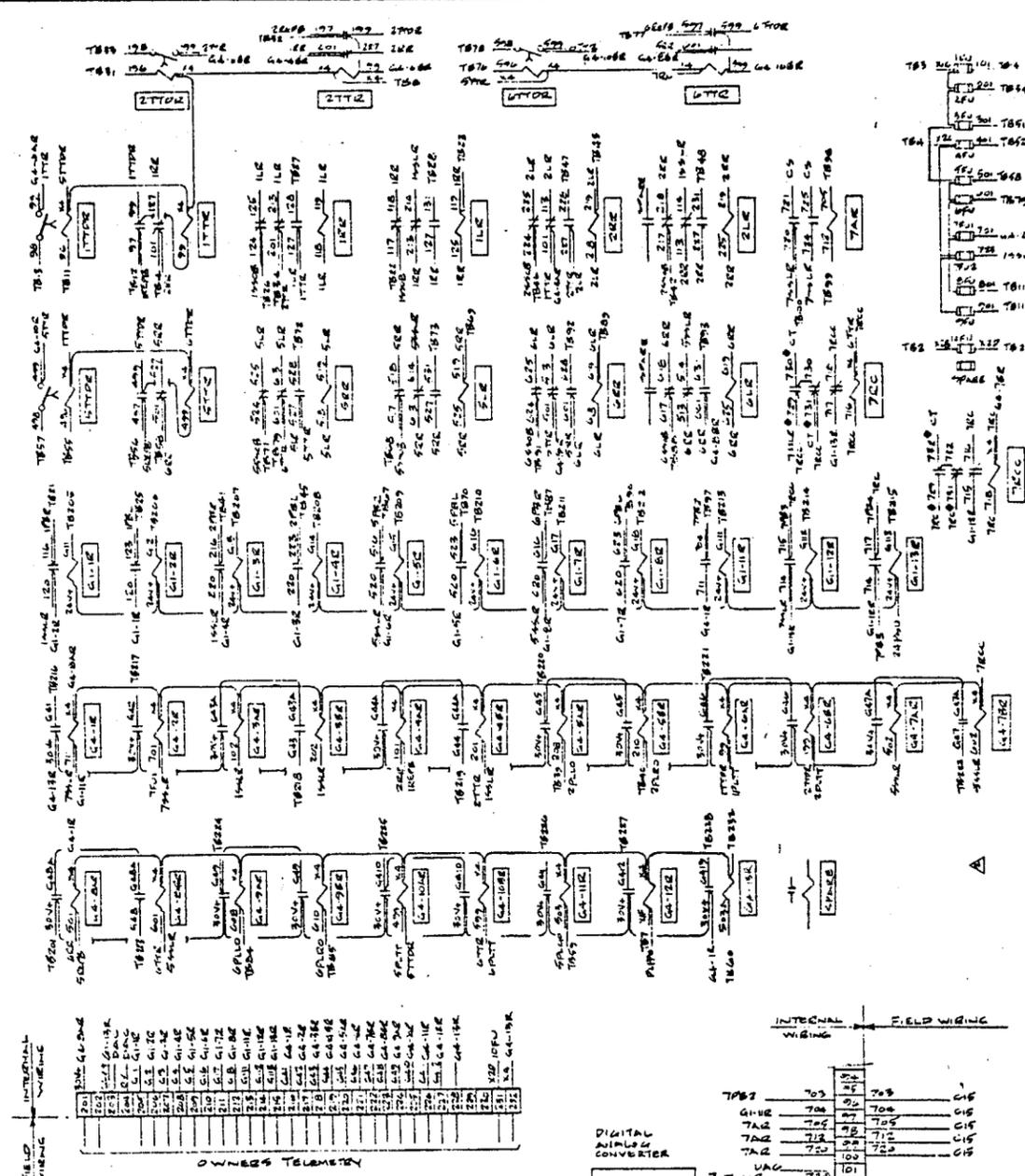
SHOP DEPARTMENT

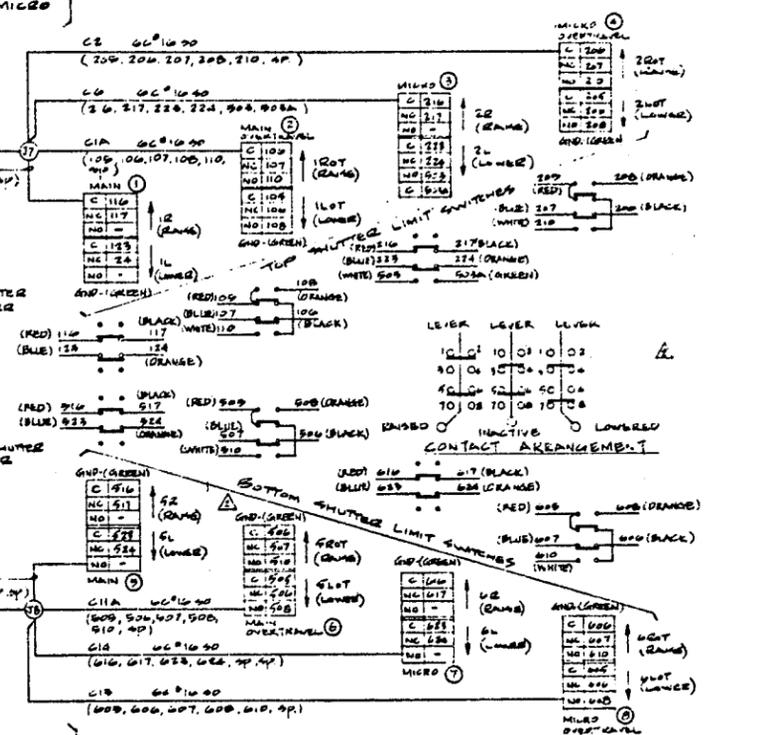
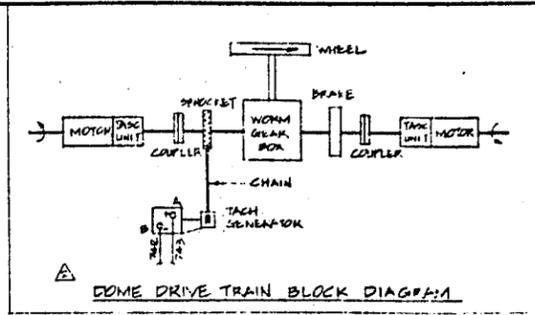
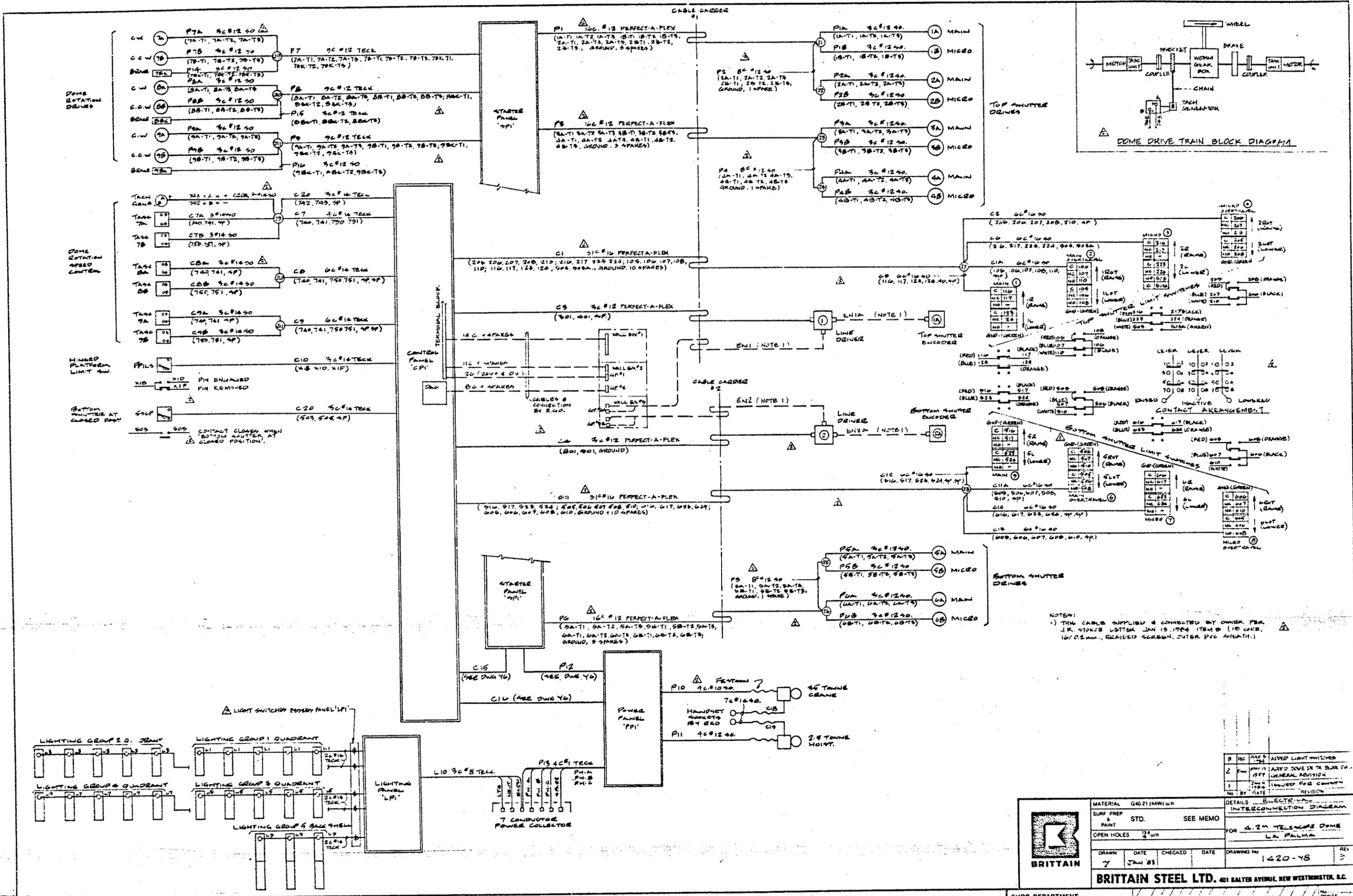
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.





WIRING ON 2002  
(VIEWED FROM REAR)

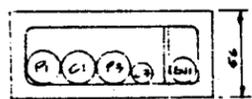




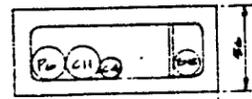
NOTES:  
 1) THIS CABLE SUPPLIED & CONNECTED BY OWNER. P.B.K. J.R. STOKES LISTON JAN 13, 1964 ITEM B (10 CONDS, 16/0.2mm., SHIELDED SCREEN, OUTER PVC SHEATH.)

3	REV 5	ADDED LIGHT SWITCHES
2	REV 4	ADDED DOME DRIVE BLOCK DIAG.
1	REV 3	GENERAL REVISION
1	REV 2	ISSUED FOR CONSTRUCTION
1	REV 1	REVISION

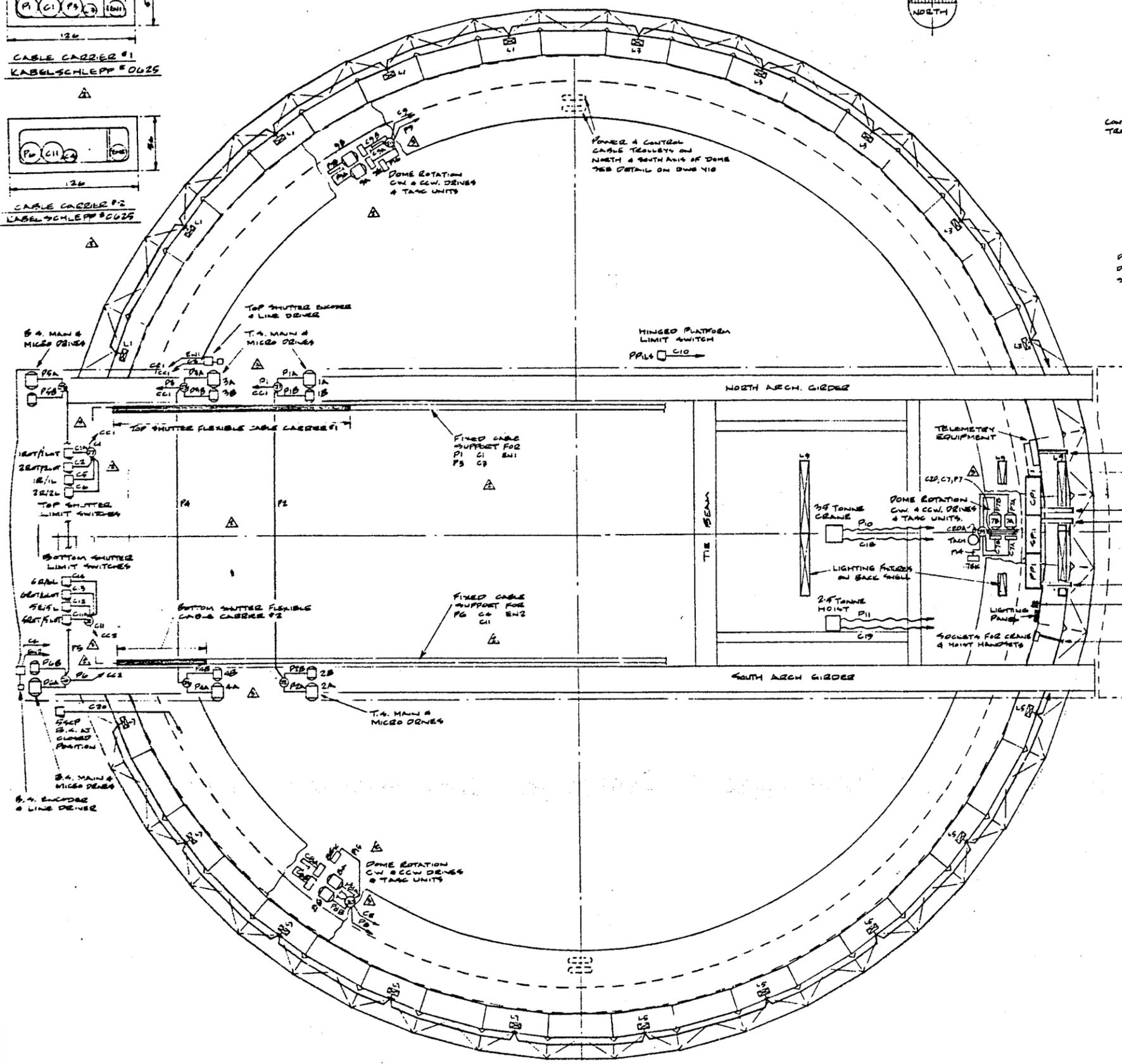
MATERIAL G40 21 (44W) UN		DETAILS ELECTRICAL INTERCONNECTION DIAGRAM	
SURF PREP & PAINT	STD.	SEE MEMO	
OPEN HOLES	1/4" UN	FOR	4.2M TELESCOPE DOME
			LA PALMA
DRAWN	DATE	CHECKED	DATE
7	JAN 83		
DRAWING NO 1420-48		REV 5	
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.			



CABLE CARRIER #1  
KABELSCHLEPP #0625



CABLE CARRIER #2  
KABELSCHLEPP #0625



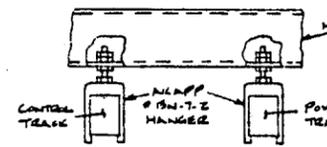
PLAN OF DOME

SCALE 0 1 2 3 4 5 M

p-abcdefghijklmnpstvw

m-abcdefghijklmnpstvw

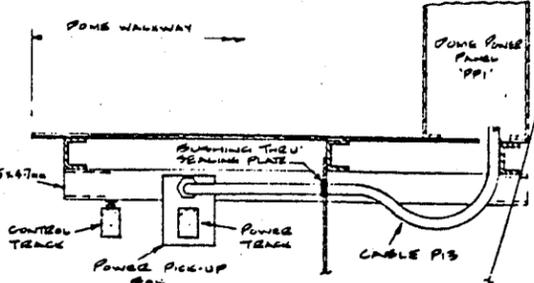
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ARCT TRACK HANGERS

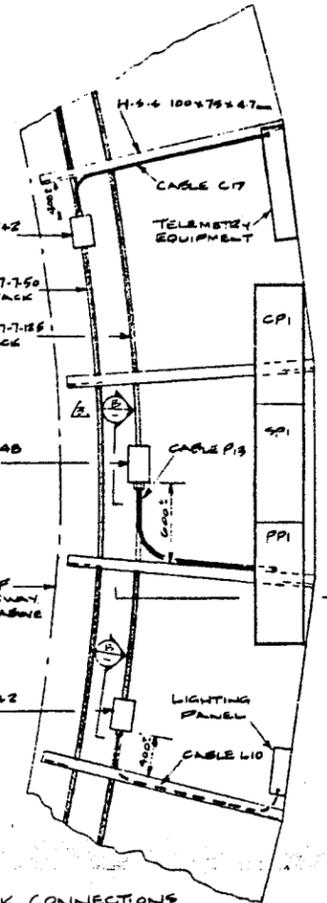


CONTROL CONDUCTOR CONFIGURATION

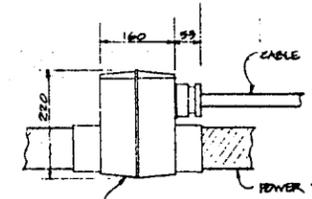


ARCT OF POWER FEED CABLE 'P13'  
(LIGHTING CABLE 'L1' AND CONTROL CABLE 'C1' SIMILAR)

SECTION A



ARCT TRACK CONNECTIONS TO DOME



SECTION B

3	PC	JULY 5	ADDED SECTION D
2	EM	MAY 17	REVISED NO. OF CABLES UP BACK SHELL IDENTIFIED JUNCTION BOXES 31 THROUGH 311
1	JAN 11	1964	USED FOR CONSTRUCTION
	NO.	BY	DATE

	MATERIAL	G40 21 (44W) WP	DETAILS	ELECTRICAL
	SURF PREP & PAINT	STD.	SEE MEMO	PLAN OF DOME
	OPEN HOLES	13/16" WP		FOR 4.2 M TELESCOPE DOME LA PALMA
DRAWN	DATE	CHECKED	DATE	DRAWING NO.
N.L.	Feb 62			1420-Y9
BRITAIN STEEL LTD. 401 SALTER AVENUE, NEW WESTMINSTER, B.C.				
SHOP DEPARTMENT				



