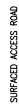
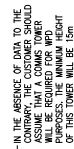


THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SHEET 2.

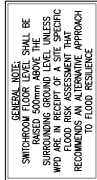
THIS DRAWING SETS OUT THE SPATIAL REQUIREMENTS FOR A SINGLE CIRCUIT INDOOR METERED CONNECTION SUBSTATION. IT SHOULD NOT BE CONSIDERED TO BE A CONSTRUCTION DOCUMENT BUT MAY BE USED BY DESIGNERS WORKING ON BEHALF OF A CUSTOMER SEEKING TO EVOLVE SUCH DESIGNS FOR THE DESIGN SUBMISSION PROCESS ASSOCIATED WITH SUCH A CONNECTION.

KEY TO LVAC SYMBOLS

VEHICLE TURNING PROVISION



ELEVATION 'C'
SCALE 1:50



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NOTES:

THIS DRAWING IS TO BE READ IN CONJUNCTION WITH WPD DOCUMENT – '33kV INDOOR METERED CONNECTION – GUIDANCE FOR SUBSTATION DESIGNERS.

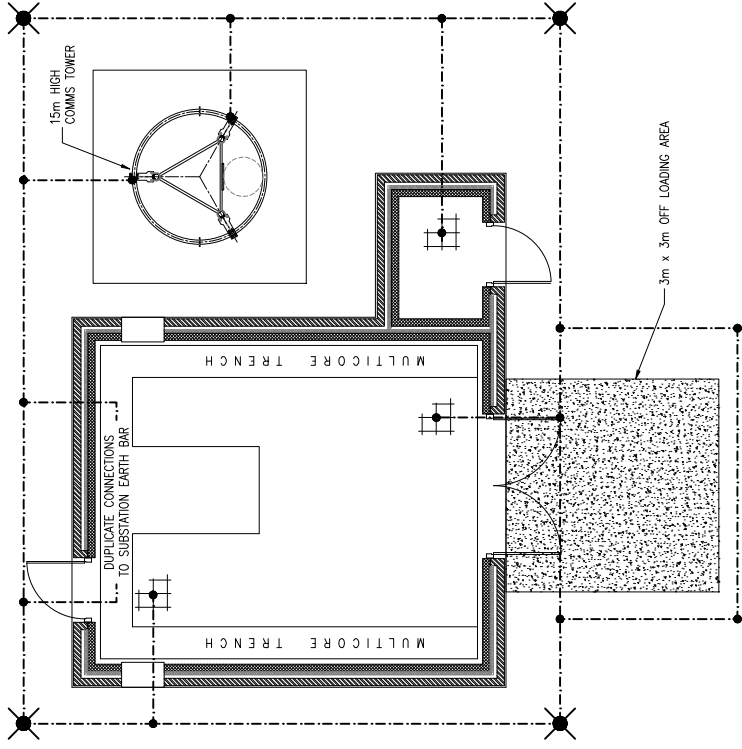
THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SHEET 1.

THIS DRAWING SETS OUT THE SPATIAL REQUIREMENTS FOR A SINGLE CIRCUIT INDOOR METERED CONNECTION SUBSTATION. IT SHOULD NOT BE CONSIDERED TO BE A CONSTRUCTION DOCUMENT BUT MAY BE USED BY DESIGNERS WORKING ON BEHALF OF A CUSTOMER SEEKING TO EVOLVE SUCH DESIGNS FOR THE DESIGN SUBMISSION PROCESS ASSOCIATED WITH SUCH A CONNECTION.

TYPICAL EARTHING LAYOUT

SCALE 1:50

THE ABOVE DESIGN IS INDICATIVE AND IS BASED UPON AN IDEALISED SITE. IT IS INTENDED MORE TO BROADLY IDENTIFY THE FEATURES COMPRISING THE EARTHING SYSTEM THAN TO BE A COVERAGE DESIGN FOR ALL SITES. SITE SPECIFIC EARTHING DESIGN FOR A PARTICULAR SITE WILL BE THE RESPONSIBILITY OF THE GC.

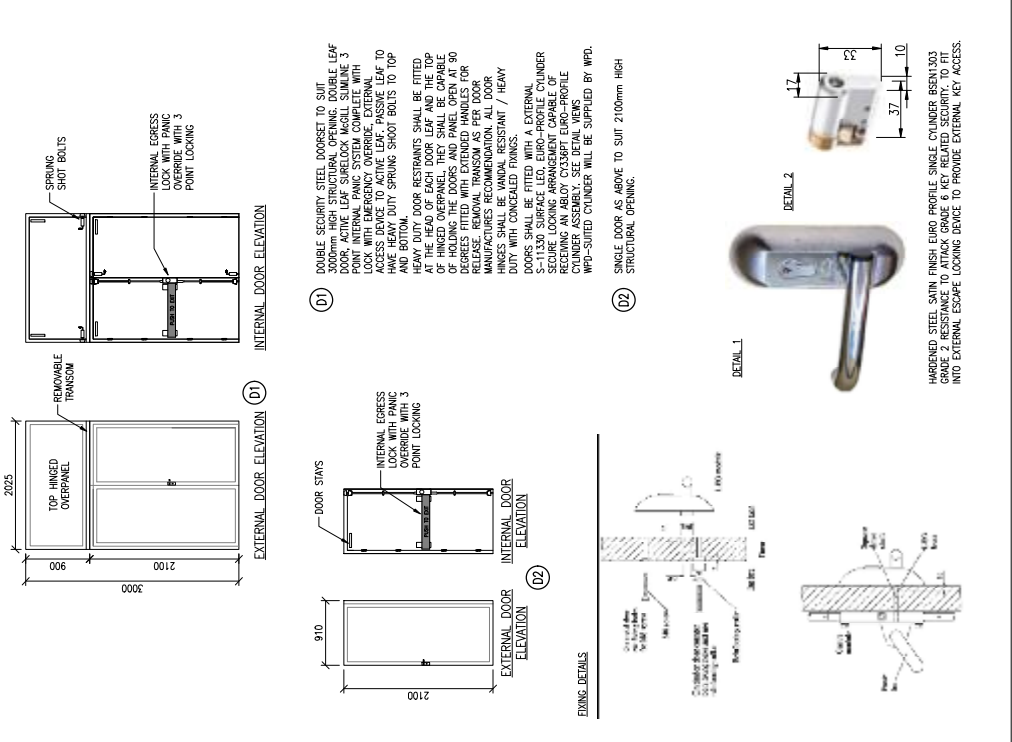
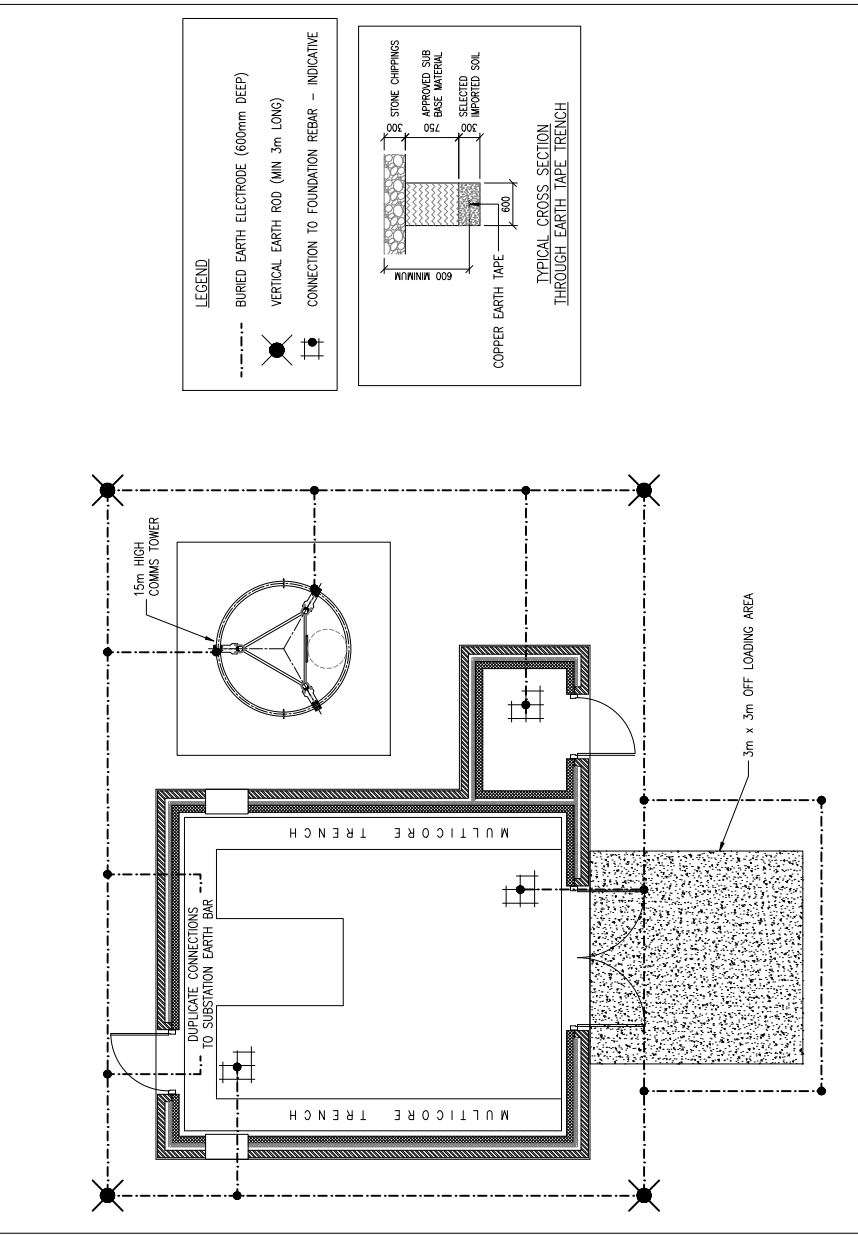
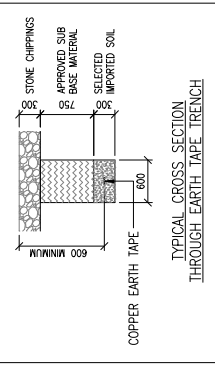


LEGEND

--- BURIED EARTH ELECTRODE (600mm DEEP)

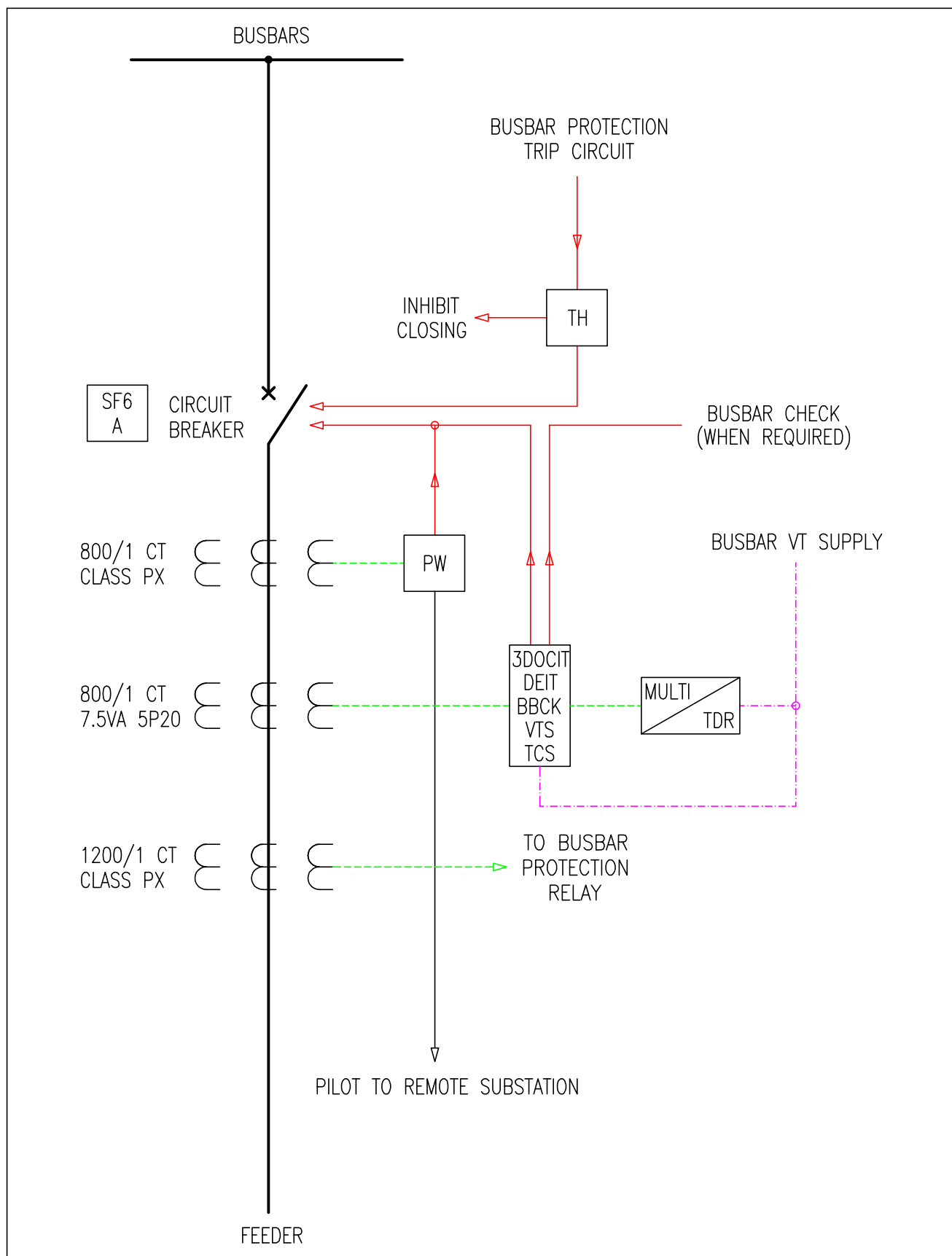
● VERTICAL EARTH ROD (MIN 3m LONG)

--- CONNECTION TO FOUNDATION REBAR – INDICATIVE

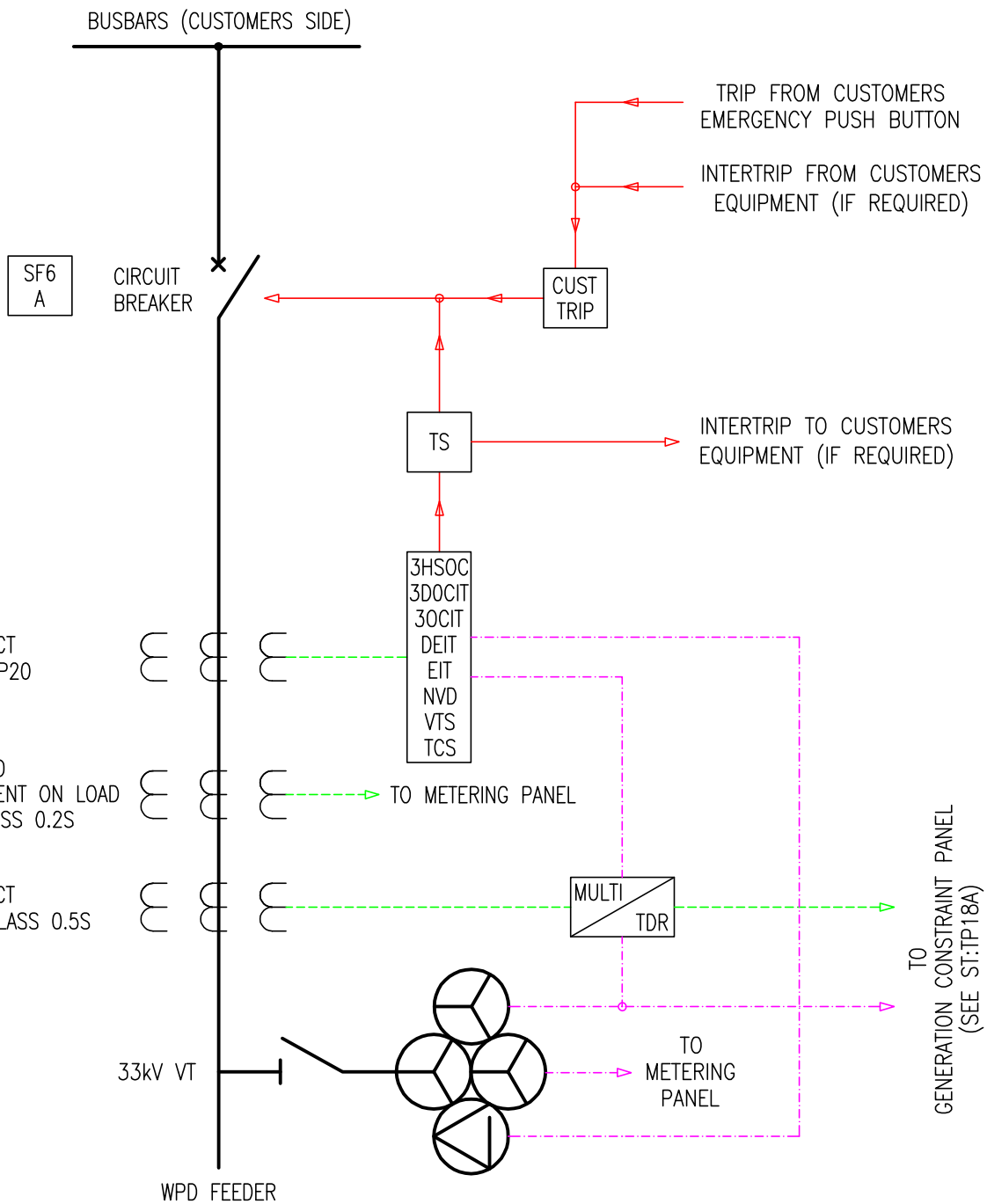


ORIGINAL ISSUE		Date	
Drawn	Lf	Aug 16	
Checked			
Approved			
SCALE:		AS NOTED	
ORIGINAL SHEET SIZE: A2			
Rev No	Drawn	Chk'd	Date
7	L.F.		SEPT17
6	L.F.		APR17
Revision			

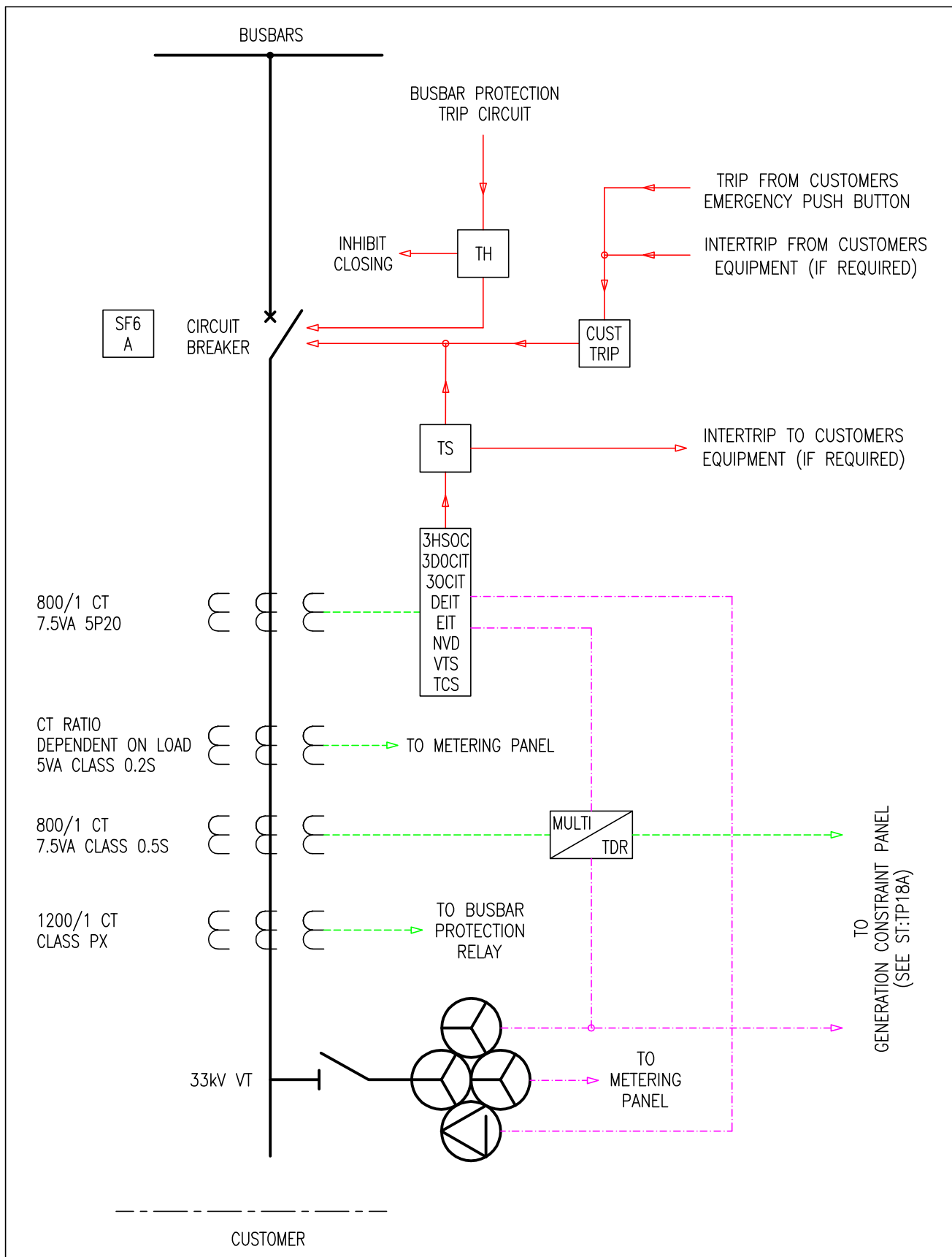
WESTERN POWER DISTRIBUTION Design Department. Lamby Way, Rumney, Cardiff CF3 2BQ		Title TYPICAL 33kV INDOOR METERED TEE'D SWITCHGEAR BUILDING BUILDING DETAILS SHEET 2 OF 2	
Drg. No. GCS0015-2		Rev No. 7	



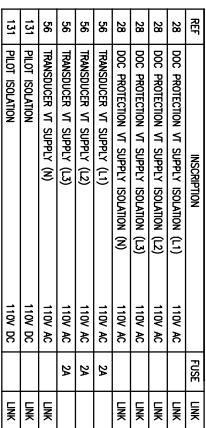
Rev No	Drawn	Chk'd	App'd	Date	Revision
ORIGINAL ISSUE		DATE		WESTERN POWER DISTRIBUTION Design Department. Avonbank, Feeder Road, Bristol BS2 OTB Tel: 0117 933 2000 Fax: 0117 933 2001.	
Drawn	CM	13/11/17		WESTERN POWER DISTRIBUTION DRG. No. SL36C5A Rev No	
Checked					
Approved					
SCALE NTS				Title SINGLE LINE DIAGRAM OF 36kV FEEDER CIRCUIT WITH PILOT WIRE PROTECTION (1250A BUSBARS)	



Rev No	Drawn	Chk'd	App'd	Date	Revision
ORIGINAL ISSUE		DATE		WESTERN POWER DISTRIBUTION Design Department. Avonbank, Feeder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.  WESTERN POWER DISTRIBUTION	
Drawn	CM	13/11/17			
Checked					
Approved					
SCALE NTS					
Title				SINGLE LINE DIAGRAM OF 36kV INCOMING CIRCUIT WITH METERING (1250A BUSBARS)	
				Drg. No. SL36C11A	
				Rev No	



Rev No	Drawn	Chk'd	App'd	Date	Revision
ORIGINAL ISSUE		DATE		WESTERN POWER DISTRIBUTION Design Department. Avonbank, Feeder Road, Bristol BS2 OTB Tel: 0117 933 2000 Fax: 0117 933 2001. WESTERN POWER DISTRIBUTION	
Drawn	CM	13/11/17			
Checked					
Approved					
SCALE		NTS		Title	
				SINGLE LINE DIAGRAM OF 36kV OUTGOING CIRCUIT WITH METERING (1250A BUSBARS)	
				Drg. No. SL36C12A	
				Rev No	

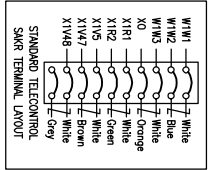
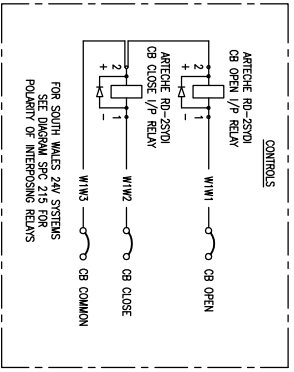
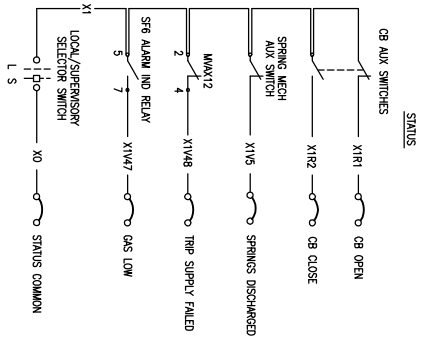
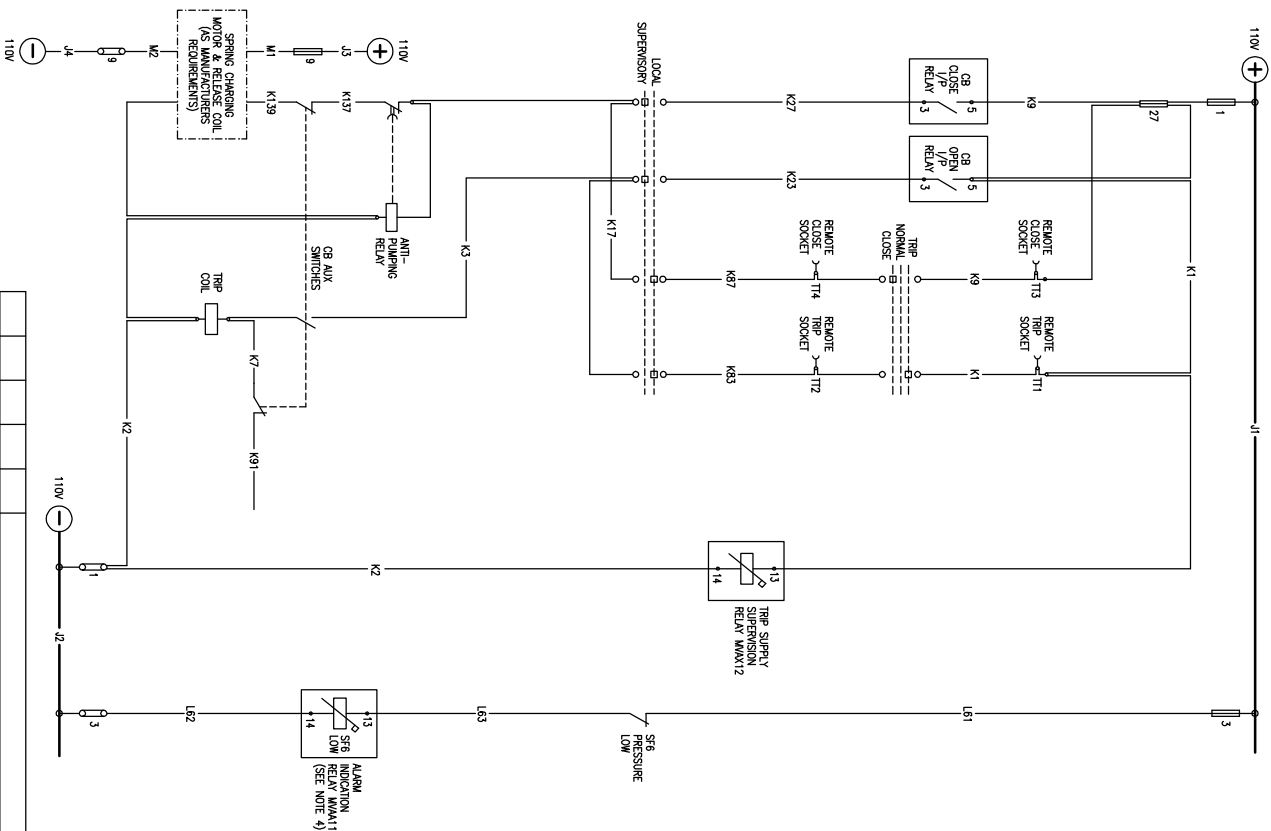


REF	DESCRIPTION	RISE	LINK
26	DOC PROTECTION VS SUPPLY ISOLATION (1)	110V AC	LINK
27	DOC PROTECTION VS SUPPLY ISOLATION (2)	110V AC	LINK
28	DOC PROTECTION VS SUPPLY ISOLATION (3)	110V AC	LINK
29	DOC PROTECTION VS SUPPLY ISOLATION (N)	110V AC	LINK
35	TRANSODOR VS SUPPLY (1)	110V AC	2A
36	TRANSODOR VS SUPPLY (2)	110V AC	2A
36	TRANSODOR VS SUPPLY (3)	110V AC	2A
56	TRANSODOR VS SUPPLY (N)	110V AC	LINK
131	PILOT ISOLATION	110V DC	LINK
131	PILOT ISOLATION	110V DC	LINK

NOTES

1. ASTERISK DENOTES SUFFIX A FOR ZONE A/SECTION A, SUFFIX B FOR ZONE B/SECTION B ETC.
2. CT SWITCHING WILL BE REQUIRED IF THE CIRCUIT MAIN EARTH IS APPLIED THROUGH THE BUS ZONE CT'S

				ORIGINAL ISSUE	Date	WESTERN POWER DISTRIBUTION Design Department, Avonbank, Feeder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.	 WESTERN POWER DISTRIBUTION	Dwg. No. SPC.36C5A-AC	Rev. No.
			Drawn	CM	13/11/17				
			Checked						
			Approved						
			SCALE:	NTS					
Rev No	Drawn	Chk'd	App'd	Date					



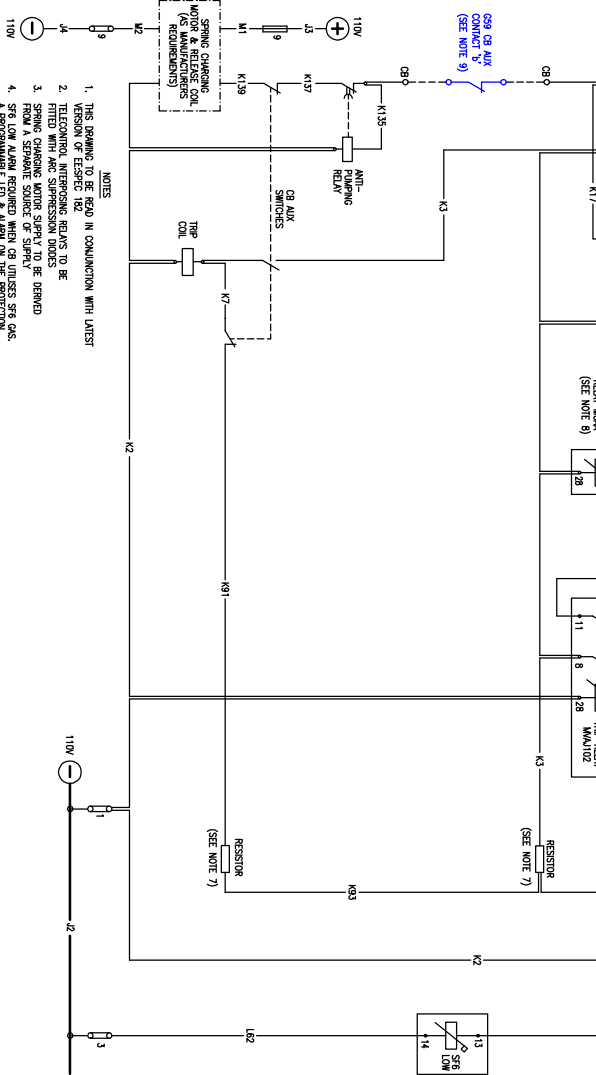
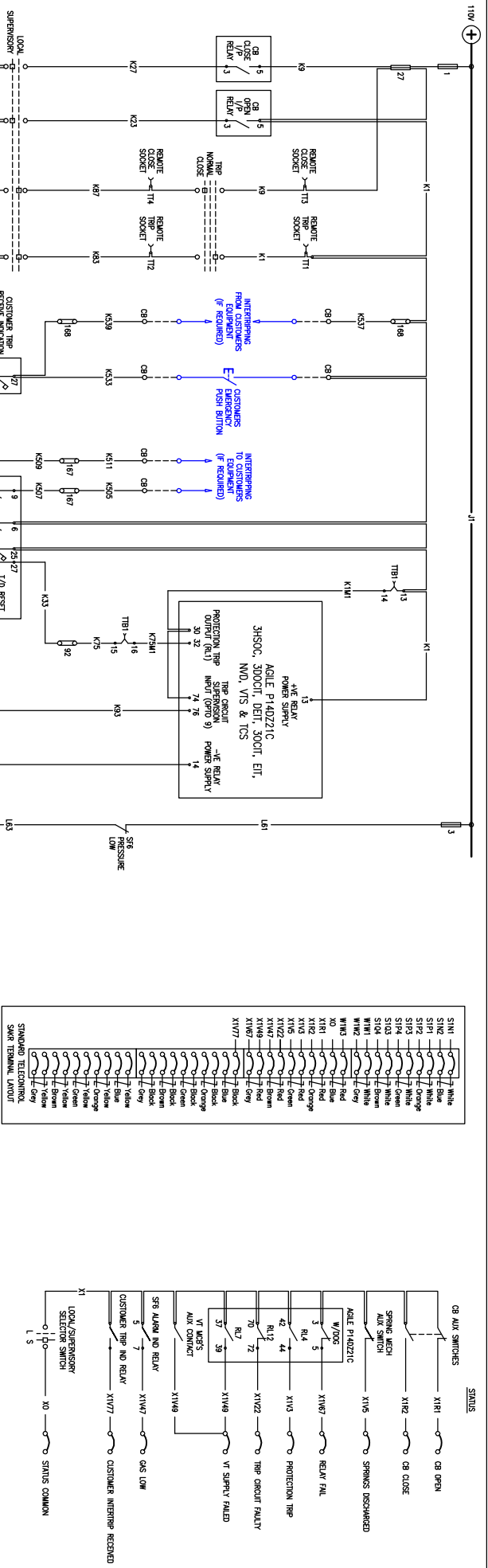
- NOTES
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF EESPEC. 182
 2. TELECONTROL INTERPOSING RELAYS TO BE FITTED WITH ARC SUPPRESSION DIODES
 3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY
 4. SFB LOW ALARM REQUIRED WHEN CB UTILISES SFB GAS, WHERE SFB IS THE INTERRUPTING MEDIUM, SEEK GUIDANCE FROM WPD POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS
 5. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SFB LOW

FUSE & LINK TABLE

REF	DESCRIPTION	FUSE	LINK
1	TRIP & CLOSE SUPPLY +VE	110V DC 16A	
1	TRIP & CLOSE SUPPLY -VE	110V DC	LINK
27	CLOSING	110V DC 6A	
3	SFB GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC 2A	
3	SFB GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC	LINK
9	SPRING MOTOR SUPPLY +VE	110V DC 6A	
9	SPRING MOTOR SUPPLY -VE	110V DC	LINK

Rev No	Drawn	Chk'd	App'd	Date	Revision	ORIGINAL ISSUE	Date	Drawn	CM	13/11/17	Checked	Approved	NTS	Title	WESTERN POWER DISTRIBUTION Design Department Avonbank, Redder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.	Dg. No.	Rev No.
														DC PROTECTION FOR 36kV CIRCUIT WITHOUT PROTECTION (1250A BUSBARS)	SPC36C10A-DC		





REF	DESCRIPTION	FUSE	LINK
1	TMR & CLOSE SUPPLY +VE	110V DC	16A
2	TMR & CLOSE SUPPLY -VE	110V DC	16A
27	CLOSING	110V DC	6A
92	PROTECTION TRIP ISOLATION	110V DC	LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC	LINK
168	CUSTOMER INTERTRIP RECEIVE ISOLATION	110V DC	LINK
167	CUSTOMER INTERTRIP SEND ISOLATION	110V DC	LINK
3	SFS GAS PRESSURE LOW ALARM SUPPLY +VE	110V DC	2A
3	SFS GAS PRESSURE LOW ALARM SUPPLY -VE	110V DC	LINK
9	SPRING MOTOR SUPPLY +VE	110V DC	6A
9	SPRING MOTOR SUPPLY -VE	110V DC	LINK

STATUS	DESCRIPTION
X1N1	CB OPEN
X1N2	CB CLOSE
X1N5	SPRINGS DISCHARGED
X1N6	RELAY FAIL
X1N7	PROTECTION TRIP
X1N8	TMR CIRCUIT FAULTY
X1N9	VF SUPPLY FAILED
X1N10	STATUS COMMON

ANALOGUE	DESCRIPTION
X1N11	12 PHASE CURRENT
X1N12	12 PHASE CURRENT
X1N13	12 PHASE CURRENT
X1N14	12 PHASE CURRENT
X1N15	12 PHASE CURRENT
X1N16	12 PHASE CURRENT
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X1N93	12 PHASE CURRENT
X1N94	12 PHASE CURRENT
X1N95	12 PHASE CURRENT
X1N96	12 PHASE CURRENT
X1N97	12 PHASE CURRENT
X1N98	12 PHASE CURRENT
X1N99	12 PHASE CURRENT
X1N100	12 PHASE CURRENT

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH LATEST VERSION OF ESPEC. NO. 101/17/17

2. FITTED WITH ARC SUPPRESSION DIODES

3. SPRING CHARGING MOTOR SUPPLY TO BE DERIVED FROM A SEPARATE SOURCE OF SUPPLY

4. SFS LOW ALARM REQUIRED WHEN CB TRIPPER SFS GAS, WHERE SFS IS THE INTERRUPTING MEDIA, SELF GUIDANCE FROM WFO POLICY TEAM ON CB LOCKOUT/TRIP FUNCTIONS

5. K1 & K2 WIRING TO ALLOW TRIP CIRCUIT SUPERVISION TO MONITOR ALL LOCKS TO CIRCUIT BREAKER TRIP COIL

6. THE LOCK RELAY SHOULD BE SELECTED TO ENSURE CORRECT OPERATION OF THE CIRCUIT BREAKER

7. THE LOCK RELAY SHOULD BE SELECTED TO ENSURE CORRECT OPERATION OF THE CIRCUIT BREAKER

8. THE LOCK RELAY SHOULD BE SELECTED TO ENSURE CORRECT OPERATION OF THE CIRCUIT BREAKER

9. A CLOSE INHIBIT CONTACT MAY BE REQUIRED FOR GENERATION CONNECTIONS FROM THE CUSTOMERS GS9 CB

10. DRAWING SHOWN WITH SUPPLIES OFF, CB OPEN, SPRINGS DISCHARGED & SFS LOW

Rev No

Drawn

Chk'd

App'd

Date

Revision

ORIGINAL ISSUE

Date

Drawn

CM

13/11/17

Checked

Approved

SCALE:

NIS

WESTERN POWER DISTRIBUTION

Design Department

Avonbank, Reeder Road, Bristol BS2 0TB

Tel: 0117 933 2000

Fax: 0117 933 2001.

DC PROTECTION FOR 36kV

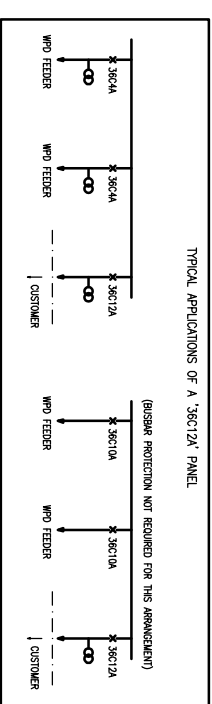
INCOMING CIRCUIT WITH METERING

(1250A BUSBARS)

Dwg. No.

SFC36C11A-DC

Rev No.



(BUSBAR PROTECTION NOT REQUIRED FOR THIS ARRANGEMENT)

- ## FUSE & LINK TABLE

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				ORIGINAL ISSUE	Date	WESTERN POWER DISTRIBUTION Design Department, Avonbank, Feeder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.	 WESTERN POWER DISTRIBUTION	Drg. No. SPC36C12A-AC Rev. No.
			Drawn	CM	13/11/17			
			Checked					
			Approved					
			SCALE:	NTS				
Rev No	Drawn	Chk'd	App'd	Date		Title AC PROTECTION FOR 36kV OUTGOING CIRCUIT WITH METERING (1250A BUSBARS)		
				Revision				

WESTERN POWER DISTRIBUTION Design Department, Avonbank, Feeder Road, Bristol BS2 0TB Tel: 0117 933 2000 Fax: 0117 933 2001.	 WESTERN POWER DISTRIBUTION
Title DC PROTECTION FOR 36kV OUTGOING CIRCUIT WITH METERING (1250A BUSBARS)	Dwg. No. SPC36C12A-DC
	Rev. No.