Distribution Construction Standard Handbook

Maintenance Manual

Part 09 (MM)

EDM #25343954

General Notes

The Maintenance Manual (MM series) is a collection of drawings for superseded construction standards. These can be used where existing pole top assets are being reinstalled on a new pole (in accordance with an approved asset strategy). This will typically occur when poles with pole top assets attached are being changed as part of the pole replacement program.

The MM series can also be used on a 'like-for-like' basis to match the original pole top configuration where use of the current standard would compromise other aspects of the design.

For any other replacement activities, the current standard in the DCSH should be applied.

Drawing Register

Dwg. No.	Revision	Title
MM01	**B**	**TRANSFORMER REINSTALLATION**
MM01-H46	A	Intermediate Transformer with or without Dropout Fuse
MM01-H47-1	A	Termination Transformer with or without Dropout Fuse
MM02	**B**	**POLE TOP SWITCH REINSTALLATION**
MM02-01	A	Pole Top Switch – Retaining Spring Installation
MM02-02	A	Falcon 22kV Pole Top Switch Maintenance Spares
MM02-R6-1	A	Pole Top Switch Earthing
MM02-R6-2	B	Pole Top Switch Down Earth Repair for Vandalism/Copper Theft
MM02-H12-1	A	22kV Pole top switch including Earth
MM02-H12-2	B	22kV PTS for covered conductor - detail of parts required
MM02-H14-1	A	Combination Switch & Fuse with Raiser (11 & 22kV) (Fly-over S)
MM02-H14-2	A	Combination Switch & Fuse with Raiser (11 & 22kV)
MM02-H14-3	A	PTS Fuses / Isolators Layout for 2 Cables
MM02-H18	A	Termination Pole top Switch with Cable & Dropout Fuse
MM02-H19	A	Termination Pole Top Switch with Cable Arrangement
MM02-H20	A	Isolation Transformer
MM02-H60-4	A	3 Φ Recloser / Load Break Switch HV Bare – HV ABC/Hendrix With LV Aerial Supply
MM02-H61-1	A	Pole Mounted 3 Φ Recloser / Load Break Switch with By-pass Switch
MM02-H61-2	A	Pole Mounted 3 Φ Recloser / Load Break Switch with By-pass Switch (Aerial LV Supply)
MM02-H62-1	A	3 Φ Recloser / Load Break Switch on Termination PTS Pole Arrangement (22kV)
MM02-H62-2	A	Combination PTS & Raiser with 3 Φ Recloser / Load Break Switch (ABB 33kV PTS)
MM03	**B**	**RECLOSER REINSTALLATION**
MM03-H16-1	A	Pole Mounted Recloser With By-Pass Switch
MM03-H17-1	B	Recloser on Termination PTS Pole Arrangement
MM03-H17-4	A	Intermediate Tx (1Ph) 3Ph inline cables/2x1Ph spurs with/without Dropout Fuse
MM03-H51-2	A	Single Phase Recloser In-Line Anti-Clash With 1Φ Tx Supply
MM03-H51-4	A	1Φ Recloser By-Pass Isolators/Strain Termination With 1Φ TX Supply
MM03-H62-1	A	3 PH Recloser / Load Break Switch on Termination PTS Pole Arrangement
MM03-H62-2	A	Combination PTS & Raiser with 3 Ph Recloser / Load Break Switch
MM03-H62-3	A	Intermediate Pole With 3 Ph Recloser / Load Break Switch and Cable
MM03-H62-4	A	Termination Pole with 3 Ph Recloser / Load Break Switch
MM03-H63-1	A	1Φ Recloser/Load Break Switch In-Line Anti-Clash With 1Φ TX or LV Supply

Dwg. No.	Revision	Title
MM04	**A**	**LOAD BREAK SWITCH REINSTALLATION**
MM04-H16-2	A	Pole Mount Load Break Switch with Bypass Switch & Antenna, Sht1 One Bushing, Sht2 Two Bushing
MM04-H16-3	A	Pole Mount LBS In-Line Strain with TX Supply
MM05	**A**	**SECTIONALISER REINSTALLATION**
MM06	**A**	**REGULATING TRANSFORMERS REINSTALLATION**
MM07	**A**	**DROP OUT FUSE REINSTALLATION**
MM08	**A**	**CAPACITORS REINSTALLATION**
MM09	**A**	**GENERAL OVERHEAD LINE MAINTENANCE**
MM09-1-1	A	Pole Top Construction
MM09-1-2	A	Pole Top Construction
MM09-1-3	A	Pole Top Construction
MM09-1-4	A	Pole Top Construction
MM09-2-1	A	Pole Top Checks/Splits Repair with Band-it Straps
MM09-2-2	A	Pole Top Checks/Splits Repair with Band-it Straps
MM09-3-1	C	General Overhead Line HV spreader 46Kv Silicone Interphase
MM09-5	A	Enhanced Foundation Details In-situ Distribution Pole
MM09-H40-1	C	Extended Raiser for Single Phase HV on 9m Pole
MM09-LV-01	B	Vertical LV intermediate/angle/termination construction
MM09-R09	B	HV Cable Termination Retrospective Earth Parking Stud Install
MM09-R24	B	Mechanical Tension Repair Splice (MTRS)
MM10	**C**	**BELOW GROUND SERVICES**
MM10-EXT	A	Mini & Uni Pillar - Cable Extension Guide
MM10-R31	A	Mini Pillar Neutral (Extra) Fitting Requirement
MM10-R35-1	A	Mini Pillar 240V Supply from Spuds or Pole
MM10-R35-2	A	Mini Pillar 480V Supply Arrangement
MM10-U08	A	Mini Pillar Installation Guide
MM10-U30-1	B	Below Ground Service Pit Installation Detail
MM10-U30-2	B	Below Ground Service Pit Installation Detail – Application Guideline
MM11	**A**	**SECURITY LIGHTING INSTALLATION**
MM11-S13	A	Mounting Arrangement for Steel Streetlight Columns
MM11-S14	A	Mounting Arrangement for Wood or Concrete Pole On Bare Aerial Connection
MM11-S15	A	Mounting Arrangement for Wood or Concrete Pole ABC Connection
MM11-S16	A	Steel Column - Double Insulated (Class 2)
MM11-S17	A	Wood or Concrete Pole Double Insulated - (Class 2)
MM11-S18	A	Wood or Concrete Pole Single Insulated - (Class 1)

Dwg. No.	Revision	Title
MM13	**A**	**Streetlight Maintenance**
MM13-01	A	Legacy Streetlight Cable Repair
MM13-02	B	Electrical Connections for Narrow Style Streetlight column
MM13-03	A	Legacy Streetlight Column with Concrete Foundation
MM13-R26-1	A	Streetlight Cut-out Single Phase Supply for Single Insulated (Class 1) Luminaires - 1
MM13-R26-2	A	Streetlight Cut-out Single Phase Supply for Single Insulated Equipment
MM13-R26-3	A	Streetlight Cut-out Single Phase Supply for Double Insulated (class 1) Luminaires - 2
MM13-R26-4	A	Avenue Streetlights Luminaire Installation
MM13-S02-1	A	Legacy Minor Road – Short Streetlight Bracket on wood Pole and Crossarm with new LED

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
XT0016	WESTRALIAN, 3Φ, 200KVA	H10-1, H10-2, H11-1, H11-2
XT0017	WESTRALIAN, 1Φ, 5KVA	MM01-H46, MM01-H47-1
XT0019	WESTRALIAN, 1Φ, 20KVA	
XT0021	WESTRALIAN, 1Φ, 5KVA	

NOTES:-

1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).

2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

3. SURGE ARRESTERS DO NOT NEED TO BE INSTALLED IF THERE ARE NO APPROPRIATE MOUNTING POINTS ON THE TANK.

4. LV BUSHING LINK PLATES (GF1510) MAY BE REPLACED WITH 95mm^2 LV ABC OR 25mm^2 COPPER TAP, WITH APPROPRIATE LUGS, ON SINGLE PHASE TRANSFORMERS.

5. EARTH STUD ON TRANSFORMER TANKS MAY BE EXTENDED USING A COPPER PLATE (GF1592) IF STUD THREAD LENGTH TOO SHORT FOR ATTACHMENT OF NEUTRAL TO EARTH LINK & DOWNEARTH LUGS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
B	25.09.19	NOTES 4 & 5 ADDED	NMc	CO	GS
A	11.08.16	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

TITLE

TRANSFORMER REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

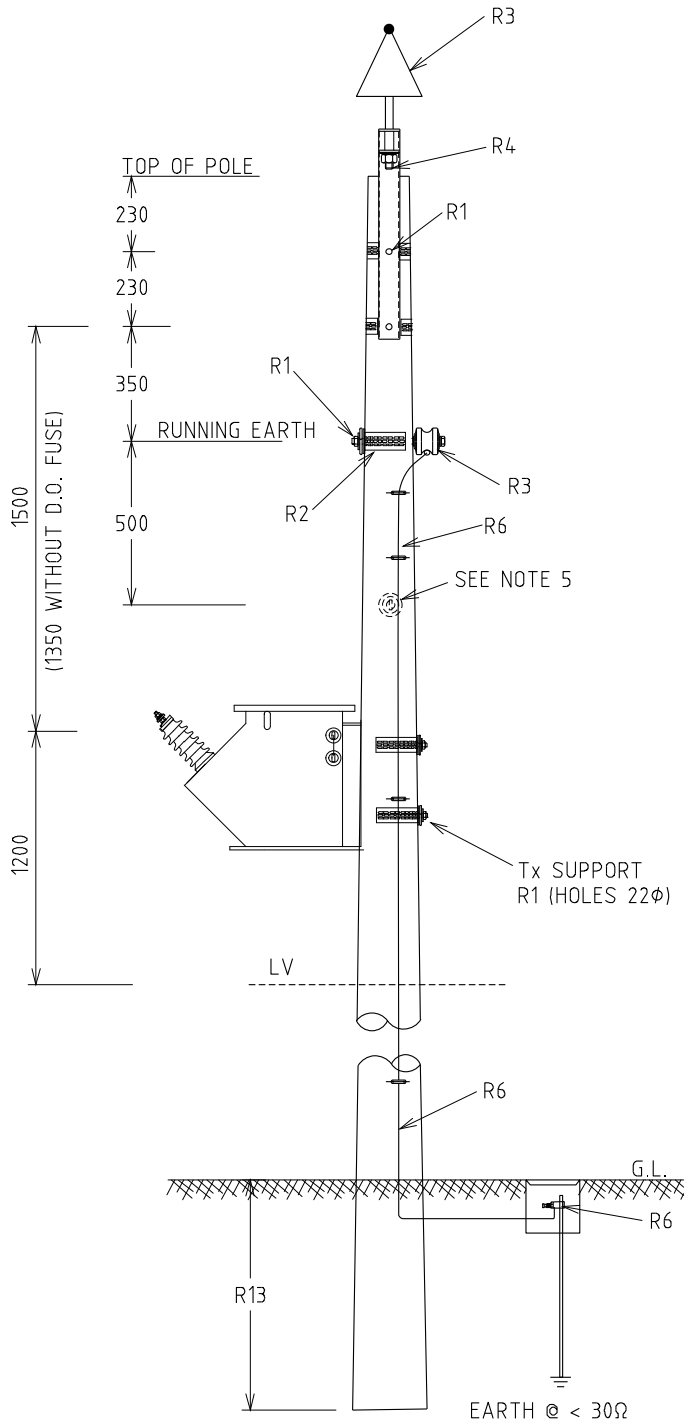
westernpower

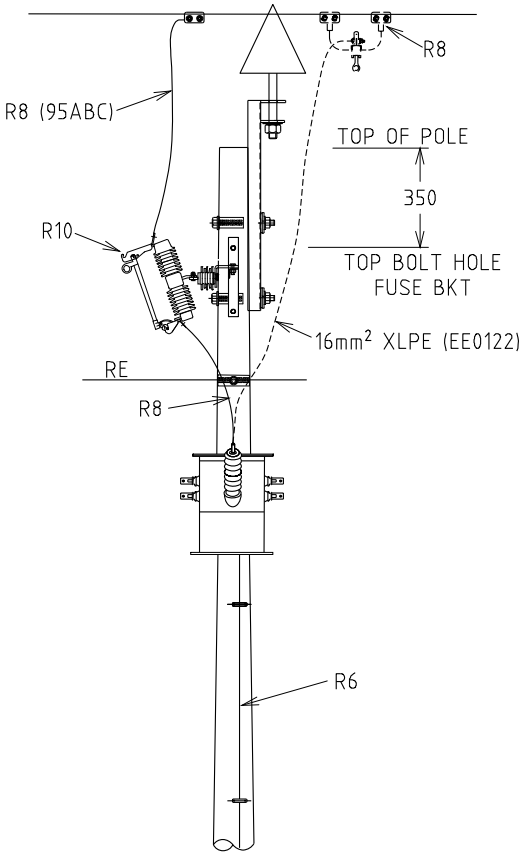
DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM01

ORIGINATED: JC | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. B | SHT.





THIS DRAWING IS APPLICABLE TO 5kVA (XT0017, XT0021) AND 20kVA (XT0019) MANUFACTURED BY WESTRALIAN.

NOTES:
1. ALL HOLES 18Φ U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
3. SEE R12/1 FOR LV ARRANGEMENT DETAILS.
4. SEE H49 FOR EARTH & LV PHASE CONNECTIONS.
5. STAND-OFF INSULATOR IF REQUIRED FOR BACK TO BACK Tx INSTALLATION

SINGLE PHASE – ONE BUSHING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	AM	ME	GS

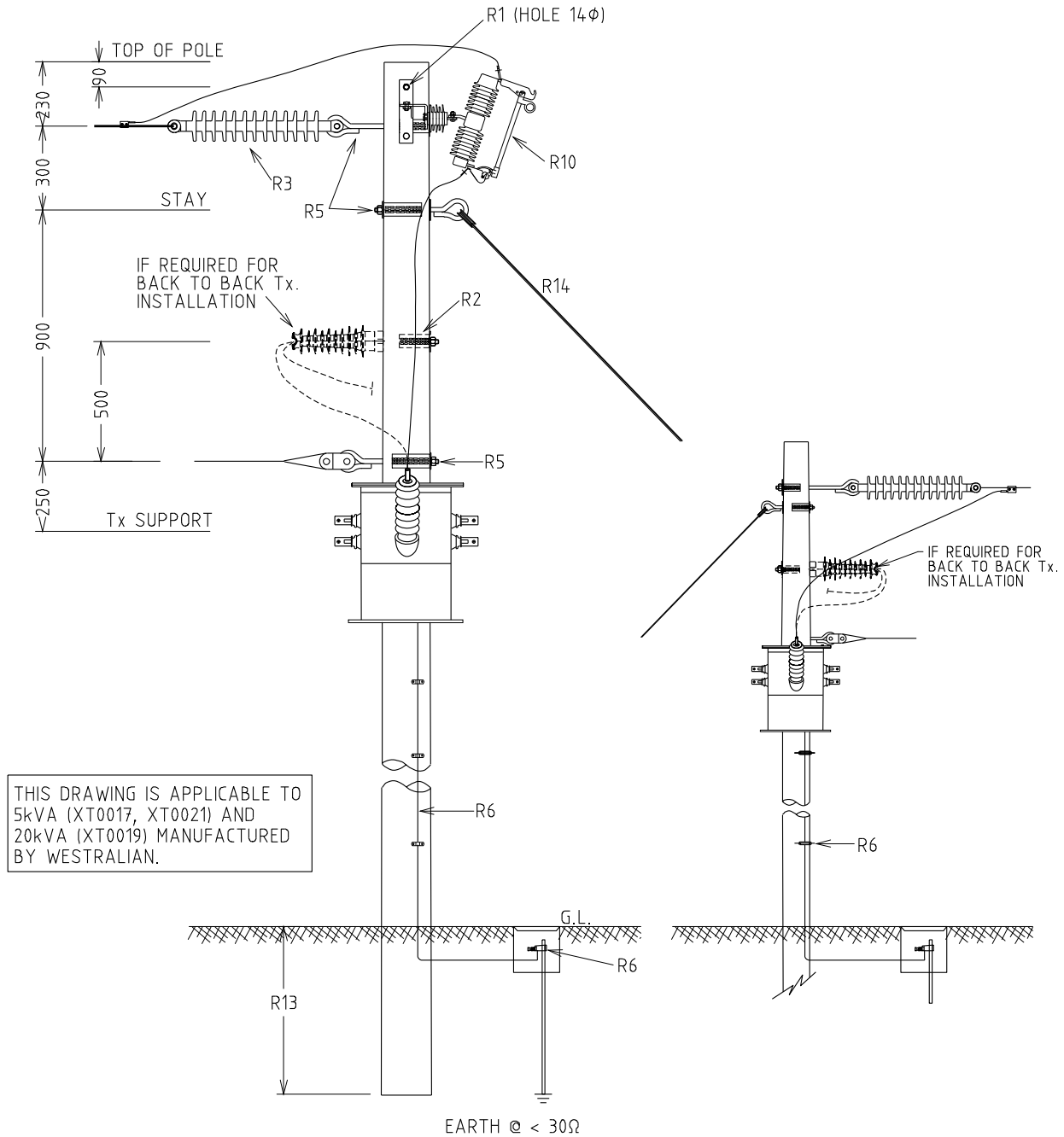
STRUCTURE

TITLE: INTERMEDIATE TRANSFORMER WITH OR WITHOUT DROPOUT FUSE (1 PHASE)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 26-05-2016	DRG. No. MM01-H46
ORIGINATED: AM	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL HOLES 18Φ U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

SINGLE PHASE – ONE BUSHING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	AM	ME	GS

STRUCTURE

TITLE: TERMINATION TRANSFORMER WITH OR WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 26-05-2016	DRG. No. MM01-H47-1
ORIGINATED: AM	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
GS0115	22kV PTS	H12, H14-2, H14-3

FLEX TAIL DOUBLE BOLT CONVERSION	
STOCK CODE	QUANTITY
GZ0036	3
GZ0045	3
CB3056	3
CT0020	3 (IF REQUIRED)
CT0021	
S/S NUTS, BOLTS AND WASHERS	AS REQUIRED

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.
3. FLEX TAIL CONNECTION MUST BE DOUBLE BOLTED AND FITTED WITH BRAID SPRINGS. REFER TO MM02-01.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	24.08.17	NOTE REVISED	JB		GS
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE: POLE TOP SWITCH REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM02

ORIGINATED: JC | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY | REV. B | SHT.

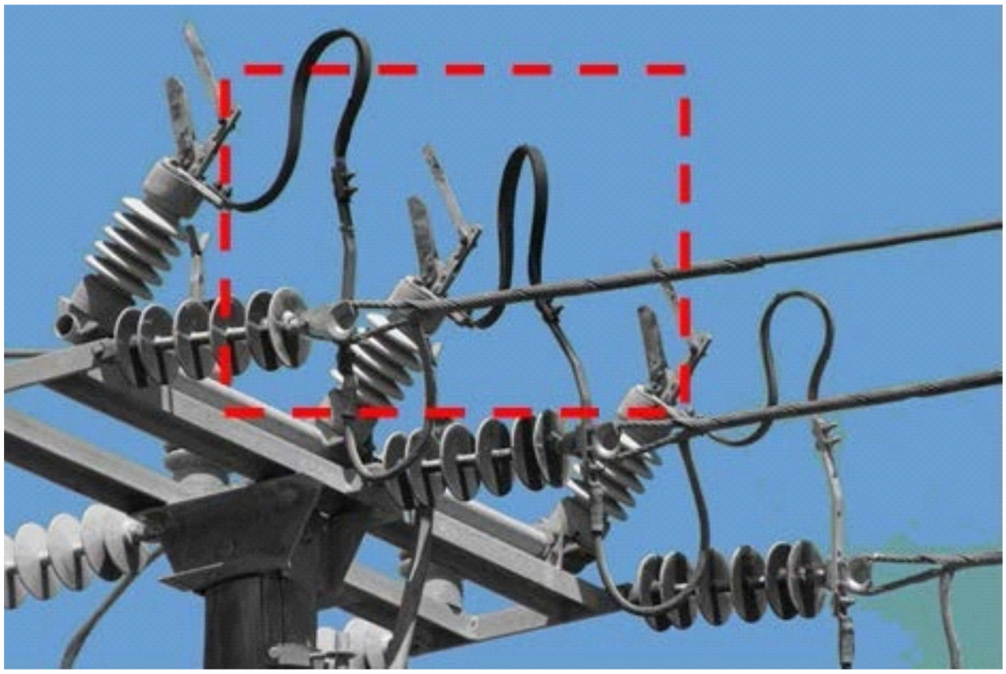


FIGURE 1

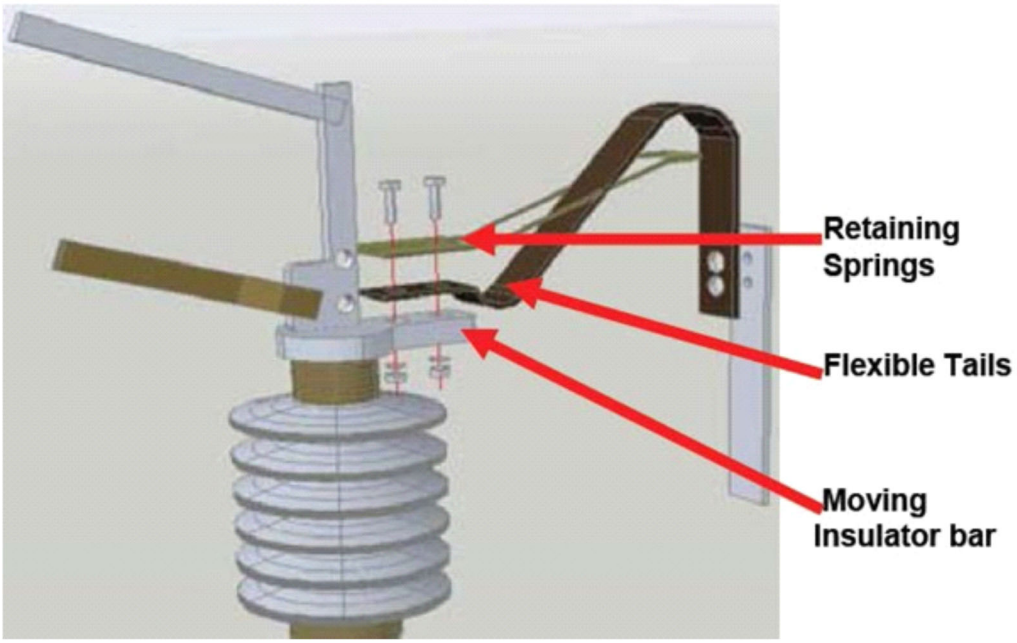


FIGURE 2

NOTES:
1. OLD POLE TOP SWITCHES REQUIRE THE INSTALLATION OF A SPRING (STOCK CODE CB 3056), AS SHOWN IN FIGURES 1 (SWITCH THAT REQUIRES RETAINING SPRINGS) AND FIGURE 2 (RETAINING SPRING ASSEMBLY). THE SPRING IS A STANDARD FITTING ON ALL NEW POLE TOP SWITCHES.
2. USE A WIRE BRUSH TO CLEAN THE SURFACE OF THE FLEXI-TAILS AND THE MOVING INSULATOR BAR TO ENABLE A GOOD ELECTRICAL CONTACT.
3. FIT THE RETAINING SPRING TO THE TOP OF THE FLEXI-TAILS AT THE BOLTED CONNECTION OF THE MOVING INSULATOR BAR (SEE FIGURE 2 (RETAINING SPRING ASSEMBLY))

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
A	24.08.17	ORIGINAL ISSUE	JB		GS

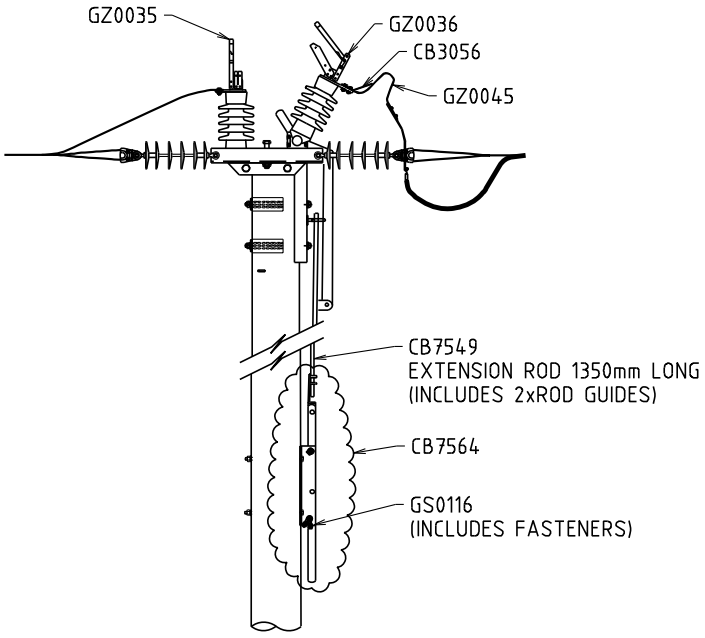
REFERENCE DRAWING

TITLE: POLE TOP SWITCH RETAINING SPRING INSTALLATION

DISTRIBUTION CONSTRN STANDARD — westernpower

DRAWN JRR	DATE 24-08-2017	DRG No MM02-01
ORIGINATED GS	SCALE NTS	
CHECKED CO		
APPROVED GRANT STACY		REV A SHT

STOCK CODE	DESCRIPTION	COMMENTS
CB3056	POLE TOP SWITCH BRAID SPRING	SPRING TO PREVENT BRAID FROM COLLAPSING
CB7549	PTS ROD EXTENSION KIT	ACTUATING ROD EXTENSION FOR 12.5m POLES INCLUDING 2xROD GUIDES
GS0116	TINNED COPPER BRAID WIRE, LUGGED AT BOTH ENDS, 320mm LONG	PTS HANDLE BONDING BRAID
GZ0035	CONTACT ASSEMBLY, W/CLAMP TERM, POLE-TOP SWITCH 11kV & 22kV, FEMALE	PTS FEMALE CONTACT ASSEMBLY COMPLETE
GZ0036	CONTACT ASSEMBLY, W/CLAMP TERM, POLE-TOP SWITCH 11kV & 22kV, MALE	PTS MALE CONTACT ASSEMBLY COMPLETE.
GZ0045	FLEXIBLE COPPER BRAIDS FOR POLE TOP SWITCHES, 2 HOLE TYPE	BRAID FOR POLE TOP SWITCH MOVING CONTACT SIDE.
CB7564	PTS HANDLE ASSEMBLY COMPLETE (NO DOWN ROD)	ENTIRE PTS HANDLE ASSEMBLY



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	15.05.18	ORIGINAL ISSUE	REE	FK	GS

STRUCTURE

TITLE: FALCON 22kV POLE TOP SWITCH MAINTENANCE SPARES

DISTRIBUTION CONSTRN. STANDARD

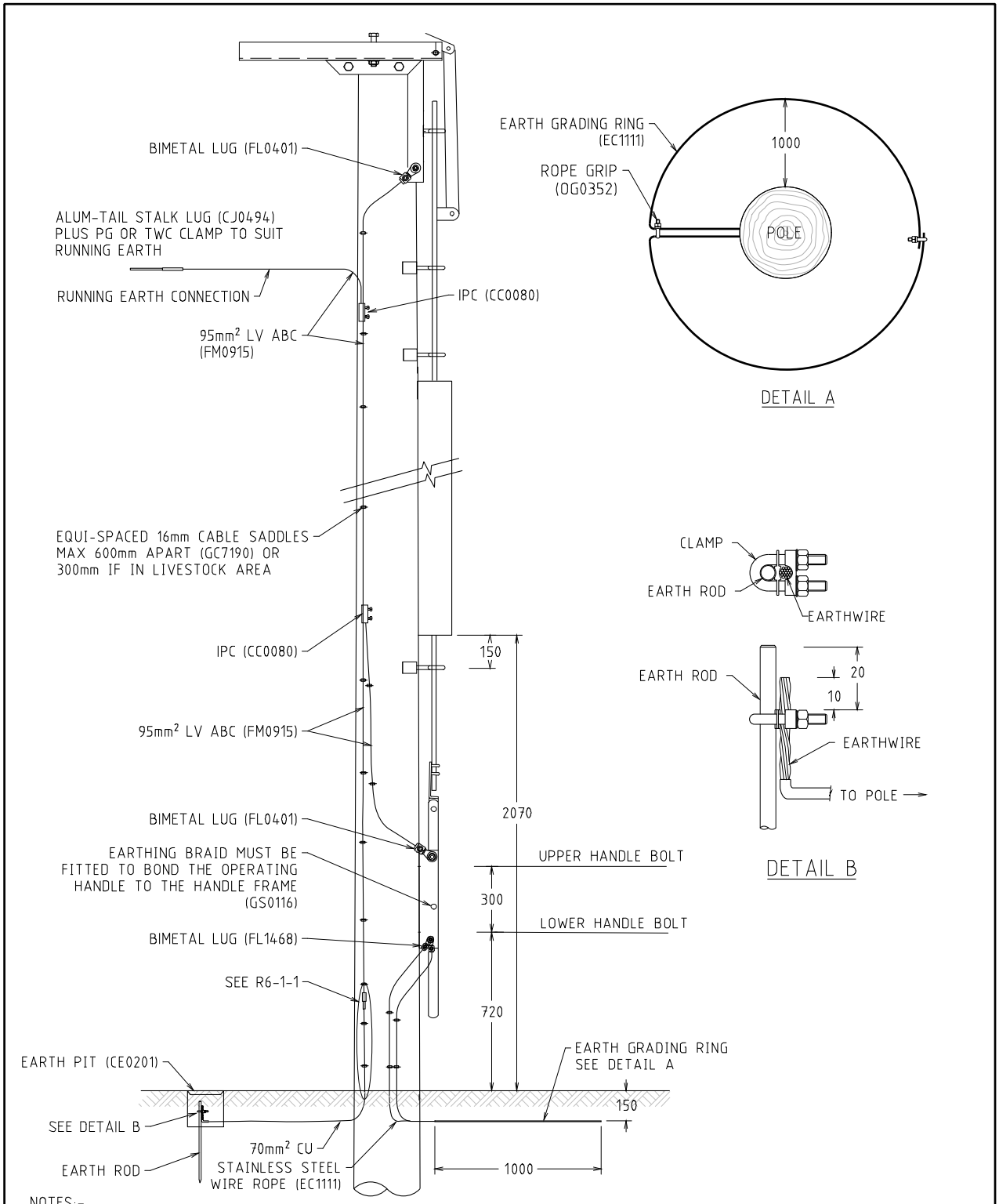
westernpower

DRAWN: JRR | DATE: 11-05-2018 | DRG. No. MM02-02

ORIGINATED: REE | SCALE:

CHECKED: JC

APPROVED: GRANT STACY | REV. A | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. IF UNABLE TO INSTALL EARTH GRADING RING INSTALL CONCRETE EARTH MAT (DC4801) ON HANDLE SIDE OF THE POLE.
3. THE INSULATION OF THE LV ABC SHOULD NOT BE BROKEN AT ANY POINT ALONG ITS LENGTH.
4. SADDLES TO BE FIXED TO POLE WITH 60mm WOOD SCREWS (AS2511)

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	07 03 18	ORIGINAL ISSUE	REE	CO	GS

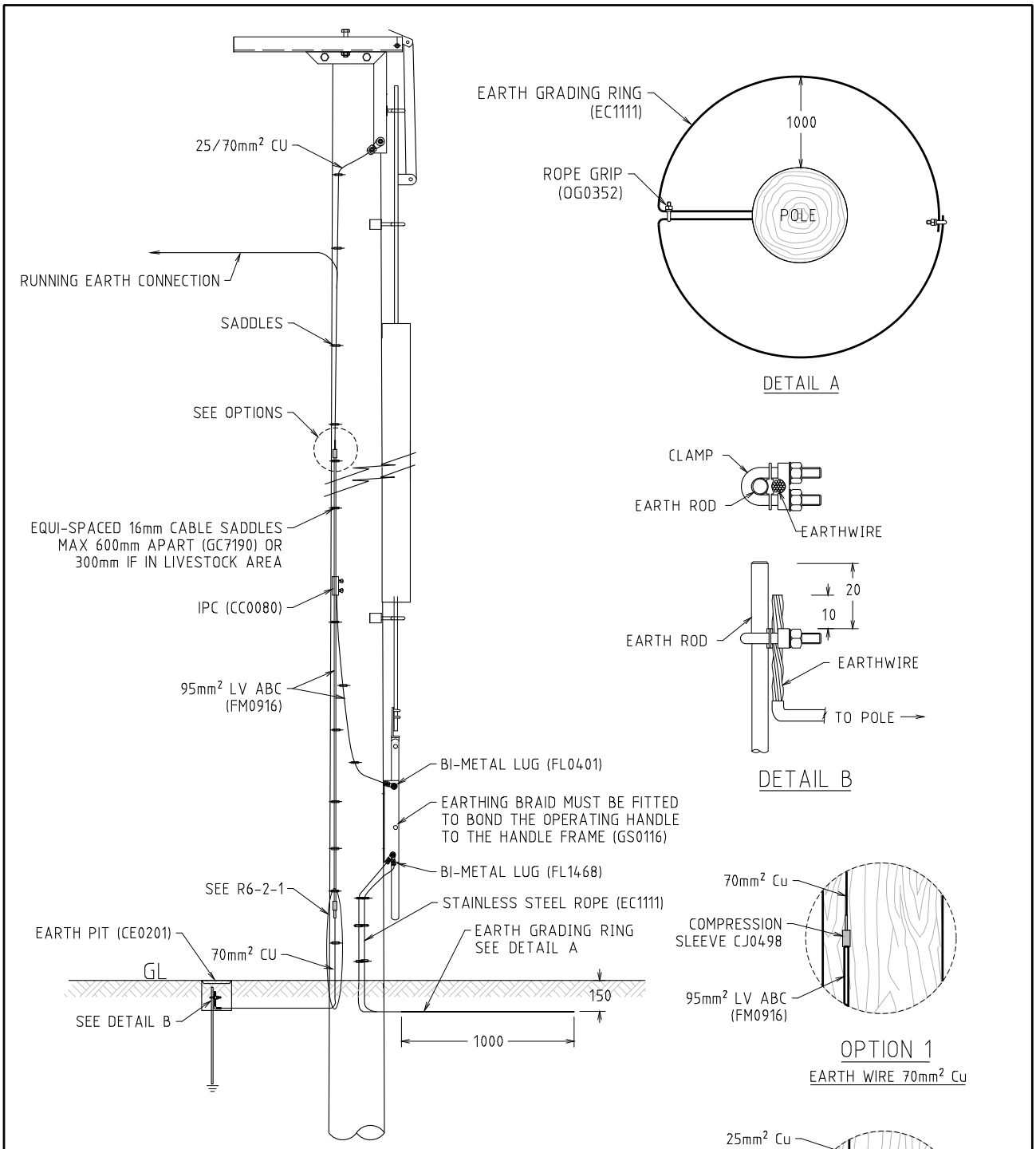
REFERENCE DRAWING

TITLE: POLE TOP SWITCH EARTHING

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 07-03-2018	DRG. No. MM02-R6-1
ORIGINATED: REE	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. UPPER MOST JOINT POSITION TO REMOVE RISK OF THEFT PREFERABLY AT LEAST 4m ABOVE GROUND, NOTE TO BE AT LEAST 760mm BELOW LV TO ALLOW MAD.
3. IF UNABLE TO INSTALL EARTH GRADING RING INSTALL CONCRETE EARTH MAT (DC4801) ON HANDLE SIDE OF THE POLE.
4. SADDLES TO BE FIXED TO POLE WITH 60mm WOOD SCREWS (AS2511).
5. THE INSULATION OF THE LV ABC SHOULD NOT BE BROKEN AT ANY POINT ALONG ITS LENGTH.

REV	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
B	12.06.19	EARTH CONNECTION OPTIONS ADDED	REE	NN	GS
A	07.03.18	ORIGINAL ISSUE	REE	CO	GS

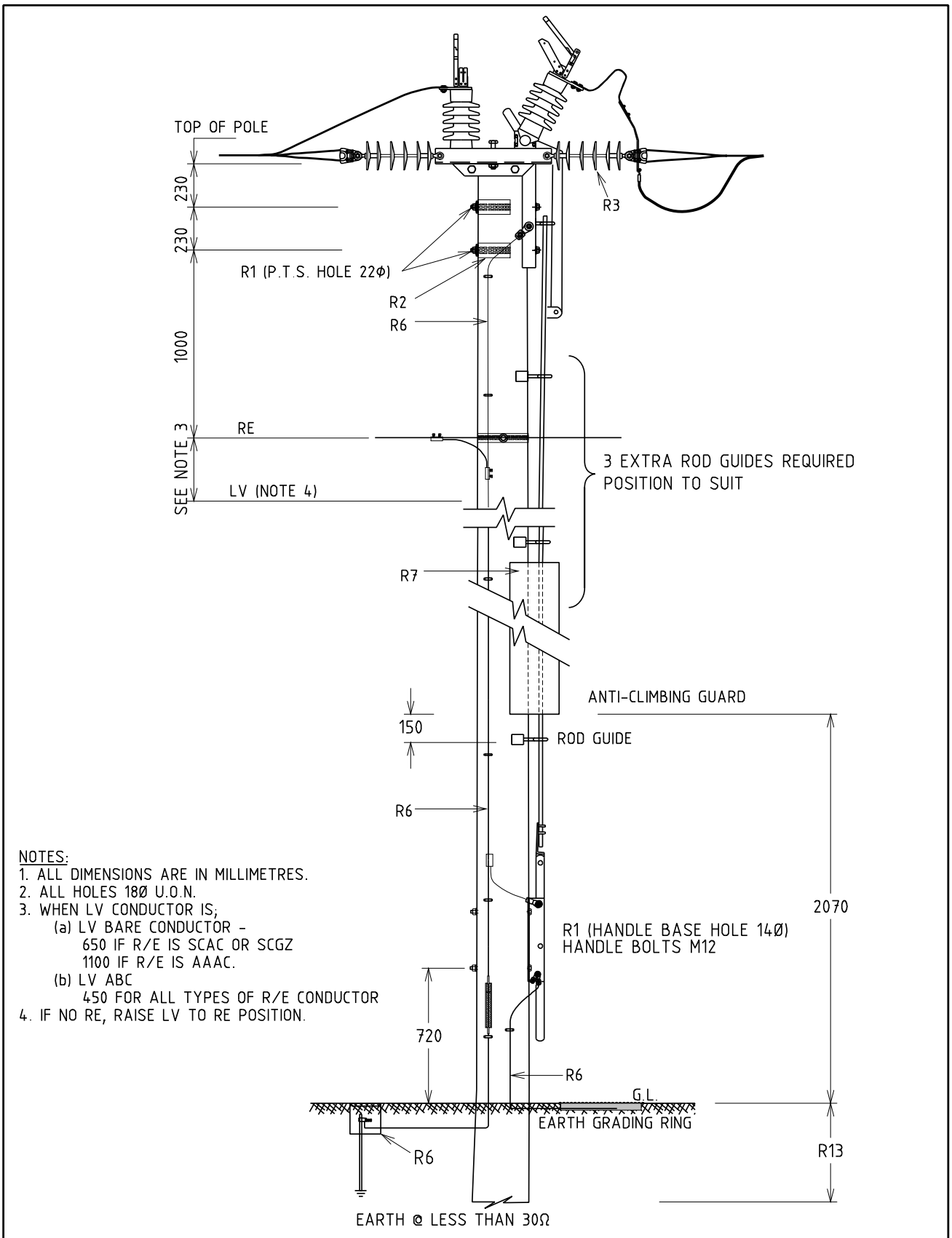
REFERENCE DRAWING

POLE TOP SWITCH DOWN EARTH REPAIR FOR VANDALISM/ COPPER THEFT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 07-03-2018 | DRG. No.
ORIGINATED: REE | SCALE: NTS | MM02-R6-2
CHECKED: CO
APPROVED: GRANT STACY | REV. B | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. WHEN LV CONDUCTOR IS;
   (a) LV BARE CONDUCTOR –
   650 IF R/E IS SCAC OR SCGZ
   1100 IF R/E IS AAAC.
   (b) LV ABC
   450 FOR ALL TYPES OF R/E CONDUCTOR
4. IF NO RE, RAISE LV TO RE POSITION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	23 01.18	ORIGINAL ISSUE	REE	JC	GS

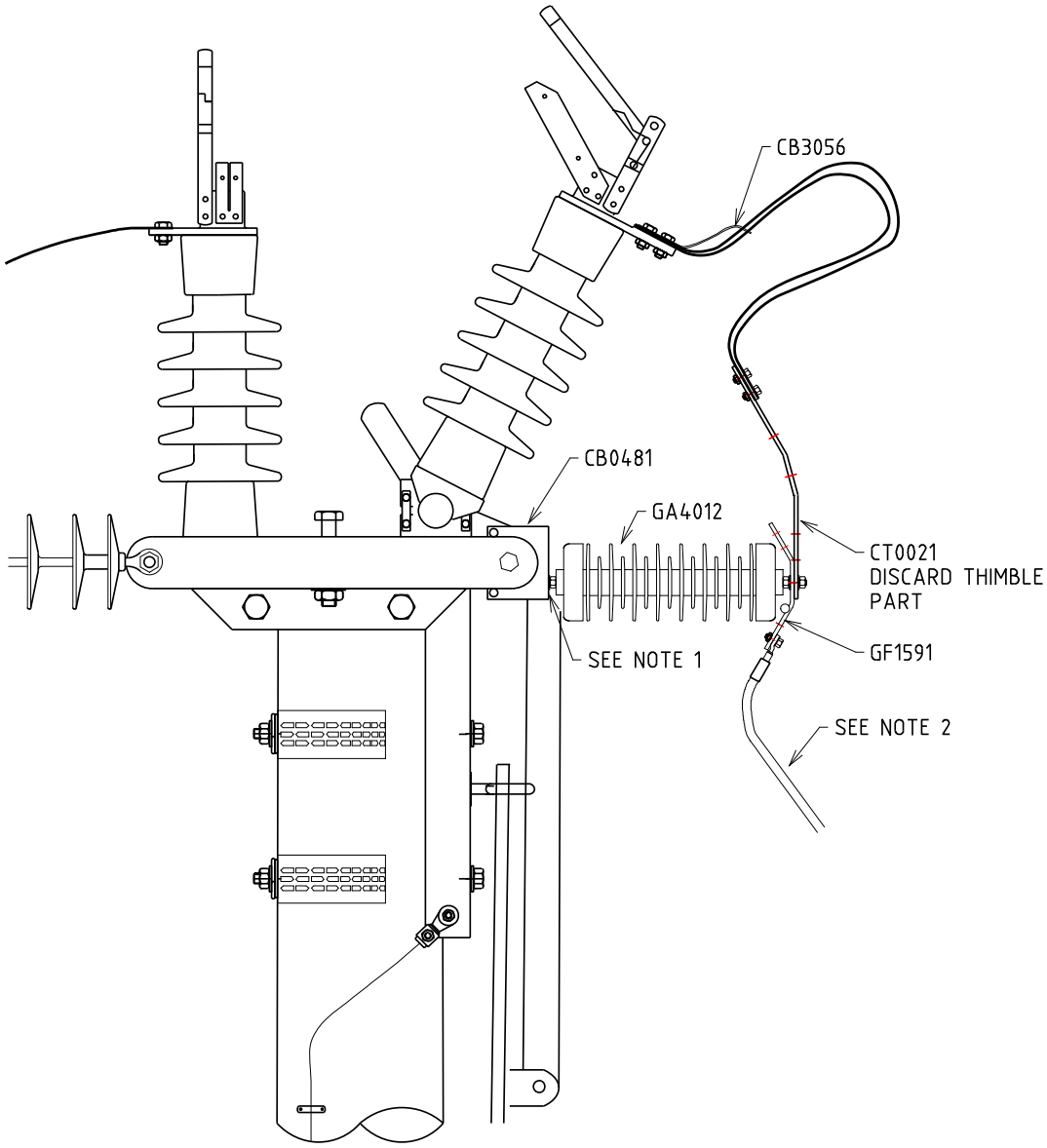
STRUCTURE

TITLE: 22kV POLE TOP SWITCH INCLUDING EARTH

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-01-2018	DRG. No. MM02-H12-1
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. USE BOTTOM HOLE IN BRACKET (CB0481).
2. TRAIN HENDRIX CONDUCTOR TO ELIMINATE ANY INHERENT FORCES BEING TRANSFERRED TO THE SURGE ARRESTER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
B	20.08.20	CLEVIS THIMBLE FIXING METHOD CHANGED	NMc		GS
A	14.08.20	ORIGINAL ISSUE	NMc		GS

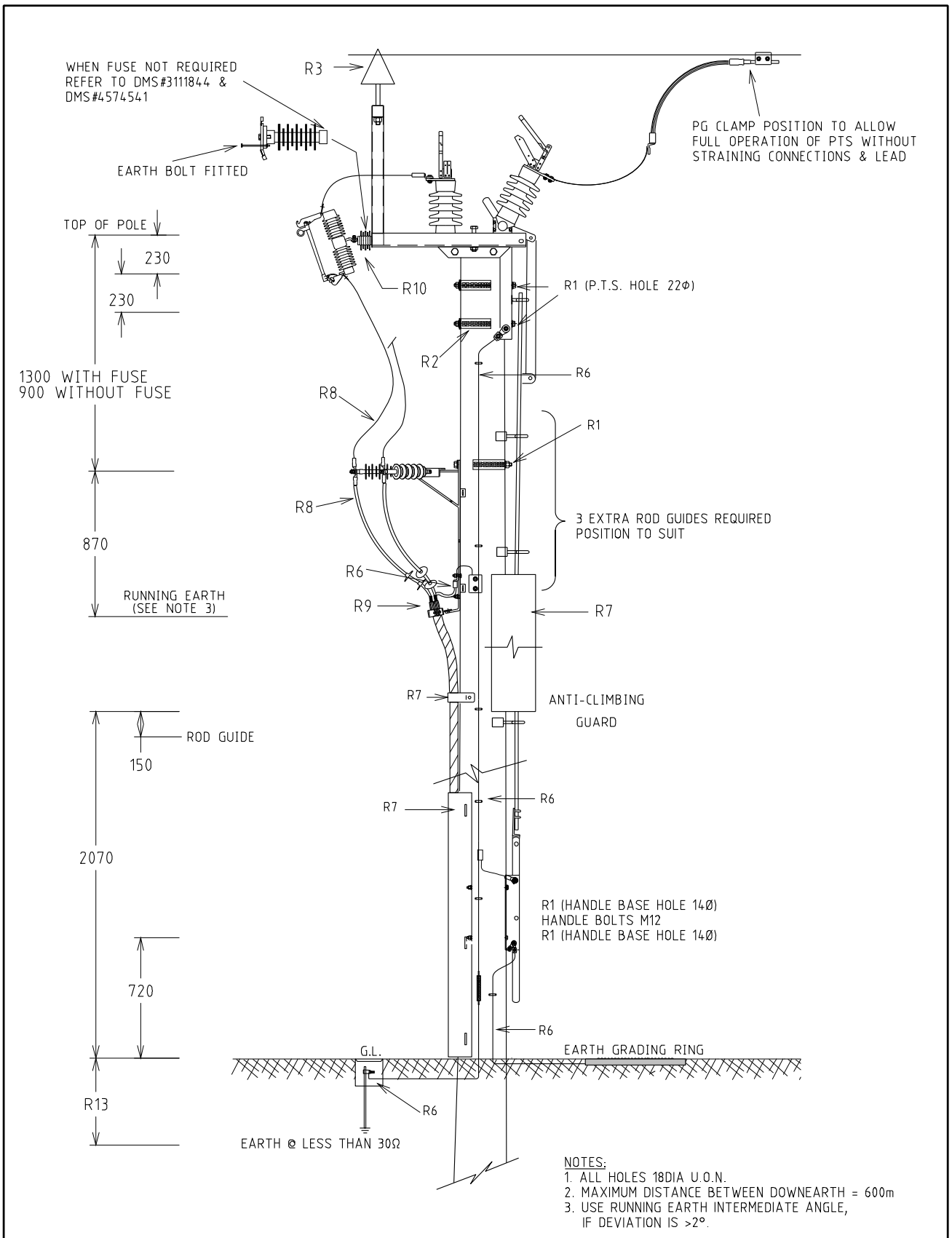
STRUCTURE

TITLE
22kV PTS FOR COVERED CONDUCTOR
DETAIL OF PARTS REQUIRED

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 31-07-2020	DRG. No.
ORIGINATED: NMc	SCALE: NTS	MM02-H12-2
CHECKED: CO		
APPROVED: GRANT STACY		REV. B / SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	23 01.18	ORIGINAL ISSUE	REE	JC	GS

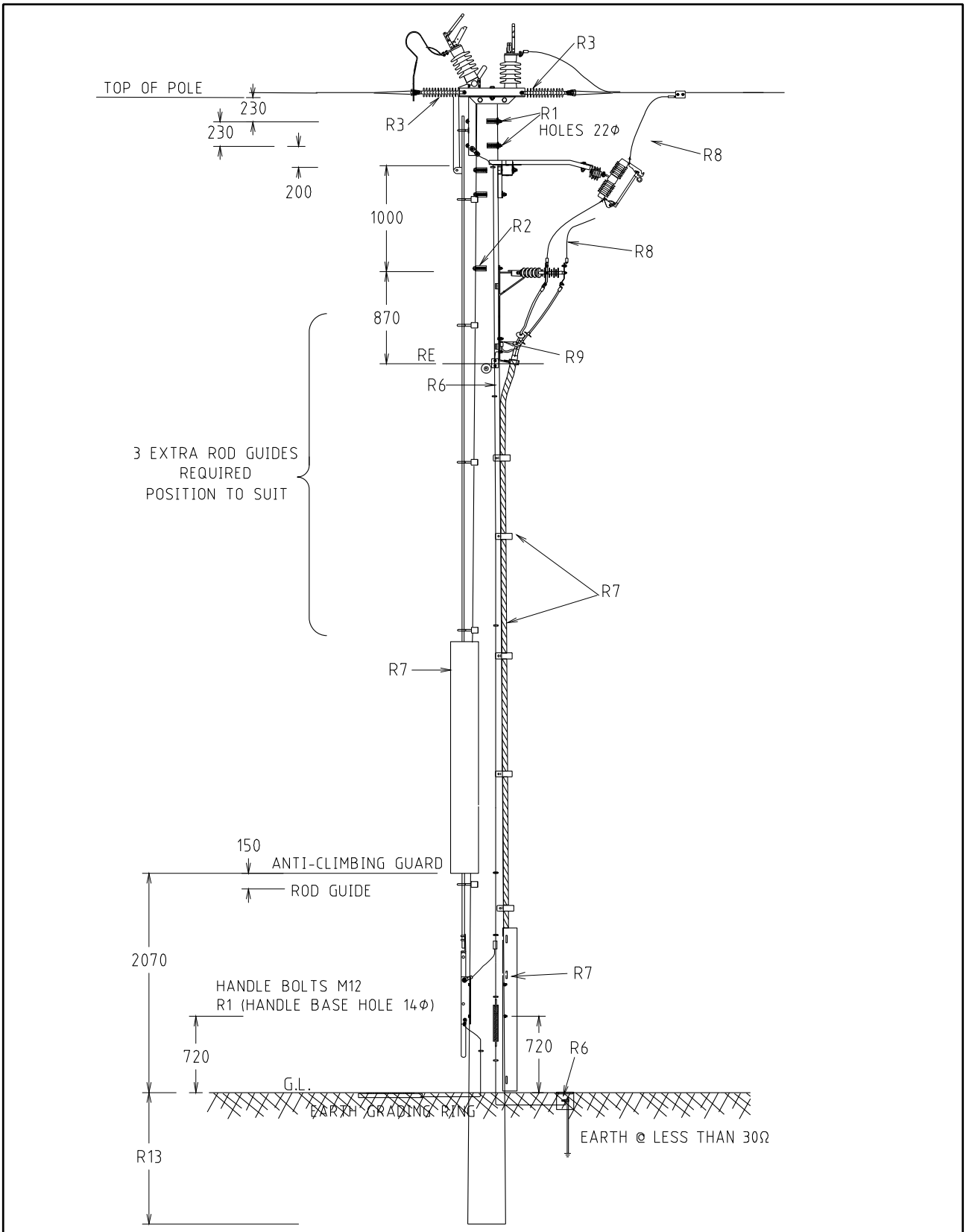
STRUCTURE

TITLE: COMBINATION SWITCH & FUSE WITH RAISER (11kV & 22kV) (FLY-OVER SWITCH)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-01-2018	DRG. No. MM02-H14-1
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	23.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

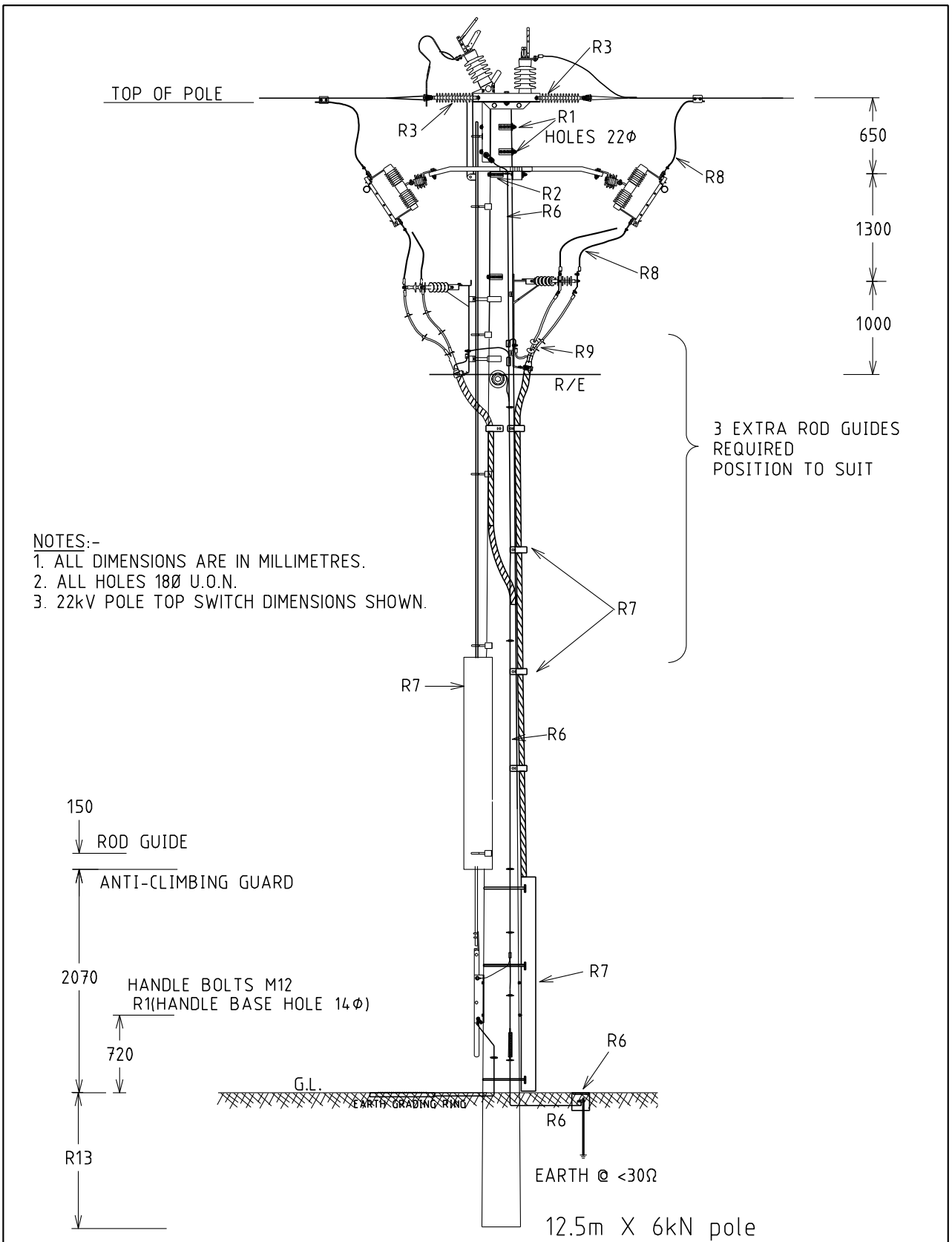
TITLE

COMBINATION SWITCH & FUSE
(11kV & 22kV)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-01-2018	DRG. No. MM02-H14-2
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY	REV. A	SHT.



REV.	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
A	31 01 18	ORIGINAL ISSUE	REE	JC	GS

TITLE

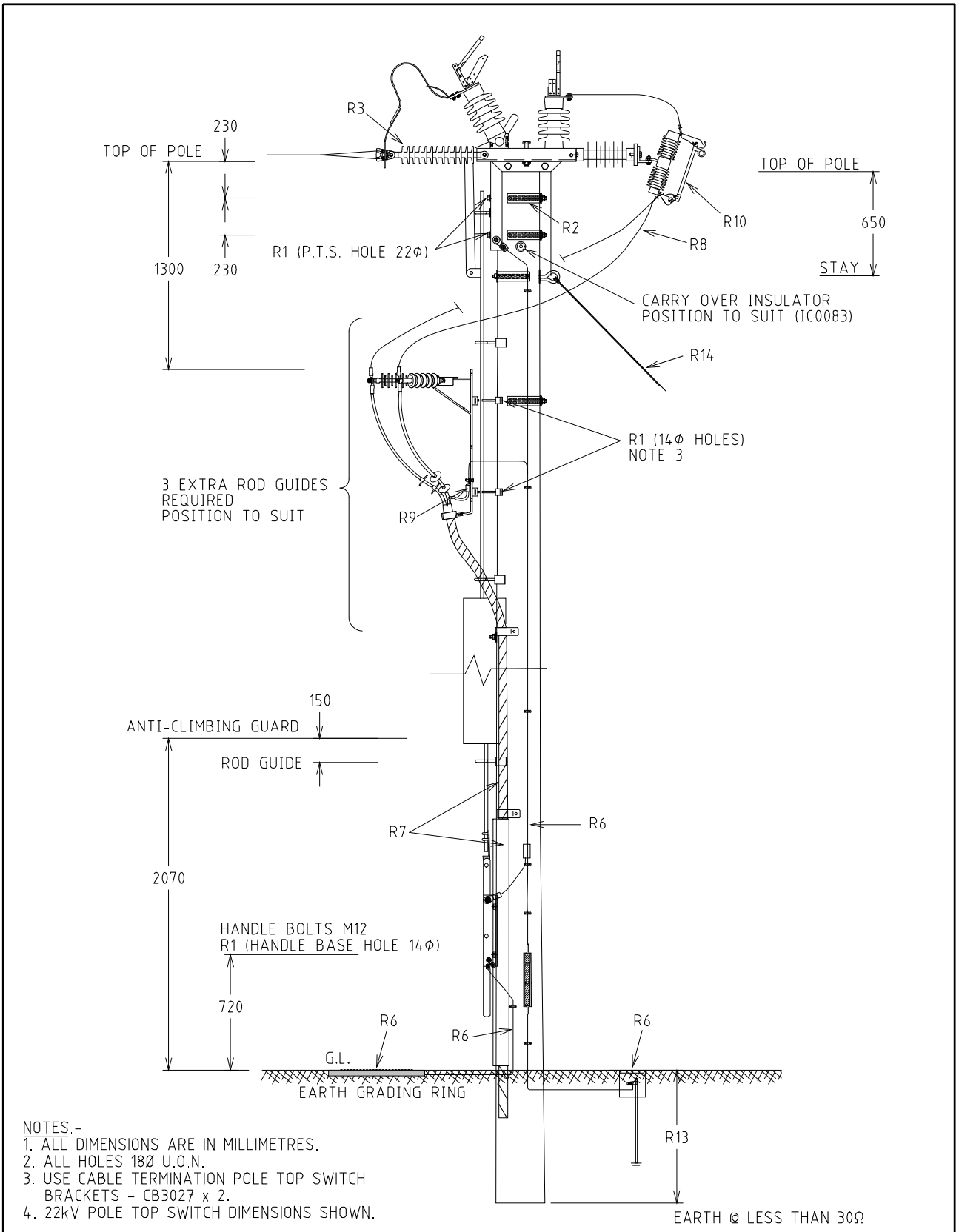
STRUCTURE

PTS & FUSES/ISOLATORS
LAYOUT FOR 2 CABLES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN JRR	DATE: 11-01-2018	DRG. No. MM02-H14-3
ORIGINATED REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV A SHT



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. USE CABLE TERMINATION POLE TOP SWITCH BRACKETS - CB3027 x 2.
4. 22kV POLE TOP SWITCH DIMENSIONS SHOWN.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

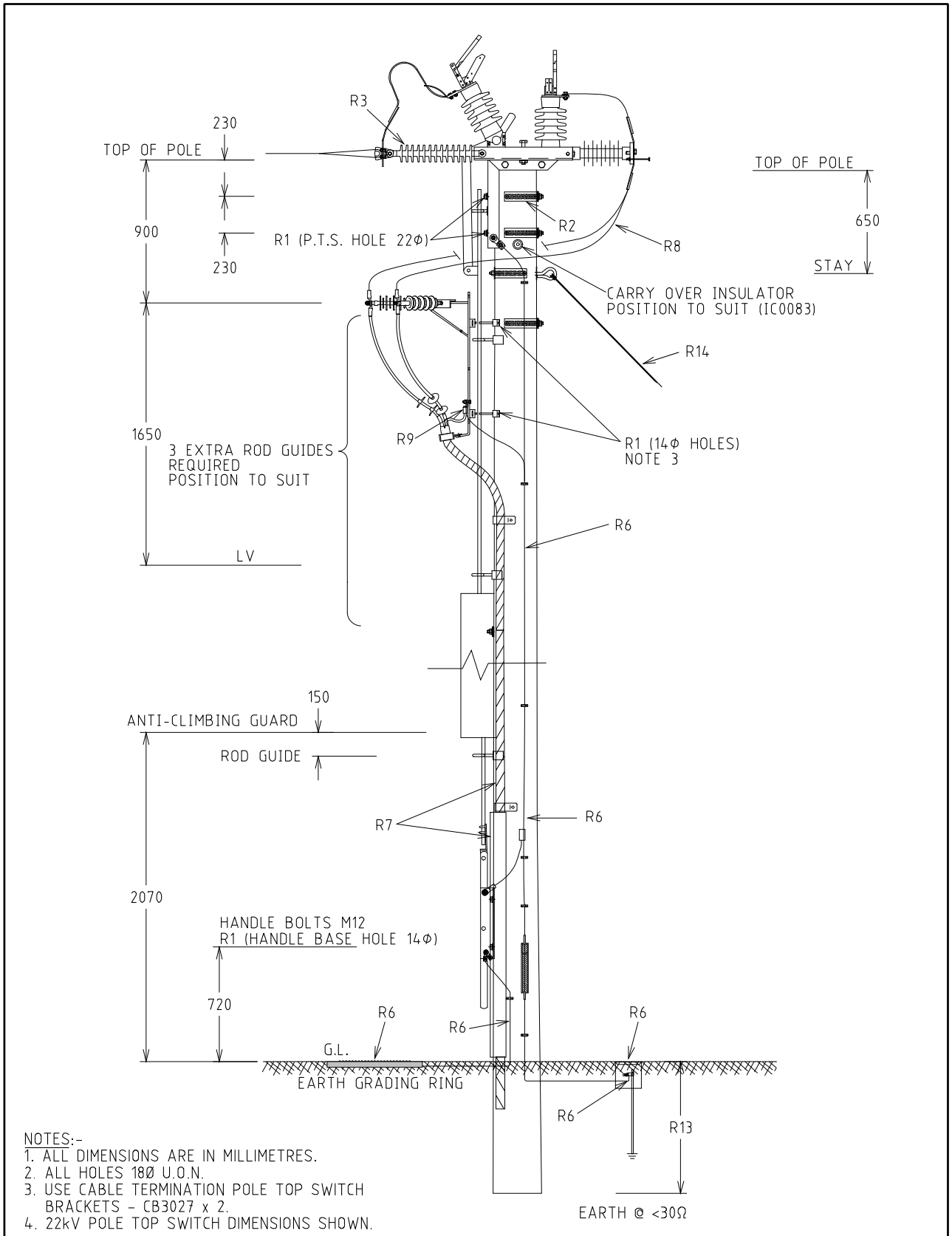
TITLE

TERMINATION POLE TOP SWITCH WITH CABLE & DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 12-01-2018	DRG. No. MM02-H18
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

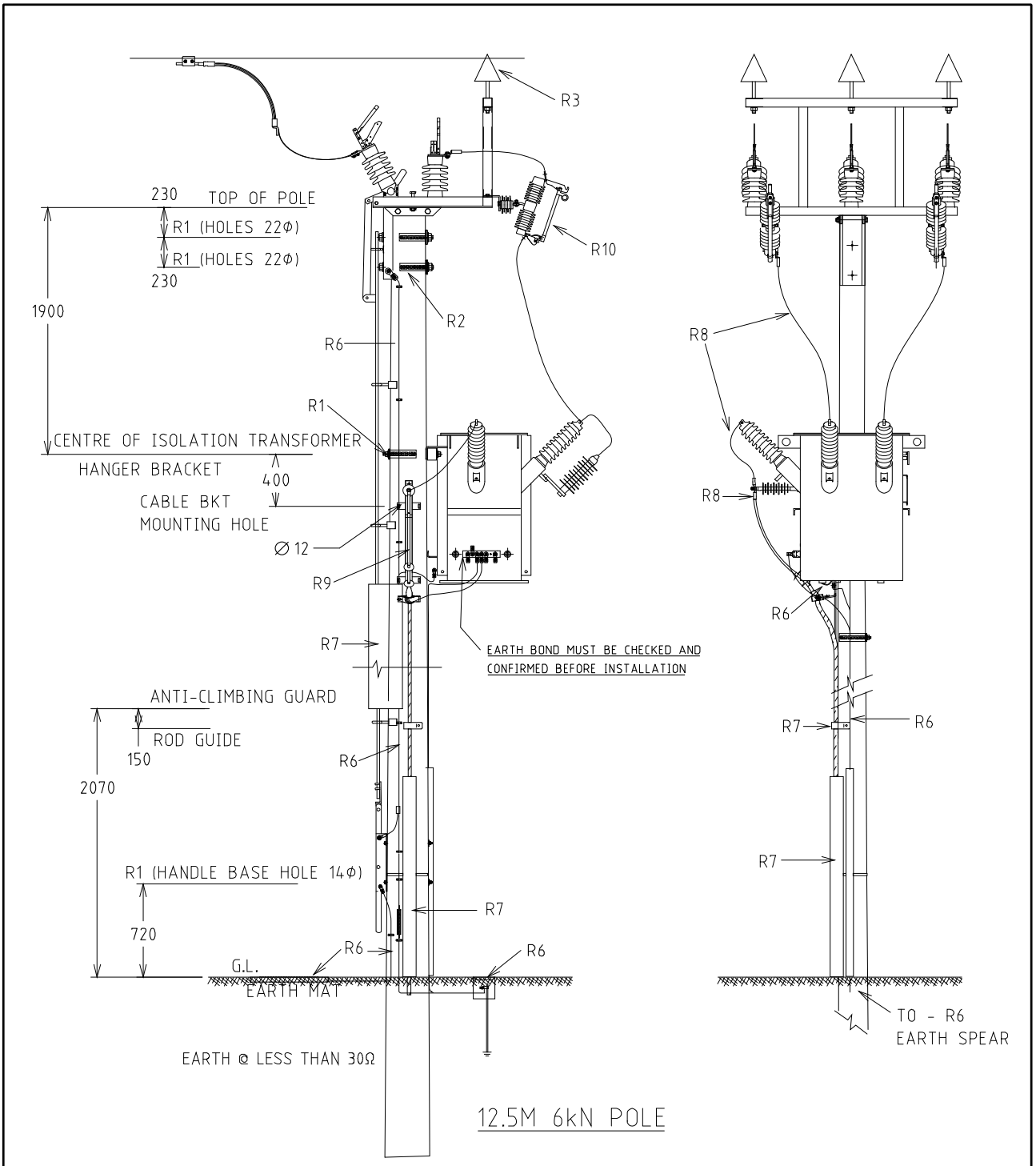
TITLE

TERMINATION POLE TOP SWITCH
WITH CABLE ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 12-01-2018	DRG. No. MM02-H19
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.



NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
4. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING.
5. 22kV POLE TOP SWITCH DIMENSIONS SHOWN.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

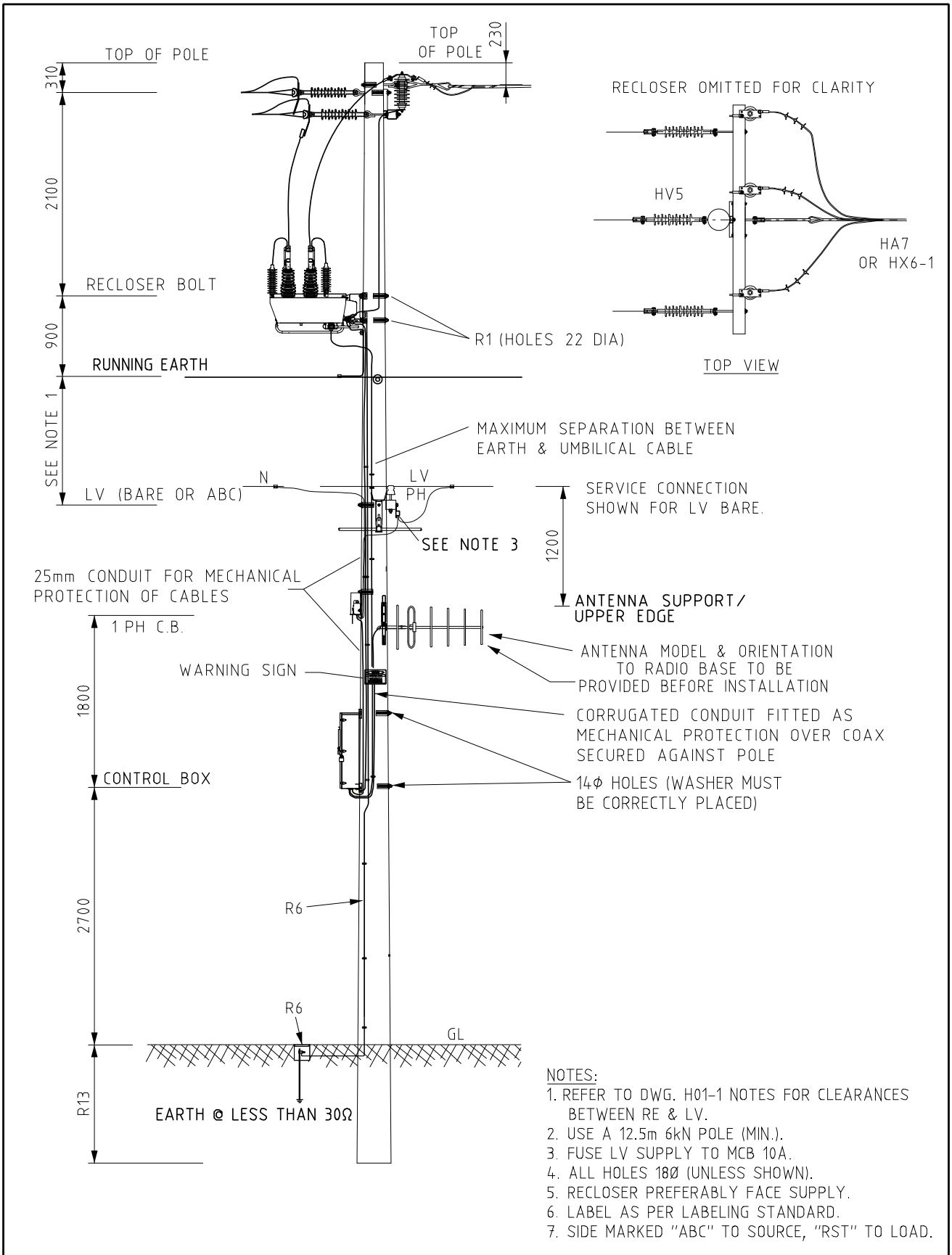
TITLE

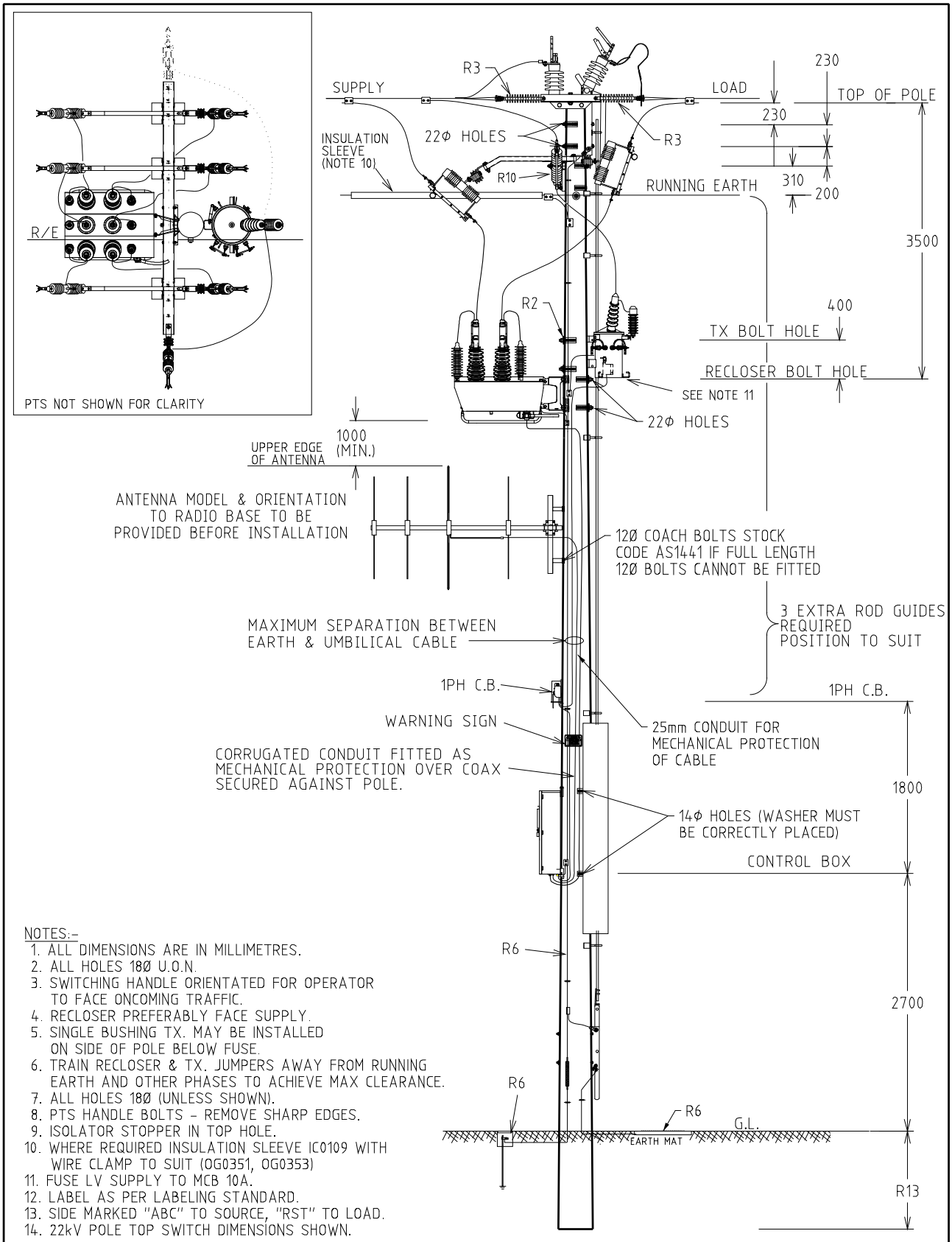
ISOLATION TRANSFORMER

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-01-2018	DRG. No.
ORIGINATED: REE	SCALE: NTS	MM02-H20
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.


TOP OF POLE
TOP OF POLE
230
310
2100
RECLOSER BOLT
900
RUNNING EARTH
SEE NOTE 1
LV (BARE OR ABC)
N
LV
PH
SEE NOTE 3
MAXIMUM SEPARATION BETWEEN EARTH & UMBILICAL CABLE
SERVICE CONNECTION SHOWN FOR LV BARE.
1200
ANTENNA SUPPORT/ UPPER EDGE
25mm CONDUIT FOR MECHANICAL PROTECTION OF CABLES
1 PH C.B.
WARNING SIGN
1800
ANTENNA MODEL & ORIENTATION TO RADIO BASE TO BE PROVIDED BEFORE INSTALLATION
CORRUGATED CONDUIT FITTED AS MECHANICAL PROTECTION OVER COAX SECURED AGAINST POLE
CONTROL BOX
14Φ HOLES (WASHER MUST BE CORRECTLY PLACED)
2700
R6
R6
GL
R13
EARTH @ LESS THAN 30Ω
RECLOSER OMITTED FOR CLARITY
HV5
HA7 OR HX6-1
TOP VIEW
NOTES:
1. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
2. USE A 12.5m 6kN POLE (MIN.).
3. FUSE LV SUPPLY TO MCB 10A.
4. ALL HOLES 18Ø (UNLESS SHOWN).
5. RECLOSER PREFERABLY FACE SUPPLY.
6. LABEL AS PER LABELING STANDARD.
7. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.
A 31.10.19 ORIGINAL ISSUE CO NMc GS
REV DATE DESCRIPTION ORGD. CHKD. APRD.
STRUCTURE
TITLE 3 PH RECLOSER / LOAD BREAK SWITCH HV BARE - HV ABC/HENDRIX WITH LV AERIAL SUPPLY
DISTRIBUTION CONSTRN. STANDARD
westernpower
DRAWN: JRR DATE: 25-10-2019
ORIGINATED: CO SCALE: NTS
CHECKED: NMc
APPROVED: GRANT STACY
DRG. No. MM02-H60-4
REV. A
SHT.



NOTES:–

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. SWITCHING HANDLE ORIENTATED FOR OPERATOR TO FACE ONCOMING TRAFFIC.
4. RECLOSER PREFERABLY FACE SUPPLY.
5. SINGLE BUSHING TX. MAY BE INSTALLED ON SIDE OF POLE BELOW FUSE.
6. TRAIN RECLOSER & TX. JUMPERS AWAY FROM RUNNING EARTH AND OTHER PHASES TO ACHIEVE MAX CLEARANCE.
7. ALL HOLES 18Ø (UNLESS SHOWN).
8. PTS HANDLE BOLTS – REMOVE SHARP EDGES.
9. ISOLATOR STOPPER IN TOP HOLE.
10. WHERE REQUIRED INSULATION SLEEVE IC0109 WITH WIRE CLAMP TO SUIT (OG0351, OG0353)
11. FUSE LV SUPPLY TO MCB 10A.
12. LABEL AS PER LABELING STANDARD.
13. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.
14. 22kV POLE TOP SWITCH DIMENSIONS SHOWN.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

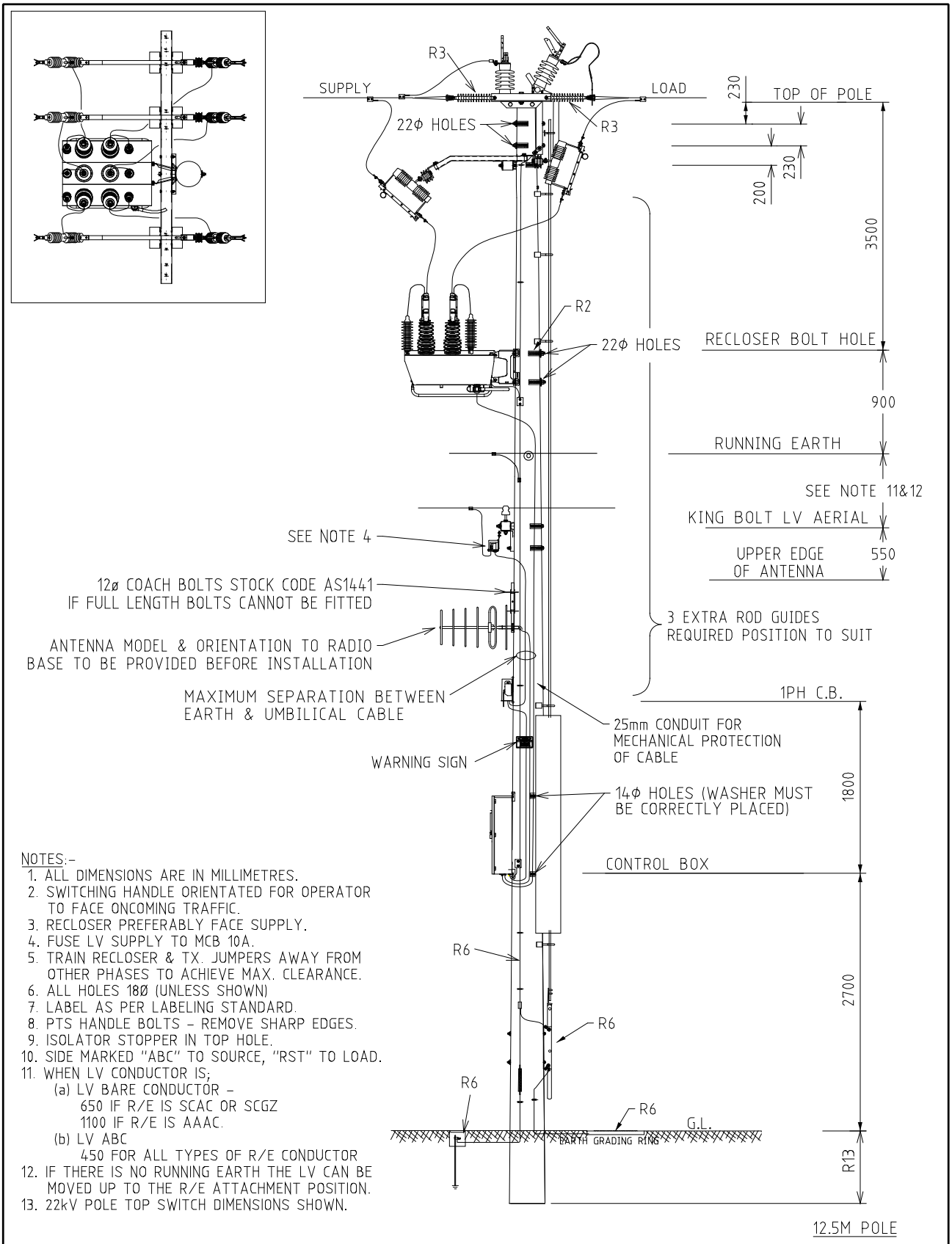
STRUCTURE

TITLE POLE MOUNTED 3 PH RECLOSER/ LOAD BREAK SWITCH WITH BY-PASS SWITCH

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-01-2018	DRG. No. MM02-H61-1
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. SWITCHING HANDLE ORIENTATED FOR OPERATOR TO FACE ONCOMING TRAFFIC.
3. RECLOSER PREFERABLY FACE SUPPLY.
4. FUSE LV SUPPLY TO MCB 10A.
5. TRAIN RECLOSER & TX. JUMPERS AWAY FROM OTHER PHASES TO ACHIEVE MAX. CLEARANCE.
6. ALL HOLES 18Ø (UNLESS SHOWN)
7. LABEL AS PER LABELING STANDARD.
8. PTS HANDLE BOLTS – REMOVE SHARP EDGES.
9. ISOLATOR STOPPER IN TOP HOLE.
10. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.
11. WHEN LV CONDUCTOR IS;
    (a) LV BARE CONDUCTOR –
        650 IF R/E IS SCAC OR SCGZ
        1100 IF R/E IS AAAC.
    (b) LV ABC
        450 FOR ALL TYPES OF R/E CONDUCTOR
12. IF THERE IS NO RUNNING EARTH THE LV CAN BE MOVED UP TO THE R/E ATTACHMENT POSITION.
13. 22kV POLE TOP SWITCH DIMENSIONS SHOWN.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

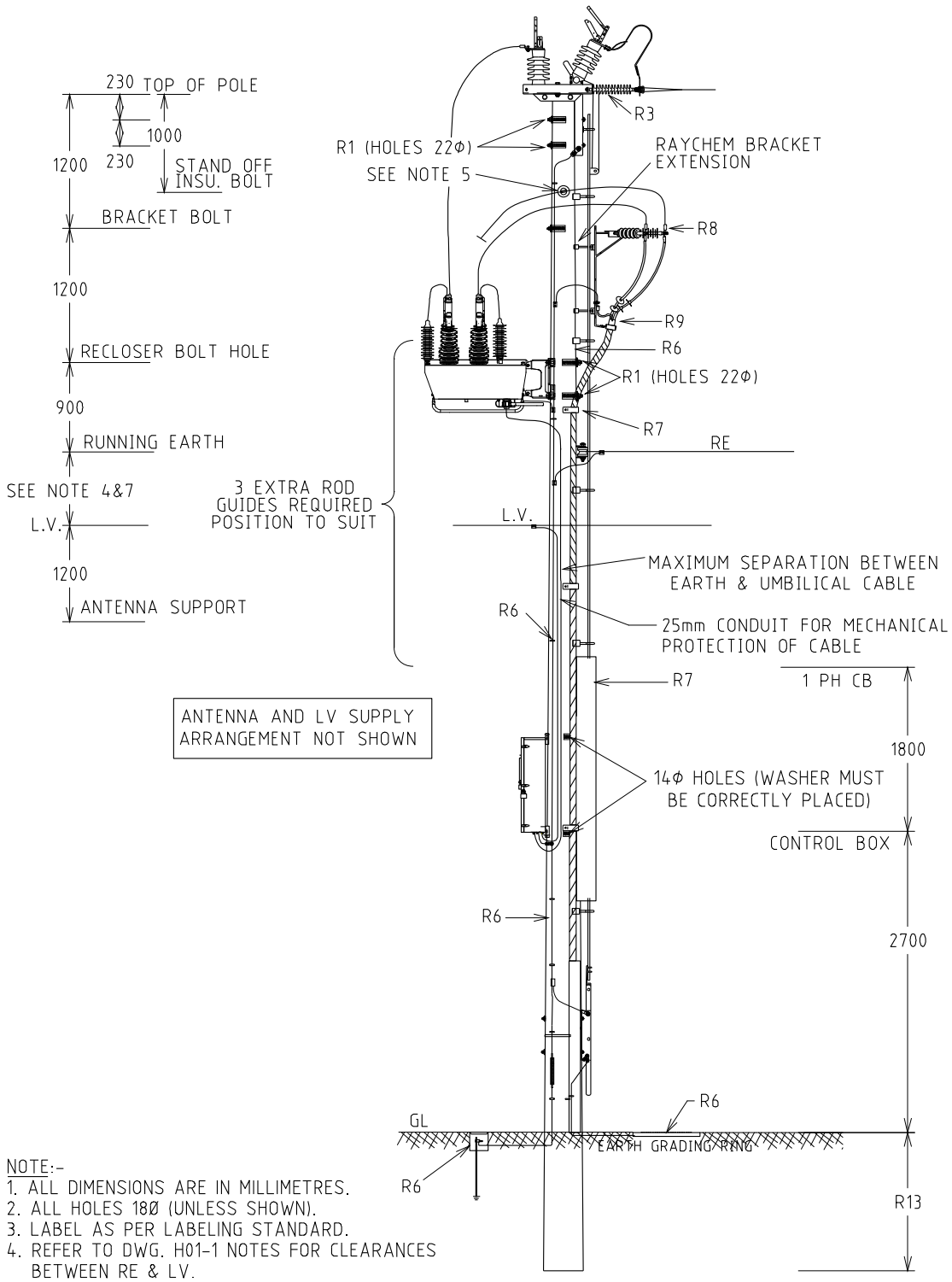
STRUCTURE

TITLE: POLE MOUNTED 3 PH RECLOSER / LOAD BREAK SWITCH WITH BY-PASS SWITCH (AERIAL LV SUPPLY)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-01-2018	DRG. No.	
ORIGINATED: REE	SCALE: NTS	MM02-H61-2	
CHECKED: JC			
APPROVED: GRANT STACY		REV. A	SHT.



NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø (UNLESS SHOWN).
3. LABEL AS PER LABELING STANDARD.
4. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
5. TIEWIRE FOR CCT CONDUCTOR IS IC0098. DON'T STRIP INSULATION ON JUMPERS.
6. RECLOSER PREFERABLY FACE SUPPLY.
7. FUSE LV SUPPLY TO MCB 10A.
8. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	31.12.18	ORIGINAL ISSUE	REE	JC	GS

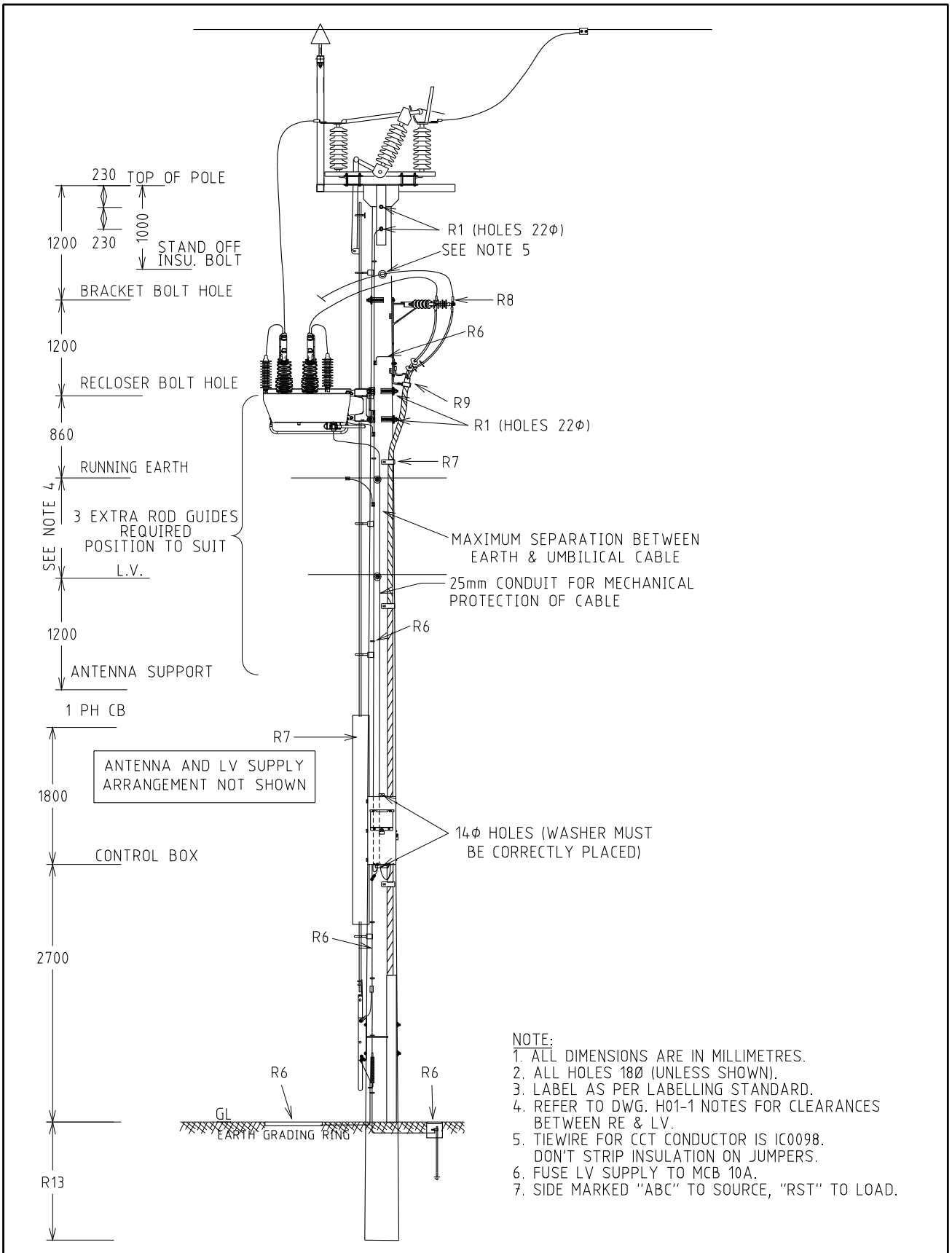
STRUCTURE

TITLE: 3 PH RECLOSER / LOAD BREAK SWITCH ON TERMINATION PTS POLE ARRANGEMENT (22kV)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-01-2018	DRG. No. MM02-H62-1
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV. A SHT.



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø (UNLESS SHOWN).
3. LABEL AS PER LABELLING STANDARD.
4. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
5. TIEWIRE FOR CCT CONDUCTOR IS IC0098. DON'T STRIP INSULATION ON JUMPERS.
6. FUSE LV SUPPLY TO MCB 10A.
7. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.

REV	DATE	DESCRIPTION	DRGD.	CHKD.	APRD.
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

TITLE: COMBINATION PTS & RAISER WITH 3 PH RECLOSER / LOAD BREAK SWITCH (ABB 33kV PTS)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-01-2018	DRG. No. MM02-H62-2
ORIGINATED: REE	SCALE: NTS	
CHECKED: JC		
APPROVED: GRANT STACY		REV: A SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
GS0311	SCHNEIDER/NULEC 3Φ 22kV RECLOSER	MM03-H16-1, MM03-H17-1
GS0312	SCHNEIDER/NULEC 3Φ 33kV RECLOSER	
GS0310	SCHNEIDER/NULEC 1Φ 12.7kV RECLOSER	MM03-H51-2, MM03-H51-4
GS0314	SCHNEIDER/NULEC 1Φ 19.1kV RECLOSER	
GS0303	1Φ HYDRAULIC RECLOSER (KYLE TYPE 'E' RECLOSER	FUTURE

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2) APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION
3) SUPERSEDED: IN LINE ISOLATOR ARRANGEMENTS FOR RECLOSERS DUE TO FIELD COMMENTS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	19.12.19	TABLE OF DRAWING NUMBERS REVISED	CO	NMc	GS
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE: RECLOSER INSTALLATION

DISTRIBUTION CONSTRN. STANDARD

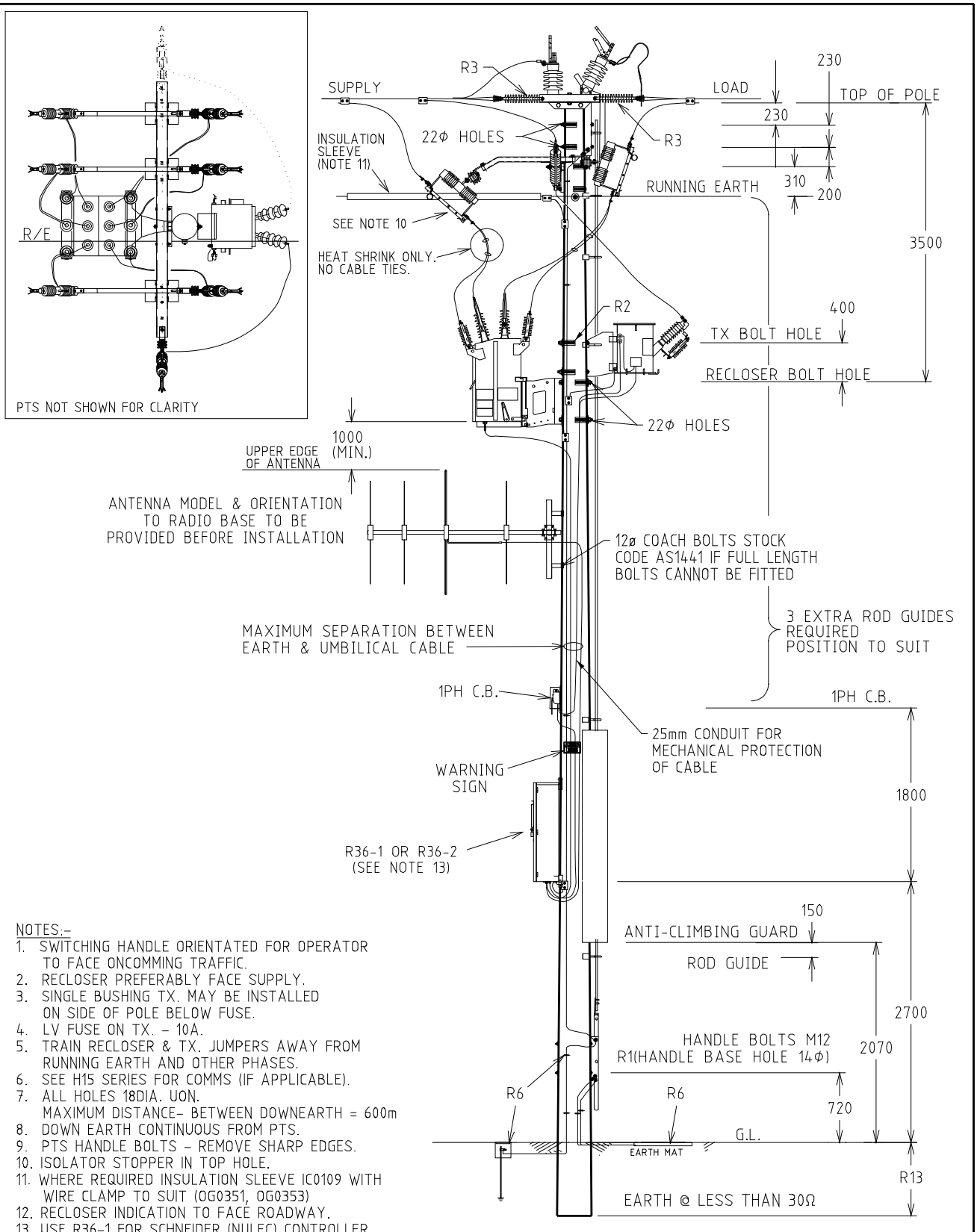
westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM03

ORIGINATED: JC | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY | REV. B | SHT.



NOTES:-

1. SWITCHING HANDLE ORIENTATED FOR OPERATOR TO FACE ONCOMMING TRAFFIC.
2. RECLOSER PREFERABLY FACE SUPPLY.
3. SINGLE BUSHING TX. MAY BE INSTALLED ON SIDE OF POLE BELOW FUSE.
4. LV FUSE ON TX. – 10A.
5. TRAIN RECLOSER & TX. JUMPERS AWAY FROM RUNNING EARTH AND OTHER PHASES.
6. SEE H15 SERIES FOR COMMS (IF APPLICABLE).
7. ALL HOLES 18DIA. UON. MAXIMUM DISTANCE- BETWEEN DOWNEARTH = 600m
8. DOWN EARTH CONTINUOUS FROM PTS.
9. PTS HANDLE BOLTS – REMOVE SHARP EDGES.
10. ISOLATOR STOPPER IN TOP HOLE.
11. WHERE REQUIRED INSULATION SLEEVE IC0109 WITH WIRE CLAMP TO SUIT (OG0351, OG0353)
12. RECLOSER INDICATION TO FACE ROADWAY.
13. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER OR R36-2 FOR SCHNEIDER – ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

STRUCTURE

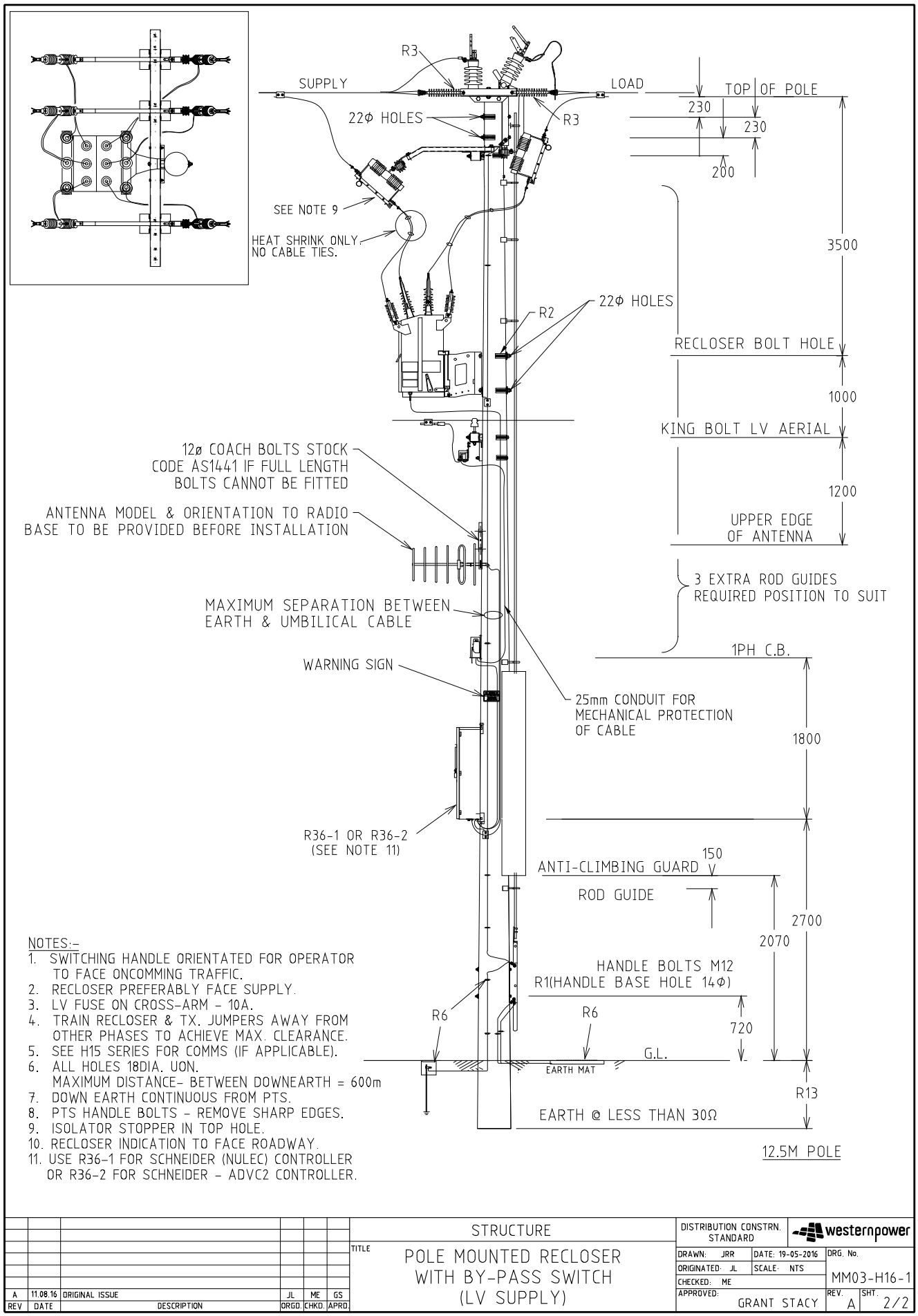
TITLE

POLE MOUNTED RECLOSER WITH BY-PASS SWITCH

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM03-H16-1
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A SHT. 1/2



NOTES:–

1. SWITCHING HANDLE ORIENTATED FOR OPERATOR TO FACE ONCOMMING TRAFFIC.
2. RECLOSER PREFERABLY FACE SUPPLY.
3. LV FUSE ON CROSS-ARM – 10A.
4. TRAIN RECLOSER & TX. JUMPERS AWAY FROM OTHER PHASES TO ACHIEVE MAX. CLEARANCE.
5. SEE H15 SERIES FOR COMMS (IF APPLICABLE).
6. ALL HOLES 18DIA. UON.
   MAXIMUM DISTANCE- BETWEEN DOWNEARTH = 600m
7. DOWN EARTH CONTINUOUS FROM PTS.
8. PTS HANDLE BOLTS – REMOVE SHARP EDGES.
9. ISOLATOR STOPPER IN TOP HOLE.
10. RECLOSER INDICATION TO FACE ROADWAY.
11. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER OR R36-2 FOR SCHNEIDER – ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

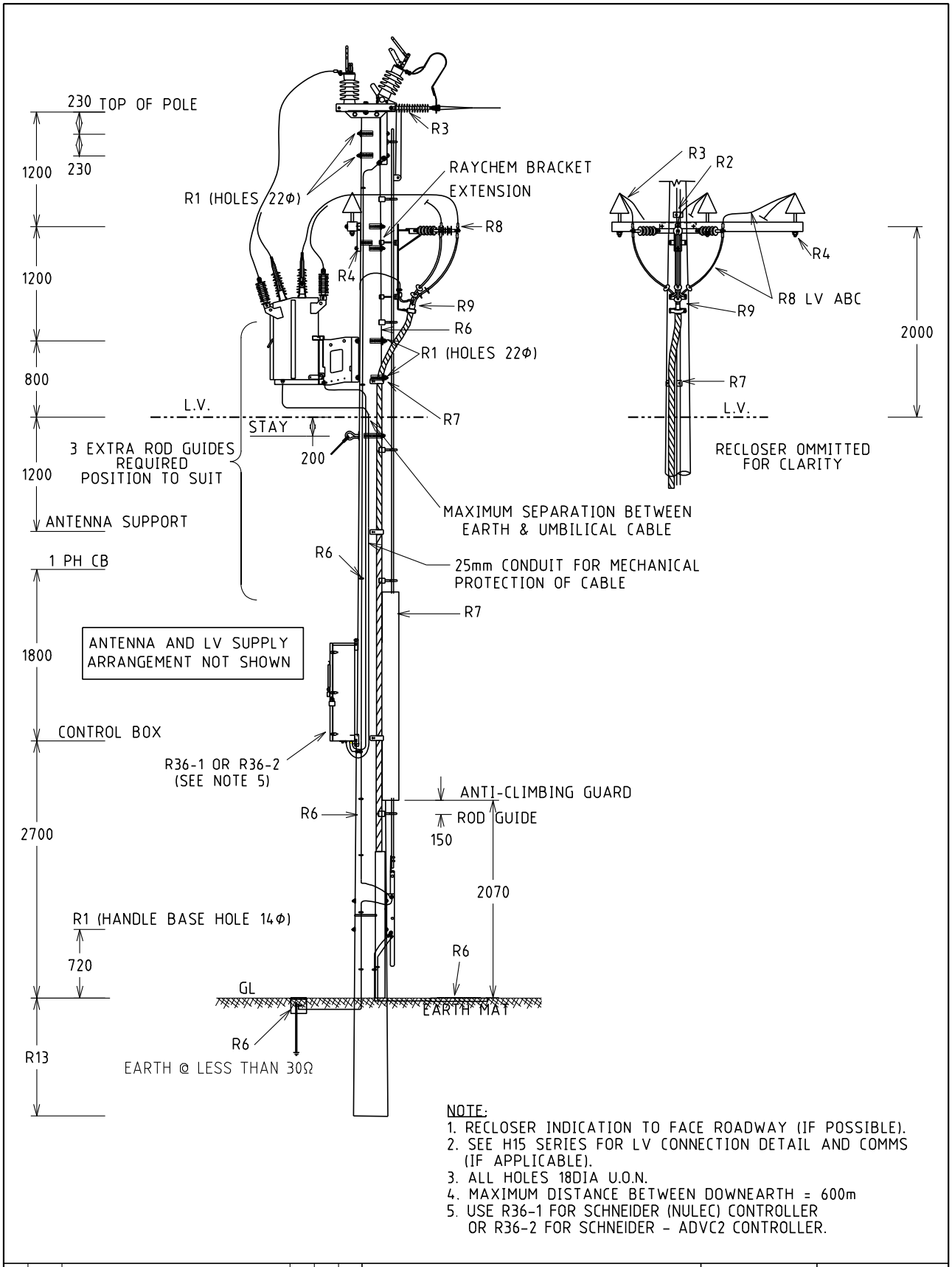
STRUCTURE

TITLE: POLE MOUNTED RECLOSER WITH BY-PASS SWITCH (LV SUPPLY)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM03-H16-1
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A SHT. 2/2



NOTE:
1. RECLOSER INDICATION TO FACE ROADWAY (IF POSSIBLE).
2. SEE H15 SERIES FOR LV CONNECTION DETAIL AND COMMS (IF APPLICABLE).
3. ALL HOLES 18DIA U.O.N.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
5. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER OR R36-2 FOR SCHNEIDER – ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	10.10.16	STAY ADDED	DVT		GS
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

STRUCTURE

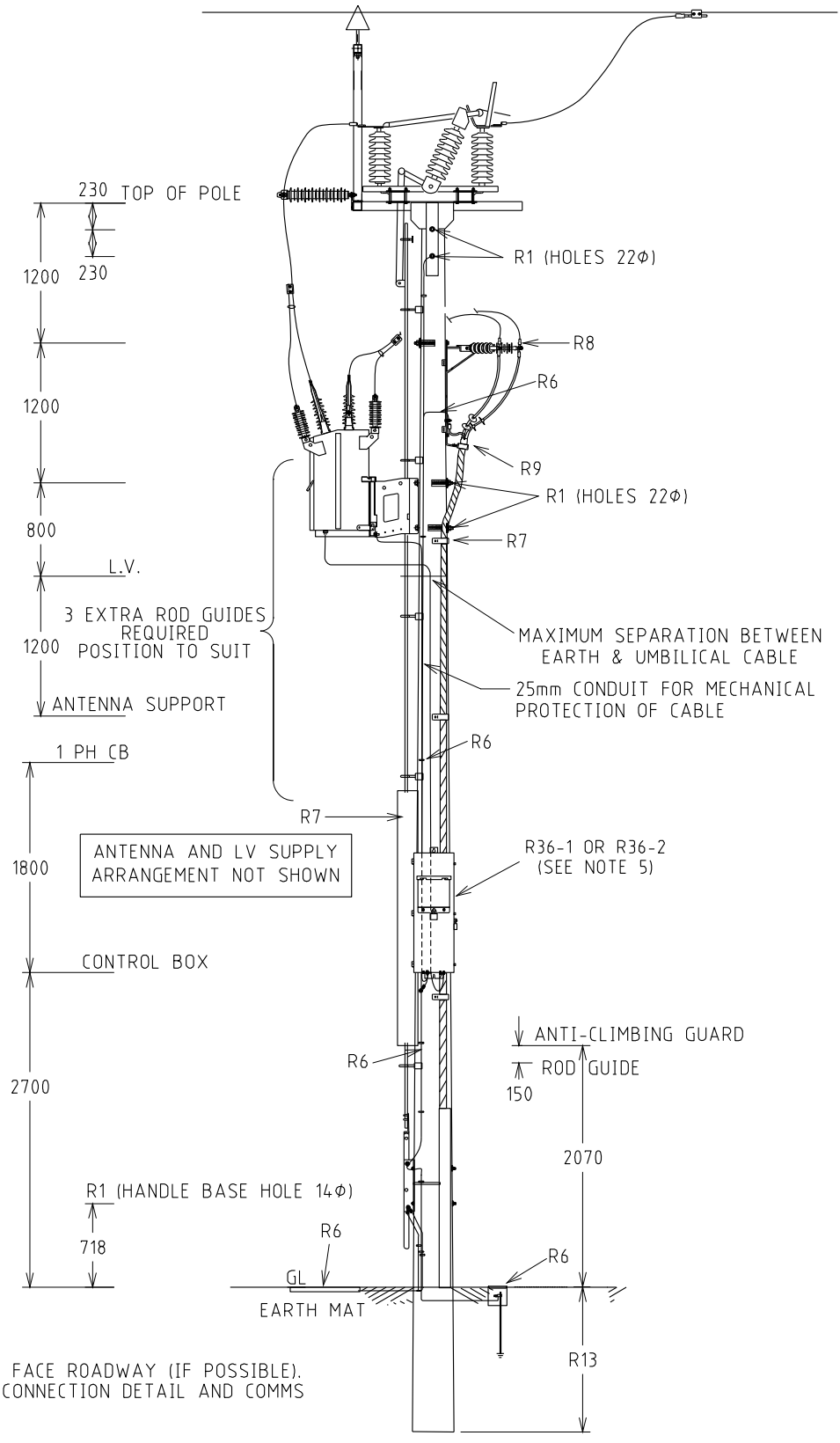
TITLE

RECLOSER ON TERMINATION
PTS POLE ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No.	MM03-H17-1
ORIGINATED: JL	SCALE: NTS		
CHECKED: ME			
APPROVED: GRANT STACY		REV. B	SHT. 1/2



NOTE:
1. RECLOSER INDICATION TO FACE ROADWAY (IF POSSIBLE).
2. SEE H15 SERIES FOR LV CONNECTION DETAIL AND COMMS (IF APPLICABLE).
3. ALL HOLES 18DIA U.O.N.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
5. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER OR R36-2 FOR SCHNEIDER – ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

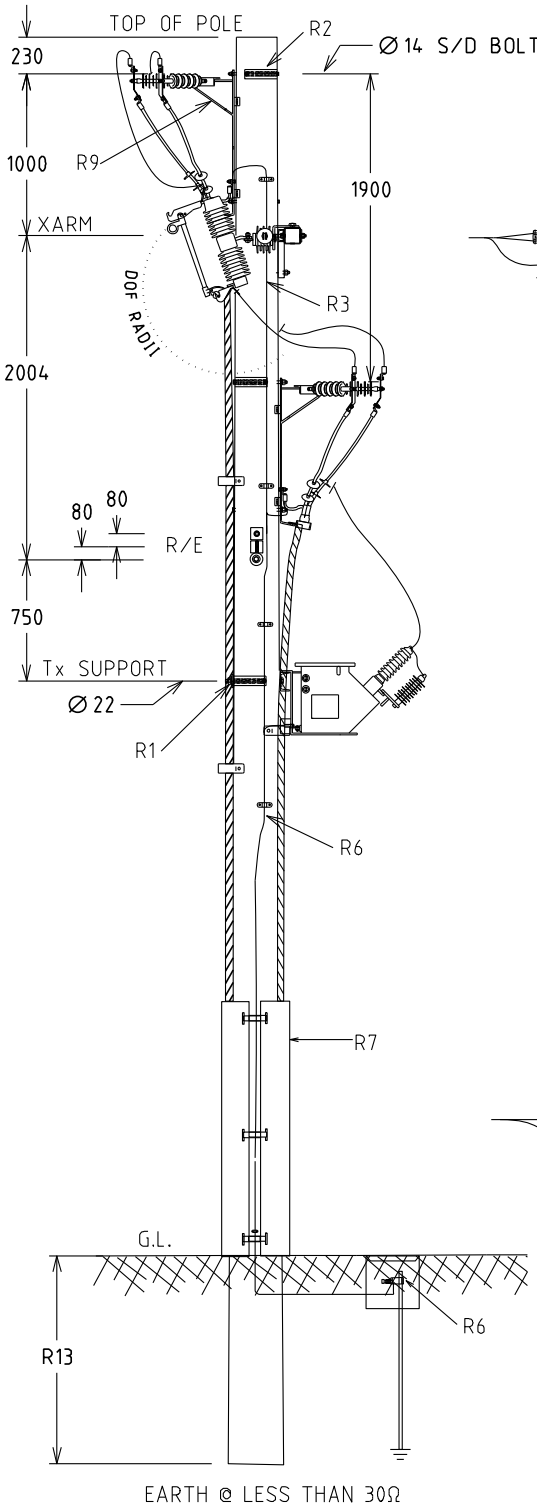
STRUCTURE

TITLE: COMBINATION PTS & RAISER WITH RECLOSER & CABLE ARRANGEMENT

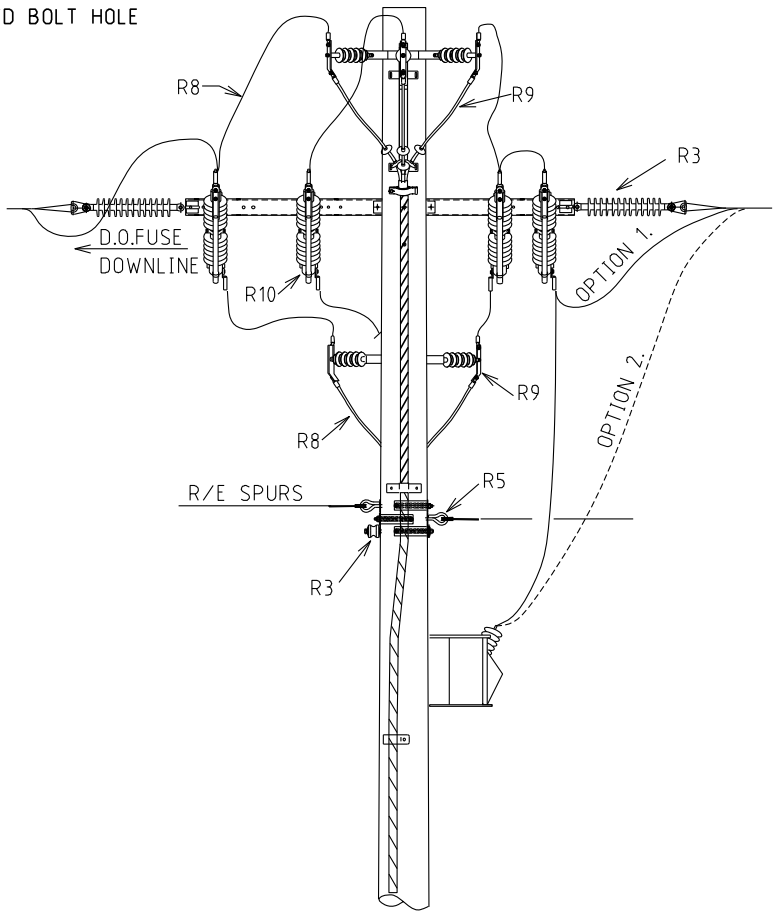
DISTRIBUTION CONSTRN. STANDARD

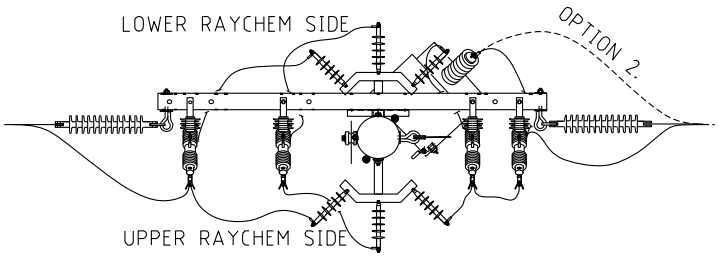
westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM03-H17-1
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT. 2/2



EARTH @ LESS THAN 30Ω





PLAN VIEW

NOTES:-
1. ALL HOLES 18DIA U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.

12.5M 6kN POLE COUNTRY NETWORKS

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	20.11.17	ORIGINAL ISSUE	NMc	CO	GS

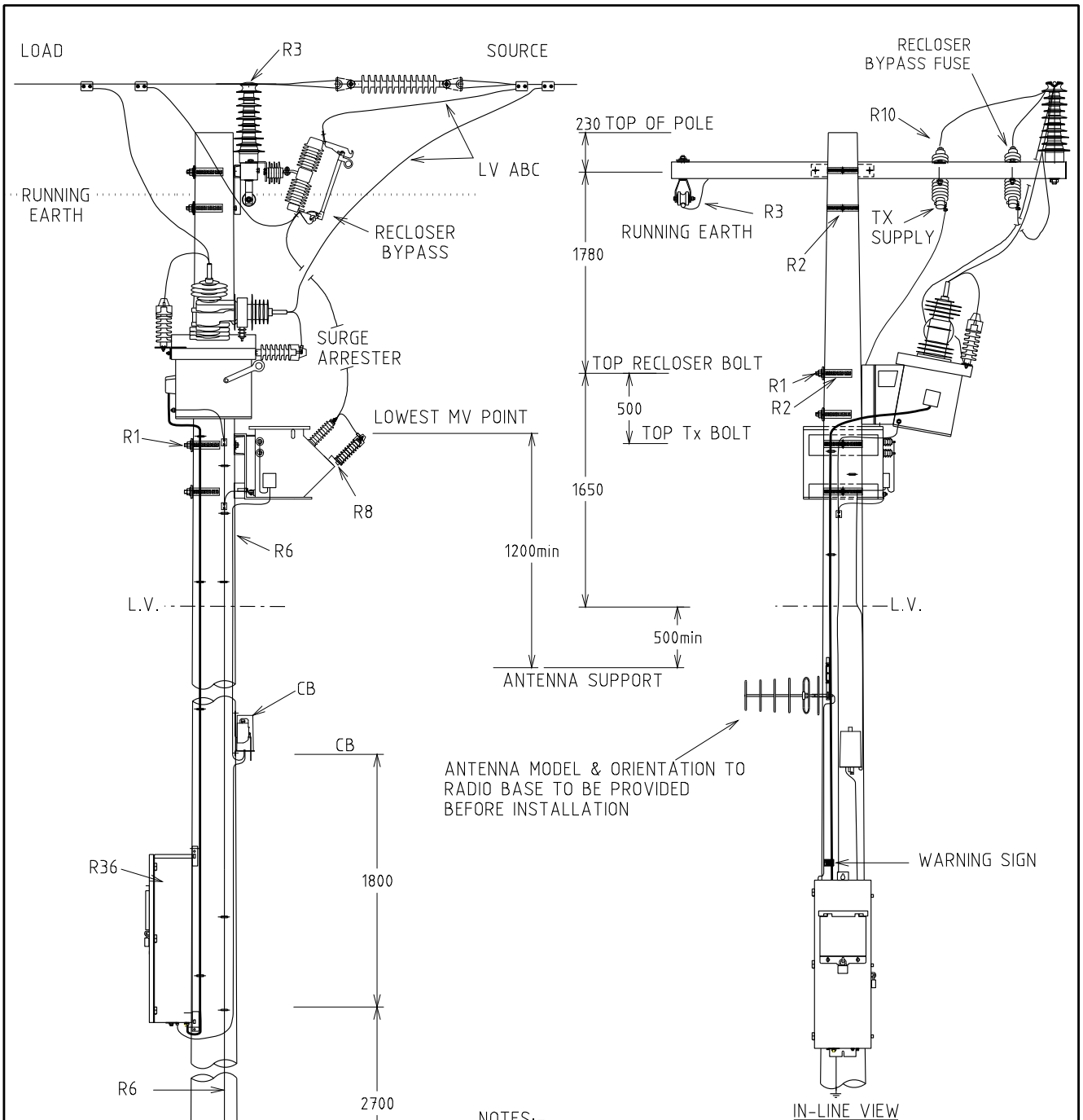
STRUCTURE

INTERMEDIATE TRANSFORMER(1PH) 3PH INLINE CABLES/2x1PH SPURS WITH/WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-11-2017	DRG. No.
ORIGINATED: NMc	SCALE: NTS	MM03-H17-4
CHECKED: CO		
APPROVED: GRANT STACY	REV. A	SHT.



NOTES:-

1. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600 metres
2. ANTENNA SUPPORT - MIN 1200mm FROM HV AND 500mm BELOW LV OR R/E WHICHEVER IS LOWER.
3. BY-PASS FUSE NOT TO BE LEFT IN OPEN POSITION. REMOVE & HANG ON POLE.
4. Tx ORIENTATED ON POLE TO ACHIVE MAX CLEARANCE.
5. UMBILICAL CABLE MAX. DIST. AWAY FROM LV & EARTH.

DOWN EARTH NOTE

A 70mm MAIN EARTH DIRECT FROM RECLOSER EARTH STUD TO EARTH STAKE UNBROKEN, ALL OTHER EARTHS TO BE PG BONDED TO THE MAIN EARTH (R/E, local tx, control box, etc). SURGE ARRESTERS DIRECT MOUNTED ON RECLOSER/FRAME CONSIDERED EARTHED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

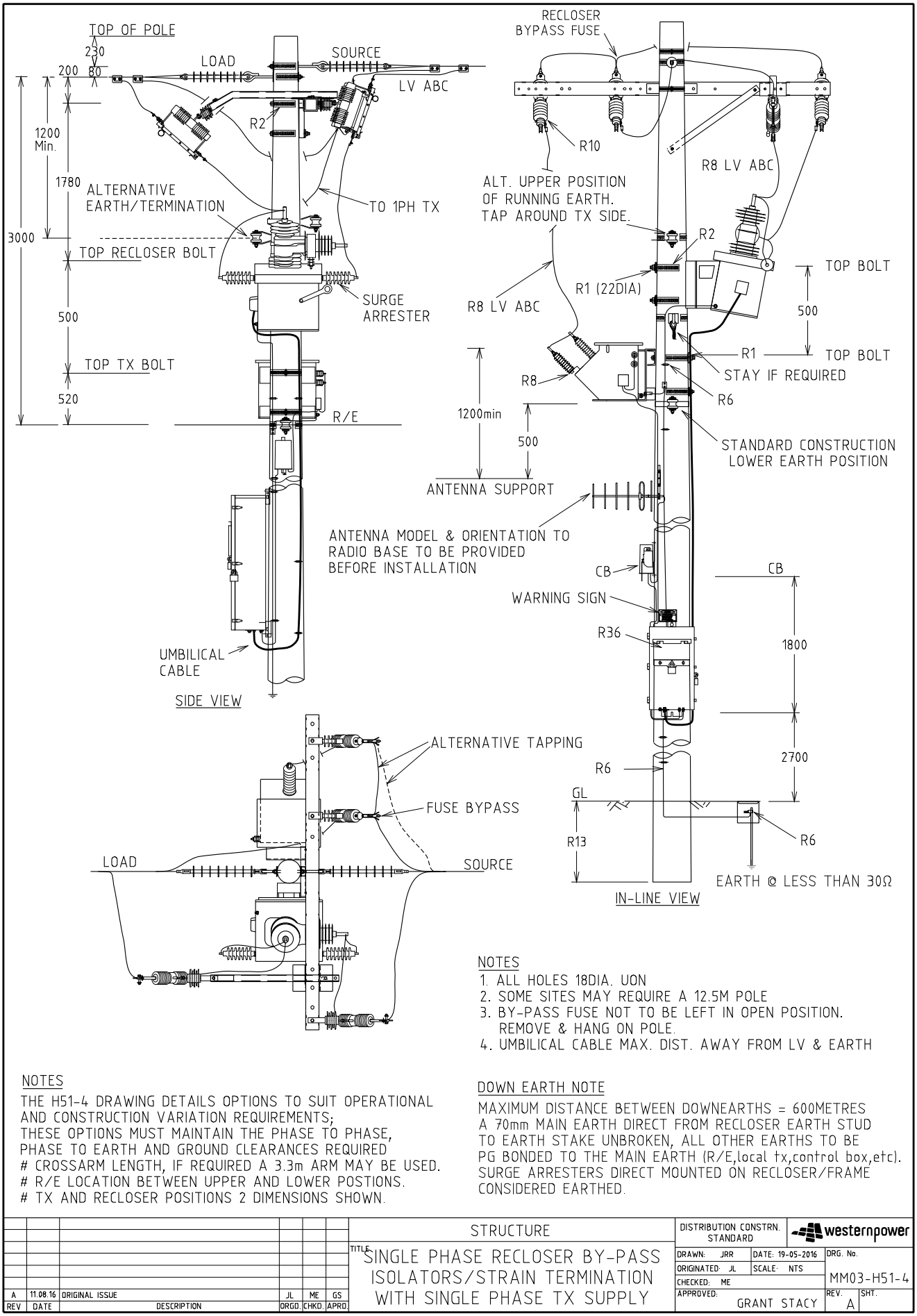
STRUCTURE

TITLE: SINGLE PHASE RECLOSER IN-LINE ANTI-CLASH WITH SINGLE PHASE TX SUPPLY

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM03-H51-2
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES
1. ALL HOLES 18DIA. UON
2. SOME SITES MAY REQUIRE A 12.5M POLE
3. BY-PASS FUSE NOT TO BE LEFT IN OPEN POSITION.
   REMOVE & HANG ON POLE.
4. UMBILICAL CABLE MAX. DIST. AWAY FROM LV & EARTH

NOTES

THE H51-4 DRAWING DETAILS OPTIONS TO SUIT OPERATIONAL AND CONSTRUCTION VARIATION REQUIREMENTS;
THESE OPTIONS MUST MAINTAIN THE PHASE TO PHASE, PHASE TO EARTH AND GROUND CLEARANCES REQUIRED
CROSSARM LENGTH, IF REQUIRED A 3.3m ARM MAY BE USED.
R/E LOCATION BETWEEN UPPER AND LOWER POSTIONS.
TX AND RECLOSER POSITIONS 2 DIMENSIONS SHOWN.

DOWN EARTH NOTE

MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600METRES
A 70mm MAIN EARTH DIRECT FROM RECLOSER EARTH STUD TO EARTH STAKE UNBROKEN, ALL OTHER EARTHS TO BE PG BONDED TO THE MAIN EARTH (R/E,local tx,control box,etc).
SURGE ARRESTERS DIRECT MOUNTED ON RECLOSER/FRAME CONSIDERED EARTHED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

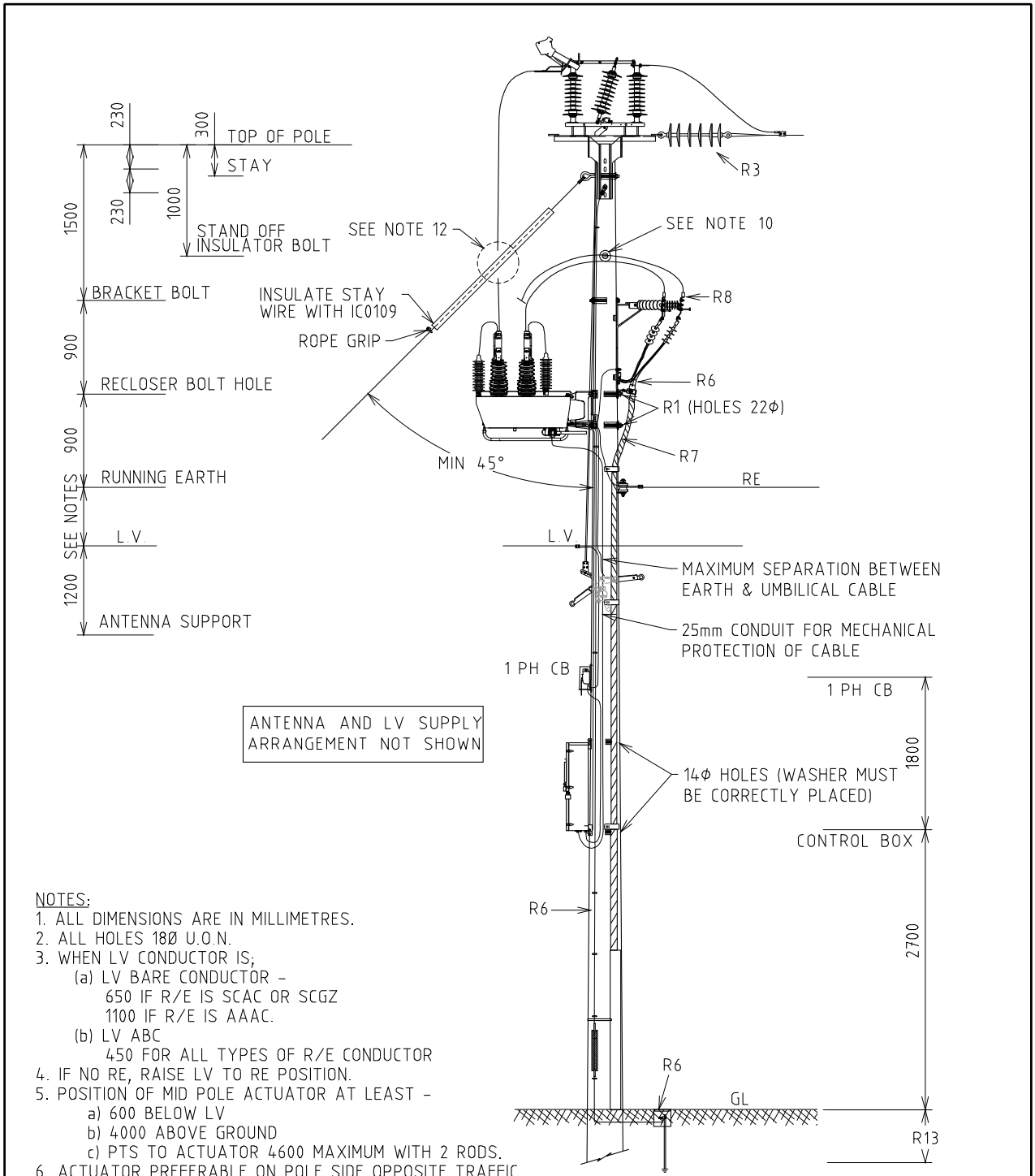
STRUCTURE

TITLE: SINGLE PHASE RECLOSER BY-PASS ISOLATORS/STRAIN TERMINATION WITH SINGLE PHASE TX SUPPLY

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM03-H51-4
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. WHEN LV CONDUCTOR IS;
   (a) LV BARE CONDUCTOR –
   650 IF R/E IS SCAC OR SCGZ
   1100 IF R/E IS AAAC.
   (b) LV ABC
   450 FOR ALL TYPES OF R/E CONDUCTOR
4. IF NO RE, RAISE LV TO RE POSITION.
5. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM WITH 2 RODS.
6. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
7. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
8. INSTALLATION INSTRUCTION EDM # 43917210 IS TO BE FOLLOWED.
9. 1200mm EXTENSION OPERATING ROD INSERT AVAILABLE AS REQUIRED TO CLEAR POLE FITTINGS IF NECESSARY.
10. TIEWIRE FOR CCT TIED TO INSULATOR IC0118. DO NOT STRIP INSULATION ON JUMPER CABLE.
11. FUSE LV SUPPLY TO MCB 10A.
12. TRAIN CENTRE PHASE JUMPER AROUND STAY WIRE. MIN CLEARANCE PHASE TO STAY AND PHASE TO PHASE – 400mm.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.08.23	TRANSFERED FROM DCSH PART 04	NMc	ML	CO

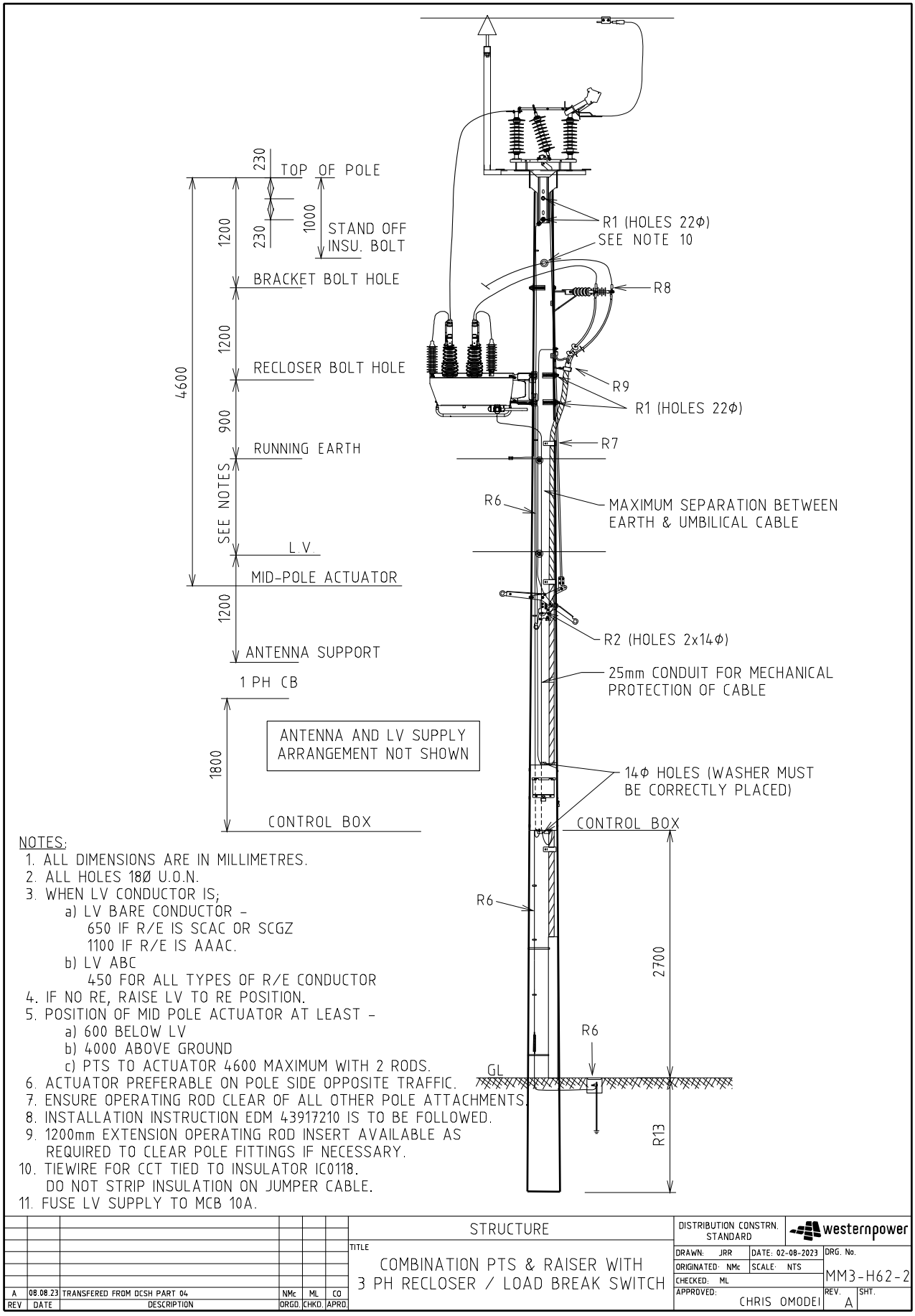
STRUCTURE

TITLE: 3 PH RECLOSER / LOAD BREAK SWITCH ON TERMINATION PTS POLE ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 02-08-2023	DRG. No. MM3-H62-1
ORIGINATED: NMc	SCALE: NTS	
CHECKED: ML		
APPROVED: CHRIS OMODEI		REV. A / SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. WHEN LV CONDUCTOR IS;
   a) LV BARE CONDUCTOR –
      650 IF R/E IS SCAC OR SCGZ
      1100 IF R/E IS AAAC.
   b) LV ABC
      450 FOR ALL TYPES OF R/E CONDUCTOR
4. IF NO RE, RAISE LV TO RE POSITION.
5. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM WITH 2 RODS.
6. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
7. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
8. INSTALLATION INSTRUCTION EDM 43917210 IS TO BE FOLLOWED.
9. 1200mm EXTENSION OPERATING ROD INSERT AVAILABLE AS REQUIRED TO CLEAR POLE FITTINGS IF NECESSARY.
10. TIEWIRE FOR CCT TIED TO INSULATOR IC0118. DO NOT STRIP INSULATION ON JUMPER CABLE.
11. FUSE LV SUPPLY TO MCB 10A.

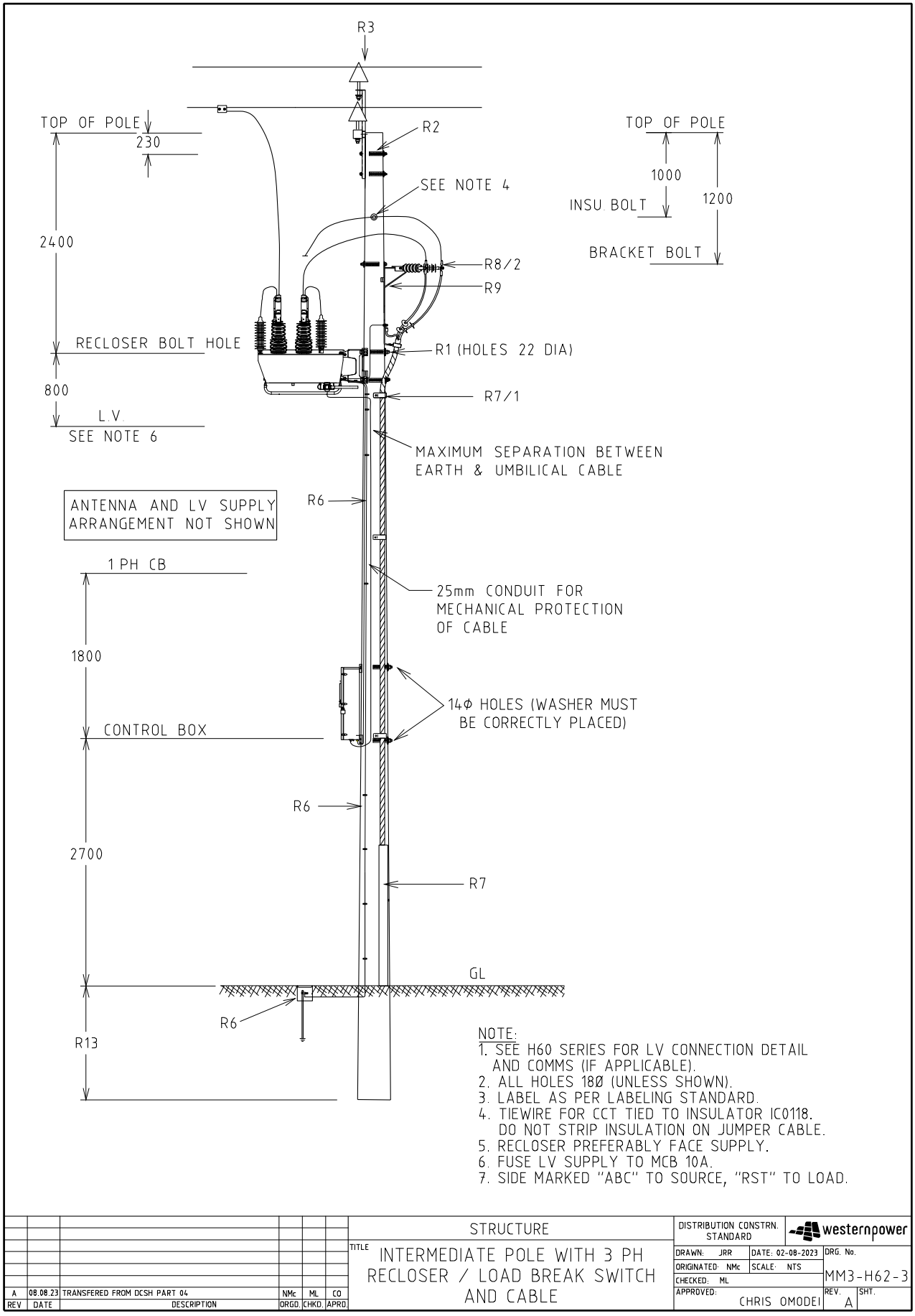
REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.08.23	TRANSFERED FROM DCSH PART 04	NMc	ML	CO

STRUCTURE

TITLE: COMBINATION PTS & RAISER WITH 3 PH RECLOSER / LOAD BREAK SWITCH

DISTRIBUTION CONSTRN. STANDARD — westernpower

DRAWN: JRR	DATE: 02-08-2023	DRG. No. MM3-H62-2
ORIGINATED: NMc	SCALE: NTS	
CHECKED: ML		
APPROVED: CHRIS OMODEI		REV. A / SHT.



NOTE:
1. SEE H60 SERIES FOR LV CONNECTION DETAIL AND COMMS (IF APPLICABLE).
2. ALL HOLES 18Ø (UNLESS SHOWN).
3. LABEL AS PER LABELING STANDARD.
4. TIEWIRE FOR CCT TIED TO INSULATOR IC0118. DO NOT STRIP INSULATION ON JUMPER CABLE.
5. RECLOSER PREFERABLY FACE SUPPLY.
6. FUSE LV SUPPLY TO MCB 10A.
7. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.08.23	TRANSFERED FROM DCSH PART 04	NMc	ML	CO

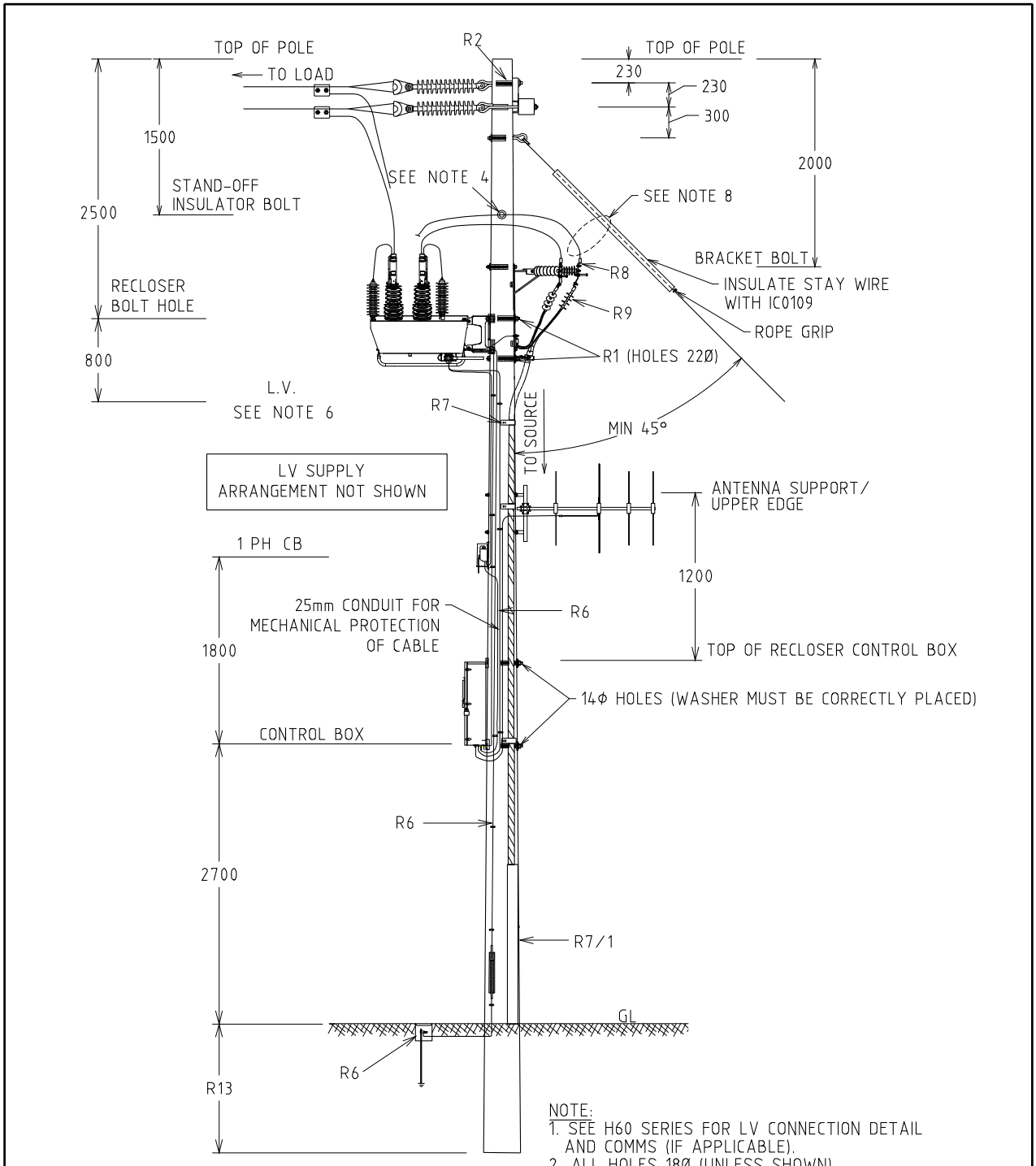
STRUCTURE

TITLE: INTERMEDIATE POLE WITH 3 PH RECLOSER / LOAD BREAK SWITCH AND CABLE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 02-08-2023	DRG. No. MM3-H62-3
ORIGINATED: NMc	SCALE: NTS	
CHECKED: ML		
APPROVED: CHRIS OMODEI		REV. A / SHT.



NOTE:
1. SEE H60 SERIES FOR LV CONNECTION DETAIL AND COMMS (IF APPLICABLE).
2. ALL HOLES 18Ø (UNLESS SHOWN).
3. LABEL AS PER LABELING STANDARD.
4. TIEWIRE FOR CCT TIED TO INSULATOR IC0118. DO NOT STRIP INSULATION ON JUMPER CABLE.
5. RECLOSER PREFERABLY FACE SUPPLY.
6. FUSE LV SUPPLY TO MCB 10A.
7. SIDE MARKED "ABC" TO SOURCE, "RST" TO LOAD.
8. MAINTAIN A CLEARANCE OF MIN. 400mm BETWEEN PHASE TO STAY WIRE.
9. OFFSET RAYCHEM BRACKET TO AVOID RECLOSER BOLTS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.08.23	TRANSFERED FROM DCSH PART 04	NMC	ML	CO

STRUCTURE

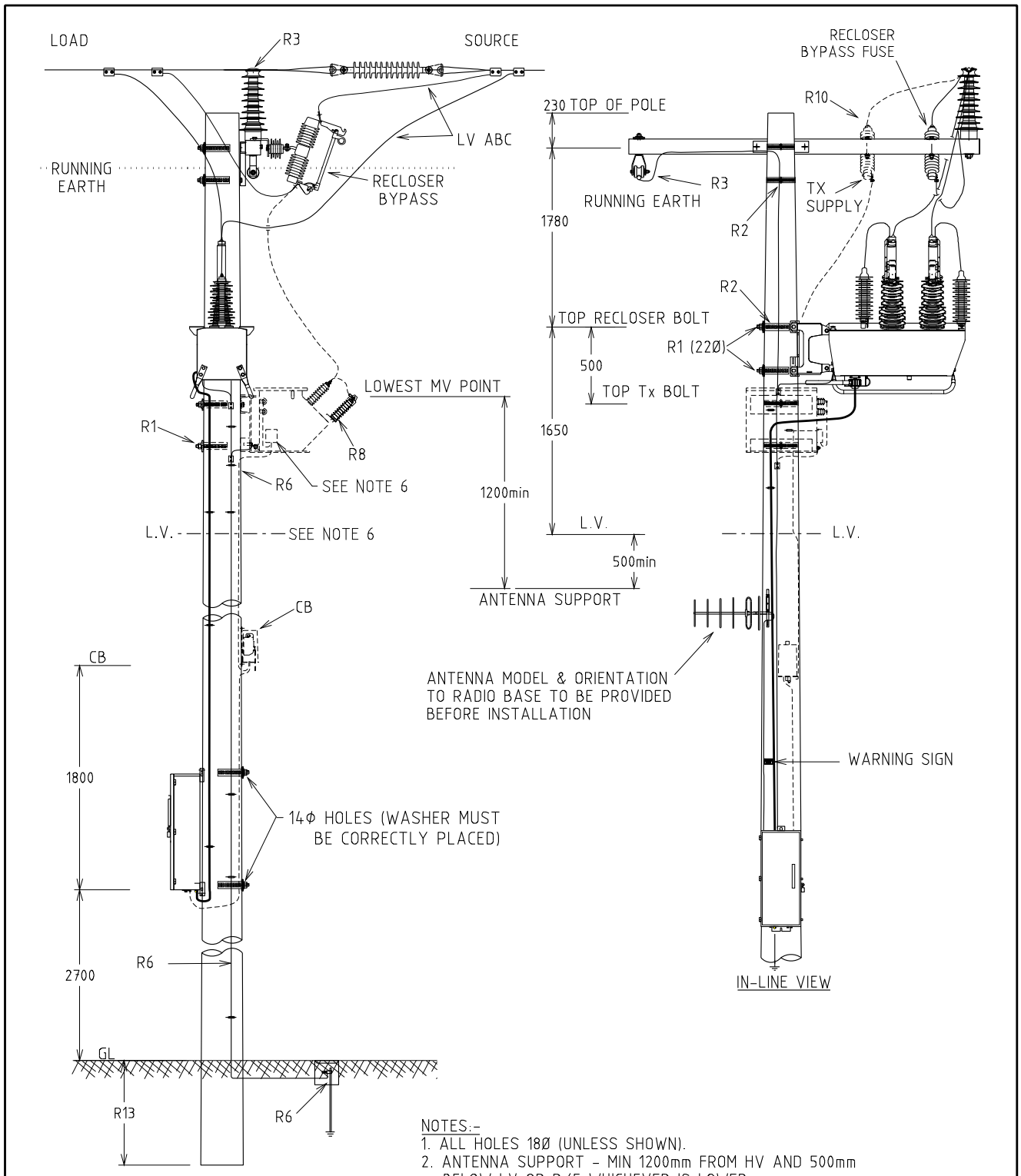
TITLE

TERMINATION POLE WITH 3 PH
RECLOSER / LOAD BREAK SWITCH

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 02-08-2023	DRG. No. MM3-H62-4
ORIGINATED: NMc	SCALE: NTS	
CHECKED: ML		
APPROVED: CHRIS OMODEI		REV. A / SHT.



NOTES:-
1. ALL HOLES 18Ø (UNLESS SHOWN).
2. ANTENNA SUPPORT - MIN 1200mm FROM HV AND 500mm BELOW LV OR R/E WHICHEVER IS LOWER.
3. BY-PASS FUSE NOT TO BE LEFT IN OPEN POSITION. REMOVE & HANG ON POLE.
4. TX. ORIENTATED ON POLE TO ACHIVE MAX CLEARANCE.
5. UMBILICAL CABLE MAX. DIST. AWAY FROM LV & EARTH.
6. FUSE LV SUPPLY TO MCB 10A.
7. LABEL AS PER LABELING STANDARD.
8. SIDE MARKED "2" TO SOURCE, "1" TO LOAD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

STRUCTURE

TITLE: SINGLE PHASE RECLOSER/LOAD BREAK SWITCH IN-LINE ANTI-CLASH WITH SINGLE PHASE TX OR LV SUPPLY

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 26-05-2016	DRG. No. MM03-H63-1
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A / SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
GS0131	33kV NULEC/SCHNEIDER LBS	MM04-H16-2

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	19.12.19	LIST OF DRAWINGS IN THE TABLE REVISED	CO	NMc	GS
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

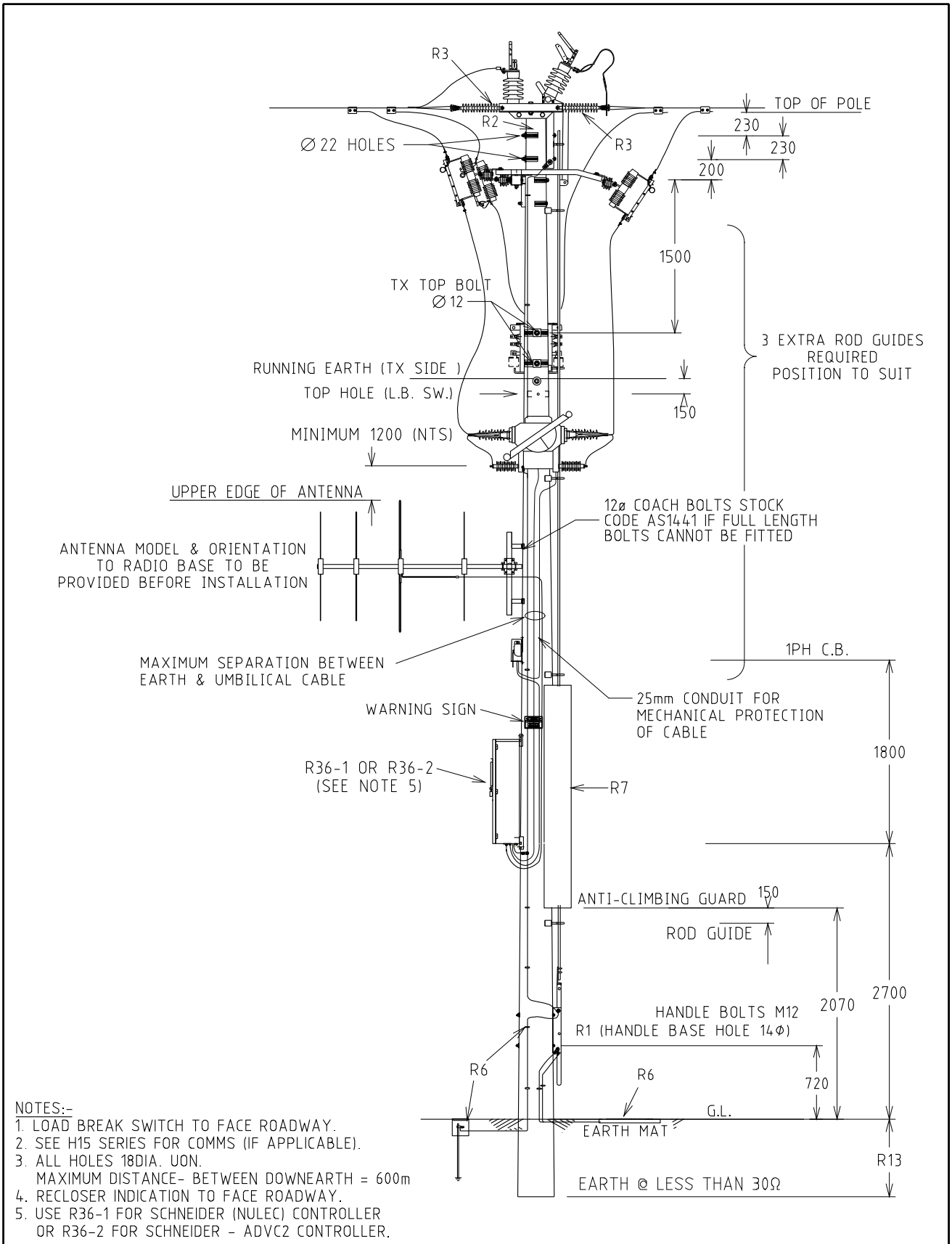
STRUCTURE

TITLE
LOAD BREAK SWITCH
REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM04
ORIGINATED: JC | SCALE: NTS
CHECKED: ME
APPROVED: GRANT STACY | REV. B | SHT.



NOTES:-
1. LOAD BREAK SWITCH TO FACE ROADWAY.
2. SEE H15 SERIES FOR COMMS (IF APPLICABLE).
3. ALL HOLES 18DIA. UON.
   MAXIMUM DISTANCE- BETWEEN DOWNEARTH = 600m
4. RECLOSER INDICATION TO FACE ROADWAY.
5. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER
   OR R36-2 FOR SCHNEIDER - ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

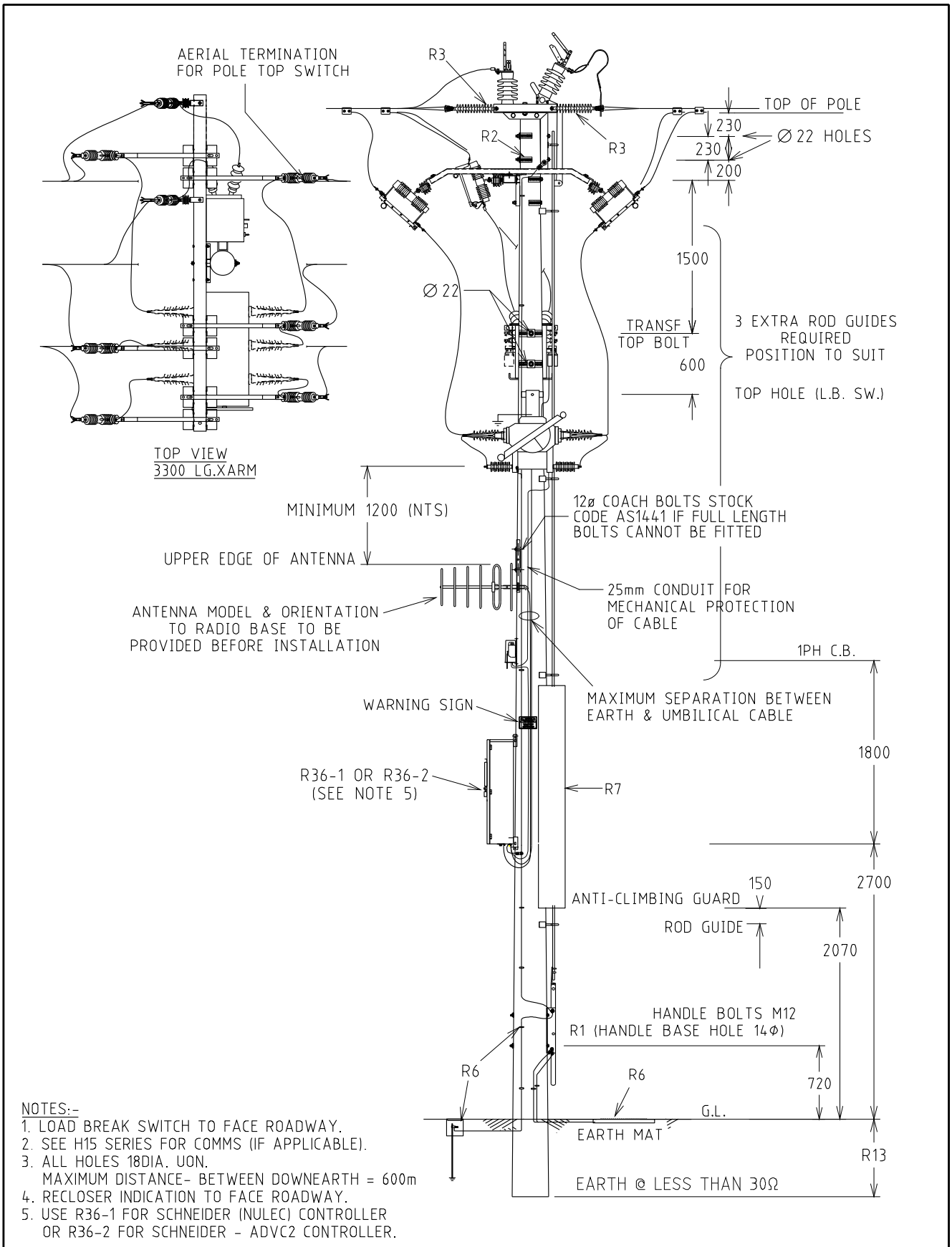
STRUCTURE

TITLE: POLE MOUNT LOAD BREAK SWITCH WITH BYPASS SW ON ONE BUSH Tx VHF ANTENNA (RURAL AREAS)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No.	
ORIGINATED: JL	SCALE: NTS	MM04-H16-2	
CHECKED: ME			
APPROVED: GRANT STACY		REV. A	SHT. 1/3



NOTES:-
1. LOAD BREAK SWITCH TO FACE ROADWAY.
2. SEE H15 SERIES FOR COMMS (IF APPLICABLE).
3. ALL HOLES 18DIA. UON.
   MAXIMUM DISTANCE- BETWEEN DOWNEARTH = 600m
4. RECLOSER INDICATION TO FACE ROADWAY.
5. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER
   OR R36-2 FOR SCHNEIDER - ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

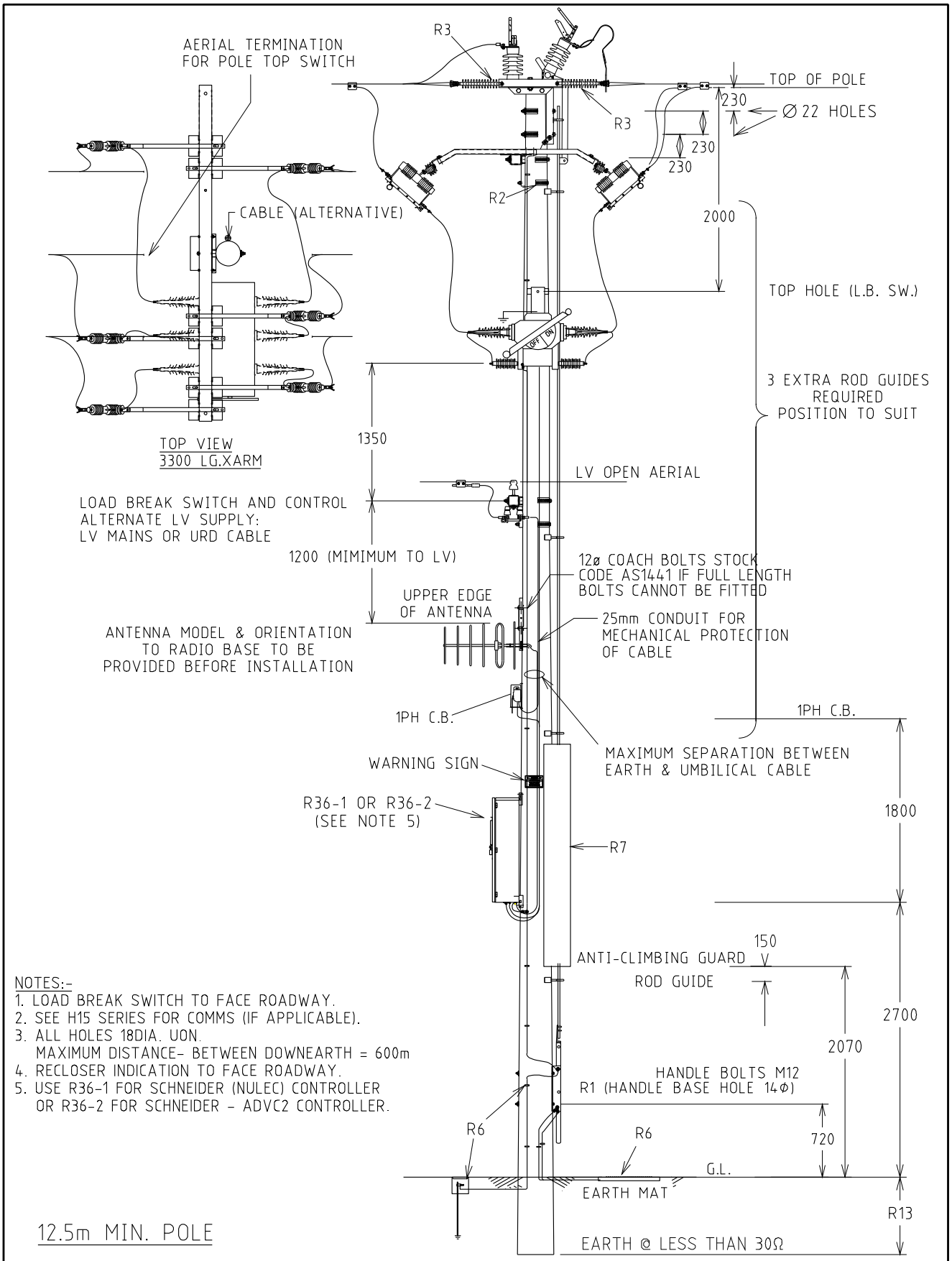
STRUCTURE

TITLE: POLE MOUNT LOAD BREAK SWITCH WITH BYPASS SW ON TWO BUSH Tx VHF ANTENNA (LOCAL AREAS)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM04-H16-2
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A SHT. 2/3



NOTES:-
1. LOAD BREAK SWITCH TO FACE ROADWAY.
2. SEE H15 SERIES FOR COMMS (IF APPLICABLE).
3. ALL HOLES 18DIA. UON.
   MAXIMUM DISTANCE- BETWEEN DOWNEARTH = 600m
4. RECLOSER INDICATION TO FACE ROADWAY.
5. USE R36-1 FOR SCHNEIDER (NULEC) CONTROLLER
   OR R36-2 FOR SCHNEIDER – ADVC2 CONTROLLER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JL	ME	GS

STRUCTURE

TITLE: POLE MOUNT LOAD BREAK SWITCH WITH BYPASS SW AND LV SUPPLY VHF ANTENNA (LOCAL AREAS)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 19-05-2016	DRG. No. MM04-H16-2
ORIGINATED: JL	SCALE: NTS	
CHECKED: ME		
APPROVED: GRANT STACY		REV. A SHT. 3/3

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
GS6017	SECTIONALISER FOR RECLOSER W/10A COIL;3 SHOT;120SEC RECLAIM TIME;MANUAL RESET	H53

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE

SECTIONALISER REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016

ORIGINATED: JC | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY

DRG. NO. MM05

REV. A | SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE: REGULATING TRANSFORMERS REINSTALLATION (FUTURE)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM06

ORIGINATED: JC | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY | REV. A | SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
GF0020	DOF	SEE RELEVANT CONSTRUCTION STANDARDS DRAWING PART 4 HV OVERHEAD
GF0021	DOF	
GF0041	DOF	
GF1540	FUSELINK	
GF1850	DOF	
GF1913	FAULT TAMER	

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.
3. LIST OF DRAWINGS HAVE NOT BEEN LISTED FOR CLARITY DUE TO THEIR WIDESPREAD USE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE: DROP OUT FUSE REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO. MM07

ORIGINATED: JC | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY | REV. A | SHT.

STOCK CODE	DESCRIPTION	RELEVANT DRAWINGS
RC0002	22kVAr CAPACITOR	H31-1, H31-2, H32-1, H32-2

NOTES:
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	11.08.16	ORIGINAL ISSUE	JC	ME	GS

STRUCTURE

TITLE

CAPACITORS REINSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG. NO.

ORIGINATED: JC | SCALE: NTS | MM08

CHECKED: ME

APPROVED: GRANT STACY | REV. A | SHT.

THIS SECTION OF THE MANUAL INCLUDES GENERAL OVERHEAD LINE MAINTENANCE, SUCH AS

* POLE TOP CONSTRUCTION GUIDANCE
* POLE CHECKS & SPLITS REPAIR
* CONDUCTOR REPAIR
* CONDUCTOR SPEADER INSTALL

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	05.14.19	ORIGINAL ISSUE	CO	NMc	GS

STRUCTURE

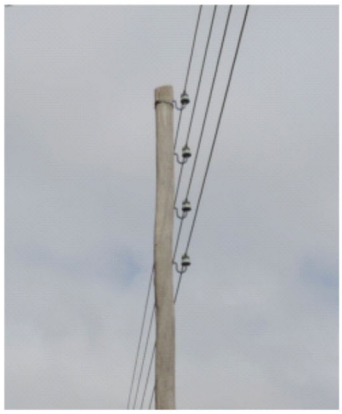
TITLE

GENERAL OVERHEAD LINE MAINTENANCE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 02-04-2019	DRG. NO. MM09
ORIGINATED: CO	SCALE: NTS	
CHECKED: NMc		
APPROVED: GRANT STACY		REV. A / SHT.

DESCRIPTION	RELEVANT DRAWINGS	APPLICATION
SINGLE PHASE INTERMEDIATE WITH EXTENDED RAISER	MM09-H40-1	WHEN THE EXISTING EXTENDED RAISER BRACKET IS UNSERVICEABLE BUT THE POLE IS FIT FOR PURPOSE REPLACE THE RAISER BRACKET USING THIS CONSTRUCTION. IF THE POLE IS UNSERVICEABLE, IT SHOULD BE REPLACED WITH AN APPROPRIATELY SIZED POLE AND DCSH H40-1. 
VERTICAL INTERMEDIATE LV CONSTRUCTION	MM09-L01	SUITABLE FOR SINGLE POLE REPLACEMENT WHERE ADJACENT STRUCTURES ARE ALSO VERTICAL. 
3 PHASE INTERMEDIATE WITH RUNNING EARTH	H01-1	APPLY WHEN HISTORICAL CONSTRUCTION TYPES HAVE BEEN USED, SEE THE PICTURE.   

NOTES:
1. POLE FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE INSTALLATION TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

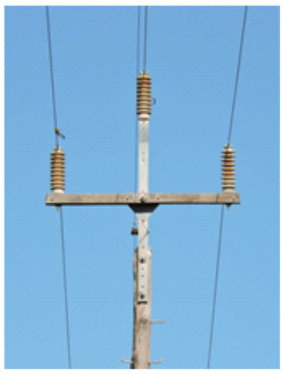
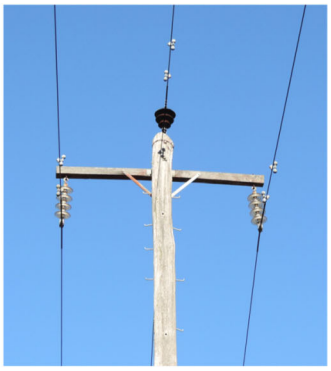
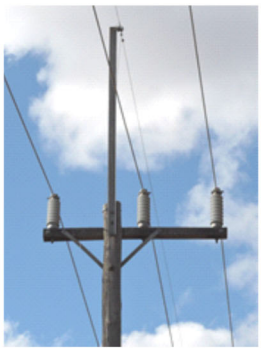
REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
C	05 04 19	DRAWING NUMBER CHANGED	CO	NMc	GS
B	03 02 17	DRAWING NUMBER CHANGED AND MORE DETAILS ADDED	CO	REE	GS
A	09 08 16	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

TITLE: POLE TOP CONSTRUCTION

DISTRIBUTION CONSTRN STANDARD — westernpower

DRAWN: JRR | DATE: 29-06-2016 | DRG NO.
ORIGINATED: JC | SCALE: NTS | MM09-1-1
CHECKED: REE
APPROVED: GRANT STACY | REV: C | SHT

DESCRIPTION	RELEVANT DRAWINGS	APPLICATION
3 PHASE INTERMEDIATE ANTI-SWAN CROSSARM	H01-3	APPLY WHEN A HIGH RAISER OR STRING INSULATOR HAS BEEN USED TO MITIGATE CLASHING, BIRD STRIKES OR LONG BAYS. SEE BELOW. (GROUND CLEARANCE TO BE CHECKED)  
INTERMEDIATE WISHBONE WITH OVERHEAD EARTH WIRE	H22	APPLY INTERMEDIATE WISHBONE CONSTRUCTION, SEE BELOW. 
INTERMEDIATE FLAT CONSTRUCTION WITH OVERHEAD EARTH WIRE	H23	 

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
B	05 04 19	DRAWING NUMBER CHANGED	CO	NMc	GS
A	03 02 17	ORIGINAL ISSUE	CO	REE	GS

STRUCTURE

TITLE

POLE TOP CONSTRUCTION

DISTRIBUTION CONSTRN STANDARD

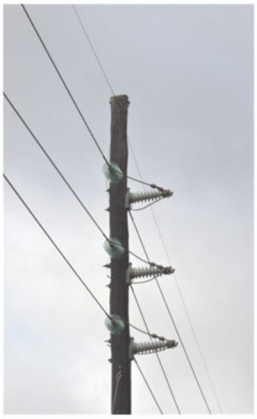
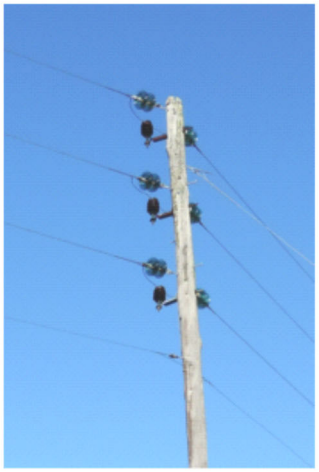
westernpower

DRAWN JRR | DATE 30-11-2016 | DRG NO MM09-1-2

ORIGINATED CO | SCALE NTS

CHECKED REE

APPROVED GRANT STACY | REV B | SHT

DESCRIPTION	RELEVANT DRAWINGS	APPLICATION
VERTICAL STRAIN	H26	
INLINE STRAIN WITH OVER HEAD EARTH WIRE	H26-2	
VERTICAL STRAIN ANGLE	H28	

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
B	05 04 19	DRAWING NUMBER CHANGED	CO	NMc	GS
A	03 02 17	ORIGINAL ISSUE	CO	REE	GS

STRUCTURE

TITLE

POLE TOP CONSTRUCTION

DISTRIBUTION CONSTRN. STANDARD

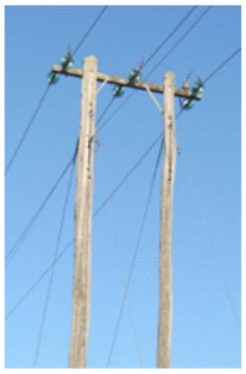
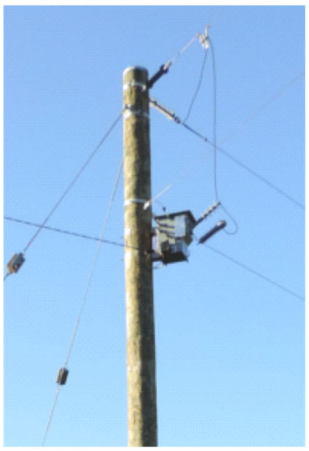
westernpower

DRAWN JRR | DATE 30-11-2016 | DRG NO

ORIGINATED CO | SCALE NTS | MM09-1-3

CHECKED REE

APPROVED GRANT STACY | REV B | SHT

DESCRIPTION	RELEVANT DRAWINGS	APPLICATION
3X1 POLE LONG BAY SOLUTION	H41-2	APPLY LONG BAY 3 POLE INSTALLATION, SEE BELOW  
1 PHASE DOUBLE TERMINATION TRANSFORMER WITHOUT DROPOUT FUSE	H47-3	

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
B	05 04 19	DRAWING NUMBER CHANGED	CO	NMc	GS
A	03 02 17	ORIGINAL ISSUE	CO	REE	GS

STRUCTURE

TITLE

POLE TOP CONSTRUCTION

DISTRIBUTION CONSTRN STANDARD

westernpower

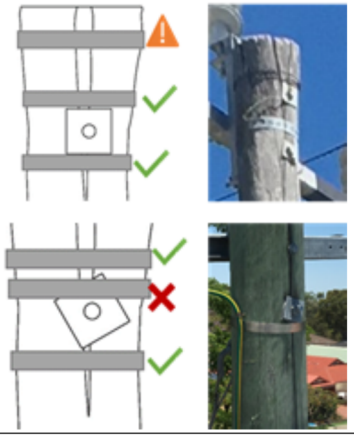
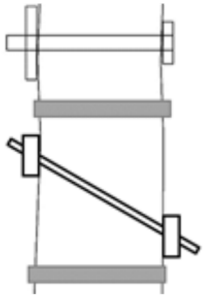
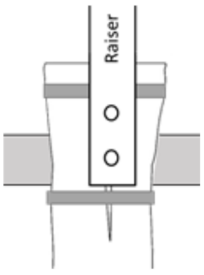
DRAWN JRR	DATE 04-01-2017	DRG NO. MM09-1-4
ORIGINATED CO	SCALE NTS	
CHECKED REE		
APPROVED GRANT STACY		REV B SHT

WOOD POLE TOP CHECKS & SPLITS REPAIR

PRE-WORK	• ASSESS THE CONDITION OF THE POLE, CONDUCTORS, MOUNTED EQUIPMENT AND HARDWARE TO ENSURE THAT THE WORK CAN BE CARRIED OUT SAFELY:
	  ◦ POLES ARE FREE OF ALL OTHER DEFECTS EXCEPT CHECKS OR SPLITS
	  ◦ POLE TOP HAS SUFFICIENT GOOD WOOD PRESENT TO SECURE THE STRAPS
	  ◦ TOP BOLT IS AT >50mm FROM THE POLE TOP.
	  ◦ POLE IS SOUND AND NOT SEVERELY INFECTED WITH ROT/TERMITES.
	• ENSURE AVAILABILITY OF TOOLS AND EQUIPMENT NEEDED TO SUPPORT CROSS-ARMS AND CONDUCTORS WHEN REQUIRED

STRAP INSTALLATION	• APPLY 32mm BAND-IT STRAPS. IN SITUATIONS WHERE THERE IS INSUFFICIENT SPACE OR CLEARANCES TO USE THE 32mm BAND-IT TOOL, CONSIDER USING 3 OF 16mm BAND-IT STRAPS, FITTED AS CLOSE AS POSSIBLE TO EACH OTHER • CUT AND SHAPE THE STRAP TO FIT THE POLE CIRCUMFERENCE AVOIDING EXCESSIVE LENGTH OF STRAP BECOMING A HAZARD. • INSTALL THE FIRST STRAP AT THE TOP, AND WORK DOWNWARDS FOLLOWING THE INSTALLATION GUIDELINES.

GUIDELINES:

DESCRIPTION	APPLICATION	POLE TOP SCENARIO
ATTACHING BAND-IT STRAPS AT THE TOP KING BOLT OR STAY EYE BOLT	AT THE TOP KING BOLT OR STAY EYE BOLT: • INSTALL STRAPS AS CLOSE AS POSSIBLE TO THE KING BOLT OR ATTACH IT UNDERNEATH THE WASHER. • WHEREVER POSSIBLE AVOID INSTALLING THE STRAP ON THE BULGING AREAS, OVER KNOTS OR OVER THE WASHER.	
ATTACHING BAND-IT STRAPS TO SUPPORT STAY EYE BOLT	AT STAY EYE BOLT: • INSTALL A STRAP IMMEDIATELY ABOVE THE TOP AND ANOTHER STRAP BELOW THE BOTTOM OF STAY EYE BOLT.	
ATTACHING BAND-IT STRAPS TO SUPPORT RAISER BOLTS	AT RAISER BOLTS: • INSTALL 32mm STRAPS (IN ALL CASES) ABOVE AND BELOW AND AS CLOSE AS POSSIBLE TO THE RAISER BOLTS DIRECTLY TO WOOD, AS SHOWN, NOT AROUND RAISER	

REV	DATE	DESCRIPTION			
A	05 04 19	ORIGINAL ISSUE	LT ORGD	NMc CHKD	GS APRD

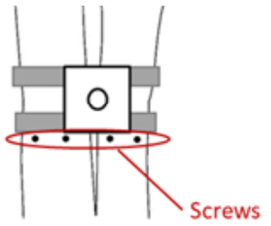
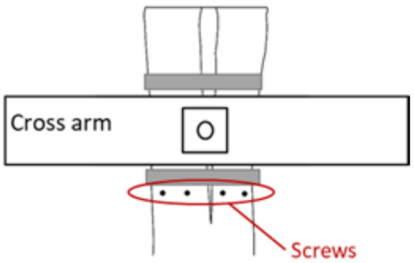
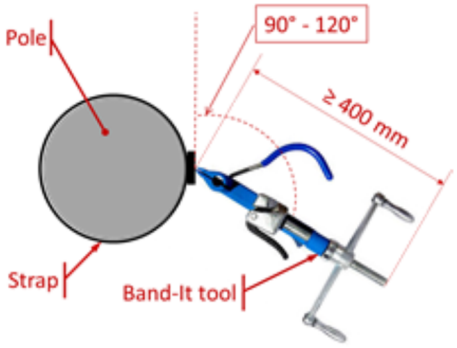
STRUCTURE

TITLE: POLE TOP CHECKS/SPLITS REPAIR WITH BAND-IT STRAPS

DISTRIBUTION CONSTRN STANDARD

westernpower

DRAWN: JRR	DATE: 11-03-2019	DRG NO: MM09-2-1
ORIGINATED: SA	SCALE: NTS	
CHECKED: LT		
APPROVED: GRANT STACY		REV: A SHT:

DESCRIPTION	APPLICATION	POLE TOP SCENARIO
WASHER REPLACEMENT (75mmx75mm)	IF THE SPLIT WIDTH AFTER REPAIR IS <20mm, EXISTING WASHER (45mm x 45mm) DOES NOT NEED TO BE REPLACED. WASHER REPLACEMENT IS REQUIRED IF: ● SPLIT WIDTH AFTER REPAIR IS ≥20mm ● EXISTING WASHER IS DEFORMED REPLACEMENT SCENARIOS: (1) WASHER ON THE HEAD SIDE OF THE BOLT PULL-THROUGH LOAD: ● INSTALL STRAPS ABOVE AND BELOW THE BOLT UNDERNEATH THE EXISTING WASHER. ● SUPPORT THE LOWER STRAP WITH A FEW SCREWS TO AVOID SLIDING DOWN. (2) WASHER ON THE CROSS ARM: ● INSTALL STRAPS ABOVE AND BELOW THE CROSS ARM AS CLOSE AS POSSIBLE.	 
BAND-IT TOOL OPERATION	● CHECK CLEARANCES BETWEEN HV AND LV CONDUCTORS AND OTHER HARDWARE TO ENSURE THAT THE BAND-IT TOOL CAN BE USED SAFELY. ● A RADIUS OF 400mm AND ANGLE OF 90-120° IS REQUIRED FOR TOOL OPERATION. ● CARE MUST BE TAKEN TO AVOID OVER TENSIONING THE STRAPS. AS A GENERAL RULE, AT THE FIRST WOOD CRACKING SOUND, THE BAND TIGHTENING CAN BE STOPPED.	

NOTES:
1. THE INTENT OF STRAPPING IS TO PREVENT FURTHER SPLITTING OF THE POLE, **NOT TO CLOSE THE SPLIT**, ALTHOUGH THIS MAY OCCUR DURING TIGHTENING OF THE BAND-IT STRAP.
2. ATTACH ADDITIONAL STRAPS AS REQUIRED BETWEEN BOLTS IF THE CHECK/SPLIT IS PRESENT AND THE DISTANCE BETWEEN STRAPS IS GREATER THAN 300mm.
3. RE-TIGHTEN ANY LOOSE BOLTS, e.g. KING BOLT, BRACING STRAPS, RAISER, Etc. AFTER STRAP IS APPLIED.

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
A	05 04 19	ORIGINAL ISSUE	LT	NMc	GS

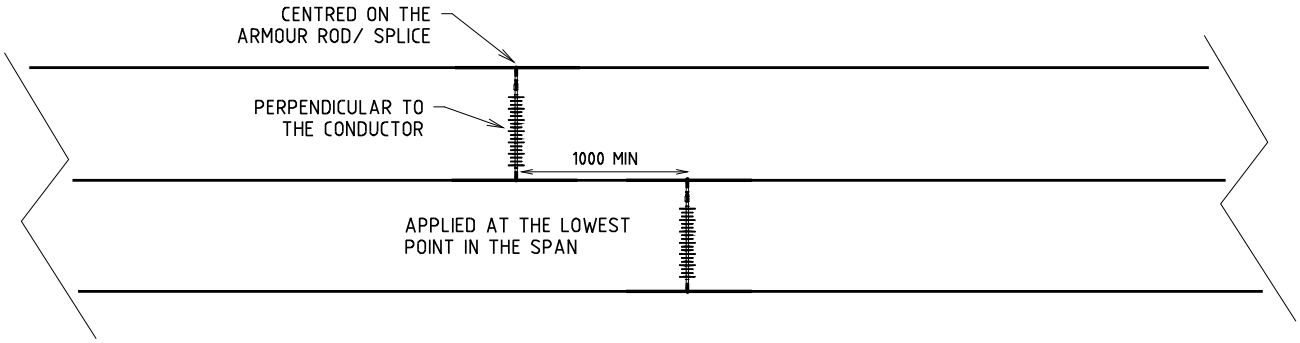
STRUCTURE

TITLE: POLE TOP CHECKS/SPLIT REPAIR WITH BAND-IT STRAPS

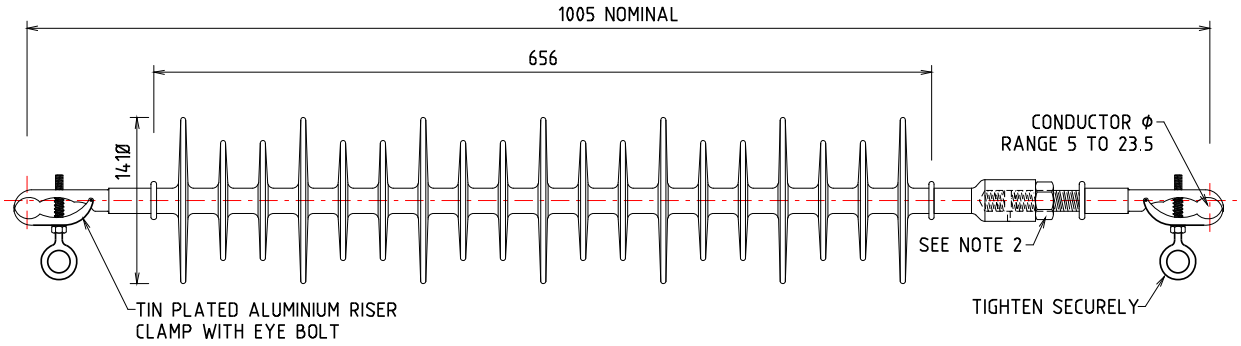
DISTRIBUTION CONSTRN STANDARD

westernpower

DRAWN: JRR	DATE: 11-03-2019	DRG. NO. MM09-2-2
ORIGINATED: SA	SCALE: NTS	
CHECKED: LT		
APPROVED: GRANT STACY		REV. A SHT.



TYPICAL BAY - PLAN VIEW



SPECIFICATIONS:- (STOCK CODE : IC0003)

INSULATION MATERIAL	: SILICONE
WEIGHT	: 3.7kg
SPECIFIED MECHANICAL LOAD (SML)	: 70kN
IMPULSE WITHSTAND VOLTAGE (BIL)	: 460kV
FLASHOVER WITHSTAND VOLTAGE (WET)	: 215kV

INSTALLATION INSTRUCTIONS:
MAINTENANCE STOCK ITEM USED TO ELIMINATE CONDUCTOR CLASHING DUE TO UNDER TENSIONED CONDUCTORS.
TYPICALLY INSTALLED MIDSPAN ON LONG BAYS.

SPREADERS SHALL BE INSTALLED:
- *ON ISOLATED AND EARTHED HV LINE.
- *ON BARE HV OVERHEAD CONDUCTORS ONLY, VIZ. ALUMINIUM, ACSR AND AC OR GZ STEEL.
- *INDIVIDUALLY (PREFERRED) OR AS A PAIR BETWEEN PHASE CONDUCTORS.
- *OVER AN ARMOUR ROD OR HELICAL SPLICE TO PROTECT THE CONDUCTOR FROM WEAR.
- *KRYPTON CONDUCTOR APPLY ALUMINIUM TAPE (CT0114) 100mm WIDE UNDER CLAMP.
- *WITH CLAMPS A MIN. 1000mm APART WHEN MORE THAN ONE CLAMP ATTACHED TO SAME CONDUCTOR E.G. CENTRE PHASE.
- *AT 90° TO THE CONDUCTOR TO PREVENT EXCESSIVE AND UNEVEN WEAR.
- *BAYS (TYPICALLY LONG BAYS) WITH LARGE ATTACHMENT HEIGHT VARIATION, SPREADER/S TO BE INSTALLED AT CENTRE OF SAG, NOT MIDSPAN.

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ROTATE CLAMP TO ENSURE PROPER FITMENT TO CONDUCTOR. LOCK NUT TIGHTENED AS SHOWN.

SEE L18-05

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	17.02.20	INSTALLATION INSTRUCTION REVISED	NMc	CO	GS
B	20.11.19	REVISED TO SUIT WITH NEW SPREADER	NMc		GS
A	05.04.19	ORIGINAL ISSUE	CO	NMc	GS

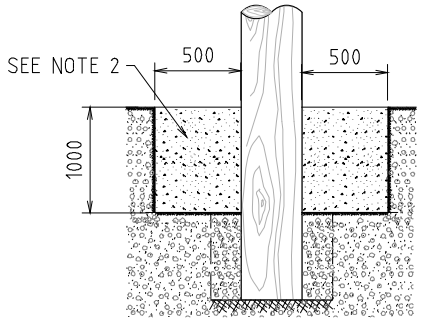
STRUCTURE

TITLE: GENERAL OVERHEAD LINE
HV SPREADER 61kV
SILICONE INTERPHASE

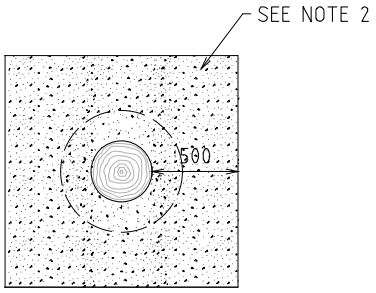
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 05-04-2019	DRG. NO. MM09-3-1
ORIGINATED: CO	SCALE: NTS	
CHECKED: NMc		
APPROVED: GRANT STACY		REV. C SHT.



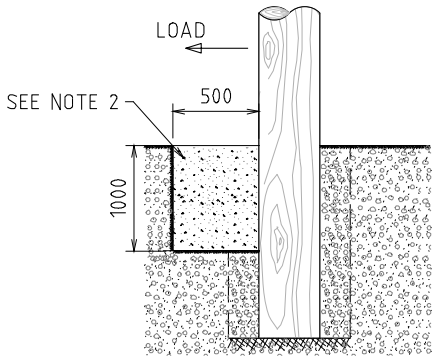
SECTION VIEW



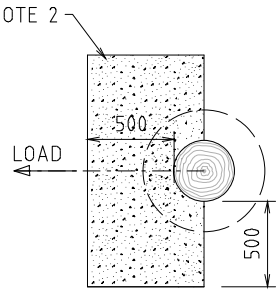
PLAN VIEW

SOIL RATING = MEDIUM (BEFORE TREATMENT)
GOOD (AFTER TREATMENT)

OPTION–1



SECTION VIEW



PLAN VIEW

OPTION–2

NOTES:–
1. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.
2. BACKFILL WITH EITHER
   a) ROAD BASE OR
   b) 5:1 SAND/CRUSHED LIMESTONE MIX
   COMPACTED IN 200 LAYERS
3. THIS DRAWING IS ONLY APPLICABLE TO EXISTING POLES, ≤10 YEARS.
4. POLE TO BE SUPPORTED DURING SOIL ENHANCEMENT.
5. COMPACT THE LAYER BENEATH THE EXCAVATED AREA TO ENSURE WELL COMPACTED SOIL UNDER THE ENHANCED ZONE.
6. SSPs, TERMINATION POLE AND T-OFFs SHOULD BE ASSESSED BY DISTRIBUTION STANDARD SUPPORT BEFORE FOUNDATION ENHANCEMENT.

FOUNDATION ENHANCEMENT	APPLICATION
OPTION–1	EXISTING POLES FAILING FOUNDATION CAPACITY IN MEDIUM SOILS
OPTION–2	ANGLE POLES UPTO 10° DEVIATION, SINGLE CIRCUIT, MAX 50m BAYS, WHERE STAY IS NOT FEASIBLE
	EXISTING POLES UPGRADING TO 315kVA TX IN MEDIUM SOILS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	19.07.23	ORIGINAL ISSUE	SJ	LT	CO

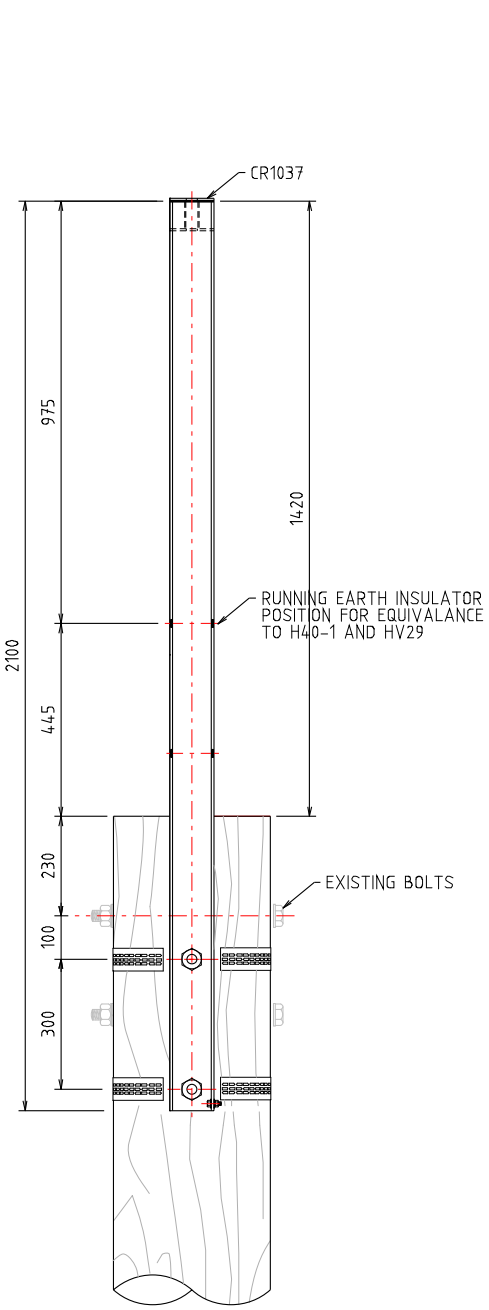
MAINTENANCE MANUAL

TITLE
ENHANCED FOUNDATION DETAILS
IN-SITU DISTRIBUTION POLE

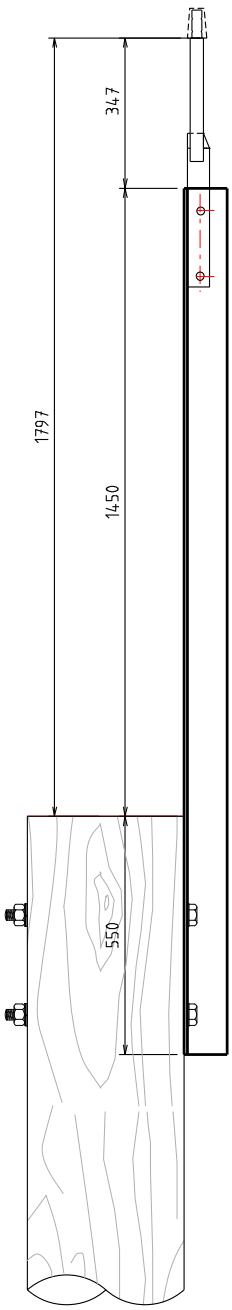
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 19-07-2023 | DRG. No. MM09-5
ORIGINATED: SJ | SCALE: NTS
CHECKED: LT
APPROVED: CHRIS OMODEI | REV. A | SHT.



REPLACEMENT



EXISTING

Rural		Allowable Angle	
Equivalent Conductor	Span Length (m)	Wind Region A	Wind Region B
7/2.50 AAAC 18% CBL @ 15° CHLORINE	60	32	25
	80	26	19
	100	21	15
	135	16	N/A
	185	N/A	N/A
	250	N/A	N/A
7/4.75 AAAC 18% CBL @ 15° IODINE	60	10	7
	80	7	4
	100	5	2
	135	3	0
	185	0	N/A
	250	N/A	N/A
3/2.75 SCAC 25% CBL @ 15° SCAC	60	10	10
	80	10	10
	100	10	10
	135	10	8
	185	8	6
	250	5	2

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. REPLACEMENT RAISER TO BE ORIENTED IN LINE AT 90° TO THE ORIGINAL RAISER.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	15.12.17	RUNNING EARTH POSITION SPECIFIED	GS	GS	GS
B	11.08.16	DWG. # CHANGED	AT	ME	GS
A	22.06.16	ORIGINAL ISSUE	AT	DVT	GS

TITLE

EXTENDED RAISER FOR SINGLE PHASE HV ON 9.5m POLE

DISTRIBUTION CONSTRN. STANDARD

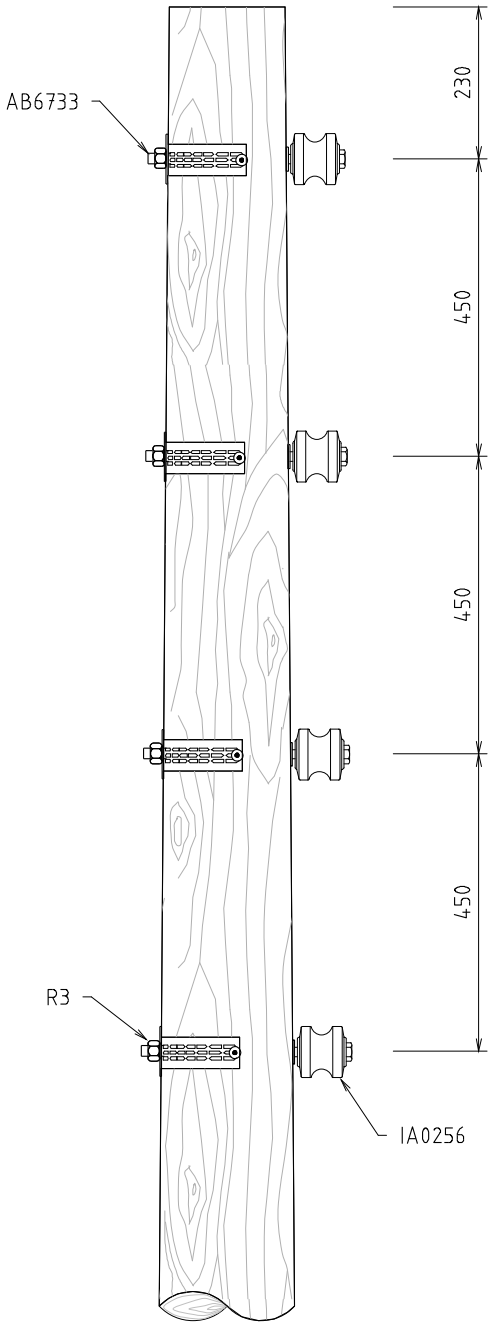
westernpower

DRAWN: JRR | DATE 15-06-2016 | DRG No

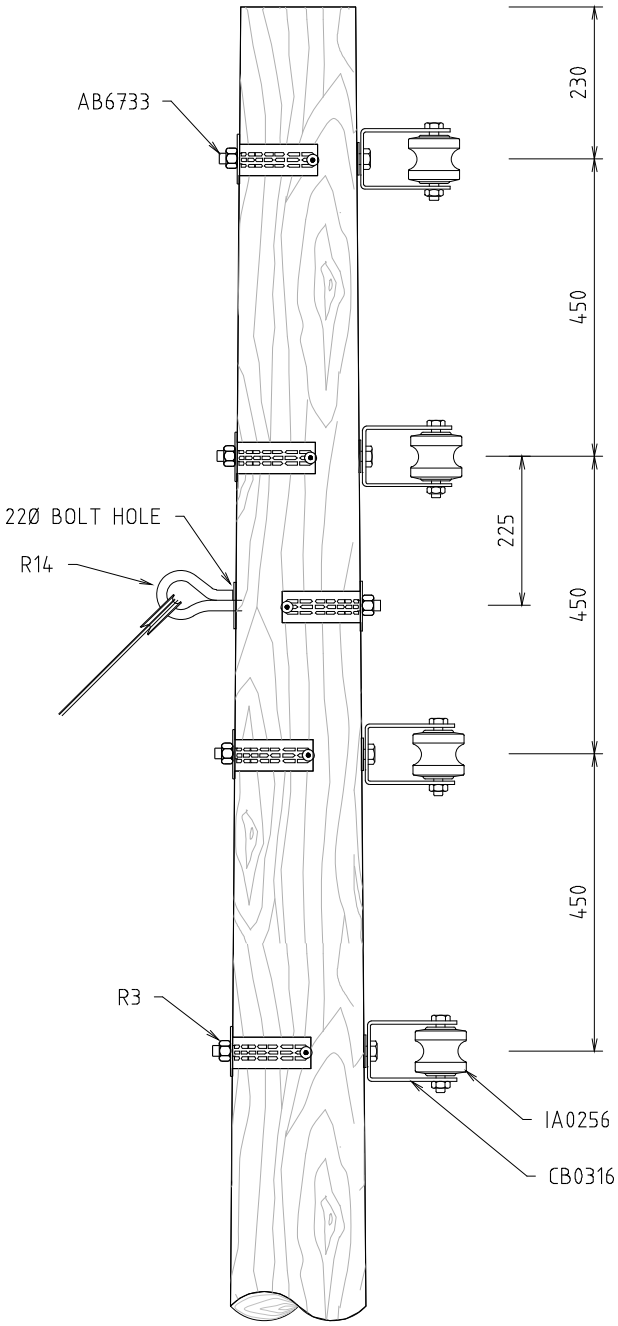
ORIGINATED: AT | SCALE: NTS | MM09-H40-1

CHECKED: ME

APPROVED: GRANT STACY | REV. C | SHT.



INTERMEDIATE & ANGLE <2°



INTERMEDIATE ANGLE 2° TO 90° & TERMINATION

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. BOLT HOLES 18Ø U.O.N.
3. REFER TO DCSH R16/2 SERIES FOR REQUIREMENT OF STAY INSTALLATION.
4. APPLICABLE FOR FLAT GROUND BAYS UPTO 60m FOR CONDUCTORS UPTO 7/4.75 AAAC, 7/4.75 AAC OR 7/12 Cu.
5. LV SPREADER IR0006 & CLIPS IR0007 ARE TO BE USE WHEN TRANSITIONING FROM VERTICAL CONFIGURATION TO HORIZONTAL CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	11.08.16	DRG # CHANGED, "INTERMEDIATE & ANGLE <2°" DETAIL ADDED AND DISTANCE BETWEEN INSULATORS CHANGED	JC	ME	GS
A	30.04.15	ORIGINAL ISSUE	CO	AK	GS

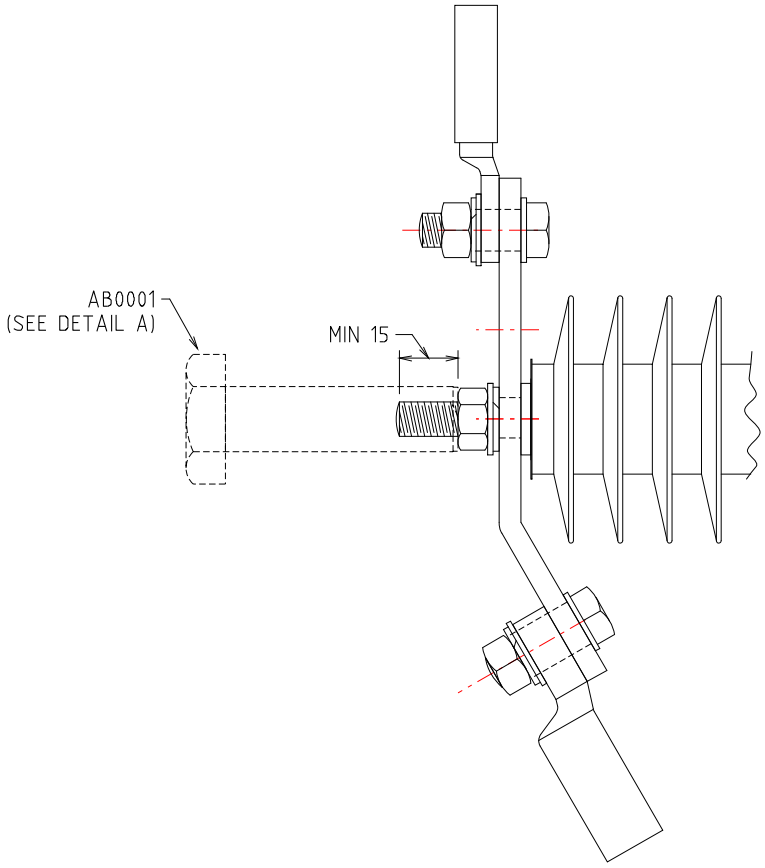
MAINTENANCE MANUAL

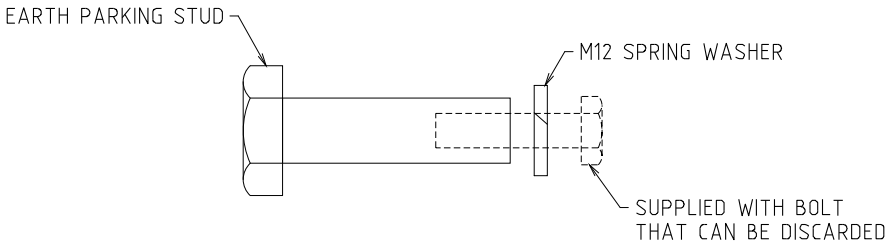
TITLE: VERTICAL LV INTERMEDIATE/ ANGLE / TERMINATION CONSTRUCTION

DISTRIBUTION CONSTRN. STANDARD — westernpower

DRAWN: JRR	DATE: 10-04-2015	DRG. No. MM09-LV-01
ORIGINATED: CO	SCALE: NTS	
CHECKED: AK		
APPROVED: GRANT STACY		REV. B / SHT.

EARTH PARKING STUD ONLY TO BE USED WHEN THE EARTH PARKING BOLT (R09-1) CANNOT BE APPLIED. FOR EXAMPLE IF THE HOLE FOR THE EARTH PARKING BOLT IS NOT PRESENT OR RESTRICTED.





DETAIL A

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. EARTH LEADS TO BE APPLIED ON THE RHS OF THE EARTH PARKING STUD TO PREVENT LOOSENING OF STUD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APPRD
B	21.09.22	DRAWING NUMBER CHANGED AND MORE DETAILS ADDED	CO	NMc	GS
A	23.08.22	ORIGINAL ISSUE	CO	NMc	GS

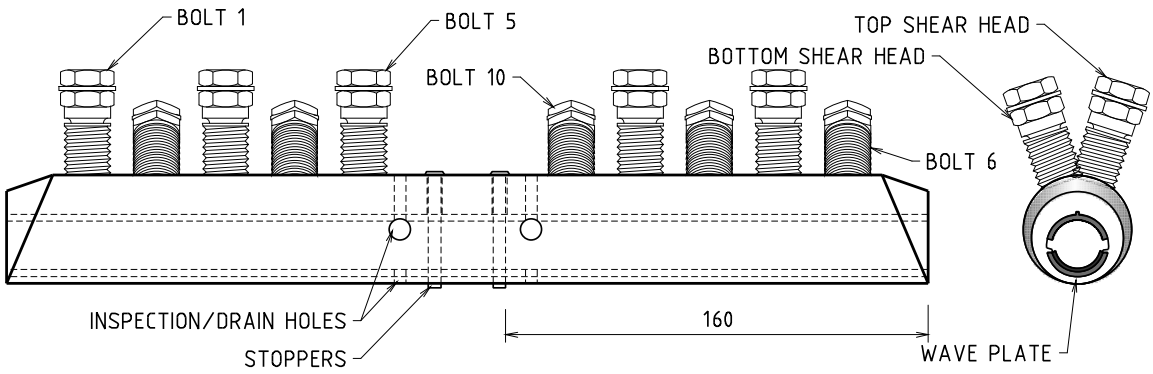
REFERENCE DRAWING

TITLE
HV CABLE TERMINATION RETROSPECTIVE EARTH PARKING STUD INSTALL

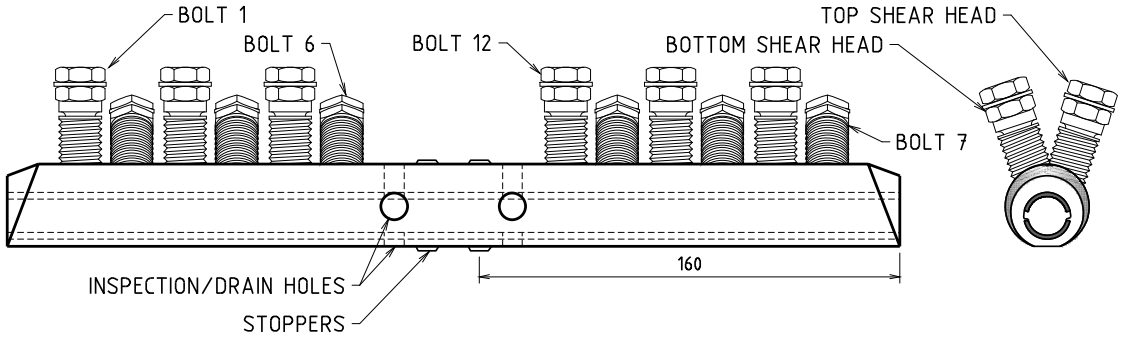
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 01-08-2022	DRG. No. MM09-R09
ORIGINATED: CO	SCALE: NTS	
CHECKED: NMc		
APPROVED: GRANT STACY		REV. B / SHT.



STOCK CODE	PRODUCT NAME	RANGE (Ø)	CONDUCTOR TYPE & PURPOSE
CJ0585	MTRS 10-14	10mm TO 14.3mm	AAC, AAAC FOR JOINING OLD 7/4.50 OR 7/3.75 TO NEW 7/4.75



STOCK CODE	PRODUCT NAME	RANGE (Ø)	CONDUCTOR TYPE & PURPOSE
CJ0586	MTRS 06-11-EHT	6mm TO 11.3mm	AAC, AAAC, ACSR FOR JOINING ARCHERY 6/1/3.0 TO CHLORINE 7/2.50

INSTALLATION INSTRUCTIONS:-

- CUT CONDUCTOR SQUARE, ALL STRANDS EVEN AND BURR FREE.
- STRAIGHTEN CONDUCTOR IF CURVED.
- CONDUCTOR BRUSH CLEANED, NO GREASE TO BE APPLIED TO CONDUCTOR.
- MARK CONDUCTOR APPROX. 160mm TO CONFIRM INSERTED CORRECTLY.
- INSERT CONDUCTOR TO REACH STOPPER.
- USING 19mm SOCKET SEQUENTIALLY TIGHTEN TOP SHEAR BOLTS FROM BOLT 1 TO BOLT 5/6 UNTIL THE TOP HEADS SHEAR AND THEN FROM BOLT 6/7 TO 10/12.
- REPEAT SHEARING OF BOTTOM SHEAR HEADS IN THE SAME SEQUENCE.
- SHEAR HEADS TO BE FLUSH WITH BODY OF MTRS AFTER INSTALLATION.
- KEEP MTRS IN PLASTIC WRAPPING AND CLEAN UNTIL INSTALLATION, ESPECIALLY SHEAR BOLT THREADS, TO PREVENT INGRESS OF DUST AND TO ENSURE CORRECT TORQUE ACHIEVED.

REV	DATE	DESCRIPTION	DRGD.	CHKD.	APRD.
B	19.11.20	DETAILS OF CJ0586 ADDED	REE	NMc	GS
A	05.04.19	ORIGINAL ISSUE	NMc	CO	GS

STRUCTURE

TITLE

MECHANICAL TENSION
REPAIR SPLICE (MTRS)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 02-04-2019 | DRG. No. MM09-R24

ORIGINATED: NMc | SCALE: NTS

CHECKED: CO

APPROVED: GRANT STACY

REV. B | SHT.

DESCRIPTION	RELEVANT DRAWINGS	APPLICATION
BELOW GROUND SERVICE MINI PILLAR NEUTRAL (EXTRA) FITTING REQUIREMENT	MM10-R31	REPLACEMENT OF EXISTING FB0059. NOT FOR NEW INSTALLATIONS IN GREENFIELD OR BROWNFIELD, MAINTENANCE ONLY.
BELOW GROUND SERVICE MINI PILLAR INSTALLATION GUIDE	MM10-U08	REPLACEMENT OF EXISTING FB0059. NOT FOR NEW INSTALLATIONS IN GREENFIELD OR BROWNFIELD, MAINTENANCE ONLY.
MINI & UNI PILLAR EXTENSION	MM10-EXT	PILLAR CABLE EXTENSION DRAWING USED IN THE EVENT GROUND LEVEL HAS BEEN RAISED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	05.02.24	PILLAR EXTENSION DETAILS ADDED. DRAWINGS REMOVED.	TCM	SH	CO
B	26.07.17	MINI PILLAR DETAILS ADDED	NMc	CO	GS
A	01.12.16	ORIGINAL ISSUE	CO	JC	GS

STRUCTURE

TITLE

BELOW GROUND SERVICES

DISTRIBUTION CONSTRN. STANDARD

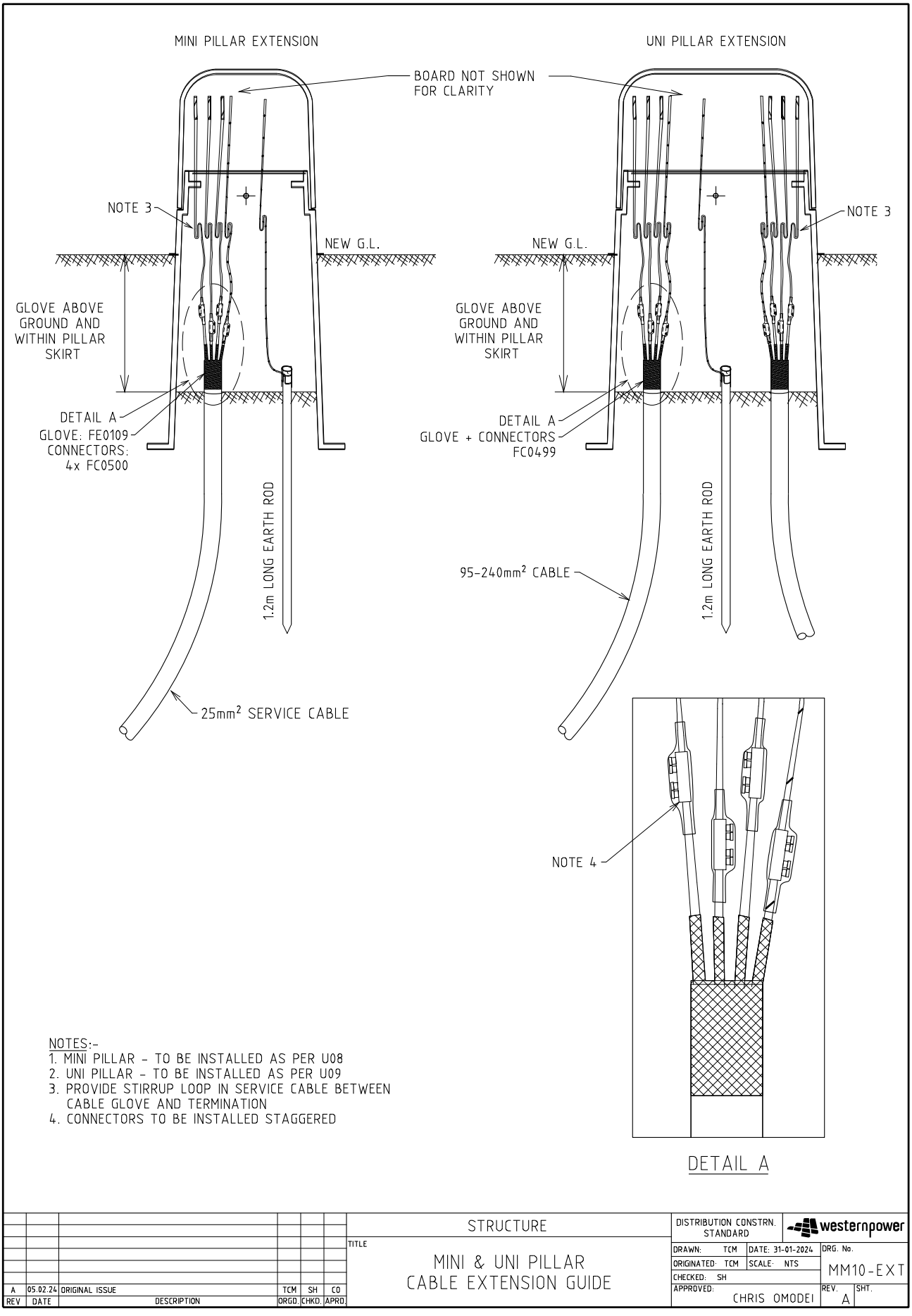
westernpower

DRAWN: JRR | DATE: 18-11-2016 | DRG. NO. MM10

ORIGINATED: CO | SCALE: NTS

CHECKED: JC

APPROVED: GRANT STACY | REV. C | SHT.



NOTES:-
1. MINI PILLAR - TO BE INSTALLED AS PER U08
2. UNI PILLAR - TO BE INSTALLED AS PER U09
3. PROVIDE STIRRUP LOOP IN SERVICE CABLE BETWEEN CABLE GLOVE AND TERMINATION
4. CONNECTORS TO BE INSTALLED STAGGERED

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	05.02.24	ORIGINAL ISSUE	TCM	SH	CO

STRUCTURE

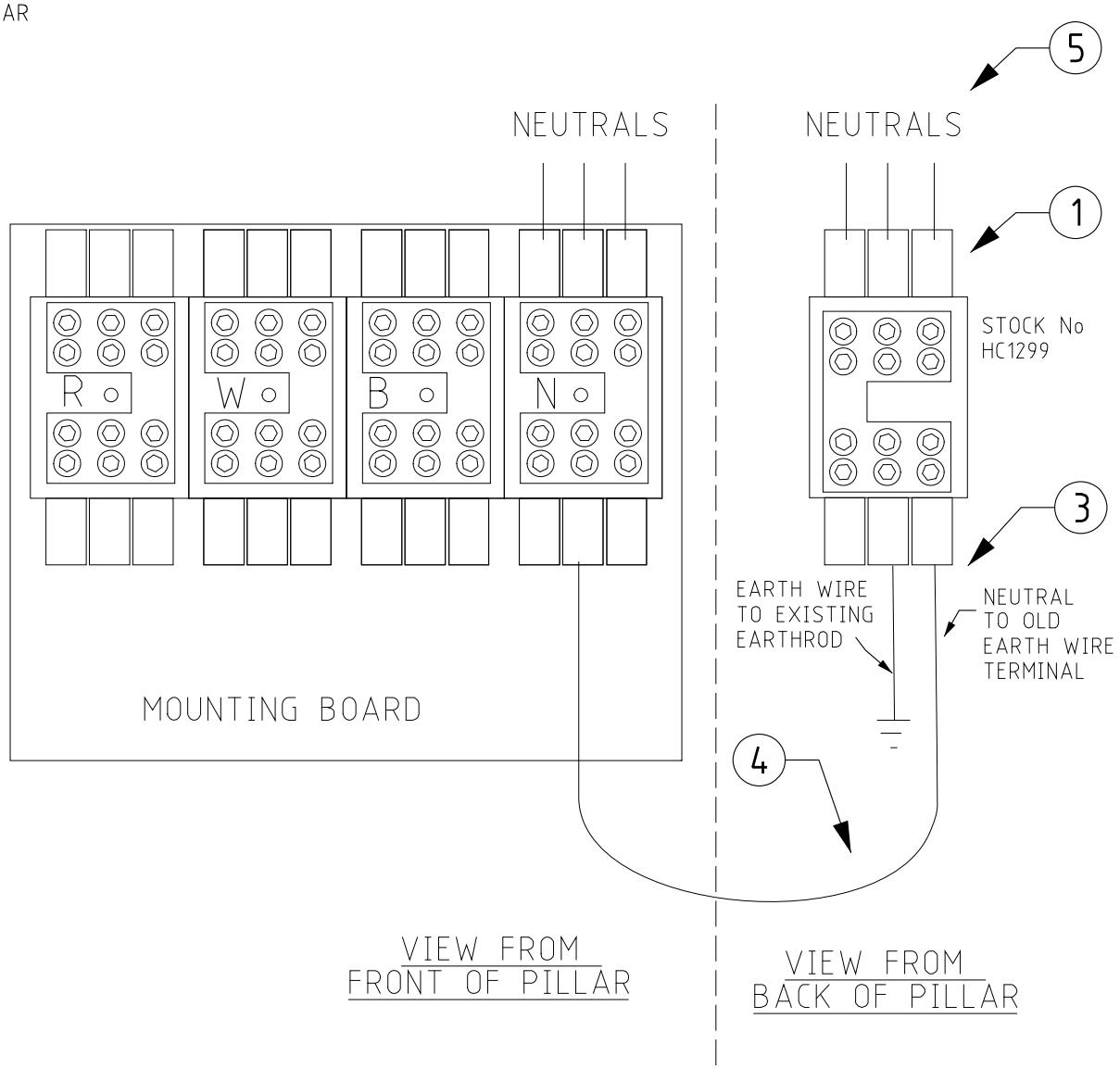
TITLE: MINI & UNI PILLAR CABLE EXTENSION GUIDE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: TCM	DATE: 31-01-2024	DRG. No. MM10-EXT
ORIGINATED: TCM	SCALE: NTS	
CHECKED: SH		
APPROVED: CHRIS OMODEI		REV. A / SHT.

NOTE: THIS STANDARD IS NOT TO BE USED FOR NEW DESIGNS AND IS INTENDED AS A FIX FOR EXISTING INSTALLATIONS THAT HAVE NOT BEEN DESIGNED TO MEET THE CABLE CAPACITY LIMITS OF THE PILLAR



NOTES:
1. FIX EXTRA NEUTRAL LINK TO BACK OF PANEL BEHIND EXISTING M.E.N LINK
2. USING INSULATED GLOVES AND TOOLS REMOVE EARTH STAKE CONDUCTOR FROM M.E.N LINK AND TEST BETWEEN EXISTING M.E.N LINK AND REMOVED CABLE END TO CONFIRM NO POTENTIAL DIFFERENCE. NOTIFY WESTERN POWER IF POTENTIAL EXISTS.
3. CONNECT REMOVED EARTH CABLE END TO BOTTOM MIDDLE TERMINAL OF NEW LINK.
4. CONNECT A 25/35mm NEUTRAL CONDUCTOR (BLACK) BETWEEN OLD EARTH TERMINAL IN EXISTING LINK AND BOTTOM RIGHT TERMINAL IN NEW M.E.N LINK.
5. THEN CONNECT EXTRA NEUTRALS TO THE NEW LINK.

REV.	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	26.07.17	ORIGINAL ISSUE			

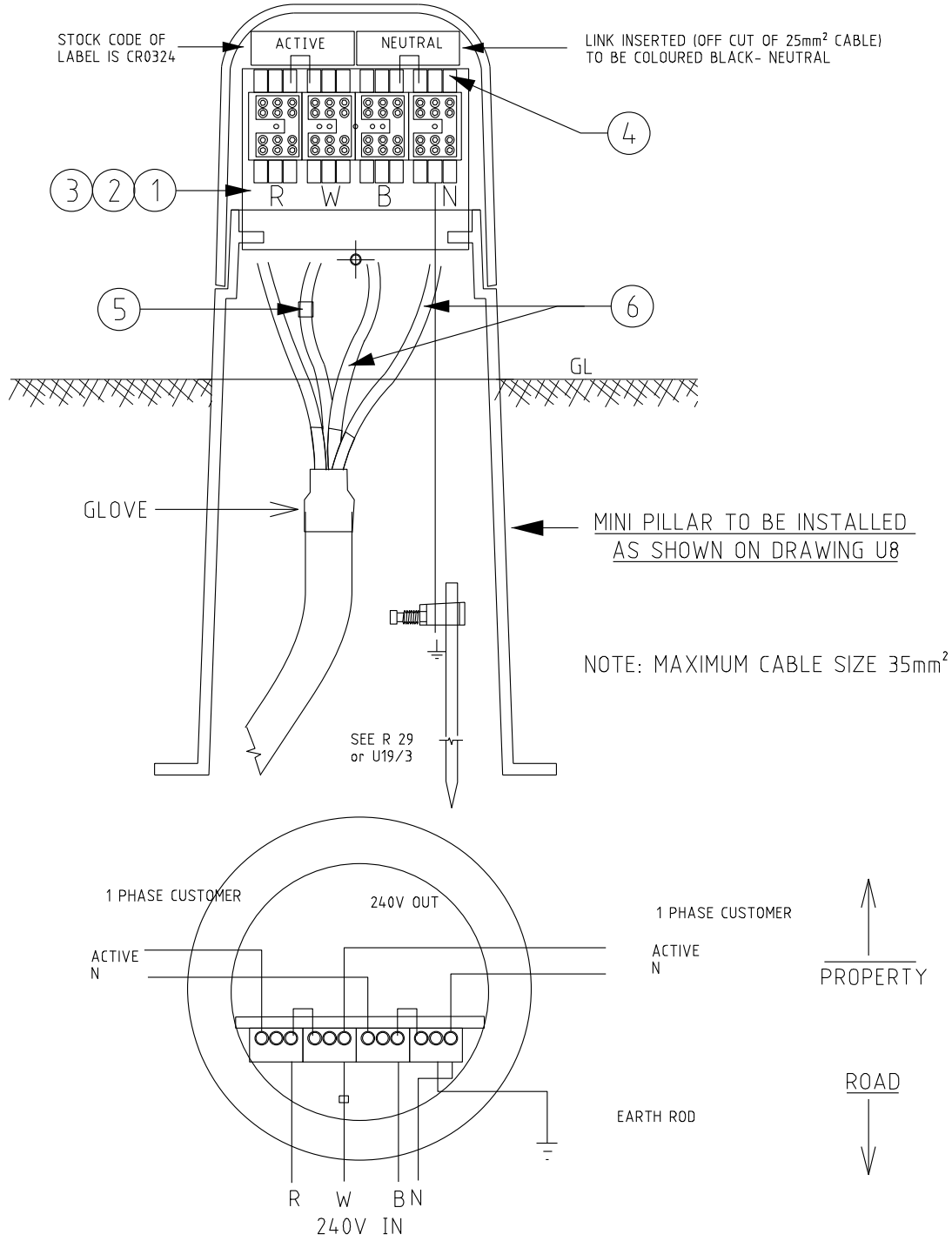
REFERENCE DRAWING

TITLE: MINI PILLAR NEUTRAL (EXTRA) FITTING REQUIREMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 15-06-2017	DRG No: MM10-R31
ORIGINATED: CO	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV: A SHT:



NOTES:
1. ALL WP 25mm² SERVICE CABLES TO ENTER BOTTOM OF TERMINAL BLOCKS
2. SOURCE OF SUPPLY TO THE PILLAR ON THE RIGHT SIDE OF THE TERMINAL BLOCK
3. FEED TO ANOTHER PILLAR TO BE ON THE LEFT SIDE OF THE TERMINAL BLOCK
4. CONSUMERS AND STREET LIGHT TO BE CONNECTED TO THE TOP OF THE TERMINAL BLOCK (LEFT OF BLOCK FOR CUSTOMER ON THE LEFT, RIGHT OF BLOCK FOR CUSTOMER ON THE RIGHT, STREET LIGHT CENTER), SEE: R32
5. WHITE PHASE TO BE CAPPED ON BOTH ENDS FOR POLE TO PILLAR APPLICATIONS WITH SINGLE TX (U19/3)
6. NEUTRAL SCREEN AND BLUE PHASE TO BE COVERED IN BLACK HEAT SHRINK

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	26.07.17	ORIGINAL ISSUE	NMc	CO	GS

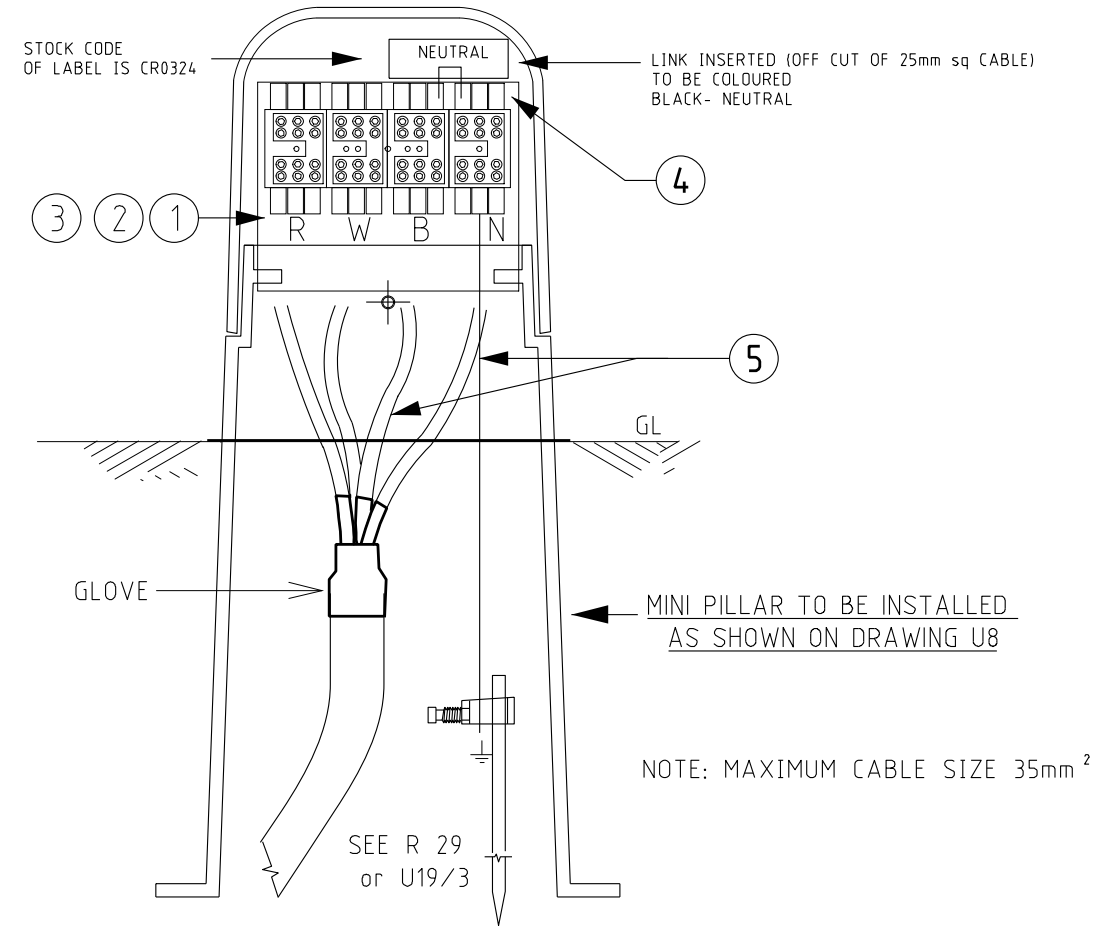
REFERENCE DRAWING

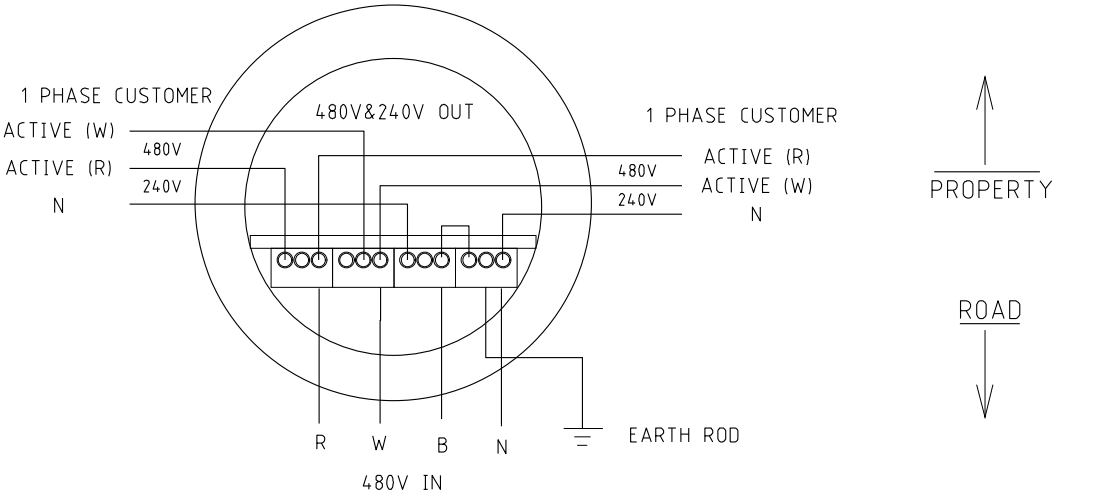
TITLE: MINI PILLAR 240V SUPPLY FROM SPUDS OR POLE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-07-2017	DRG. No. MM10-R35-1
ORIGINATED: NMc	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY		REV. A / SHT.





NOTES:
1. ALL WP 25mm² SERVICE CABLES TO ENTER BOTTOM OF TERMINAL BLOCKS
2. SOURCE OF SUPPLY TO THE PILLAR ON THE RIGHT SIDE OF THE TERMINAL BLOCK
3. FEED TO ANOTHER PILLAR TO BE ON THE LEFT SIDE OF THE TERMINAL BLOCK
4. CONSUMERS AND STREET LIGHT TO BE CONNECTED TO THE TOP OF THE TERMINAL BLOCK (LEFT OF BLOCK FOR CUSTOMER ON THE LEFT, RIGHT OF BLOCK FOR CUSTOMER ON THE RIGHT, STREET LIGHT CENTER)SEE: R32
5. NEUTRAL SCREEN AND BLUE PHASE TO BE COVERED IN BLACK HEAT SHRINK

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	26.07.17	ORIGINAL ISSUE	NMc	CO	GS

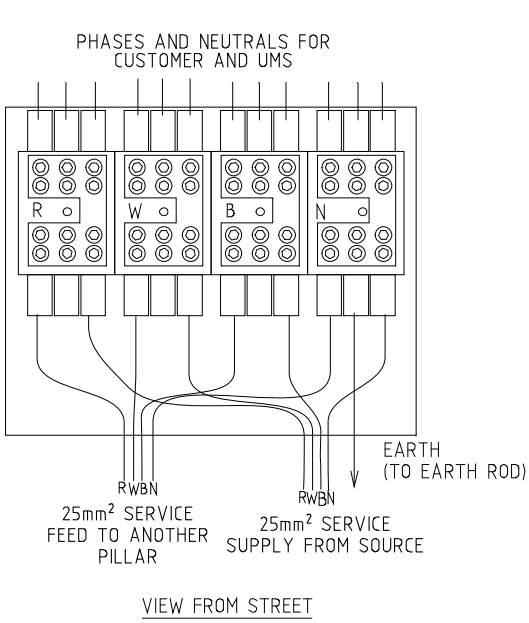
REFERENCE DRAWING

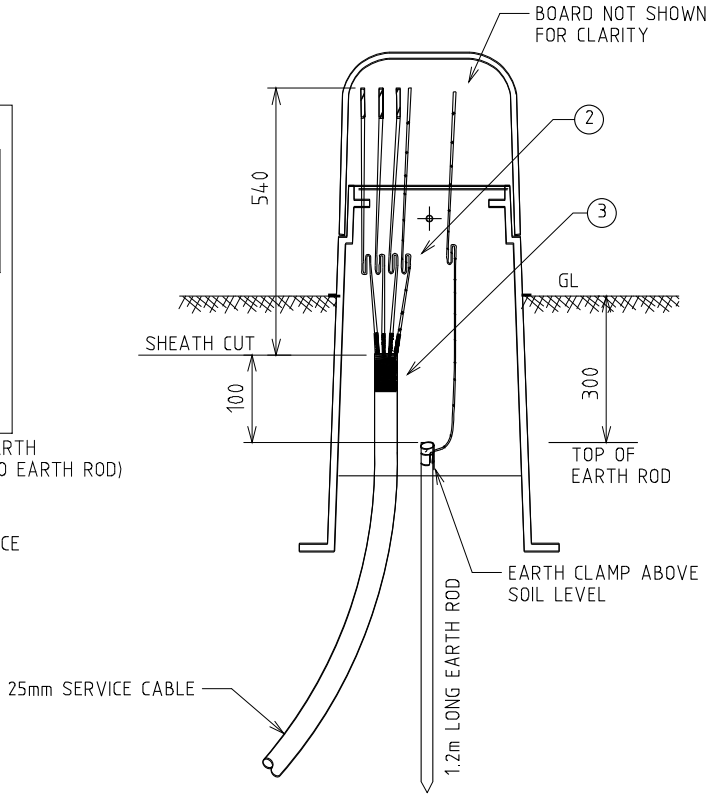
TITLE
MINI PILLAR
480V SUPPLY ARRANGEMENT

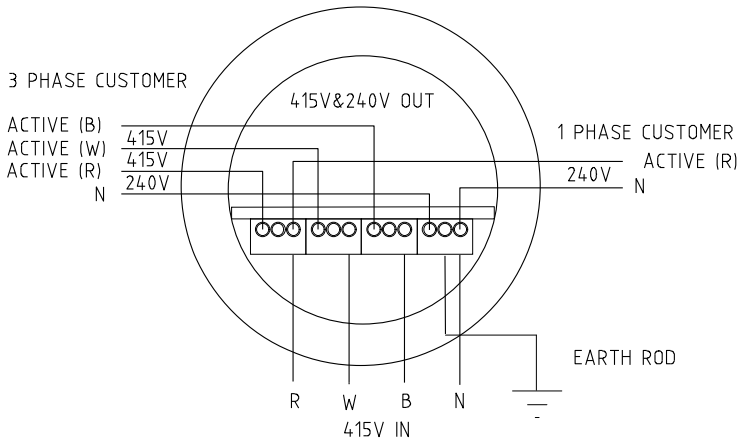
DISTRIBUTION CONSTRN. STANDARD

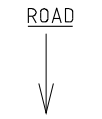
westernpower

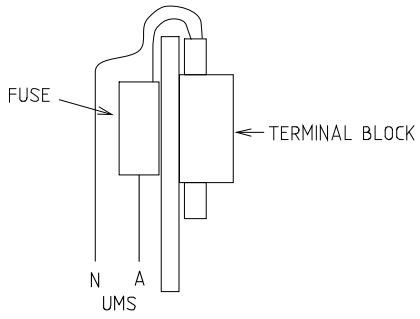
DRAWN: JRR	DATE: 21-07-2017	DRG. No. MM10-R35-2
ORIGINATED: NMc	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY		REV. A SHT.











NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. PROVIDE STIRRUP LOOP IN SERVICE CABLE BETWEEN CABLE GLOVE AND TERMINATION
3. FIT MASTIC LINED GLOVE TO ALL CABLES & BLACK HEATSHRINK ON NEUTRAL SCREENS.
4. SEE R35 FOR ALTERNATIVE CONNECTIONS.
5. SEE U19/3 FOR POLE TO PILLAR.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	26.07.17	ORIGINAL ISSUE	NMc	CO	GS

STRUCTURE

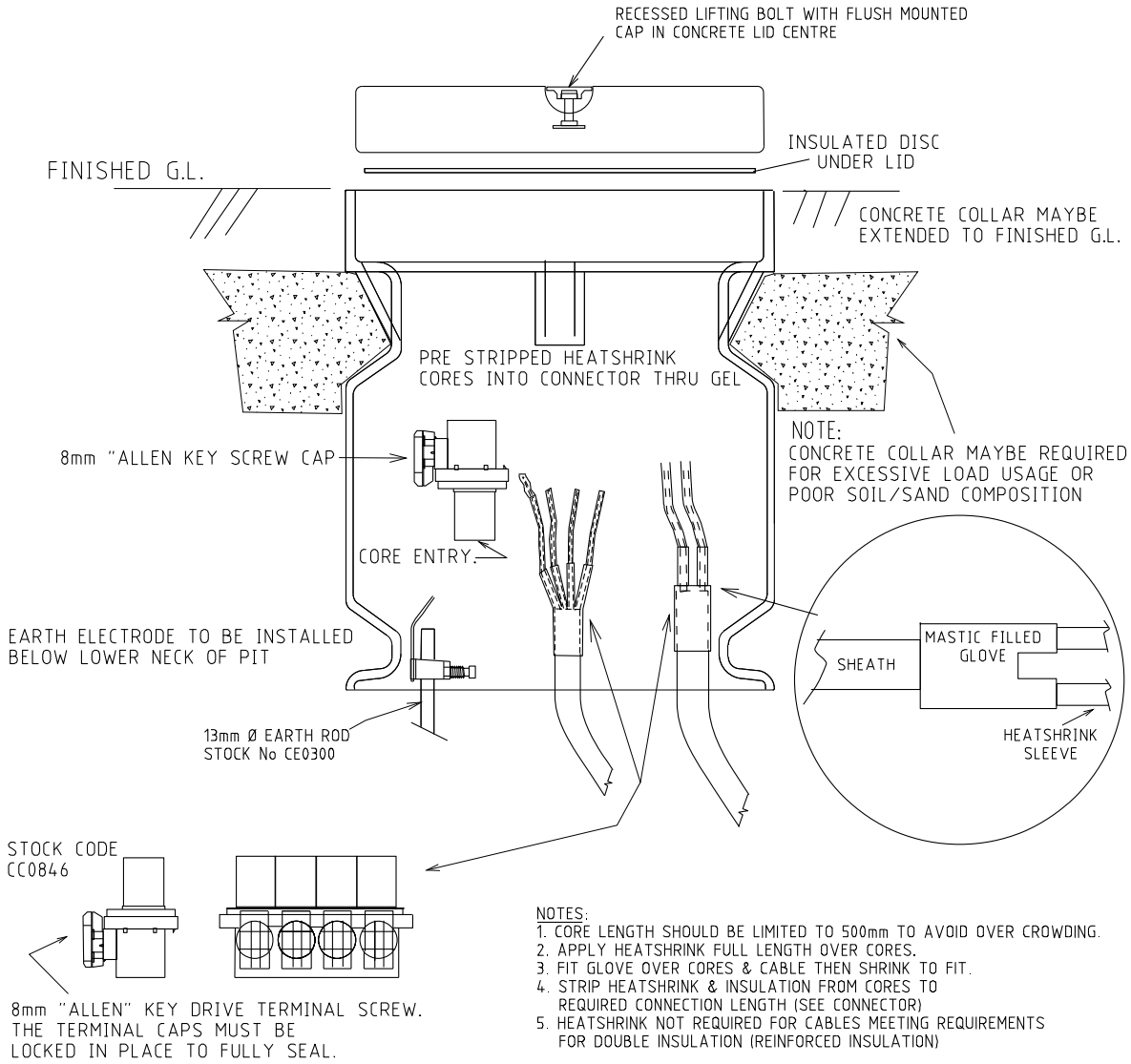
TITLE

MINI PILLAR INSTALLATION GUIDE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-07-2017	DRG. No.
ORIGINATED: NMc	SCALE: NTS	MM10-U08
CHECKED: CO		
APPROVED: GRANT STACY	REV. A	SHT.



NOTES:
1. CORE LENGTH SHOULD BE LIMITED TO 500mm TO AVOID OVER CROWDING.
2. APPLY HEATSHRINK FULL LENGTH OVER CORES.
3. FIT GLOVE OVER CORES & CABLE THEN SHRINK TO FIT.
4. STRIP HEATSHRINK & INSULATION FROM CORES TO REQUIRED CONNECTION LENGTH (SEE CONNECTOR)
5. HEATSHRINK NOT REQUIRED FOR CABLES MEETING REQUIREMENTS FOR DOUBLE INSULATION (REINFORCED INSULATION)

DESCRIPTION		COLOUR CODE			
		RED	WHITE	BLUE	BLACK
2 Finger glove	WPC stock				FE0032
	Raychem part no.	N/A	N/A	N/A	302K333-23/239(S20)
4 Finger glove	WPC stock				FE0031
	Raychem part no.				502K033-53/239(S15)
Heatshrink tubing 6mm2	WPC stock	FE0106	FE0107	FE0108	FE0105
	Raychem part no.	RNF100 3/8" Rd	RNF100 3/8" Wh	RNF100 3/8" Bl	RNF100 3/8" Bk
Heatshrink tubing 10-25mm2	WPC stock	FE0102	FE0103	FE0104	FE0071
	Raychem part no.	RNF100 1/2" Rd	RNF100 1/2" Wh	RNF100 1/2" Bl	RNF100 1/2" Bk

This drawing is valid ONLY when read in conjunction with drawings MM10 & MM10-U30-2

STOCK CODE: HL0360

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	01.12.16	FOOTNOTE REVISED & MM10 REFERENCE ADDED	CO	JC	GS
A	18.10.16	ORIGINAL ISSUE	JC	FK	GS

STRUCTURE

TITLE: BELOW GROUND SERVICE PIT INSTALLATION DETAIL

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 17-10-2016	DRG. No.	
ORIGINATED:	SCALE: NTS	MM10-U30-1	
CHECKED: REE			
APPROVED: GRANT STACY		REV. B	SHT.

APPLICATION GUIDELINE

REFER TO MM10

NOTE

1. DUST CAPS MUST BE LEFT ON ANY UNUSED CONNECTOR CABLE ENTRY TO AVOID GEL CONTAMINATION.
2. DOUBLE INSULATION IS TO BE MAINTAINED INTO CONNECTOR GEL
3. STRIP INSULATION/HEAT SHRINK FROM CORE END. SEE CONNECTOR FOR STRIP LENGTH.
4. WIPE CLEAN THE STRIPPED CORE AND ENSURE IT IS NOT CONTAMINATED WITH SAND, GREASE, ETC.
5. INSERT THE STRIPPED CORE GENTLY THRU THE GEL AND HOLD IT FULLY HOME AGAINST THE TERMINAL BLOCK WHILE TIGHTENING THE CLAMPING BOLT WITH A 8MM ALLEN KEYDRIVE. THE RECOMMENDED TORQUE SETTINGS ARE LISTED BELOW IF TORQUE WRENCHES ARE USED.
   - 4 TO 15mm^2 CONDUCTOR ---- 14.1 TO 19.8Nm TORQUE
   - 21.1 TO 53.5mm^2 CONDUCTOR ---- 25.4 TO 31.1Nm TORQUE
   - 67.4 TO 180mm^2 CONDUCTOR ---- 31.1 TO 39.5Nm TORQUE
6. UPON TIGHTENING THE CLAMPING BOLT, GIVE THE CORE A SWIFT TUG TO ENSURE THAT IT DOES NOT COME LOOSE/OUT OF THE TERMINAL BLOCK
7. AFTER CLAMPING CABLE THE CLAMP CAP MUST BE LOCKED IN PLACE TO FULLY SEAL
8. WHEN DISCONNECTING CABLE FROM CONNECTOR REMOVE SLOWLY TO ALLOW GEL TO RE-SEAL ITSELF BEHIND THE CABLE AS IT IS REMOVED.
9. TEMPORARY DISCONNECTION COVER CABLE PORT WITH BLUE CAP OR TAPE TO AVOID GEL CONTAMINATION. MARK PORT WITH ONE SCRIBE FOR EACH DISCONNECTION. REPLACE CONNECTOR AFTER 3 DISCONNECTS FOR ANY ONE PORT.
10. FOR PERMANENT DISCONNECTION DO NOT REMOVE CABLE FROM PORT. CUT CABLE TO LEAVE APPROX 50MM PROTRUDING OUT OF GELPORT THEN CAP WITH HEATSHRINK. CAUTION WHEN APPLYING HEATSHRINK TO AVOID DAMAGE TO GEL AREA.

THIS DRAWING IS VALID ONLY WHEN READ IN CONJUNCTION WITH DRAWING MM10-U30-1

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	01.12.16	APPLICATION GUIDELINE REVISED	CO	JC	GS
A	18.10.16	ORIGINAL ISSUE	JC	FK	GS

STRUCTURE

TITLE: BELOW GROUND SERVICE PIT INSTALLATION DETAIL APPLICATION GUIDELINE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 17-10-2016	DRG. No.	
ORIGINATED:	SCALE: NTS	MM10-U30-2	
CHECKED: REE			
APPROVED: GRANT STACY		REV. B	SHT.

DRG. No.	DESCRIPTION
MM11-S13	MOUNTING ARRANGEMENT FOR STEEL STREETLIGHT COLUMNS
MM11-S14	MOUNTING ARRANGEMENT FOR WOOD OR CONCRETE POLE ON BARE AERIAL CONNECTION
MM11-S15	MOUNTING ARRANGEMENT FOR WOOD OR CONCRETE POLE ABC CONNECTION
MM11-S16	STEEL COLUMN - DOUBLE INSULATED (CLASS 2)
MM11-S17	WOOD OR CONCRETE POLE DOUBLE INSULATED - (CLASS 2)
MM11-S18	WOOD OR CONCRETE POLE SINGLE INSULATED - (CLASS 1)

STOCK CODE	DESCRIPTION
HL3351	1000W FIXTURE
GL1892	1000W CONTROL GEAR BOX
GL1886	1000W MH GLOBE
HL3350	400W FIXTURE
GL1891	400W CONTROL GEAR BOX
GL1890	400W MH GLOBE
GL1871	400W HPS GLOBE
GF1803	CONCRETE FUSEHOLDER
GF1802	WOODEN FUSEHOLDER
HL5557	PE CELL
GF0550	FUSE
GL1850	BRACKET FOR WOODEN POLES
GL1851	BRACKET FOR METAL POLES

NOTES:-
1. ITEM FOR RE-USE TO BE CONFIRMED IN WORKING ORDER (NO 'REPLACE' DEFECTS) BEFORE ATTACHMENT TO POLE (REFER TO DEFECT SEVERITY CATALOGUE).
2. APPROPRIATE DRAWING TO BE USED DEPENDING ON EXISTING POLE CONFIGURATION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

TITLE: SECURITY LIGHTING INSTALLATION

DISTRIBUTION CONSTRN. STANDARD

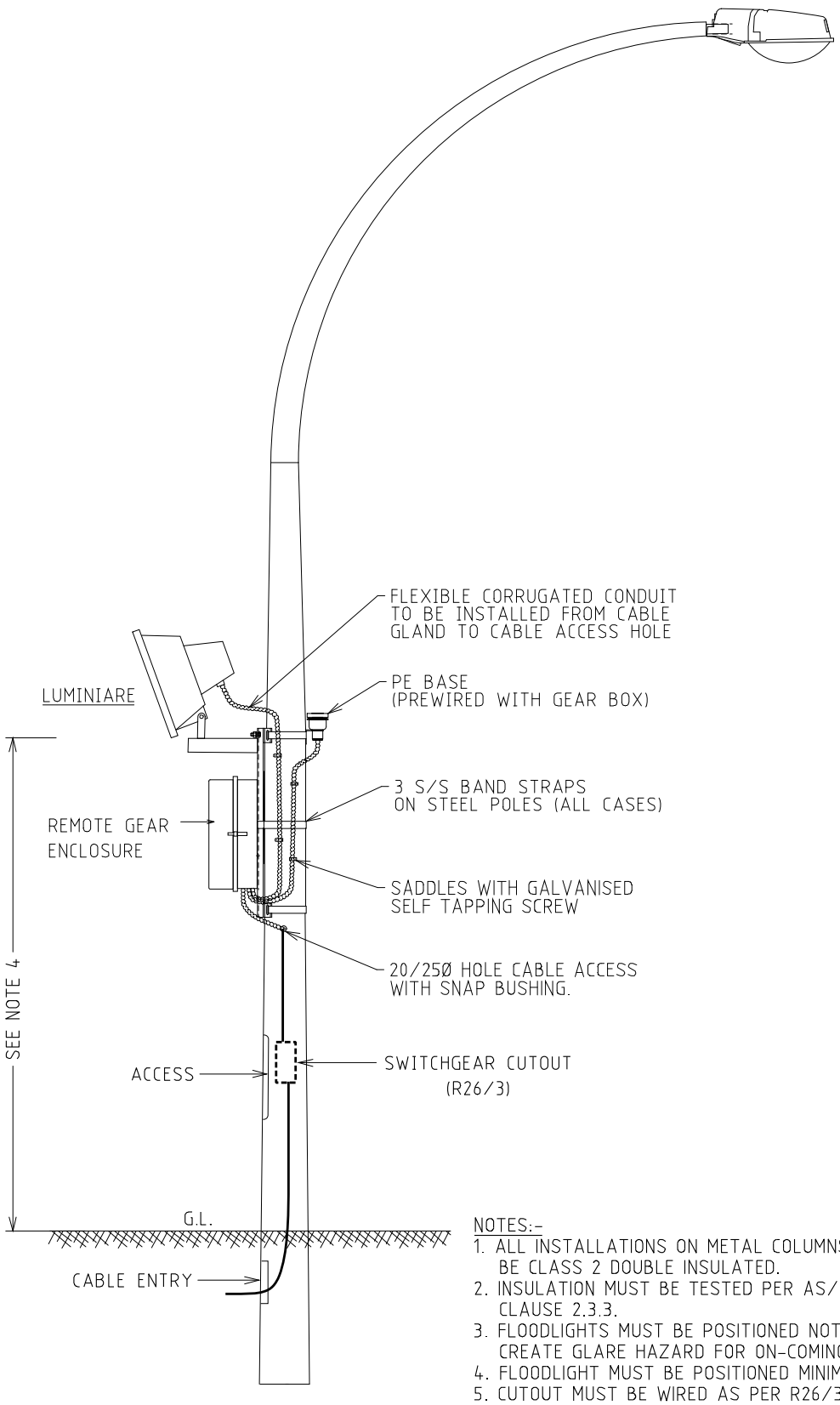
westernpower

DRAWN: JRR | DATE: 09-02-2017 | DRG. NO. MM11

ORIGINATED: JC | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. A | SHT.



NOTES:-
1. ALL INSTALLATIONS ON METAL COLUMNS MUST BE CLASS 2 DOUBLE INSULATED.
2. INSULATION MUST BE TESTED PER AS/NZS 3760 CLAUSE 2.3.3.
3. FLOODLIGHTS MUST BE POSITIONED NOT TO CREATE GLARE HAZARD FOR ON-COMING VEHICLES.
4. FLOODLIGHT MUST BE POSITIONED MINIMUM 5m FROM G.L.
5. CUTOUT MUST BE WIRED AS PER R26/3 OF THE DISTRIBUTION CONSTRUCTION STANDARDS HANDBOOK.

REV	DATE	DESCRIPTION	ORGD.	CHKD	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

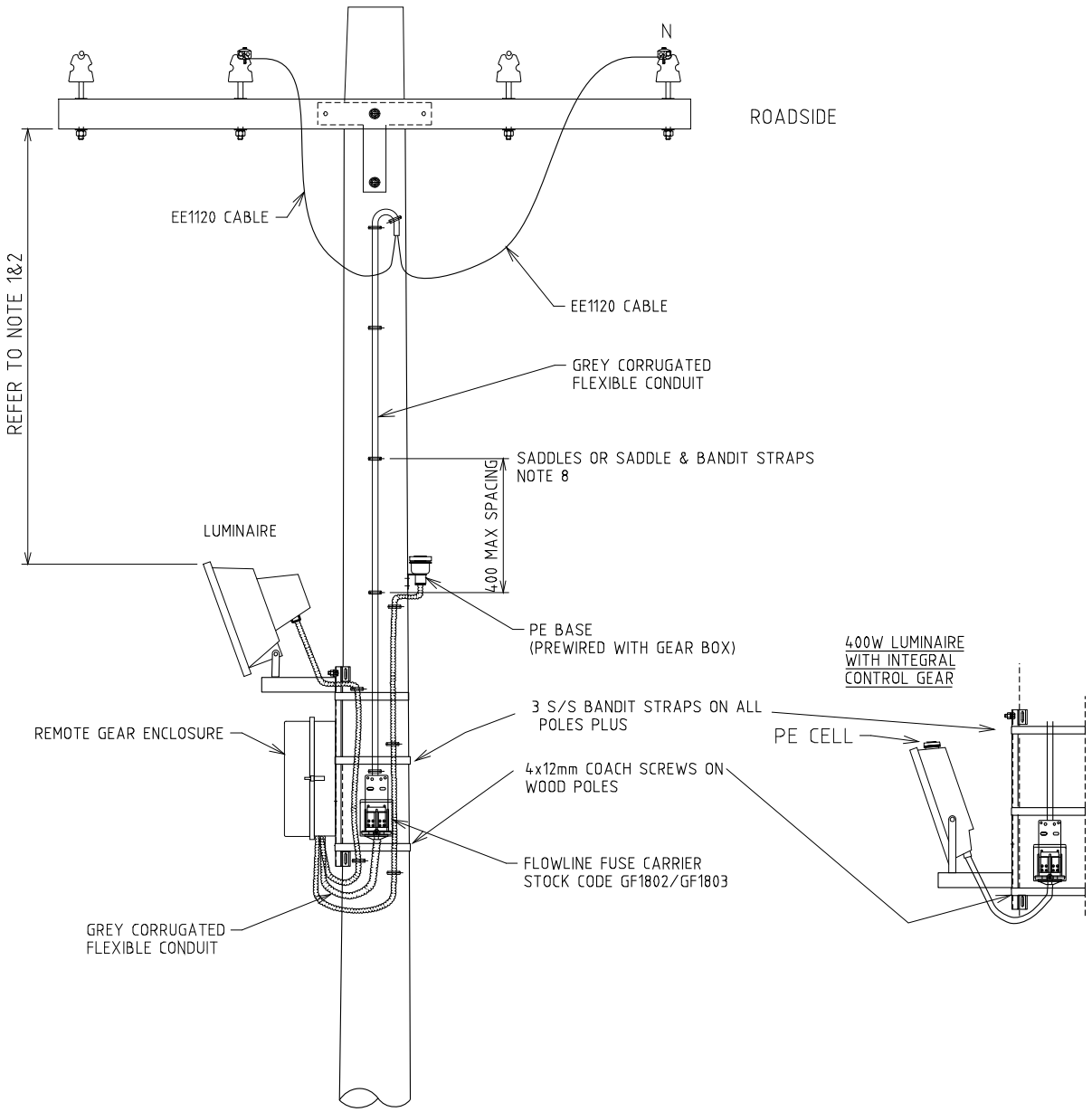
STREET LIGHTING

TITLE: MOUNTING ARRANGEMENT FOR STEEL STREETLIGHT COLUMNS

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-02-2017	DRG. No. MM11-S13
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:-
1. A MINIMUM OF 300MM CLEARANCE BETWEEN THE TOP OF THE LIGHT AND THE BOTTOM OF THE CROSS ARM IS REQUIRED.
2. A MINIMUM OF 800MM CLEARANCE IS REQUIRED WHEN LV ISOLATORS ARE FITTED.
3. IN MOST CASES, NEUTRAL CONDUCTOR WILL BE THE OUTSIDE CONDUCTOR, ON THE ROADSIDE.
4. FLOODLIGHTS MUST BE POSITIONED SO THEY WILL NOT CREATE A GLARE HAZARD FOR VEHICLE TRAFFIC ON ROADWAY.
5. ALL NEW AND REPLACEMENT FLOODLIGHTS MUST BE CLASS 2 DOUBLE INSULATED. (SOME EXISTING INSTALLATIONS ARE CLASS 1)
6. INSTALLATION MUST BE TESTED AS PER AS/AZS 3760 CLAUSE 2.3.3.
7. FLOODLIGHTS MUST BE POSITIONED MINIMUM 5 METRES FROM GROUND LEVEL AND NO MORE THAN 6 METRES HIGH.
8. FOR WOOD POLES, USE SADDLES ON CONDUIT. FOR CONCRETE, USE SADDLE & BANDIT STRAPS.

REV	DATE	DESCRIPTION	ORGD.	CHKD	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

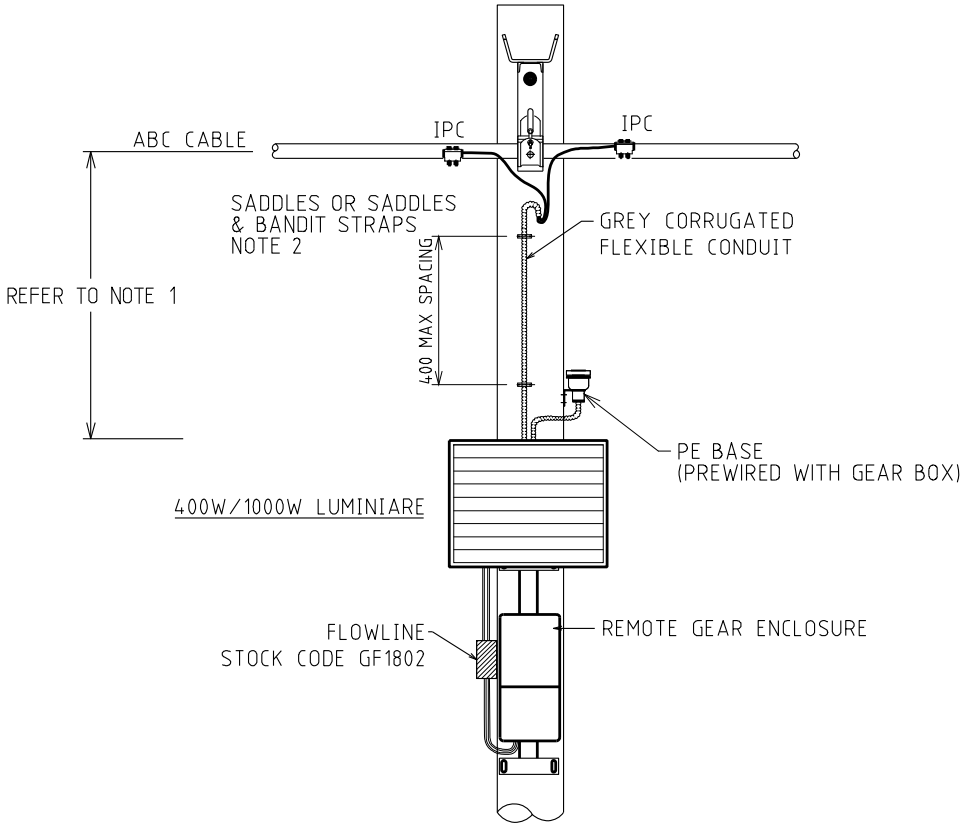
STRUCTURE

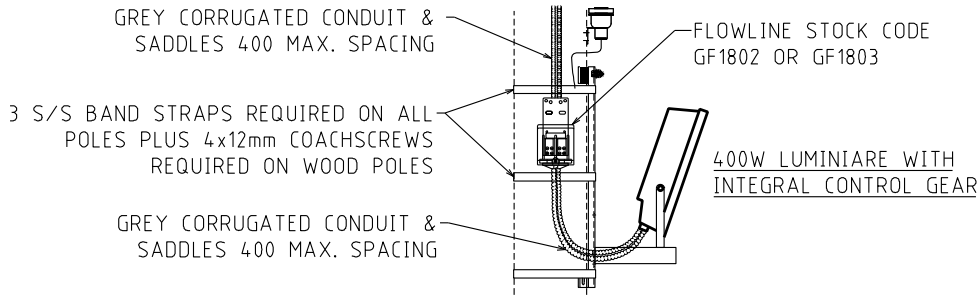
TITLE: MOUNTING ARRANGEMENT FOR WOOD OR CONCRETE POLE ON BARE AERIAL CONNECTION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN JRR	DATE: 09-02-2017	DRG NO	
ORIGINATED: JC	SCALE: NTS	MM11-S14	
CHECKED: REE			
APPROVED GRANT STACY		REV. A	SHT





NOTES
1. A MINIMUM OF 300mm CLEARANCE BETWEEN THE TOP OF THE LIGHT AND THE BOTTOM OF THE HANGER ARM.
2. FOR WOOD POLES, USE SADDLES ON CONDUIT.
   FOR CONCRETE, USE SADDLES AND BANDIT STRAP.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

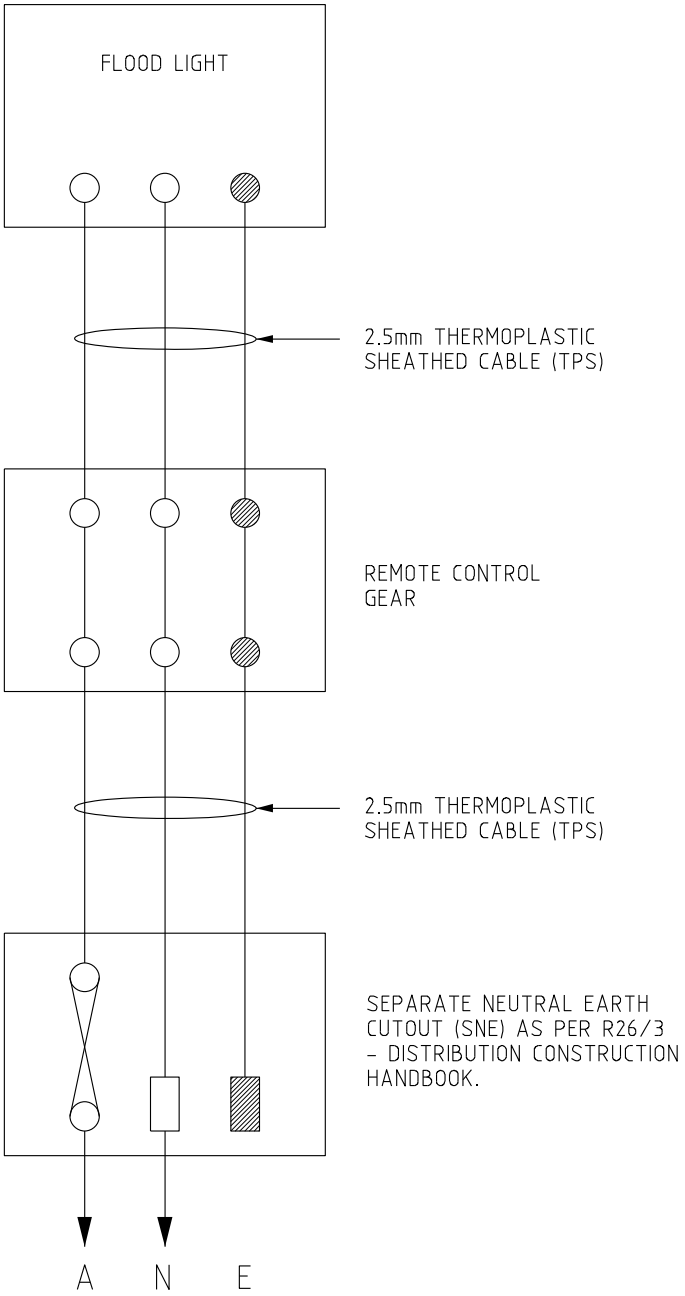
STRUCTURE

TITLE: MOUNTING ARRANGEMENT FOR WOOD OR CONCRETE POLE ABC CONNECTION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-02-2017	DRG. NO. MM11-S15
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL STEEL COLUMN INSTALLATIONS MUST BE DOUBLE INSULATED (CLASS 2).
2. ALL EXPOSED TPS NEEDS TO BE INSTALLED IN GREY FLEXIBLE CONDUIT AND MOUNTED TO COLUMN WITH GALVANISED SELF TAPPING DRILL SCREWS AND SADDLES.
3. EARTH TERMINALS ARE A TERMINATION POINT FOR EARTH CABLES ONLY AND ***MUST NOT*** BE BONDED TO THE STEEL WORK AT ANY POINT.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

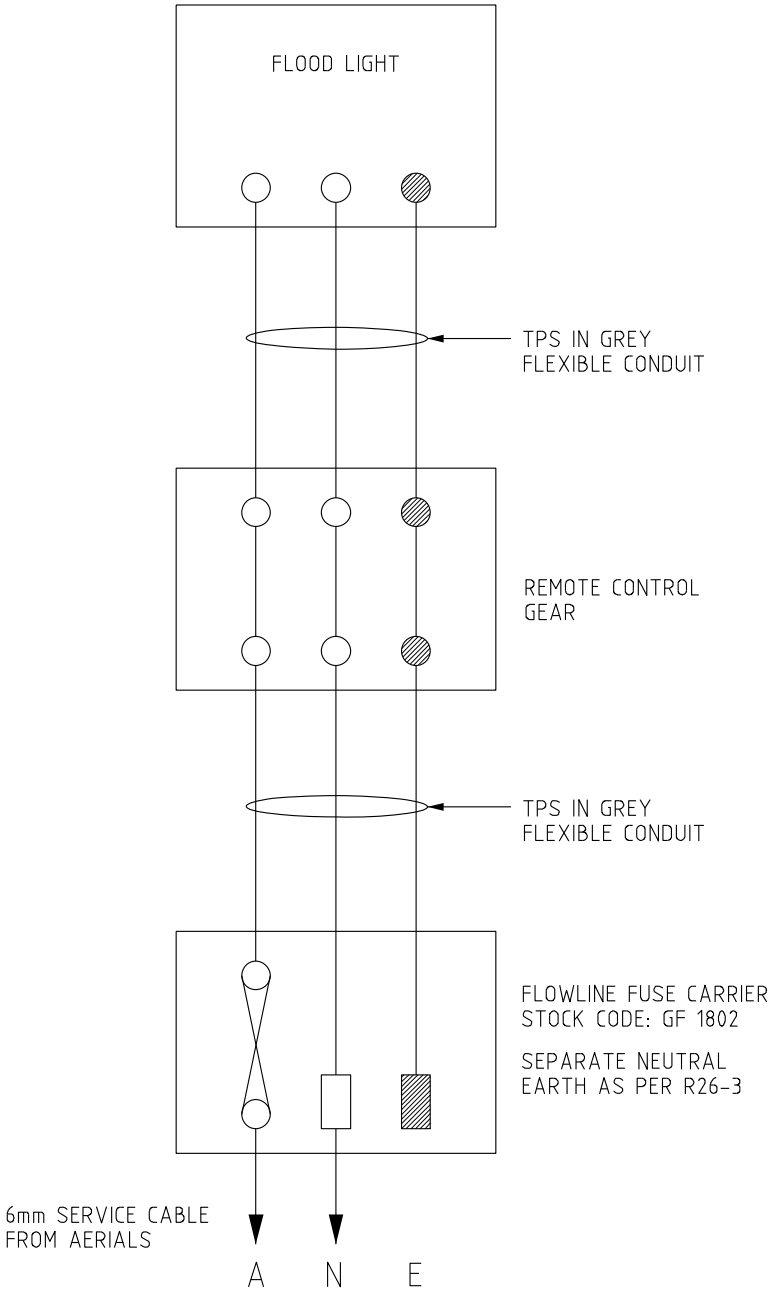
STRUCTURE

TITLE
STEEL COLUMN – DOUBLE INSULATED (CLASS 2)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-02-2017	DRG. NO. MM11-S16
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL STEEL POLE INSTALLATIONS MUST BE DOUBLE INSULATED (CLASS 2).
2. ALL EXPOSED TPS NEEDS TO BE INSTALLED IN GREY FLEXIBLE CONDUIT AND MOUNTED TO POLE WITH GALVANISED SELF TAPPING DRILL SCREWS AND SADDLES.
3. GREY FLEXIBLE CONDUIT MUST BE BANDIT STRAPPED TO CONCRETE POLES.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

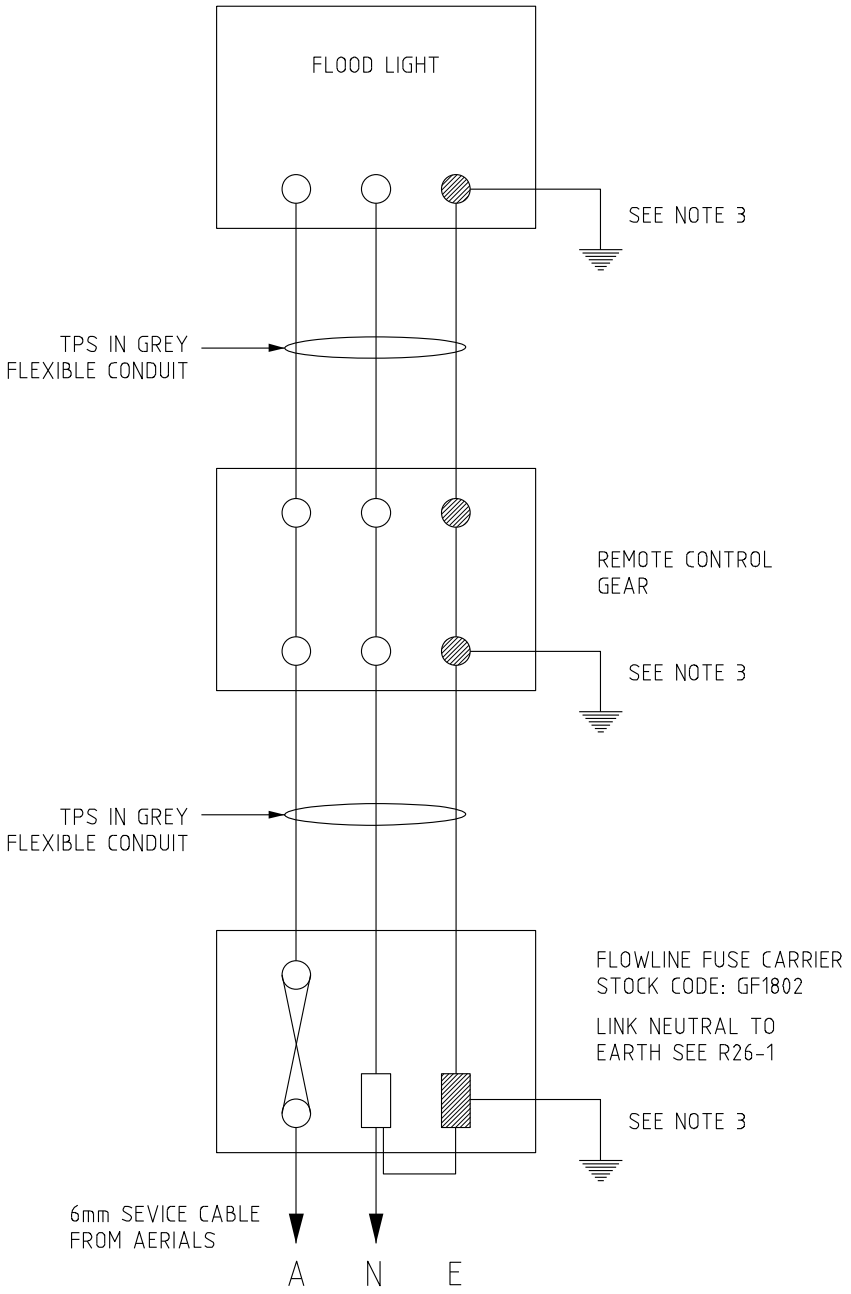
TITLE

WOOD OR CONCRETE POLE
DOUBLE INSULATED – (CLASS 2)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-02-2017	DRG. NO. MM11-S17
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. CLASS 1 BONDED TO METAL BODY OF FIXTURE. CLASS 2 MUST NOT BE BONDED.
2. IF EXISTING FIXTURE AND CONTROL GEAR ARE UNSERVICEABLE, A NEW CLASS 2 INSTALLATION IS REQUIRED PER MM11-S17.
3. EARTHS MUST BE BONDED TO STEEL BODY OF FITTING.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.03.17	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

TITLE: WOOD OR CONCRETE POLE SINGLE INSULATED – (CLASS 1)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-02-2017	DRG. NO.	
ORIGINATED: JC	SCALE: NTS	MM11-S18	
CHECKED: REE			
APPROVED: GRANT STACY		REV. A	SHT.

DESCRIPTION	RELEVANT DRAWINGS
STREET LIGHT CUTOUT SINGLE PHASE SUPPLY FOR SINGLE INSULATED (CLASS 1) LUMINAIRES - 1	MM13-R26-1
STREET LIGHT CUTOUT SINGLE PHASE SUPPLY FOR SINGLE INSULATED (CLASS 1) LUMINAIRES - 2	MM13-R26-2

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	09 01.18	ORIGINAL ISSUE	JC	REE	GS

STRUCTURE

TITLE

STREET LIGHT MAINTENANCE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR DATE: 08-01-2018

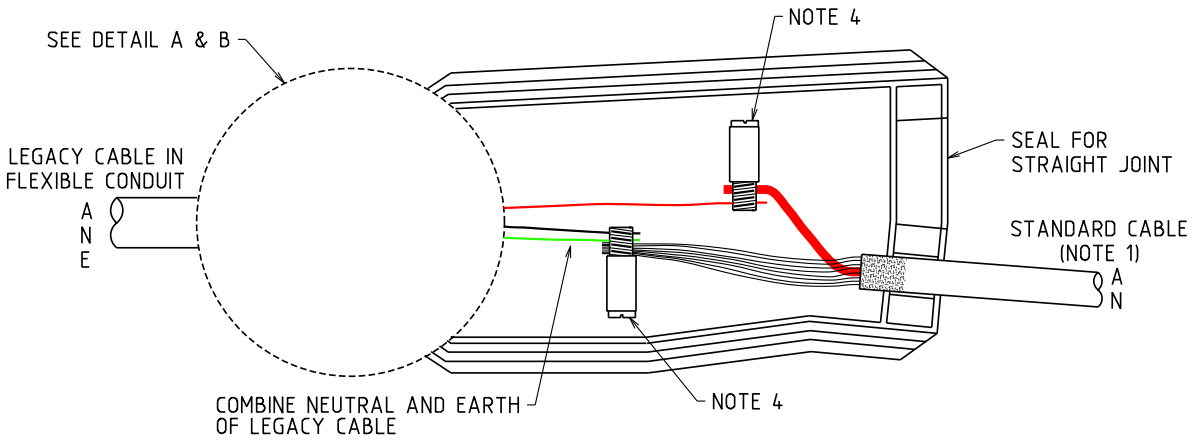
ORIGINATED: JC SCALE: NTS

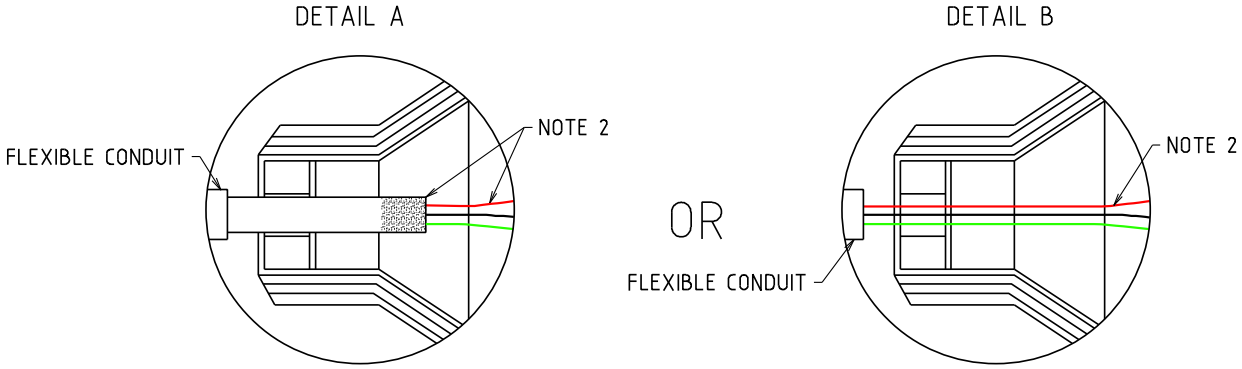
CHECKED: REE

APPROVED: GRANT STACY

DRG. NO. MM13

REV. A SHT.





MULTI CORE CABLES

eg:- TPS (3 CORE)

SINGLE CORE CABLES

eg:- BUILDING WIRE (3x1 CORE)

LEGACY CABLE		STANDARD CABLE
CABLE TYPE	CABLE RANGE	
2 CORE	2.5 - 16mm^2	16mm^2 1 CORE HELICAL SCREEN
3 CORE	2.5 - 16mm^2	16mm^2 1 CORE HELICAL SCREEN
2x1 CORE	2.5 - 16mm^2	16mm^2 1 CORE HELICAL SCREEN
3x1 CORE	2.5 - 16mm^2	16mm^2 1 CORE HELICAL SCREEN

NOTES:-
1. WHEN STANDARD CABLE IS JOINTED TO LEGACY CABLE AND TERMINATED, I.E. INTO A PILLAR, STREETLIGHT ETC., THEN ATTACH A CAUTION TAG TO THE CABLE TERMINATION STATING "CONNECTED TO LEGACY CABLE".
2. ABRADE ALL INSULATION ON CORES AND SHEATHS THAT ENTER JOINT.
3. REFER TO COMMISSIONING INSTRUCTION 2.10.
4. THE SMALLER CROSS SECTIONAL AREA CORE(S) SHALL BE PLACED IN THE BOTTOM OF THE CONNECTOR.

STOCK CODE: FJ0241

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
A	10.12.18	ORIGINAL ISSUE	CO	NMc	FK

STRUCTURE

TITLE: LEGACY STREETLIGHT CABLE REPAIR

DISTRIBUTION CONSTRN. STANDARD

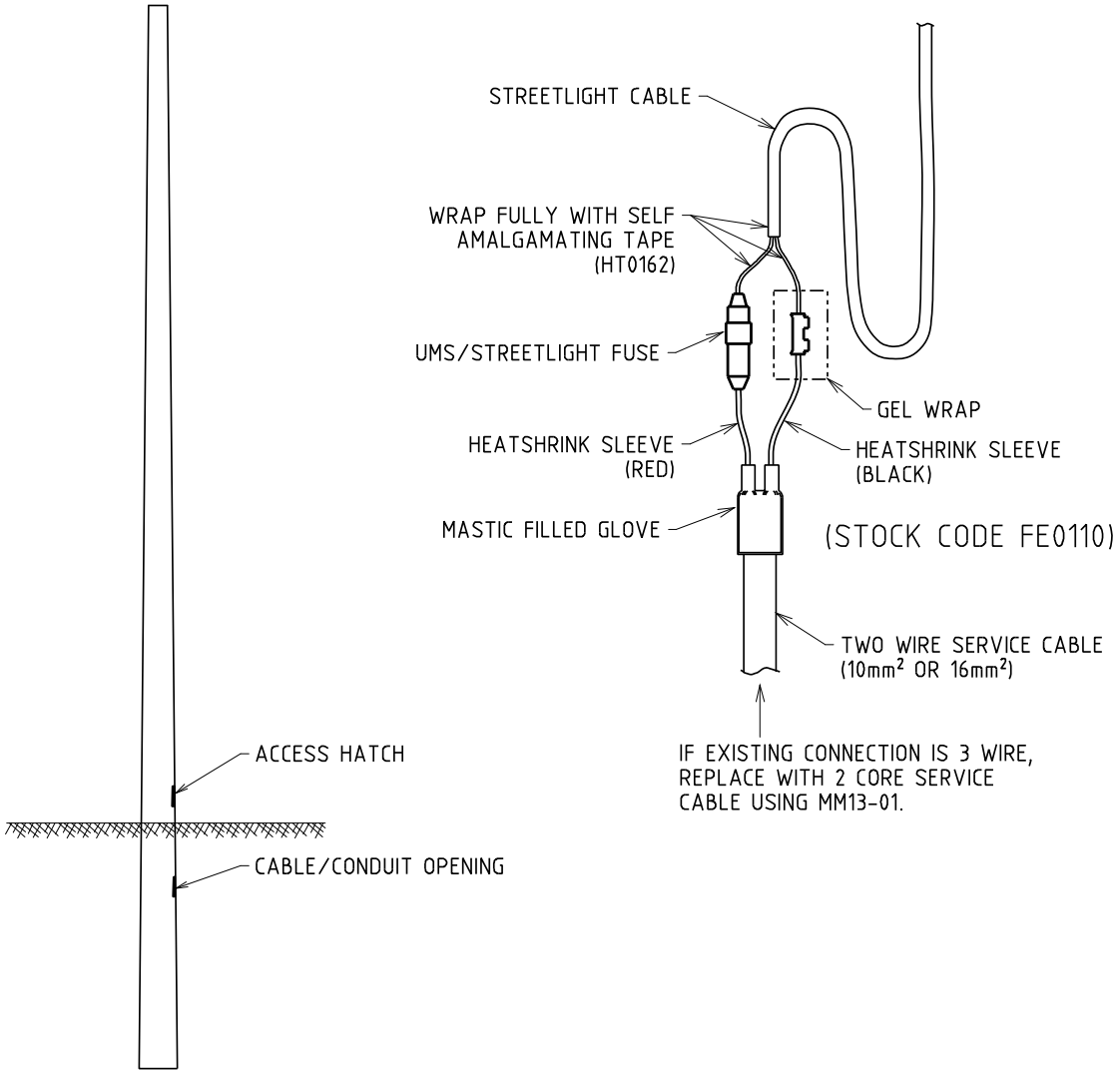
westernpower

DRAWN: JRR | DATE: 12-10-2018 | DRG. No. MM13-01

ORIGINATED: CO | SCALE: NTS

CHECKED: REE

APPROVED: FARHAN KHAN | REV. A | SHT.



NOTES:-
1. APPLICATION FOR USE WITH COLUMNS THAT CANNOT ACCOMMODATE A STANDARD CUT OUT BOX.
2. FOR CLASS II LED LUMINAIRE INSTALLATION ONLY.
3. THIS DRAWING REPRODUCED FROM DRG. No. SL75-0009.
4. DOUBLE 1.5mm CONDUCTOR OVER TO FIT INTO CONNECTORS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	29.10.19	DRAWING NUMBER & CONNECTION DETAILS CHANGED	REE	CO	GS
A	23 05 17	ORIGINAL ISSUE	CB		GS

MAINTENANCE MANUAL

TITLE: ELECTRICAL CONNECTIONS FOR NARROW STYLE STREETLIGHT COLUMN

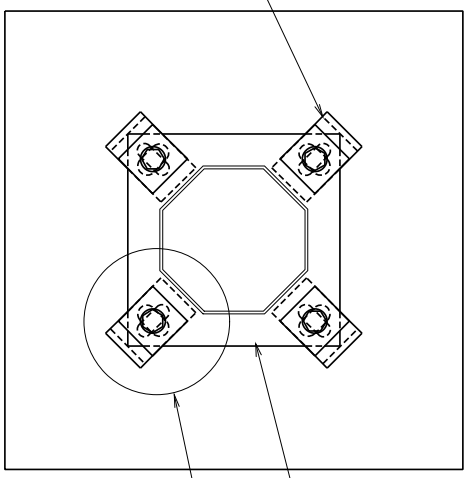
DISTRIBUTION CONSTRN. STANDARD

westernpower

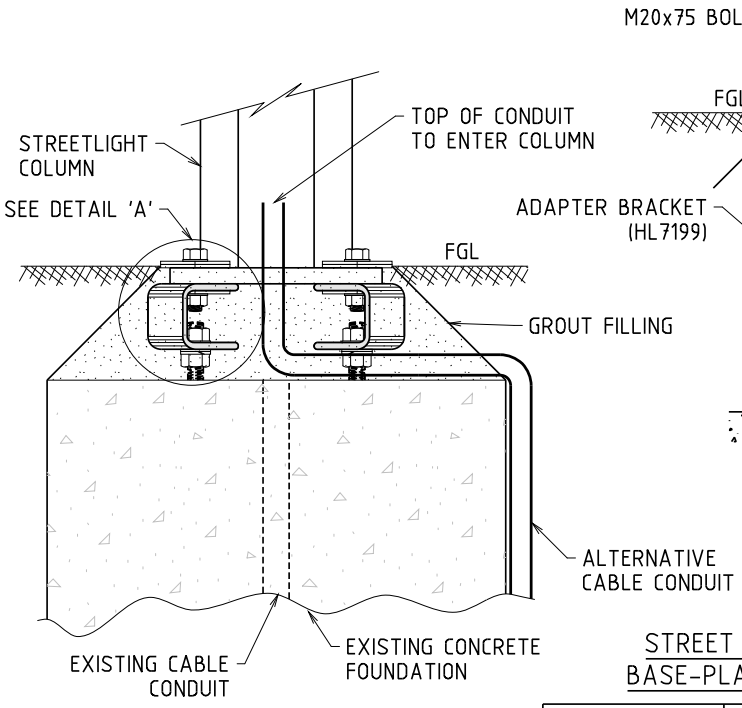
DRAWN: JRR	DATE: 15-05-2017	DRG. No. MM13-02
ORIGINATED: CB	SCALE: NTS	
CHECKED:		
APPROVED: GRANT STACY	REV B	SHT.

INSTALLATION INSTRUCTIONS

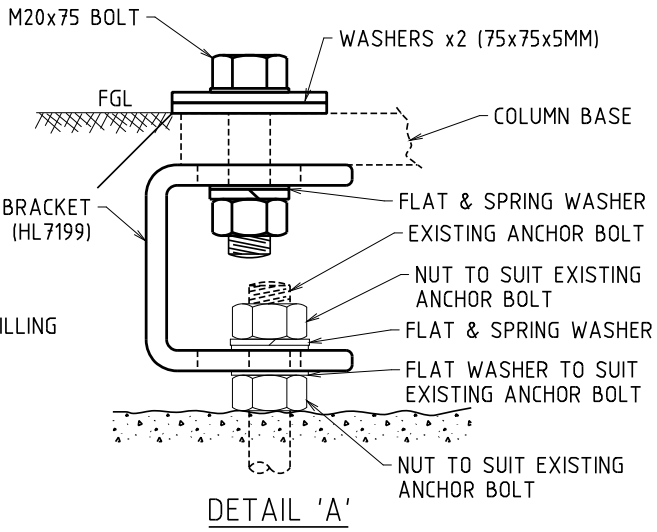
1. REMOVE EXISTING COLUMN AND EXISTING NUTS.
2. CLEAN ANCHOR BOLT THREADS WITH WIRE BRUSH.
3. ASSESS CONDITION OF ANCHOR BOLTS.
   CONSULT ENGINEERING IF ANCHOR BOLTS ARE;
   - SMALLER THAN 16MM.
   - EXCESSIVELY CORRODED, THREAD NOT SUITABLE.
   - BEND IS GREATER THAT 5 DEG.
4. IF ANCHOR BOLTS ARE IN GOOD CONDITION, APPLY COLD GALV OVER THREAD.
5. ATTACH ADAPTER BRACKETS TO THE EXISTING ANCHOR BOLTS USING SUITABLE NUTS x2, WASHERS x2 AND SPRING WASHER, SEE DETAIL 'A'.
6. LEVEL BRACKETS USING WASHER/NUTS BELOW ADAPTER BRACKETS.
7. BRACKETS CAN BE ORIENTATED TO SUIT ANY EXISTING ANCHOR BOLT DIMENSION/POSITION. ENSURE BRACKET FACES INWARDS AS PER ELEVATION VIEW.
8. PREFERENCE TO INSTALL CABLE IN EXISTING CONDUIT. IF NOT POSSIBLE, USE ALTERNATIVE CONDUIT POSITION AS INDICATED.
9. ATTACH THE COLUMN WITH BASE PLATE TO THE ADAPTER BRACKET USING NUTS, BOLTS AND WASHERS SUPPLIED WITH HL7199, SEE DETAIL 'A'.



PLAN



ELEVATION



DETAIL 'A'

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.

STREET LIGHT COLUMN AND OUTREACH WITH BASE-PLATE – STOCK CODES (MADE TO ORDER)

FINISH	POLE HEIGHT	SINGLE OUTREACH	DOUBLE OUTREACH
GALVANISED	10.5m	CW4111	CW4112
	12.5m	CW4113	CW4114
POWDER COATED	10.5m	CW4115	CW4116
	12.5m	CW4117	CW4118

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
A	26 11.20	ORIGINAL ISSUE	SA	CO	GS

STRUCTURE

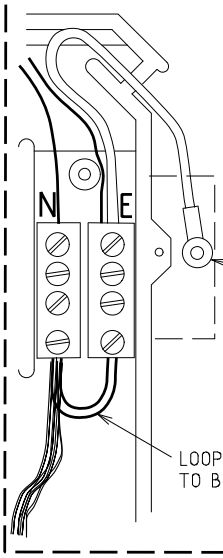
TITLE: LEGACY STREETLIGHT COLUMN WITH CONCRETE FOUNDATION

DISTRIBUTION CONSTRN. STANDARD — westernpower

DRAWN: JRR	DATE: 22-05-2020	DRG. No. MM13-03
ORIGINATED: SA	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY		REV. A SHT.

FOR SINGLE INSULATED CLASS 1 EQUIPMENT ONLY

TYPE 1 – SEPARATE NEUTRAL EARTH REQUIREMENTS (SNE)



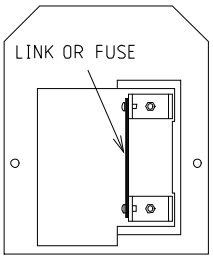
NOTE:
TYPE 1 MUST BE CONNECTED AS SHOWN 'WITH THE MEN LOOP INSTALLED' & 'EARTH LEAD TO MOUNTING BRACKET'

CONNECT 6mm EARTH WIRE TO MOUNTING BRACKET FROM EARTH BLOCKS

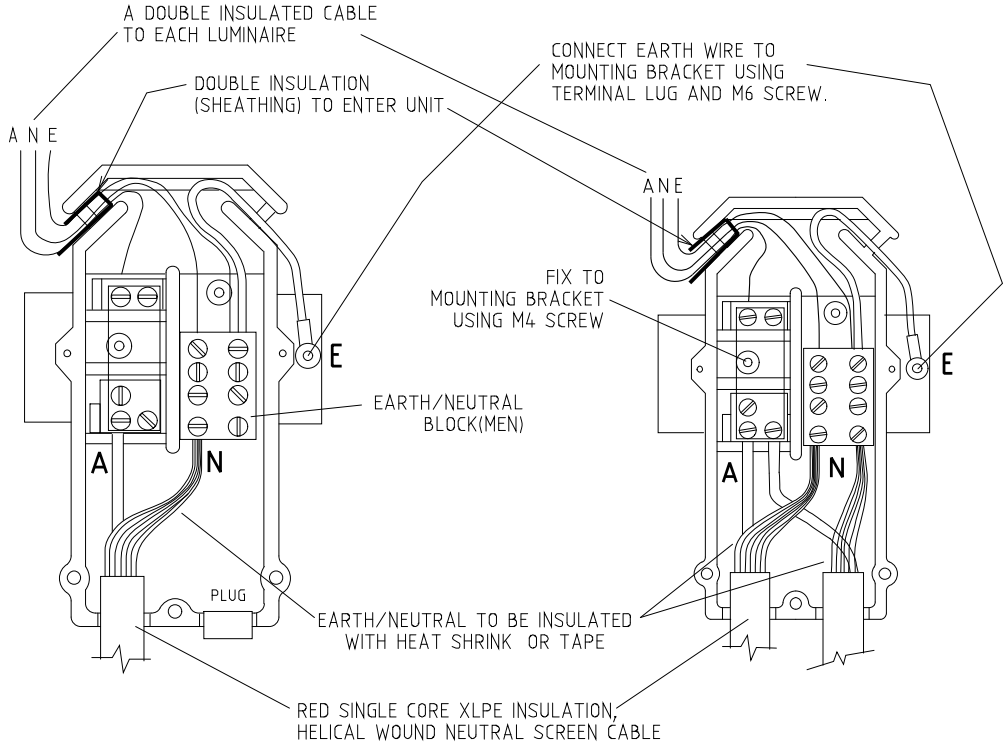
NOTE: THESE LINKS MUST BE INSTALLED.

LOOP BETWEEN NEUTRAL AND EARTH BLOCKS TO BE 6mm Cu PVC INSULATED.

GEC HENLEY CUTOUT CAT No. 54715-03 TYPE 1-SNE



VIEW ON INSIDE OF FRONT COVER TYPE 2 – COMMON NEUTRAL EARTH (CNE)



SINGLE SERVICE SUPPLY

LOOPED SERVICE SUPPLY

SUPERSEDED TYPE 2 UNIT USE TYPE 1 – SNE ABOVE OR SEE R26/2 FOR REPLACEMENT

GEC HENLEY STREET LIGHTING SERVICE CUTOUT CAT No. 8DE 54715-04 TYPE 2

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	09 01.18	ORIGINAL ISSUE	JC	REE	GS

REFERENCE DRAWING

TITLE: STREET LIGHT CUTOUT SINGLE PHASE SUPPLY FOR SINGLE INSULATED (CLASS 1) LUMINAIRES – 1

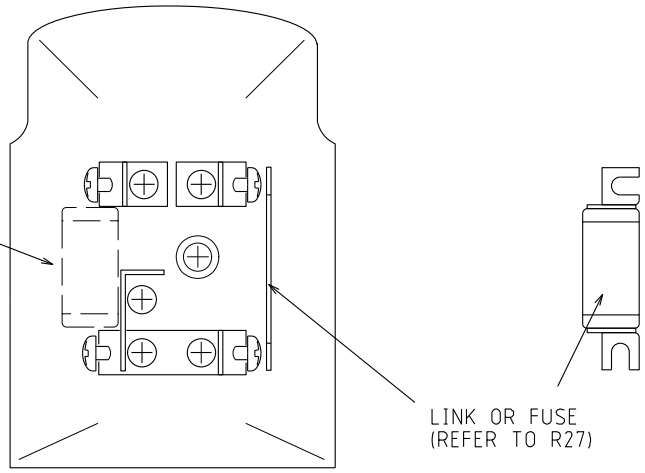
DISTRIBUTION CONSTRN. STANDARD

westernpower

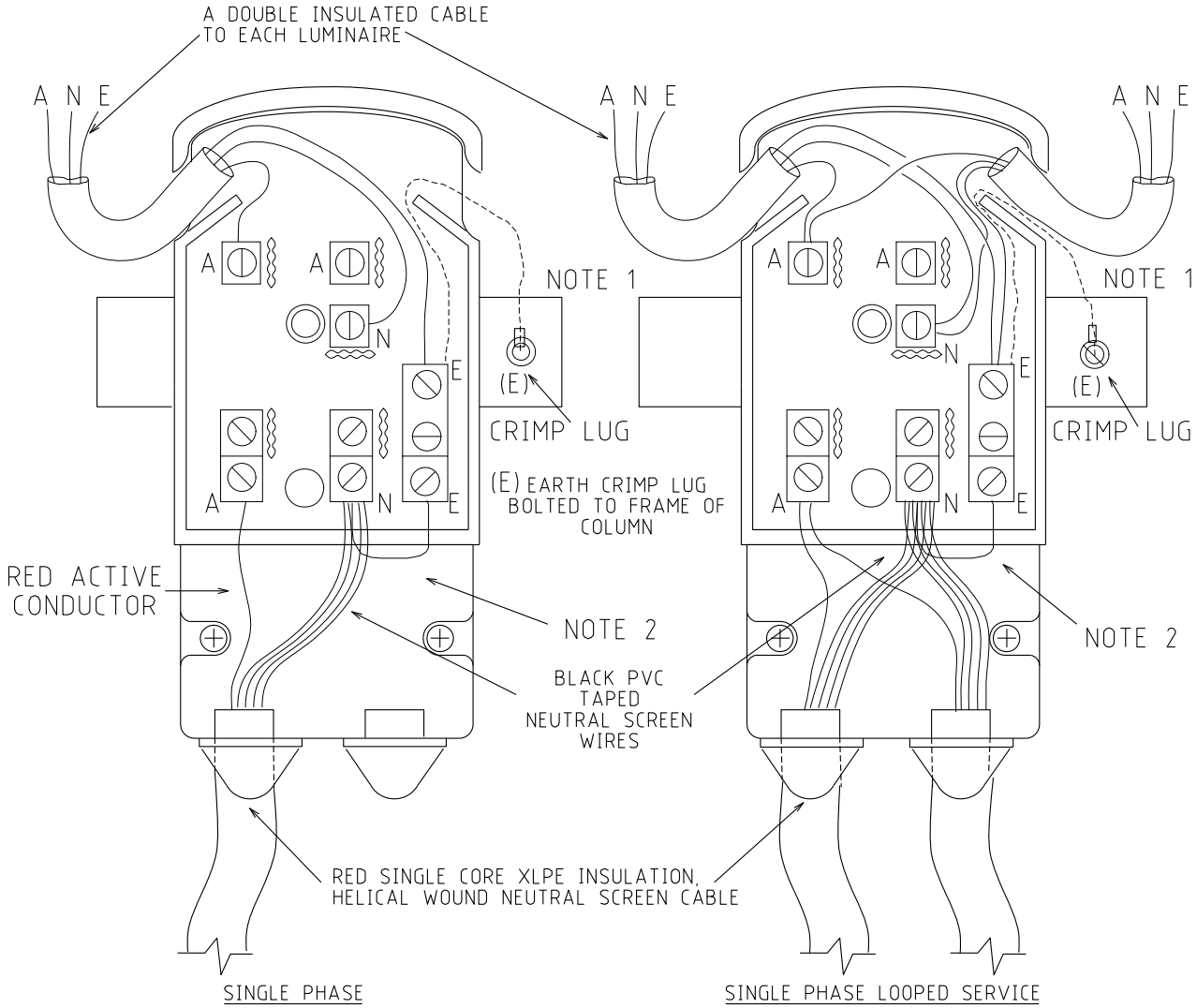
DRAWN: JRR	DATE: 08-01-2018	DRG. No. MM13-R26-1
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.

FOR SINGLE INSULATED CLASS 1 EQUIPMENT ONLY

NOTE:
1. EARTH LINK BETWEEN EARTH TERMINAL AND MOUNTING BRACKET REQUIRED.
2. NEUTRAL TO EARTH LINK REQUIRED.
3. INSERT FUSE IF CONNECTION TO SECOND LUMINAIRE REQUIRED.



VIEW ON INSIDE OF FUSELINK HOLDER



SINGLE PHASE

SINGLE PHASE LOOPED SERVICE

FIX TO MOUNTING BRACKET USING PLATE AND SCREWS

STOCK CODE: HZ0128

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	09.10.18	ORIGINAL ISSUE	JC	REE	GS

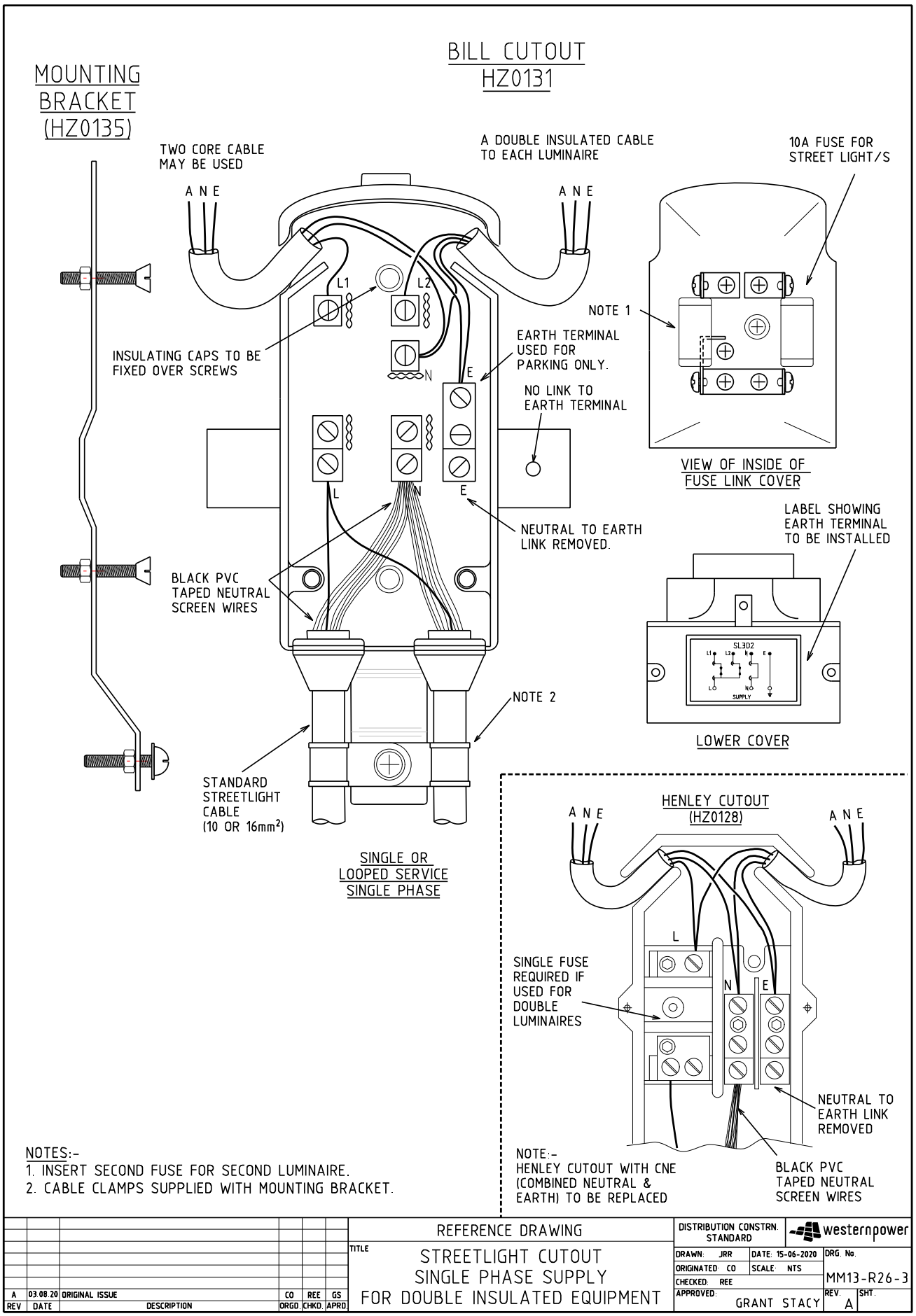
REFERENCE DRAWING

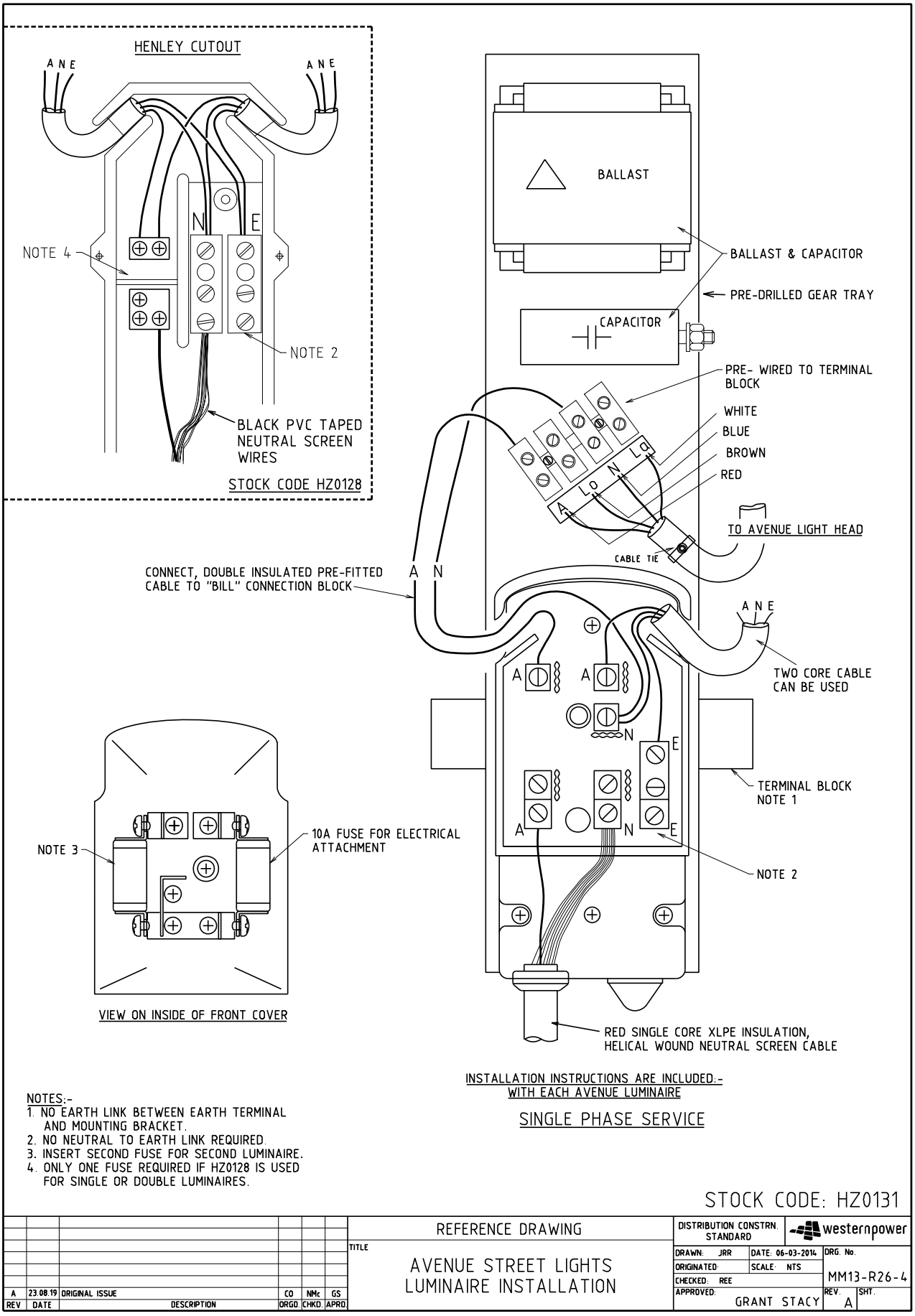
TITLE: STREET LIGHT CUTOUT SINGLE PHASE SUPPLY FOR SINGLE INSULATED (CLASS 1) LUMINAIRES - 2

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 08-01-2018	DRG. No. MM13-R26-2
ORIGINATED: JC	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.


MOUNTING BRACKET (HZ0135)
BILL CUTOUT HZ0131
TWO CORE CABLE MAY BE USED
A N E
A DOUBLE INSULATED CABLE TO EACH LUMINAIRE
A N E
10A FUSE FOR STREET LIGHT/S
L1
L2
N
E
INSULATING CAPS TO BE FIXED OVER SCREWS
EARTH TERMINAL USED FOR PARKING ONLY.
NO LINK TO EARTH TERMINAL
NOTE 1
VIEW OF INSIDE OF FUSE LINK COVER
L
N
E
NEUTRAL TO EARTH LINK REMOVED.
LABEL SHOWING EARTH TERMINAL TO BE INSTALLED
BLACK PVC TAPED NEUTRAL SCREEN WIRES
SL3D2
L1 L2 N E
LO NO
SUPPLY
LOWER COVER
NOTE 2
STANDARD STREETLIGHT CABLE (10 OR 16mm²)
SINGLE OR LOOPED SERVICE SINGLE PHASE
HENLEY CUTOUT (HZ0128)
A N E
A N E
L
N
E
SINGLE FUSE REQUIRED IF USED FOR DOUBLE LUMINAIRES
NEUTRAL TO EARTH LINK REMOVED
NOTE:-
HENLEY CUTOUT WITH CNE (COMBINED NEUTRAL & EARTH) TO BE REPLACED
BLACK PVC TAPED NEUTRAL SCREEN WIRES
NOTES:-
1. INSERT SECOND FUSE FOR SECOND LUMINAIRE.
2. CABLE CLAMPS SUPPLIED WITH MOUNTING BRACKET.
REFERENCE DRAWING
TITLE
STREETLIGHT CUTOUT
SINGLE PHASE SUPPLY
FOR DOUBLE INSULATED EQUIPMENT
DISTRIBUTION CONSTRN. STANDARD
westernpower
DRAWN: JRR
DATE: 15-06-2020
ORIGINATED: CO
SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY
DRG. No. MM13-R26-3
REV. A
SHT.
A 03.08.20 ORIGINAL ISSUE CO REE GS
REV DATE DESCRIPTION ORGD. CHKD. APRD.



INSTALLATION INSTRUCTIONS ARE INCLUDED:- WITH EACH AVENUE LUMINAIRE

SINGLE PHASE SERVICE

NOTES:-
1. NO EARTH LINK BETWEEN EARTH TERMINAL AND MOUNTING BRACKET.
2. NO NEUTRAL TO EARTH LINK REQUIRED.
3. INSERT SECOND FUSE FOR SECOND LUMINAIRE.
4. ONLY ONE FUSE REQUIRED IF HZ0128 IS USED FOR SINGLE OR DOUBLE LUMINAIRES.

STOCK CODE: HZ0131

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	23.08.19	ORIGINAL ISSUE	CO	NMc	GS

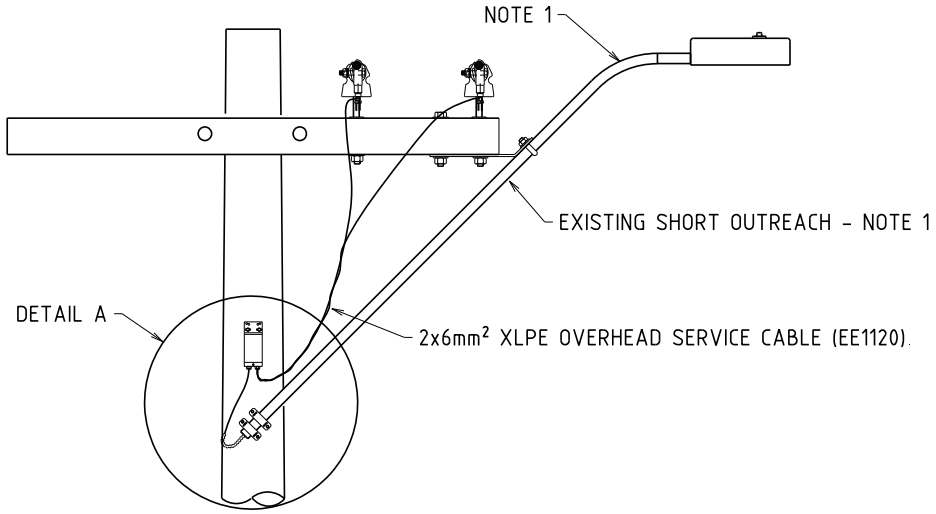
REFERENCE DRAWING

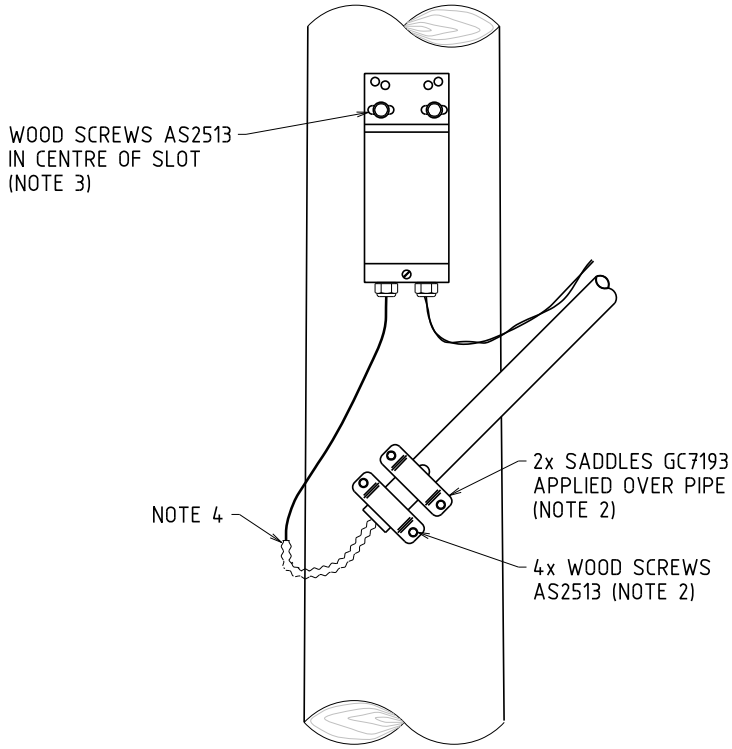
TITLE: AVENUE STREET LIGHTS LUMINAIRE INSTALLATION

DISTRIBUTION CONSTRN. STANDARD — westernpower

DRAWN: JRR	DATE: 06-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	MM13-R26-4	
CHECKED: REE			
APPROVED: GRANT STACY		REV. A	SHT.

PURPOSE:-
INSTALLING NEW LED LUMINAIRE ON LEGACY MINOR ROAD – SHORT (2m LONG) STREETLIGHT BRACKET WHERE BRACKET PIPE DIAMETER IS TOO SMALL TO FIT CABLE TOGETHER WITH 12mm BOLT.





DETAIL A

NOTES:-
1. ATTACHED TO CROSSARM OR TWISTED STRAPS SIMILAR S20.
2. ATTACH 2x SADDLES GC7193 WITH 4x WOOD SCREWS AS2513 STRAIGHT INTO THE POLE, I.E. PERPENDICULAR TO POLE FACE.
3. INSTALL FUSE BOX GF1804 DIRECTLY TO POLE OR ONTO EXISTING FUSE SUPPORT.
4. INSTALL 20mm FLEXIBLE CONDUIT OR HOSE (APPROXIMATELY 300mm LONG) OVER CONDUCTOR AND INTO PIPE.

REV.	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	03.09.19	ORIGINAL ISSUE	CO	NMc	GS

STRUCTURE

TITLE: LEGACY MINOR ROAD – SHORT STREETLIGHT BRACKET ON WOOD POLE AND CROSSARM WITH NEW LED

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 14-08-2019	DRG. No. MM13-S02-1
ORIGINATED: CO	SCALE: NTS	
CHECKED: NMc		
APPROVED: GRANT STACY		REV. A SHT.