Distribution Construction Standard Handbook

High Voltage Overhead

Part 04 (H)

EDM #24538359

General Notes

Clearances of conductors from ground, other structures and other conductors shall be undertaken in accordance with AS/NZS 7000:2010, Standard for Overhead Line Design – Detailed Procedures, and the following Western Power references:

- Distribution Overhead Line Design Manual
- High Voltage Aerial Bundled Cable Manual
- High Voltage Hendrix Manual

HV Insulated Taps are to be used where wildlife protection against contact with earth or another phase is required, using either –

1) LVABC may be used for connection to for mounted transformers and cable heads supplying ground mounted transformers,
2) For all other applications, use a conductor to match the conductors being joined, and fit this conductor with grey flexible hose with drain holes cut at the bottom of the drip loops to drain moisture.

Pole strength and height selections for poles without pole top plant shall be determined as per Poles 'n' Wires assessments, unless stated otherwise under the specific DCSH reference.

In general, the following rules apply when selecting pole strengths with pole top plant, unless stated otherwise under the specific DCSH references:

- For 315kVA Pole Top Transformers: use 8kN poles
- For single phase Pole Top Transformers: use 4kN poles as minimum
- For all other pole top plant and pole top switches: use 6kN poles as a minimum

Drawing Register

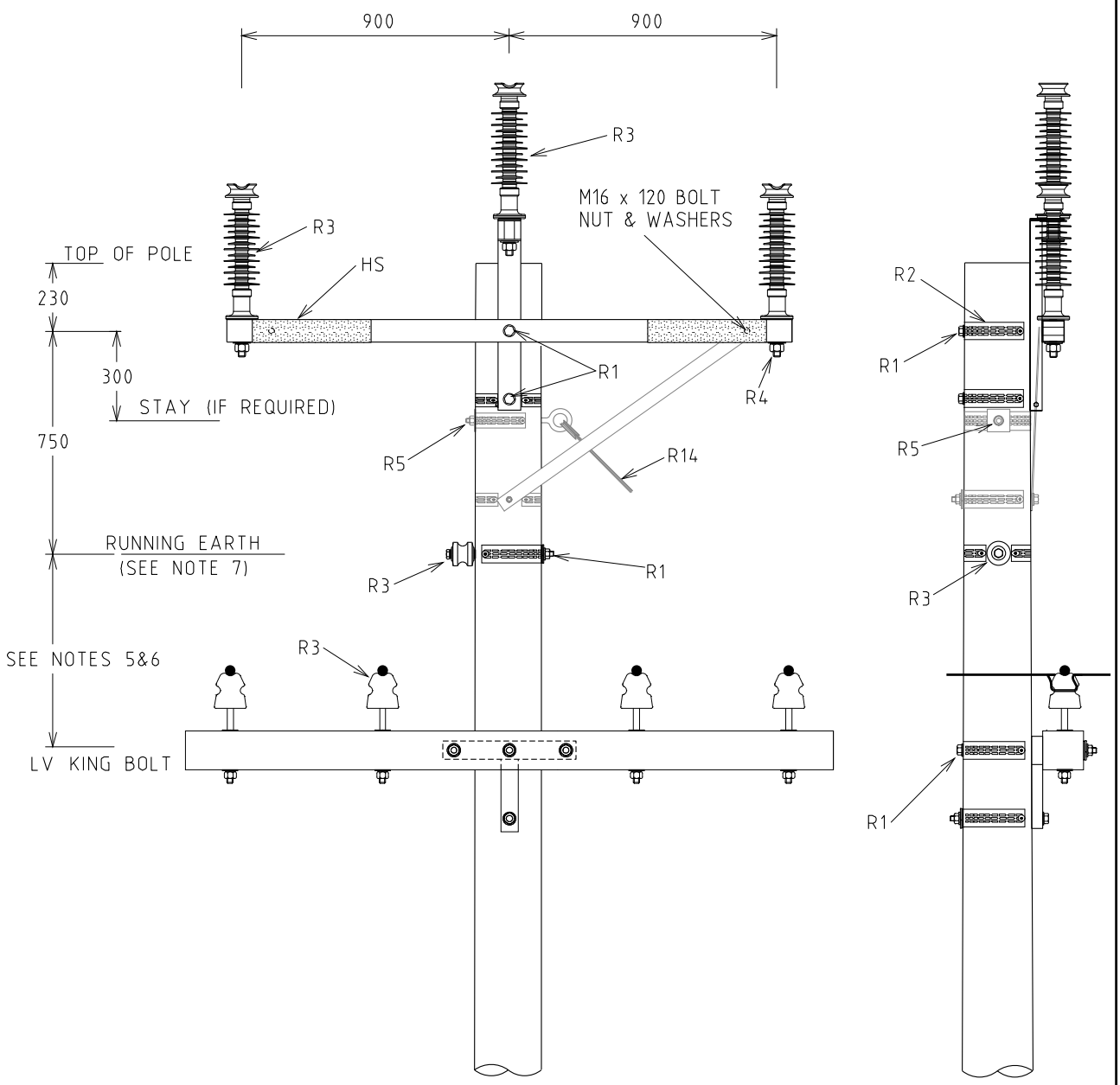
Number	Revision	DESCRIPTION
H01-1	I	3 PHASE INTERMEDIATE WITH RUNNING EARTH
H01-3	L	3 PHASE INTERMEDIATE ANTI-SWAN CROSSARM GUIDE
H01-4	B	3 PHASE INTERMEDIATE DOUBLE CROSS-ARM
H02-1	E	3 PH INTERMEDIATE 1 PH TEE-OFF WITH/WITHOUT DOF
H02-2	A	3 PH INTERMEDIATE 1 PH TEE-OFF WITH/WITHOUT DOF ALT. MAIN RE
H03	F	4 WAY INTERMEDIATE
H04-1	I	HORIZONTAL TERMINATION
H04-2	B	HORIZONTAL TERMINATION – ANTI-SWAN CROSS-ARM
H04-3	B	DOUBLE TERMINATION AND 1 PH T-OFF WITH DOF
H05-1	E	STRAIN ANGLE WITH OR WITHOUT DROPOUT FUSE
H05-2	C	STRAIN ANGLE UPTO 30° DEVIATION - DOUBLE ANTI-SWAN CROSS-ARM
H05-3	B	STRAIN ANGLE ANTI SWAN CROSS-ARM – LONG BAY
H05-4	A	3Φ x 3 POLE LONG BAY SOLUTION FOR ANGLE DEVIATION UPTO 45°
H06	L	RUNNING DISC ANGLE OR VERTICAL TERMINATION (900mm SPACING)
H07	H	RUNNING DISC ANGLE OR VERTICAL TERMINATION (1200mm SPACING)
H08-1	C	INTERMEDIATE CABLE WITH DROPOUT FUSES
H08-2	D	INTERMEDIATE CABLE WITH DROPOUT FUSES (ALTERNATE CROSSARM)
H08-3	A	INTERMEDIATE CABLE WITHOUT DROPOUT FUSES
H09-1	G	TERMINATION CABLE WITH DROPOUT FUSES UPSTREAM
H09-2	E	TERMINATION & CABLE WITH DROPOUT FUSES
H09-3	C	3 PHASE TERMINATION & CABLE WITH FUSED SINGLE-PHASE TEE-OFF
H09-4	A	Termination Cable Single Phase Tx. And DOF
H10-1	K	INTERMEDIATE TRANSFORMER HV TO OPEN AERIAL
H10-2	M	INTERMEDIATE TRANSFORMER HV TO ABC
H11-1	J	IN-LINE TERMINATION TRANSFORMER
H11-2	H	SIDE MOUNTED TERMINATION TRANSFORMER WITH DROPOUT FUSES
H11-3	C	REMOTE DATA ACQUISITION FOR TX TERMINATION TRANSFORMER STOCK NO.
H12	E	POLE TOP SWITCH INCLUDING EARTH
H13-1	E	TEE-OFF WITH DROPOUT FUSES
H13-2	B	TEE-OFF WITHOUT DROPOUT FUSES
H14-1	C	COMBINATION SWITCH & FUSE WITH RAISER (11KV & 22KV) (FLY-OVER SWITCH)
H14-2	B	COMBINATION SWITCH & FUSE
H14-3	D	PTS & FUSES/ISOLATORS LAYOUT FOR 2 CABLES
H17-4	C	TRANSFORMER CABLE SUPPLIED
H18	E	TERMINATION POLE TOP SWITCH WITH CABLE AND DROPOUT FUSE
H19	E	TERMINATION POLE TOP SWITCH WITH CABLE ARRANGEMENT
H20-1	E	ISOLATION TRANSFORMER
H20-2	E	ISOLATION TRANSFORMER 3PH TERMINATION 1PH IN-LINE WITHOUT 1PH DROPOUT FUSE
H20-3	C	ISOLATION TRANSFORMER 3PH TERMINATION 1PH IN-LINE WITH DROPOUT FUSE
H20-4	D	ISOLATION TRANSFORMER 3PH TERMINATION 1PH IN-LINE WITH/WITHOUT DROPOUT FUSE
H20-5	F	ISOLATION TRANSFORMER 3PH CABLE/1PH TEE-OFF WITH/WITHOUT DROPOUT FUSE

Number	Revision	DESCRIPTION
H20-6	D	ISOLATION TRANSFORMER 3PH IN-LINE/1PH TEE-OFF WITHOUT DROPOUT FUSE
H20-7	D	ISOLATION TRANSFORMER 3PH TERMINATION/1PH CABLE WITH DROP OUT FUSE
H20-8	A	TERMINATION TRANSFORMER 2 PHASE LINE/ 1 PHASE SPUR
H21	D	METERING TRANSFORMER
H22	C	INTERMEDIATE WISHBONE WITH OVERHEAD EARTHWIRE
H23	C	INTERMEDIATE FLAT CONSTRUCTION WITH OVERHEAD EARTHWIRE
H24	C	TERMINATION TRANSFORMER WITH OVERHEAD EARTHWIRE
H25	B	INTERMEDIATE TRANSFORMER WISHBONE CONSTRUCTION
H26-1	C	VERTICAL STRAIN
H26-2	A	INLINE STRAIN WITH OVER HEAD EARTH WIRE
H27	B	WISHBONE CONSTRUCTION WITH TEE-OFF
H28	B	VERTICAL STRAIN ANGLE WITH OVERHEAD EARTHWIRE
H29-1	B	FAULT INDICATOR LV AERIAL SUPPLY ARRANGEMENT
H30	C	SURGE ARRESTOR STANDARD LINE INSTALLATION
H31	F	22kV CAPACITOR BANK WITH 10 kVA TRANSFORMER (SINGLE/DOUBLE BUSHING)
H32	H	33kV CAP BANK WITH SWITCH AND 10kVA OR 25kVA TRANSFORMER (SINGLE/TWO BUSHING) CONNECTION DETAILS
H33-1	C	INLINE LAYOUT TYPE GE VR-1 50A-100A DETAILS
H33-2	C	INLINE DETAIL TYPE GE VR-1 50A-100A CONSTRUCTION DETAIL
H33-3	A	OFFSET DETAIL TYPE GE VR-1 50A-100A ARRANGEMENT
H33-3A	A	OFFSET DETAIL TYPE GE VR-1 50A-100A DETAILS
H33-4	A	OFFSET DETAIL TYPE GE VR-1 50A-100A CONSTRUCTION DETAIL
H34	A	SHUNT REACTOR
H40-1	F	INTERMEDIATE
H40-2	E	1 PHASE ANTI CLASH /ANTI GALAH INTERMEDIATE
H41-1	B	RUNNING DISC OR TERMINATION WITH / WITHOUT TERMINATION
H41-2	D	SINGLE PHASE STRAIN ANGLE
H41-3	A	1 PHASE ANTI CLASH / ANTI GALAH TERMINATION
H41-4	A	SINGLE PHASE ANTI CLASH / ANTI GALAH STRAIN
H42-1	C	SINGLE PHASE TEE-OFF TO STRAIN WITH OR WITHOUT DROPOUT FUSE
H42-2	A	INTERMEDIATE WITH CABLE TERMINATION
H43	D	TEE OFF WITHOUT DROPOUT FUSE
H44-1	E	DOUBLE TERMINATION
H44-2	B	TRIPLE TERMINATION
H46-1	H	INTERMEDIATE TRANSFORMER WITH OR WITHOUT DROPOUT FUSE
H46-2	A	2Ph IN-LINE 2Ph TRANSFORMER WITH DROPOUT FUSE
H47-1	F	TERMINATION TRANSFORMER WITH OR WITHOUT DROPOUT FUSE
H47-2	F	3 PH INLINE/1 PH TRANSFORMER WITH DROPOUT FUSE
H47-3	C	DOUBLE TERMINATION TRANSFORMER WITHOUT DROPOUT FUSE
H47-4	A	1Ph CABLE TERMINATION TRANSFORMER WITH/WITHOUT DROPOUT FUSE
H48-1	G	TWIN MOUNTED TRANSFORMER (1 PHASE) EACH SIDE OF POLE
H48-2	B	VERTICAL MOUNTED TRANSFORMER SINGLE PHASE 2 BUSHING
H49	C	EARTH & LV PHASE CONNECTIONS
H50	C	EARTH & LV PHASE CONNECTIONS THREE & FOUR TRANSFORMERS SETUP

Number	Revision	DESCRIPTION
H52-1	B	STANDARD DOWN EARTH – RUNNING EARTH
H52-2	A	EXTENDED OR REMOTE DOWN EARTH – RUNNING EARTH
H53	B	1 PHASE IN-LINE STRAIN WITH SECTIONALISER & BYPASS FUSE
H60-4	A	3 PH. RECLOSER / LOAD BREAK SWITCH HV BARE – HV ABC/HENDRIX WITH LV ARIAL SUPPLY
H61-1	F	POLE MOUNTED 3 PH RECLOSER / LOAD BREAK SWITCH WITH BY-PASS SWITCH
H61-2	F	POLE MOUNTED 3 PH RECLOSER / LOAD BREAK SWITCH WITH BY-PASS SWITCH (ARIEL LV SUPPLY)
H63-2	D	1 PHASE RECLOSER / LOAD BREAK SWITCH BY-PASS ISOLATORS/STRAIN TERMINATION WITH SINGLE PHASE TX SUPPLY

	Drawings	HV HENDRIX
H100	E	INTERMEDIATE POLE 0 - 2 DEGREES
H101	D	INTERMEDIATE ANGLE POLE 2 – 30 DEGREES
H102	C	INTERMEDIATE ANGLE POLE 31 – 60 DEGREES
H103	D	DOUBLE TERMINATION 61 – 90 DEGREES
H104	B	TERMINATION POLE FOR CABLE CONNECTION
H105	C	INTERMEDIATE TEE-OFF FROM EXISTING COVERED CONDUCTOR WITH DOF DRILLING DETAILS
H106	D	INTERMEDIATE TEE-OFF FROM EXISTING BARE CONDUCTOR WITH D.O.F DRILLING DETAILS
H107	D	INTERMEDIATE POLE CROSSING DRILLING DETAILS
H108-1	B	OPEN AERIAL TO COVERED CONDUCTOR WITH SURGE ARRESTERS
H108-2	C	IN-LINE (0-6°) STRAIN COVERED CONDUCTOR WITH SURGE ARRESTERS
H109	D	PTS COVERED CONDUCTOR TERMINATED MESSENGER WIRE
H110	D	PTS COVERED CONDUCTOR TO OPEN AERIAL
H111	F	INTERMEDIATE TRANSFORMER COVERED CONDUCTOR DRILLING DETAILS
H112	F	TERMINATION TRANSFORMER WITH DROP OUT FUSE DRILLING DETAILS

HV BARE



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH WHEN RUNNING EARTH PRESENT = 600m
4. USE CROSSARM STRAP (CB0485) IF DEVIATION IS >10°
5. 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
6. IF THERE IS NO RUNNING EARTH THIS DISTANCE IS 450.
7. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
8. IF LV DEVIATION IS >2° REFER TO DWG. L02.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
I	11.01.19	NOTE REGARDING TWO PHASE CONSTRUCTION DELETED	NC	REE	GS
H	13.09.17	NOTE 9 ADDED	JB	NMc	GS
G	16.06.17	DRAWINGS H01-1 & H01-2 COMBINED	GS	NMc	GS
F	24.09.14	NOTE 6 REVISED AND NOTE 7 ADDED			GS

STRUCTURE

TITLE: 3 PHASE INTERMEDIATE

DISTRIBUTION CONSTRN. STANDARD

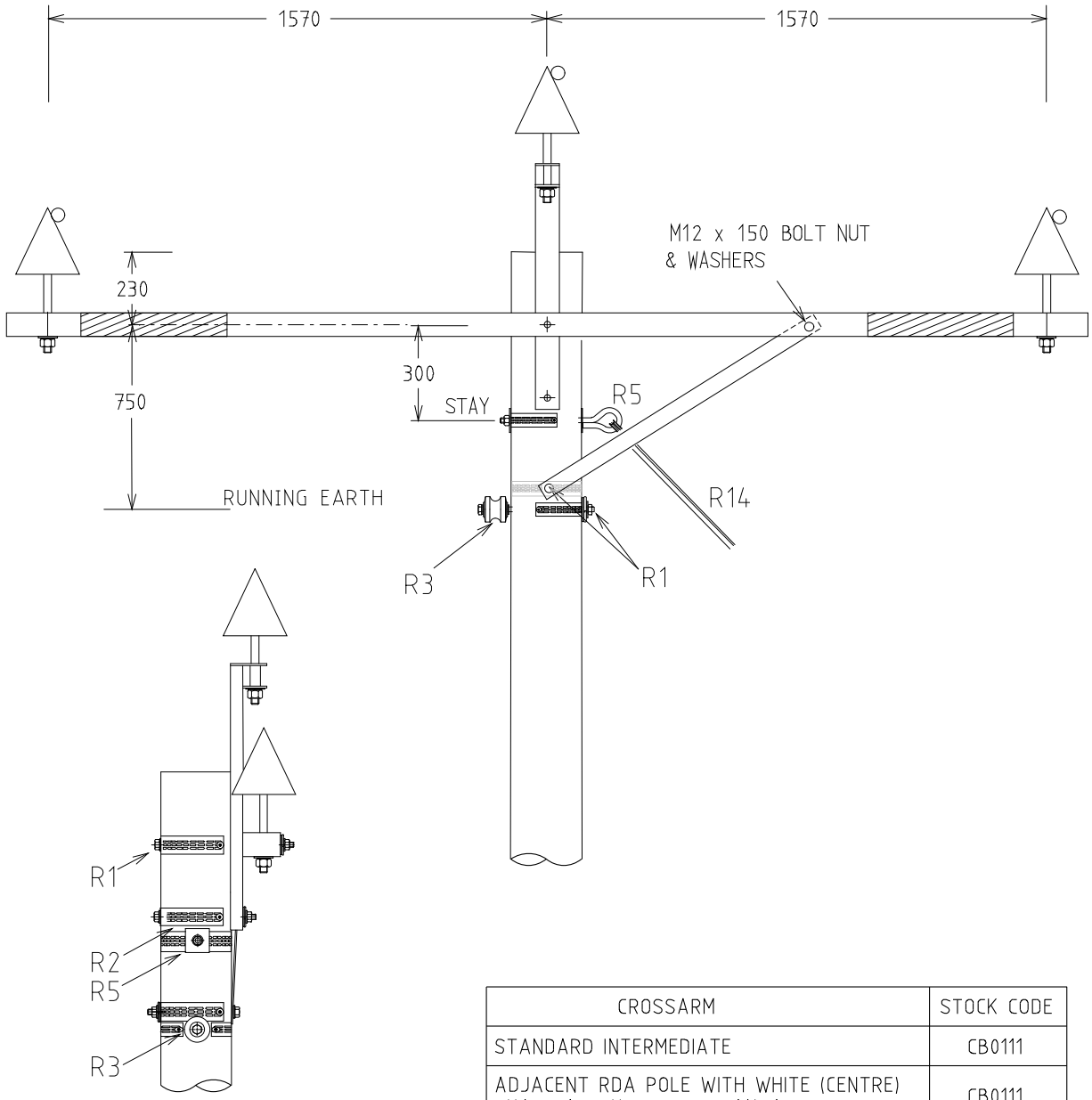
westernpower

DRAWN: JRR | DATE: 01-04-2014 | DRG. No. H01-1

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. I | SHT.



CROSSARM	STOCK CODE
STANDARD INTERMEDIATE	CB0111
ADJACENT RDA POLE WITH WHITE (CENTRE) PHASE AT THE TOP - STANDARD	CB0111
ADJACENT RDA POLE WITH RED OR BLUE PHASE AT THE TOP - SHORT RAISER	CB0114

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. USE CROSSARM STRAP (CB0485) IF DEVIATION IS >10°.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
L	11.01.19	NOTE REGARDING TWO PHASE CONSTRUCTION DELETED	NC	REE	GS
K	09.01.18	CROSSARM USE TABLE ADDED	CO	NMc	GS
J	24.09.14	NOTE 4 ADDED			GS
H	14.08.14	DISPERSION PLATE FOR CROSSARM STRAP ADDED			GS
G	07.07.14	DRAWING NUMBER CHANGED			GS

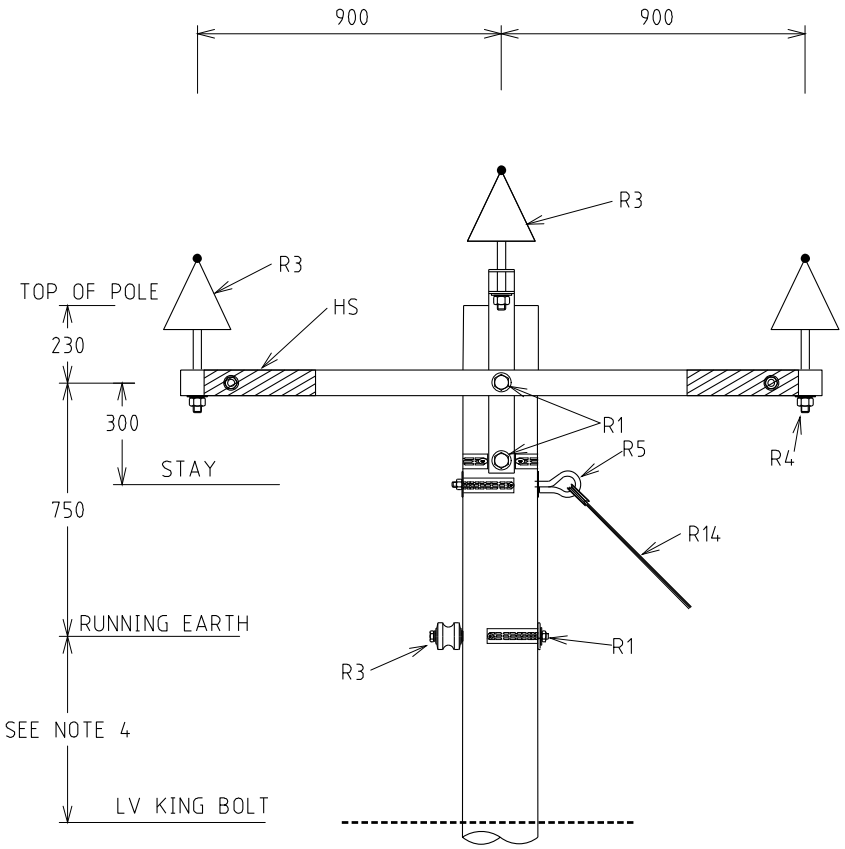
STRUCTURE

TITLE
3 PHASE INTERMEDIATE
ANTI-SWAN CROSSARM GUIDE

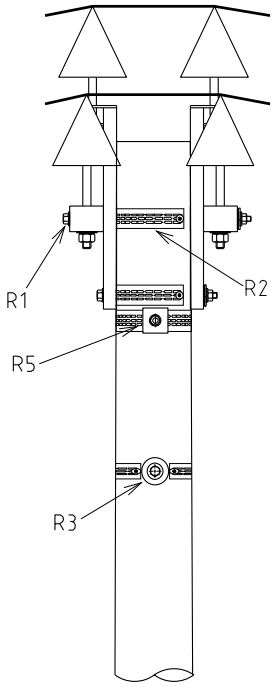
DISTRIBUTION CONSTRN. STANDARD

westernpower

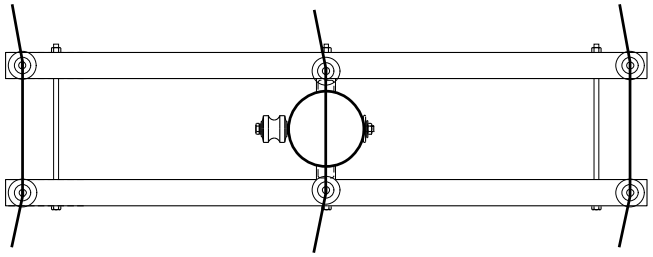
DRAWN: JRR | DATE: 01-04-2014 | DRG. No. H01-3
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. L | SHT.



ELEVATION



SIDE VIEW



PLAN

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	11.01.19	NOTE REGARDING TWO PHASE CONSTRUCTION DELETED	NC	REE	GS
A	05.05.16	ORIGINAL ISSUE	AT	FK	GS

STRUCTURE

TITLE

3 PHASE INTERMEDIATE
DOUBLE CROSS-ARM

DISTRIBUTION CONSTRN. STANDARD

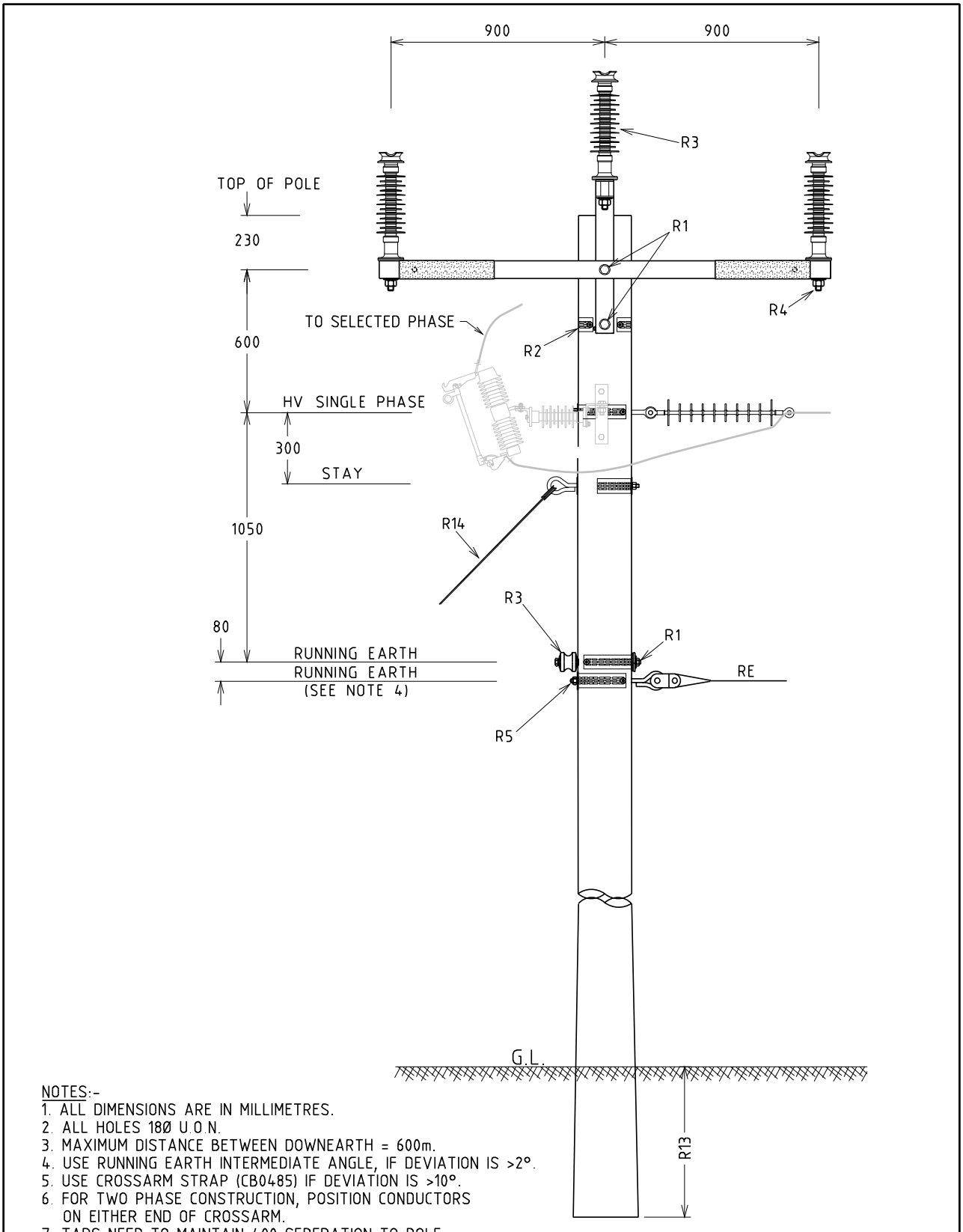
westernpower

DRAWN: JRR | DATE: 12-02-2016 | DRG. No. H01-4

ORIGINATED: AT | SCALE: NTS

CHECKED: FK

APPROVED: GRANT STACY | REV. B | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
5. USE CROSSARM STRAP (CB0485) IF DEVIATION IS >10°.
6. FOR TWO PHASE CONSTRUCTION, POSITION CONDUCTORS ON EITHER END OF CROSSARM.
7. TAPS NEED TO MAINTAIN 400 SEPERATION TO POLE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	25.29.19	DRAWING NUMBER AND TEE-OFF DISTANCE CHANGED	NN	REE	GS
D	15.01.16	STAY & DOF ADDED AND TITLE REVISED	FK	ME	GS
C	12.01.15	FORMAT CHANGED, RUNNING EARTH AND NOTES REVISED	JC	REE	GS
B	09.10.12	ORIGINAL ISSUE			

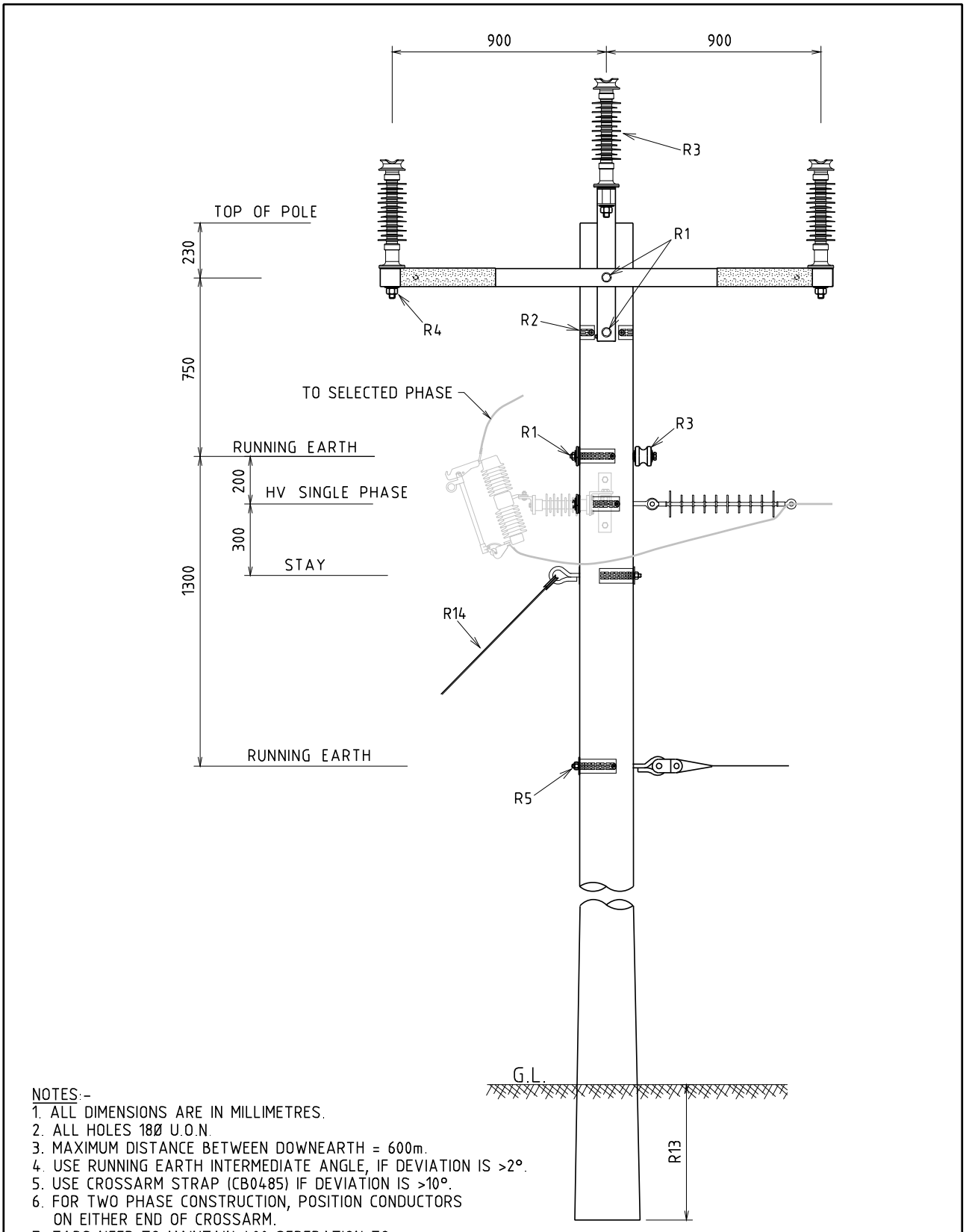
STRUCTURE

3 PHASE INTERMEDIATE
SINGLE PHASE TEE-OFF
WITH/WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 10-03-2014 | DRG. No. H02-1
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. E | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
5. USE CROSSARM STRAP (CB0485) IF DEVIATION IS >10°.
6. FOR TWO PHASE CONSTRUCTION, POSITION CONDUCTORS ON EITHER END OF CROSSARM.
7. TAPS NEED TO MAINTAIN 400 SEPERATION TO RUNNING EARTH OR POLE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	25.09.19	ORIGINAL ISSUE	NN	CO	GS

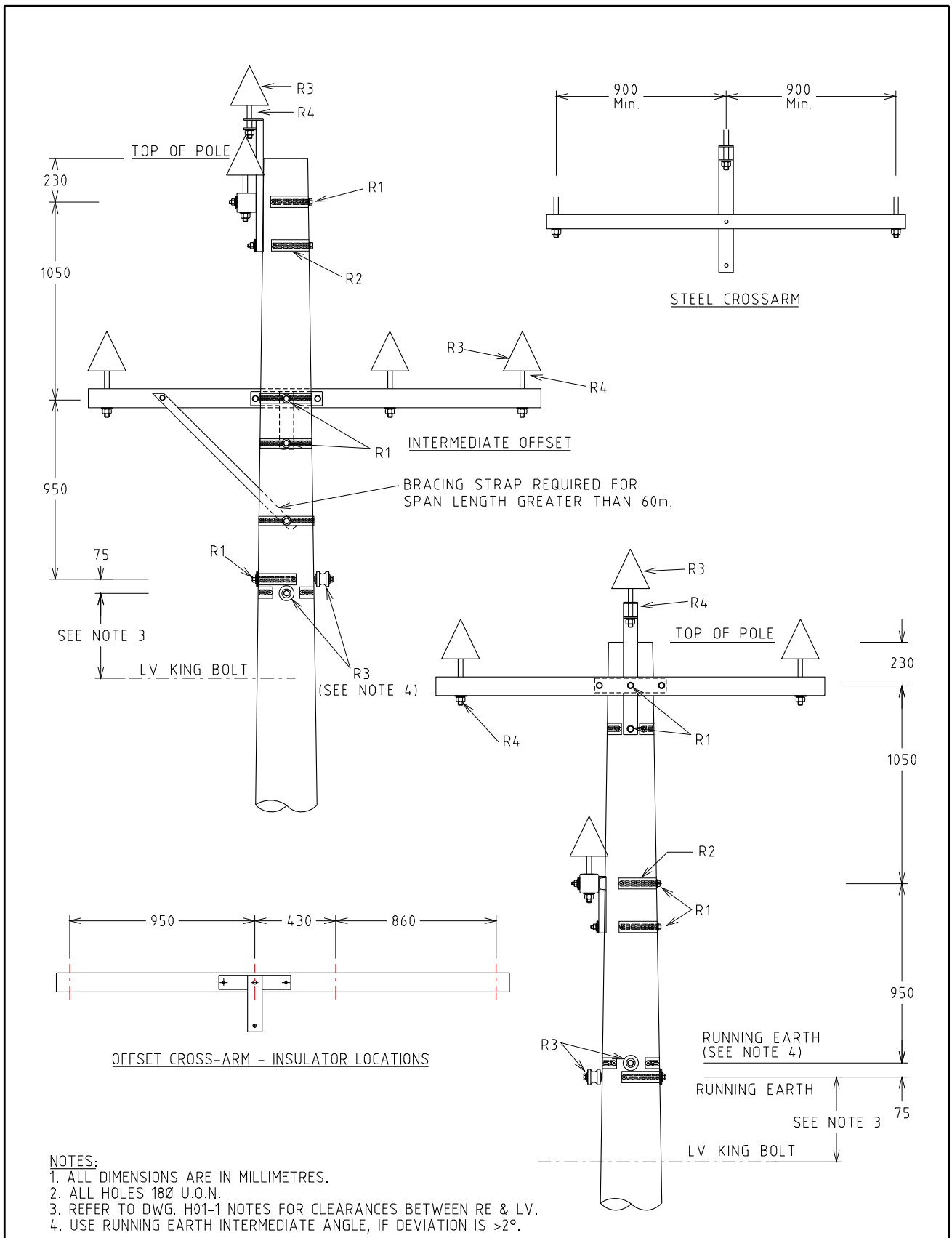
STRUCTURE

3 PHASE INTERMEDIATE SINGLE PHASE TEE-OFF WITH/ WITHOUT DOF ALTERNATIVE MAIN RE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 11-09-2019	DRG. No. H02-2
ORIGINATED: NN	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	16.01.16	NOTE 4 ADDED	FK	ME	GS
E	15.09.14	NOTE 3 REVISED			GS
D	13.08.14	BRACING STRAP NOTE REVISED			GS
C	09.07.14	FORMAT CHANGED AND NOTE REVISED			GS
B	03.07.13	ORIGINAL ISSUE			

STRUCTURE

TITLE: 4 WAY INTERMEDIATE

DISTRIBUTION CONSTRN. STANDARD

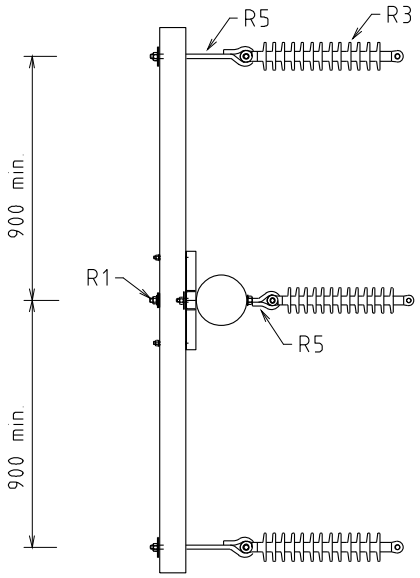
westernpower

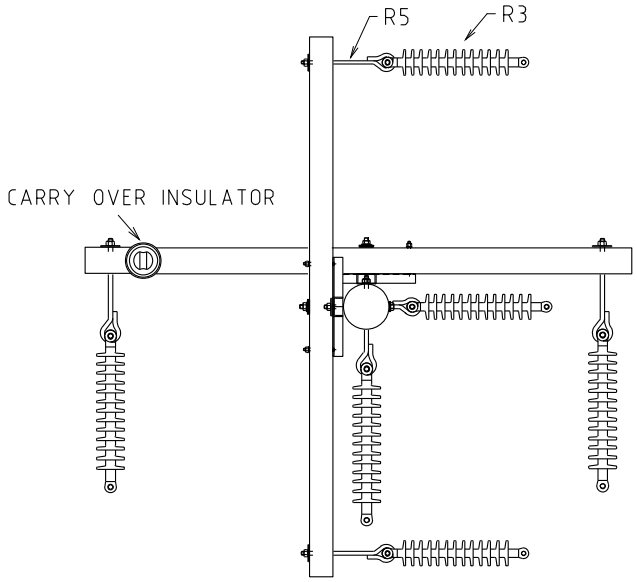
DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H03

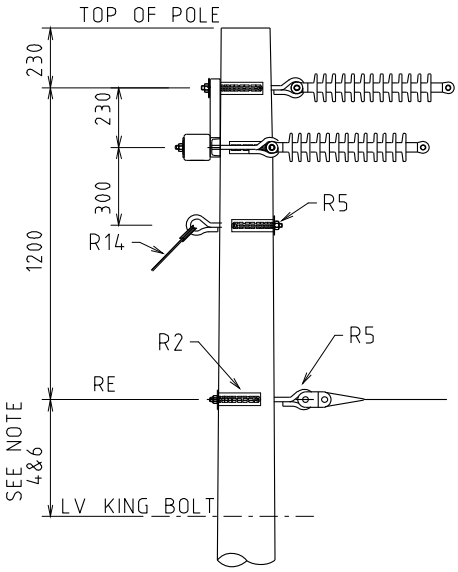
ORIGINATED: | SCALE: NTS

CHECKED: REE

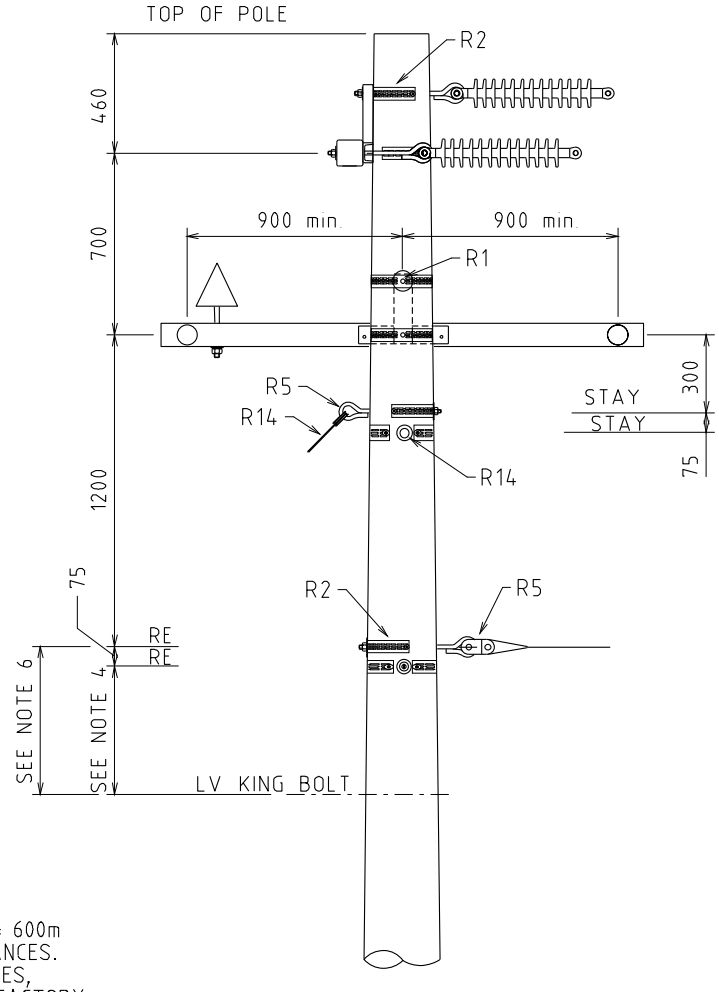
APPROVED: GRANT STACY | REV. F | SHT.







SINGLE TERMINATION



DOUBLE TERMINATION

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.N.O.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. REFER TO DWG. H01-1 NOTES FOR LV CLEARANCES.
5. THE CROSSARMS CAN BE AT DIFFERENT ANGLES, PROVIDED STAY CONFIGURATIONS ARE SATISFACTORY.
6. IF NO R/E, 250

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
I	26.03.21	DISTANCE BETWEEN CROSS-ARMS INCREASED TO 700	NN	KT	GS
H	24.09.19	DISTANCE BETWEEN CROSSARMS IN DOUBLE TER. REVISED	NN		GS
G	19.12.17	NOTES REVISED	JC	REE	GS
F	09.03.17	DWG. No. CHANGED AND LV ATTACHMENTS CLARIFIED	CO	DVT	GS

STRUCTURE

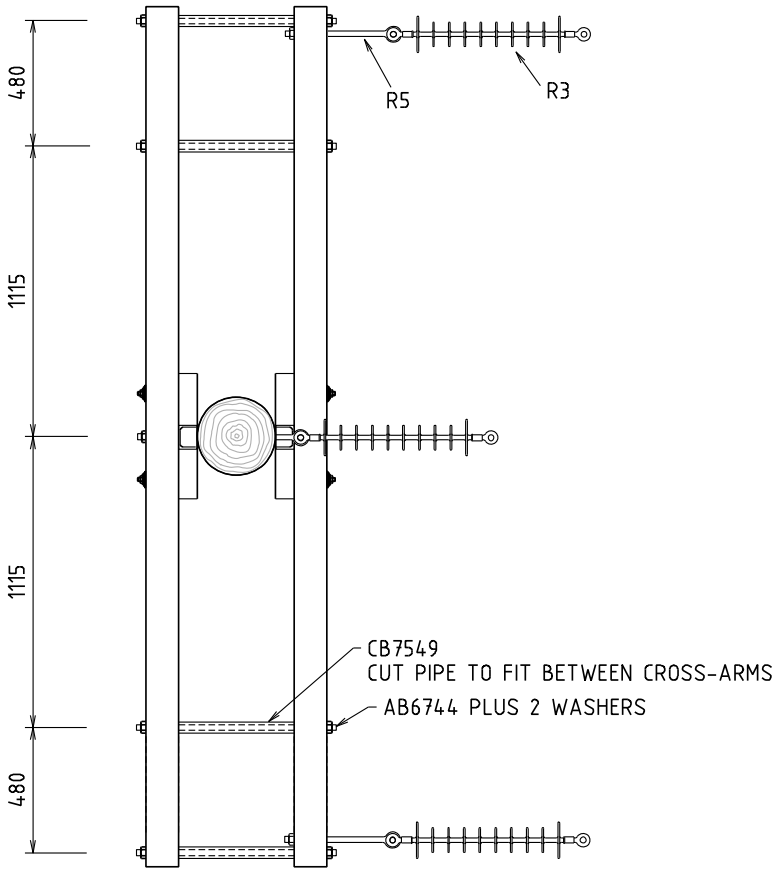
TITLE

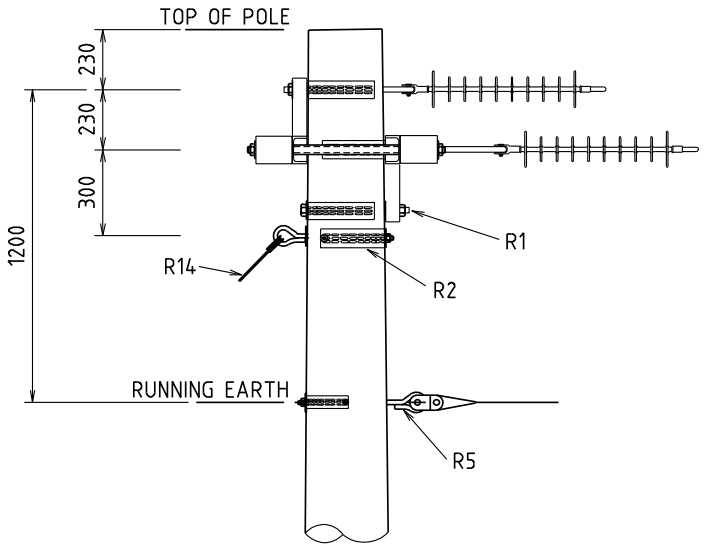
HORIZONTAL TERMINATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	H04-1
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. I	SHT.





NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.N.O.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. THE CROSSARMS CAN BE AT DIFFERENT ANGLES, PROVIDED STAY CONFIGURATIONS ARE SATISFACTORY.

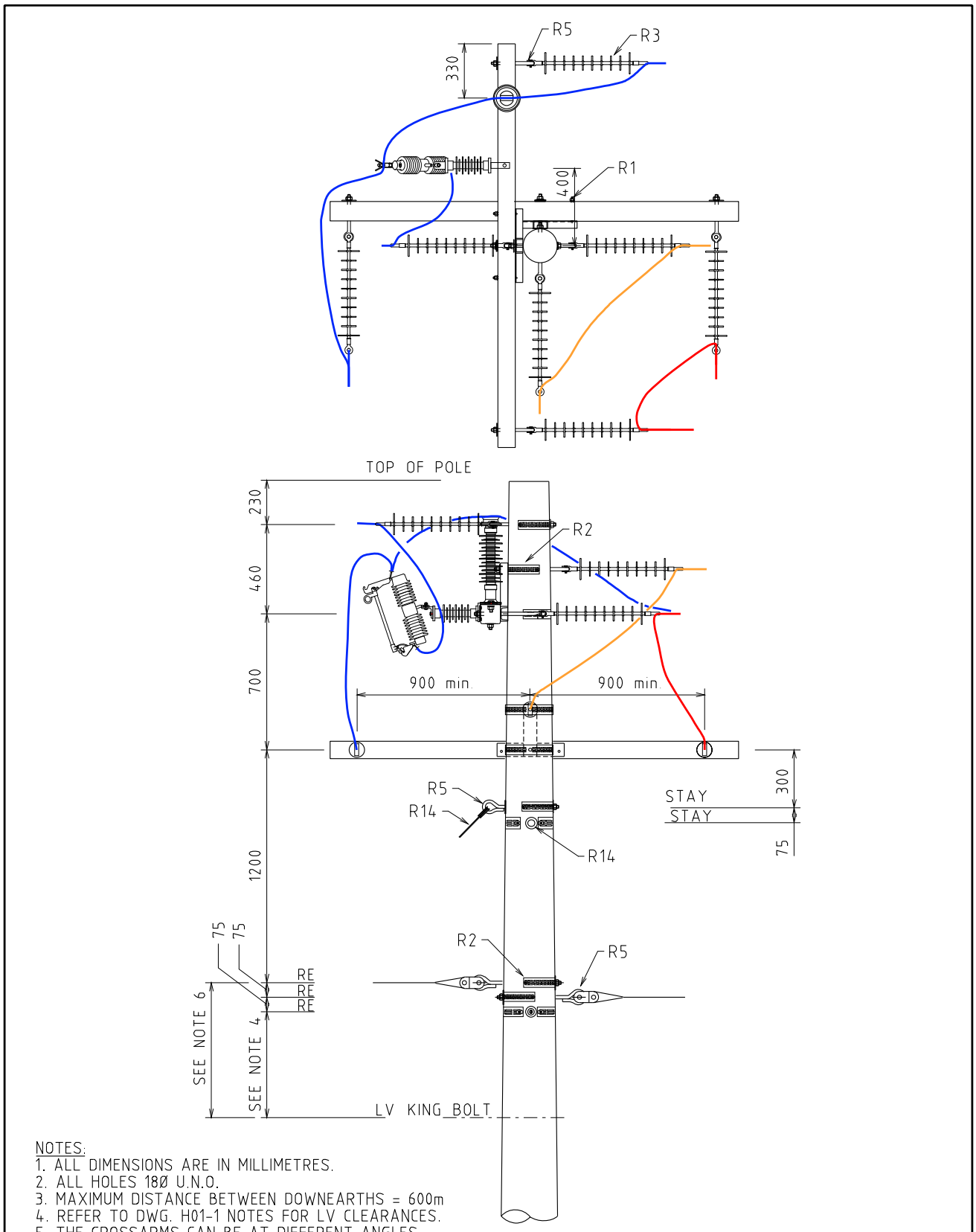
REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	01.06.18	MORE DETAILS ADDED & DIMENSIONS REFIXED	NMc	CO	GS
A	09.03.17	ORIGINAL ISSUE	CO	DVT	GS

STRUCTURE

TITLE
HORIZONTAL TERMINATION
ANTI SWAN CROSS-ARM

DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 03-03-2017	DRG. No.	H04-2
ORIGINATED: CO	SCALE: NTS		
CHECKED: DVT			
APPROVED: GRANT STACY		REV. B	SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.N.O.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. REFER TO DWG. H01-1 NOTES FOR LV CLEARANCES.
5. THE CROSSARMS CAN BE AT DIFFERENT ANGLES, PROVIDED STAY CONFIGURATIONS ARE SATISFACTORY.
6. IF NO R/E, 250

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	26.03.21	DISTANCE BETWEEN CROSS-ARMS INCREASED TO 700	NN	KT	GS
A	24.09.19	ORIGINAL ISSUE	NN	REE	GS

STRUCTURE

TITLE: DOUBLE TERMINATION AND 1 PH T-OFF WITH DOF

DISTRIBUTION CONSTRN. STANDARD

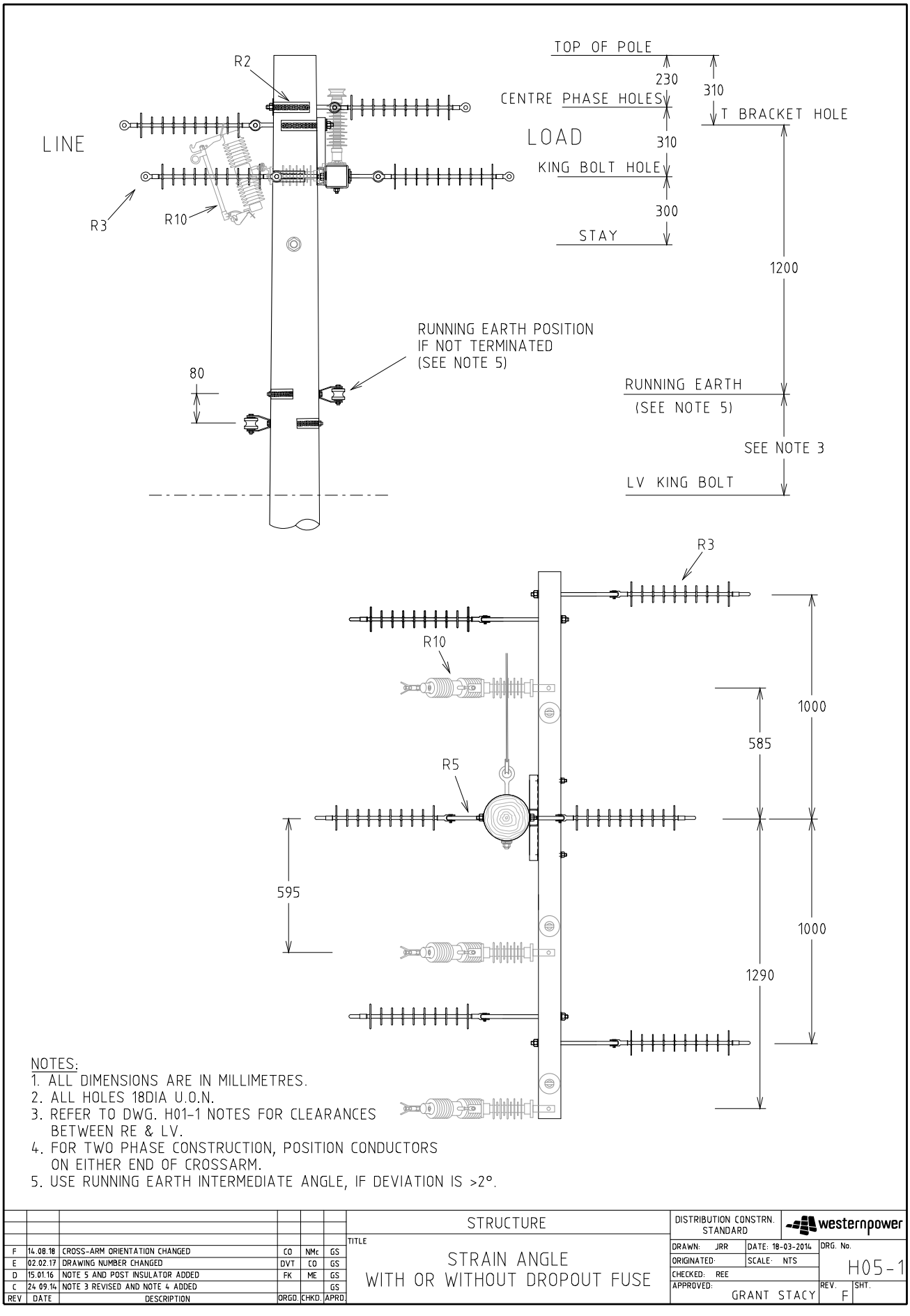
westernpower

DRAWN: JRR | DATE: 19-09-2019 | DRG. No. H04-3

ORIGINATED: NN | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. B | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
4. FOR TWO PHASE CONSTRUCTION, POSITION CONDUCTORS ON EITHER END OF CROSSARM.
5. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	14.08.18	CROSS-ARM ORIENTATION CHANGED	CO	NMc	GS
E	02.02.17	DRAWING NUMBER CHANGED	DVT	CO	GS
D	15.01.16	NOTE 5 AND POST INSULATOR ADDED	FK	ME	GS
C	24.09.14	NOTE 3 REVISED AND NOTE 4 ADDED			GS

STRUCTURE

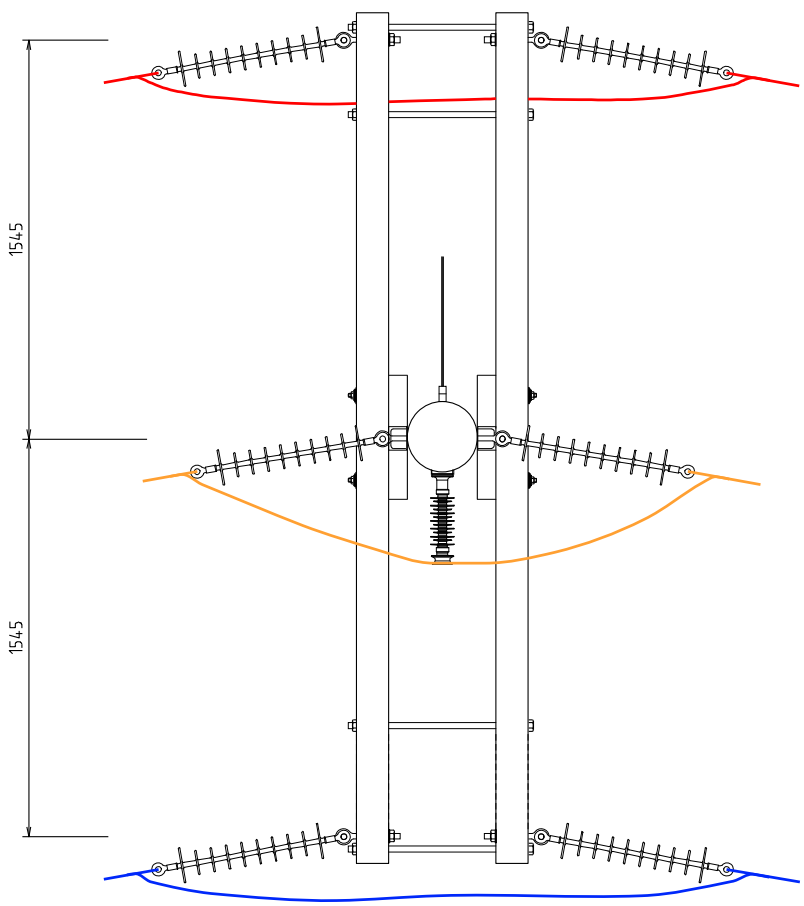
TITLE

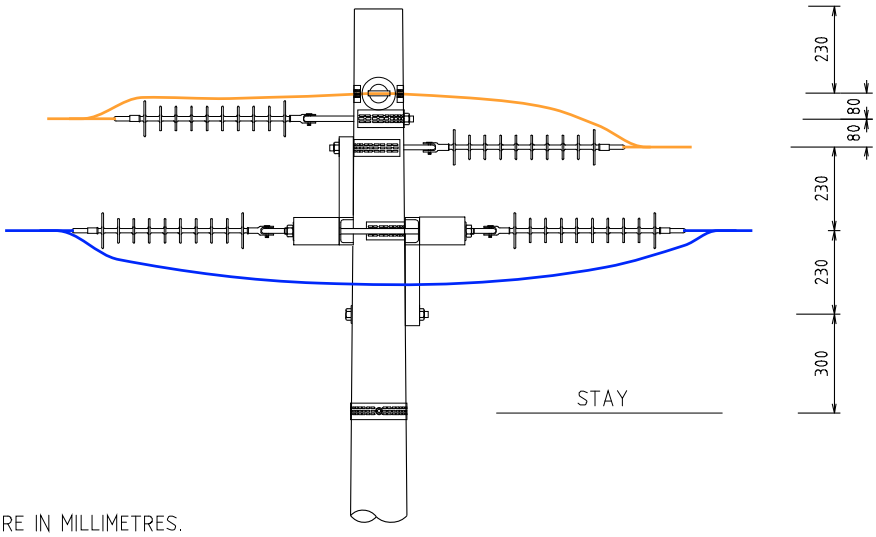
STRAIN ANGLE
WITH OR WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H05-1
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. F | SHT.





NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	02.05.17	STAND-OFF INSULATOR LOCATION CHANGED	JC	REE	GS
B	03.03.17	DRAWING NUMBER CHANGED	DVT	REE	GS
A	07.10.16	ORIGINAL ISSUE	DVT	GS	GS

STRUCTURE

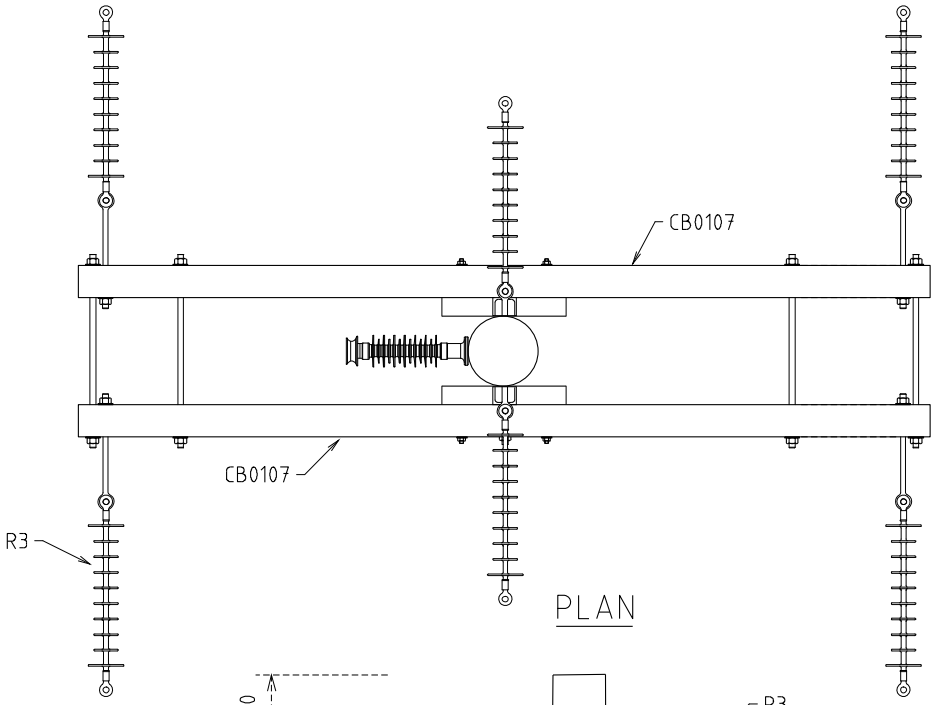
TITLE
STRAIN ANGLE UPTO 30° DEVIATION
DOUBLE ANTI-SWAN CROSS-ARM

DISTRIBUTION CONSTRN. STANDARD

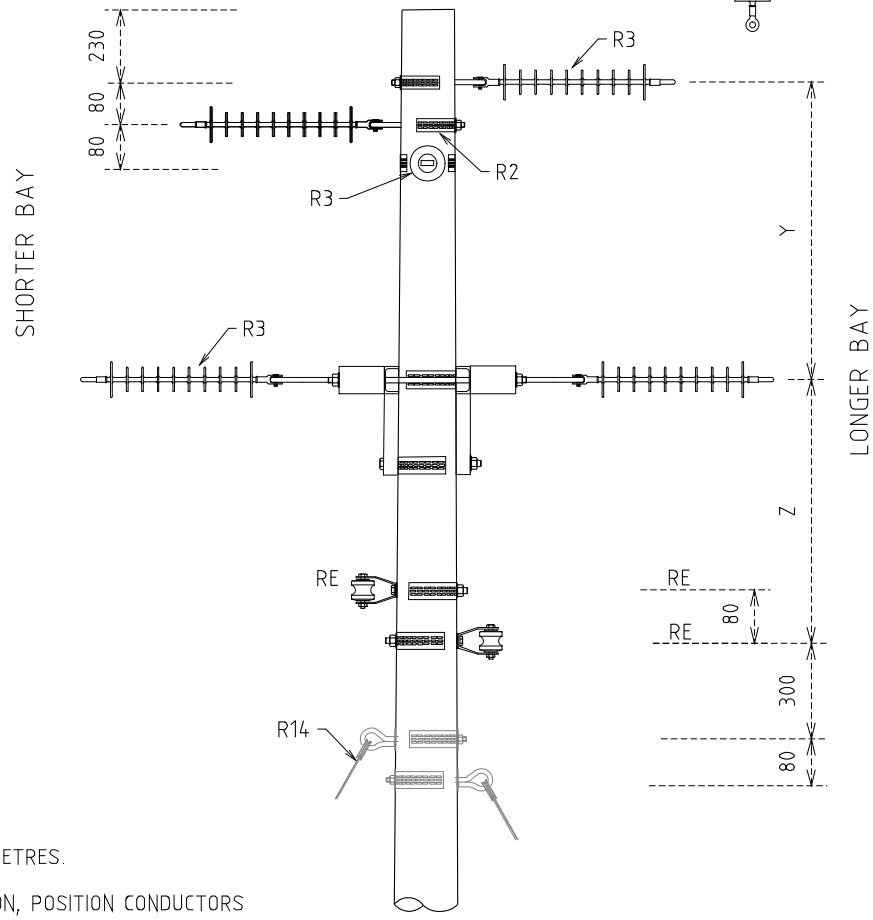
westernpower

DRAWN: JRR | DATE: 06-10-2016
ORIGINATED: DVT | SCALE: NTS
CHECKED: GS
APPROVED: GRANT STACY

DRG. No. H05-2
REV. C | SHT.



PLAN



SPAN	Y	Z
UPTO 250m	1000	1200
400m	2000	2000

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. FOR TWO PHASE CONSTRUCTION, POSITION CONDUCTORS ON EITHER END OF CROSSARM.

ELEVATION

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	02.05.17	STAND-OFF INSULATOR ADDED	JC	REE	GS
A	03.03.17	ORIGINAL ISSUE	DVT	CO	GS

STRUCTURE

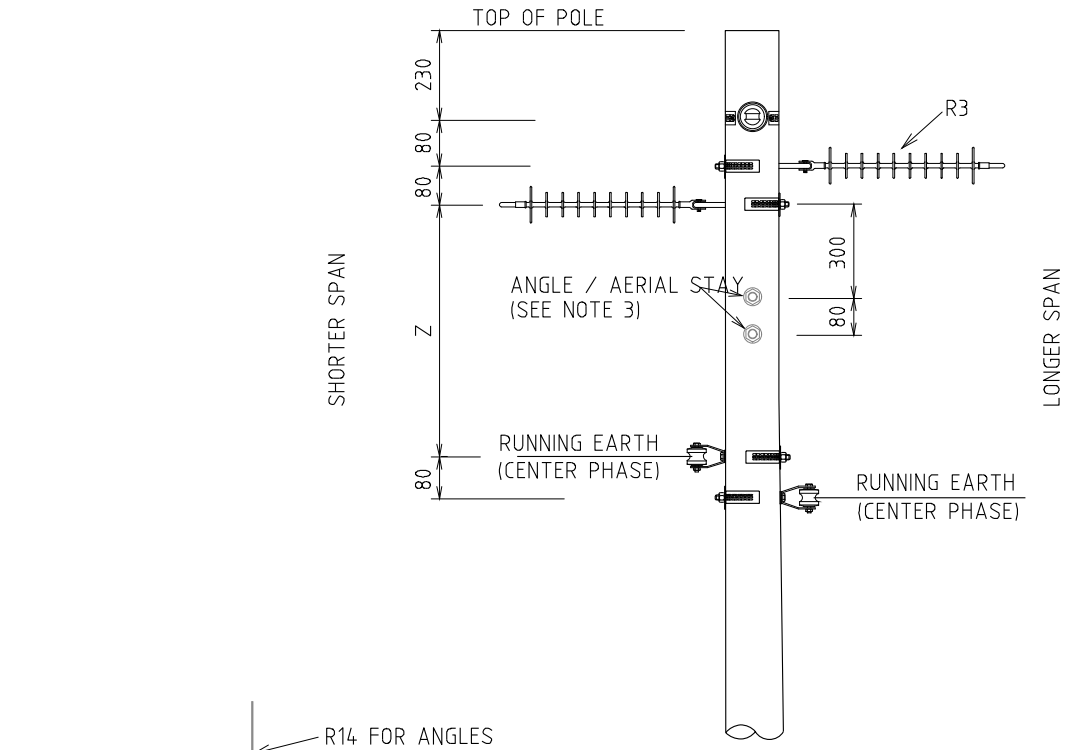
TITLE

STRAIN ANGLE
ANTI SWAN CROSS-ARM - LONG BAY

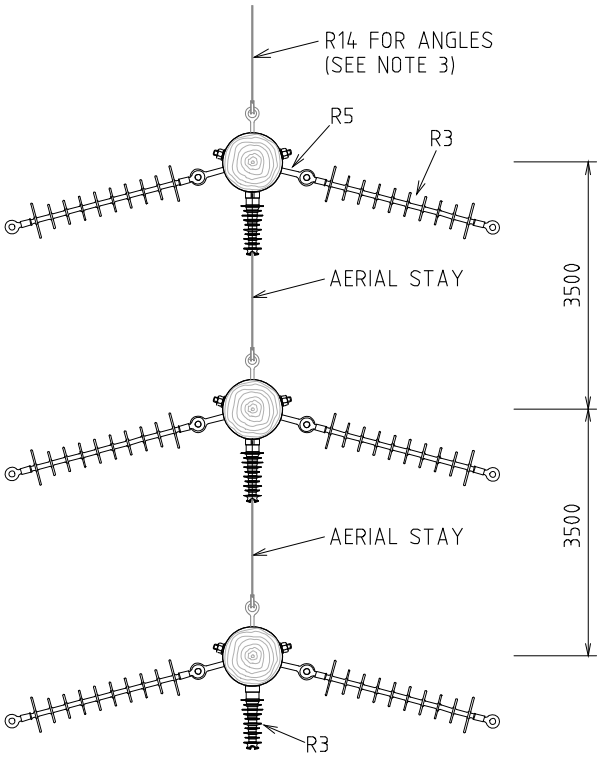
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 20-01-2017 | DRG. No. H05-3
ORIGINATED: DVT | SCALE: NTS
CHECKED: CO
APPROVED: GRANT STACY | REV. B | SHT.



ELEVATION



PLAN

SPAN	Z
UPTO 250m	1200
400m	2000

NOTES :-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. WITH ANGLE STRUCTURES EXCEEDING 2° A BISECTOR STAY IS REQUIRED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	03.03.17	ORIGINAL ISSUE	DVT	CO	GS

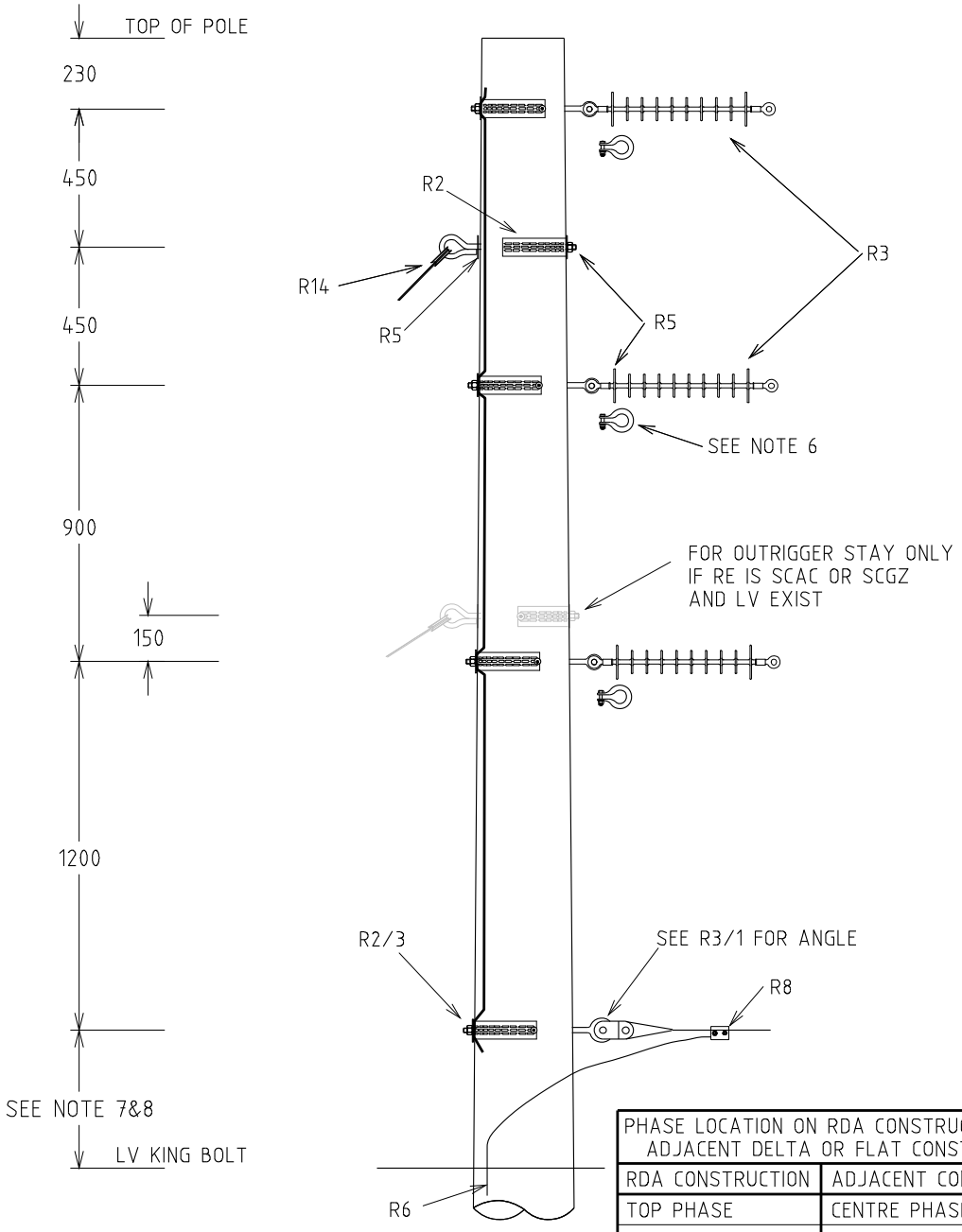
STRUCTURE

TITLE
3Φ x 3 POLE LONG BAY SOLUTION FOR ANGLE DEVIATION UPTO 45°

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-01-2017	DRG. No.	
ORIGINATED: DVT	SCALE: NTS	H05-4	
CHECKED: CO			
APPROVED: GRANT STACY		REV. A	SHT.



PHASE LOCATION ON RDA CONSTRUCTION FROM ADJACENT DELTA OR FLAT CONSTRUCTION	
RDA CONSTRUCTION	ADJACENT CONSTRUCTION
TOP PHASE	CENTRE PHASE
MIDDLE PHASE	OUTER PHASE
BOTTOM PHASE	INNER PHASE

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. FOR BAY LENGTHS LESS THAN 55M WITH R/E -12.5M POLE.
4. FOR BAY LENGTHS LESS THAN 80M WITHOUT R/E -12.5M POLE IF ALL OTHER GROUND CLEARANCES COMPLY.
5. FOR BAY LENGTHS GREATER THAN 80M ON A 12.5m POLE H7 CONDUCTOR SPACING APPLY AND ALL OTHER GROUND CLEARANCES COMPLY.
6. FOR RDA USE BOW SHACKLE - OS0055.
7. 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
8. IF THERE IS NO RUNNING EARTH INSTALL LV AT R/E POSITION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
L	09.01.18	PHASE LOCATION TABLE ADDED	CO	NMc	GS
K	06.07.17	NOTES REVISED	NMc	JC	GS
J	20.04.16	OUTRIGGER STAY ADDED	AT	DVT	GS
H	03.11.15	EARTHING SYSTEM MODIFIED	GS	REE	GS

STRUCTURE

TITLE: RUNNING DISC ANGLE OR VERTICAL TERMINATION (900mm SPACING)

DISTRIBUTION CONSTRN. STANDARD

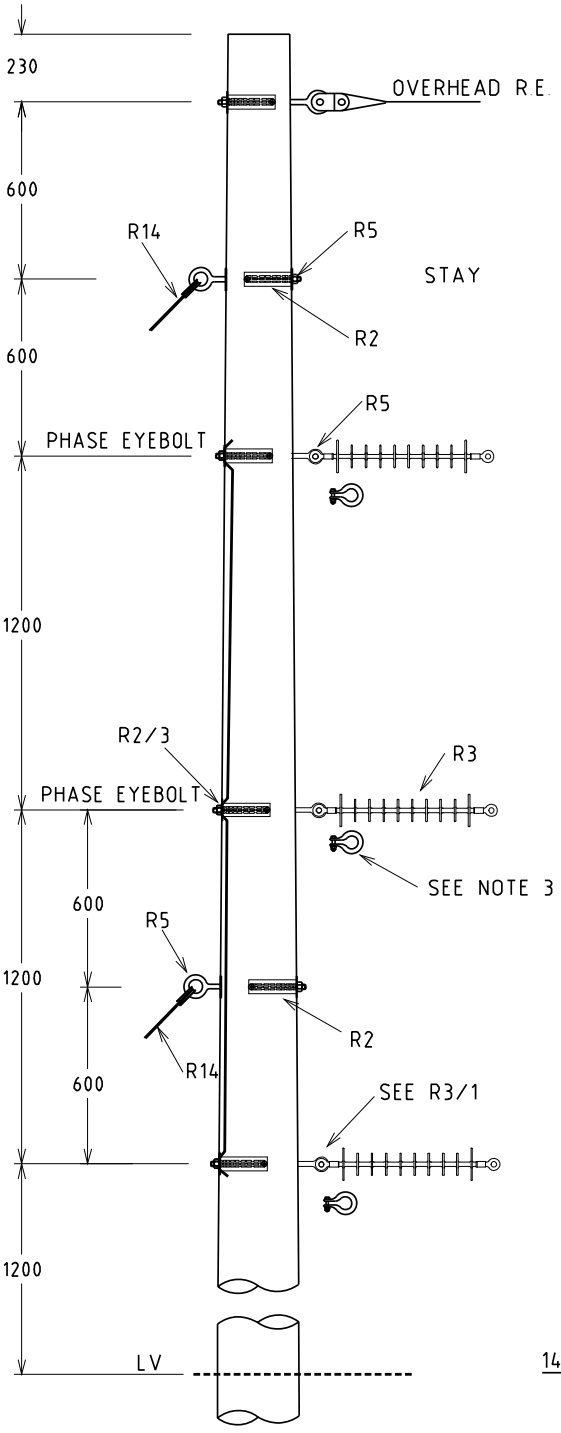
westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H06

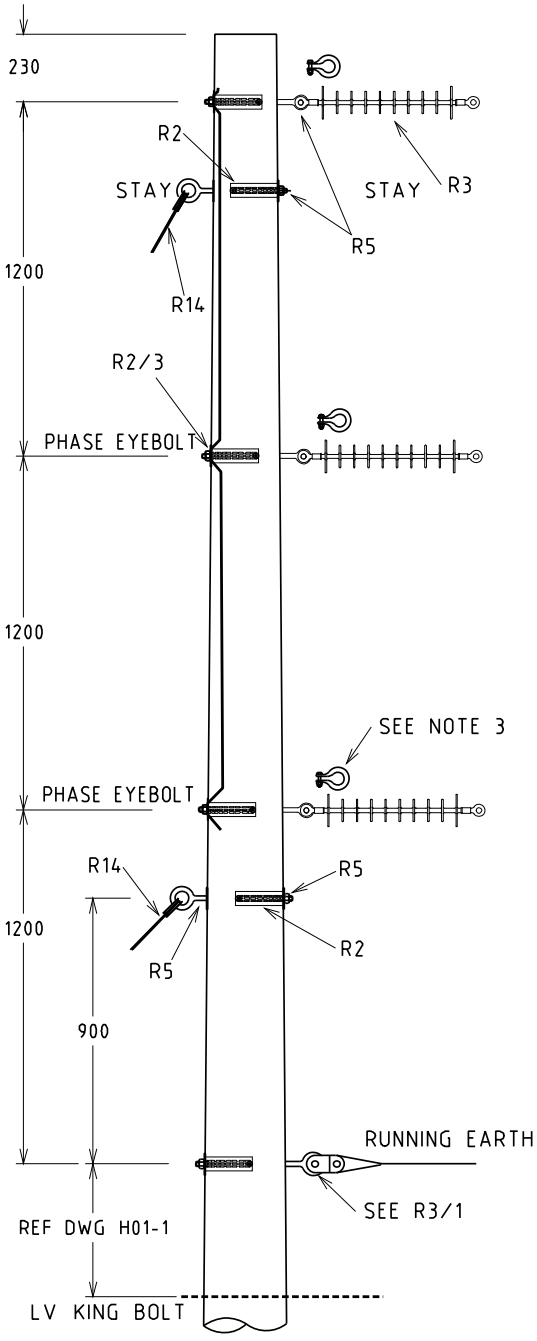
ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. L | SHT.



OVERHEAD EARTH WIRE



14m POLE min.

UNDER SLUNG RUNNING EARTH

PHASE LOCATION ON RDA CONSTRUCTION FROM ADJACENT DELTA OR FLAT CONSTRUCTION	
RDA CONSTRUCTION	ADJACENT CONSTRUCTION
TOP PHASE	CENTRE PHASE
MIDDLE PHASE	OUTER PHASE
BOTTOM PHASE	INNER PHASE

NOTES
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18ϕ U.O.N.
3. FOR RDA USE BOW SHACKLE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
H	09.01.18	PHASE LOCATION TABLE ADDED	CO	NMc	GS
G	03.11.15	EARTHING SYSTEM MODIFIED	GS	REE	GS
F	29.01.15	SOME ANNOTATIONS REVISED	REE	REE	GS
E	15.09.14	NOTE 5 REVISED	JC	REE	GS

STRUCTURE

TITLE: RUNNING DISC ANGLE OR VERTICAL TERMINATION (1200mm SPACING)

DISTRIBUTION CONSTRN. STANDARD

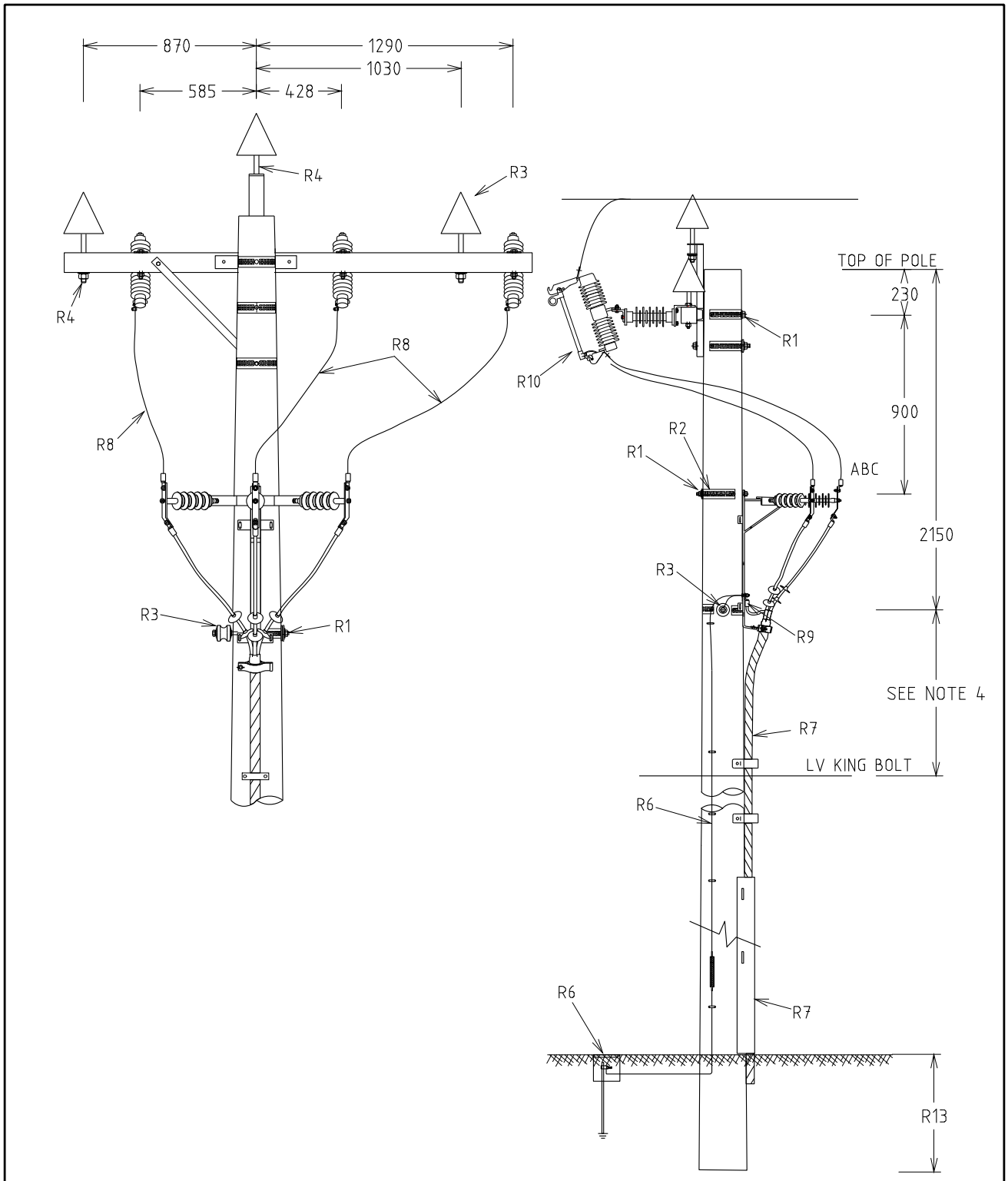
westernpower

DRAWN: JRR | DATE: 18-03-2014 | ORG. No. H07

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. H | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. (a) FOR OPEN AERIAL 650 IF R/E IS SCAC OR SCGZ
   1100 IF R/E IS AAAC
   (b) FOR LV ABC 450.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	29.11.18	EARTHING SYSTEM AND NOTES REVISED	REE	NMc	GS
B	18.09.14	FORMAT CHANGED, DIMENSIONS AND NOTES REVISED			GS
A	28.10.10	ORIGINAL ISSUE			

STRUCTURE

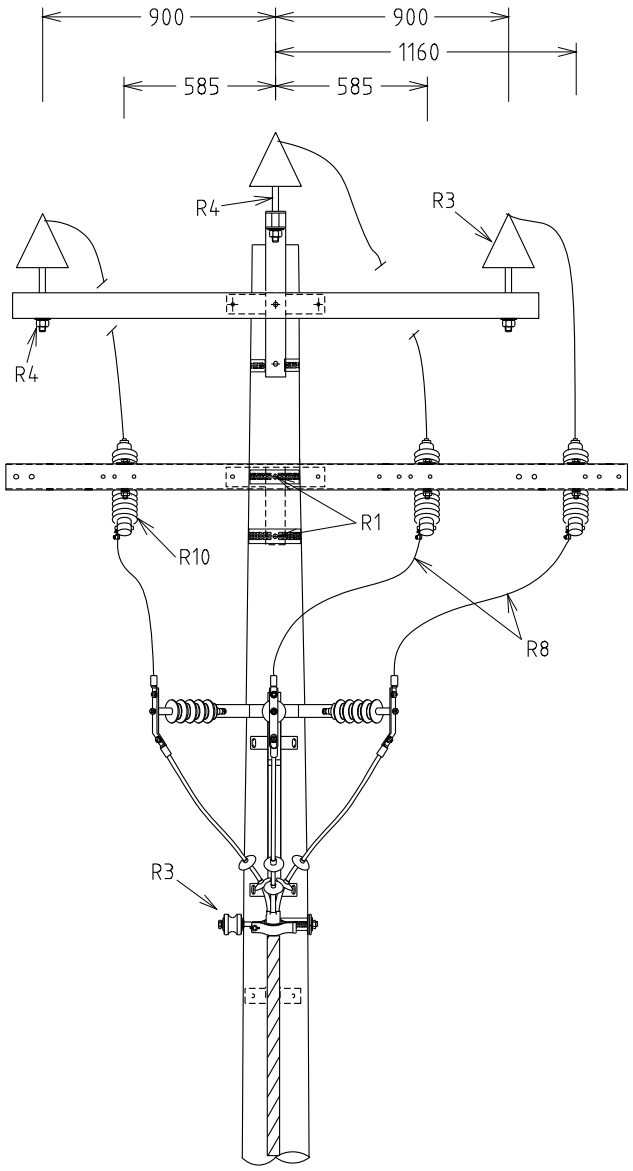
TITLE

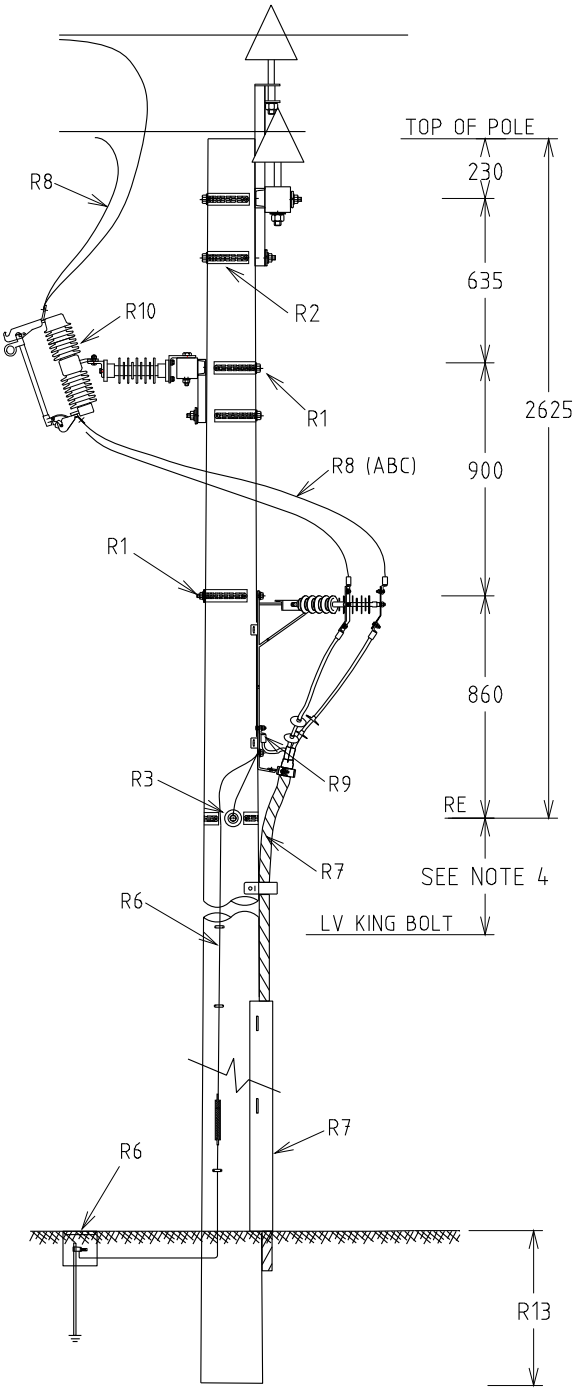
INTERMEDIATE CABLE
WITH DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H08-1	
CHECKED: REE			
APPROVED: GRANT STACY		REV. C	SHT.





NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. (a) FOR OPEN AERIAL 650 IF R/E IS SCAC OR SCGZ
   1100 IF R/E IS AAAC
   (b) FOR LV ABC 450.

EARTH @ LESS THAN 30Ω

12.5m 6kN POLE

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	29.11.18	EARTHING SYSTEM AND NOTES REVISED	REE	NMc	GS
C	15.09.14	NOTE 3 REVISED			GS
B	09.07.14	FORMAT CHANGED AND NOTES REVISED			GS

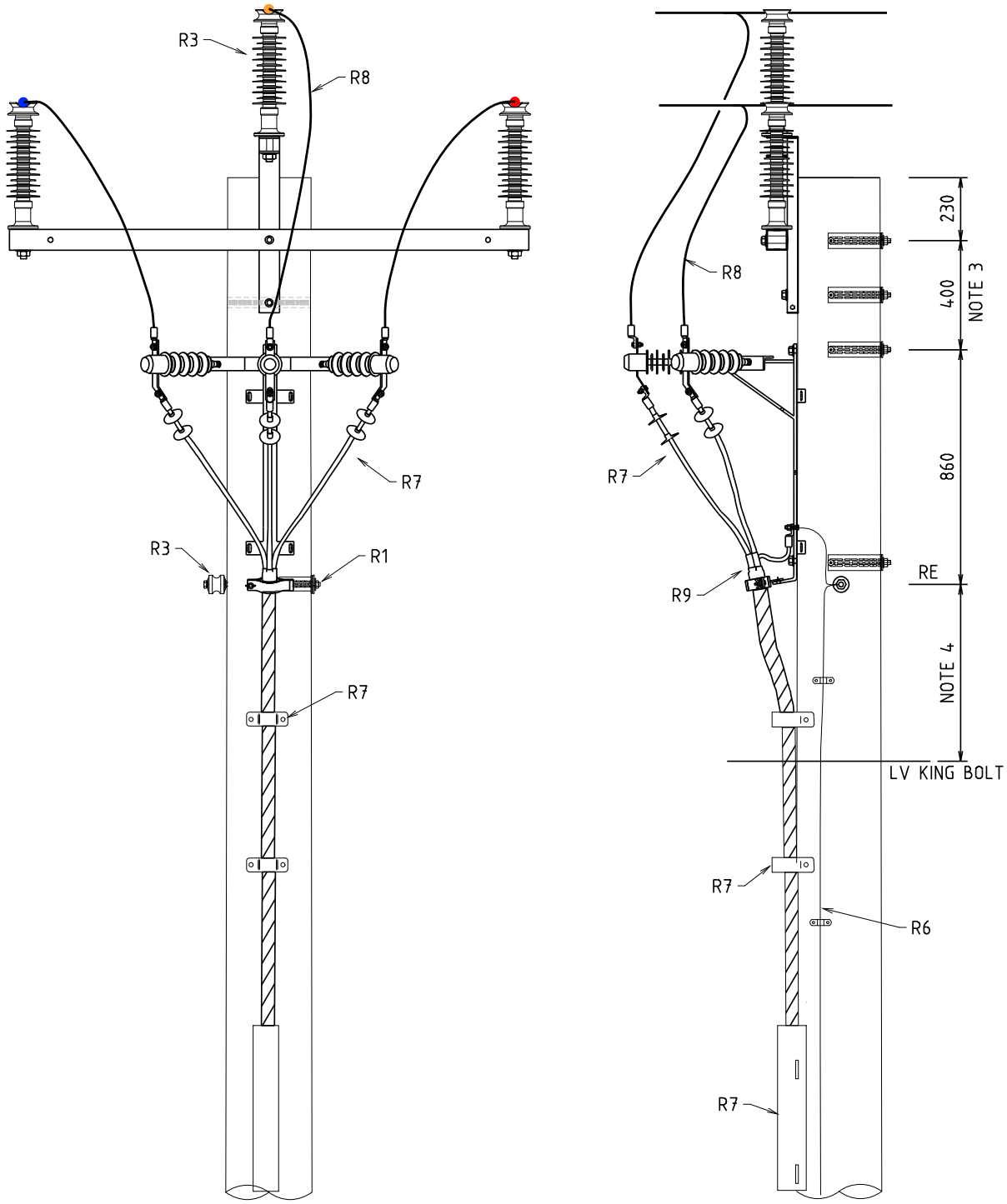
STRUCTURE

TITLE
INTERMEDIATE CABLE
WITH DROPOUT FUSE
(ALTERNATE CROSSARM)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H08-2
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. D | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. CAN BE INCREASED TO MAX. 1000 WHEN NO RUNNING EARTH PRESENT.
4. (a) FOR OPEN AERIAL 650 IF R/E IS SCAC OR SCGZ & 1100 IF R/E IS AAAC
   (b) FOR LV ABC 450.
5. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	30.08.19	ORIGINAL ISSUE	MS	NMc	GS

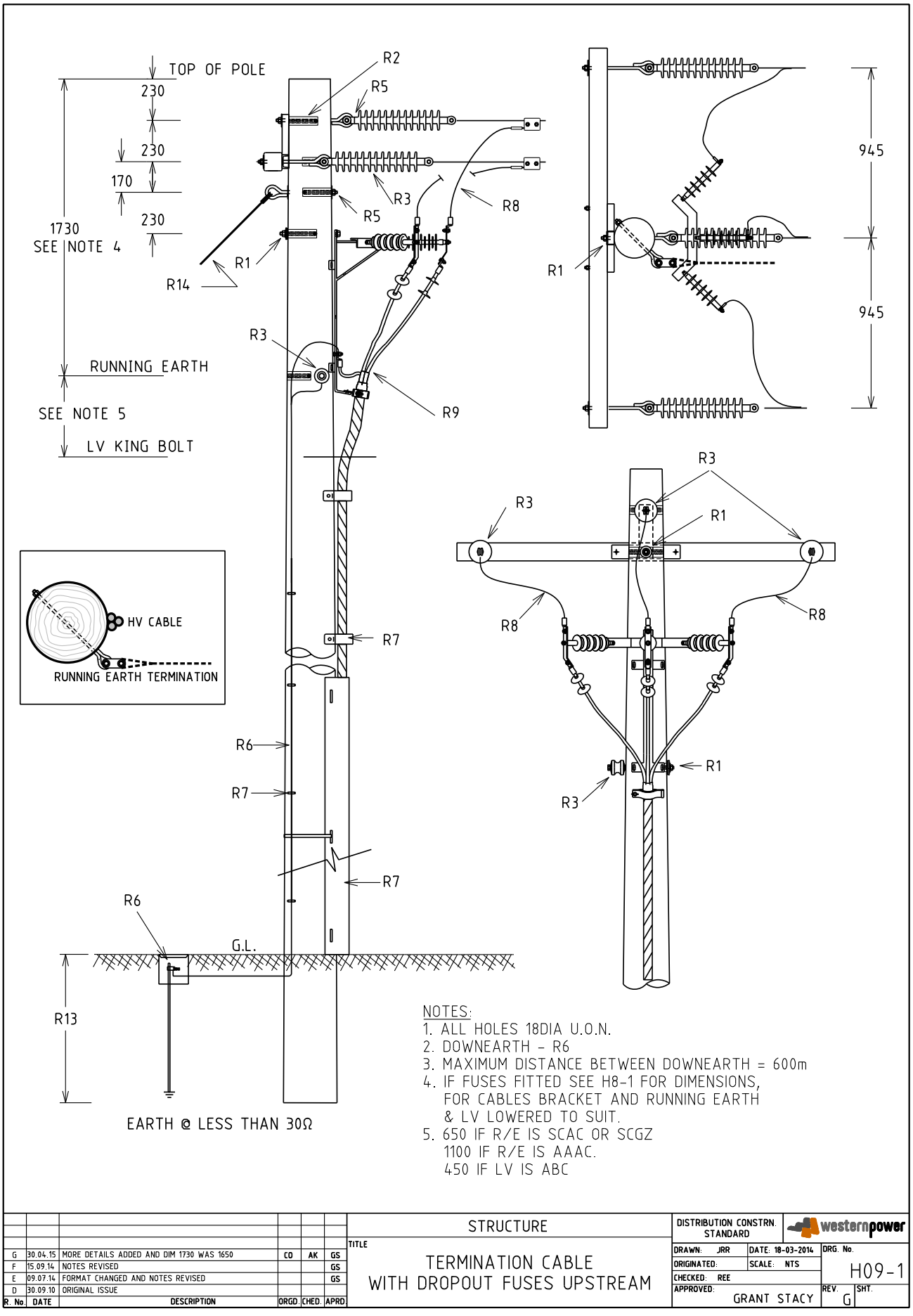
STRUCTURE

TITLE: INTERMEDIATE CABLE WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 29-08-2019	DRG. No. H08-3
ORIGINATED: NMc	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL HOLES 18DIA U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. IF FUSES FITTED SEE H8-1 FOR DIMENSIONS, FOR CABLES BRACKET AND RUNNING EARTH & LV LOWERED TO SUIT.
5. 650 IF R/E IS SCAC OR SCGZ
   1100 IF R/E IS AAAC.
   450 IF LV IS ABC

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
G	30.04.15	MORE DETAILS ADDED AND DIM 1730 WAS 1650	CO	AK	GS
F	15.09.14	NOTES REVISED			GS
E	09.07.14	FORMAT CHANGED AND NOTES REVISED			GS
D	30.09.10	ORIGINAL ISSUE			

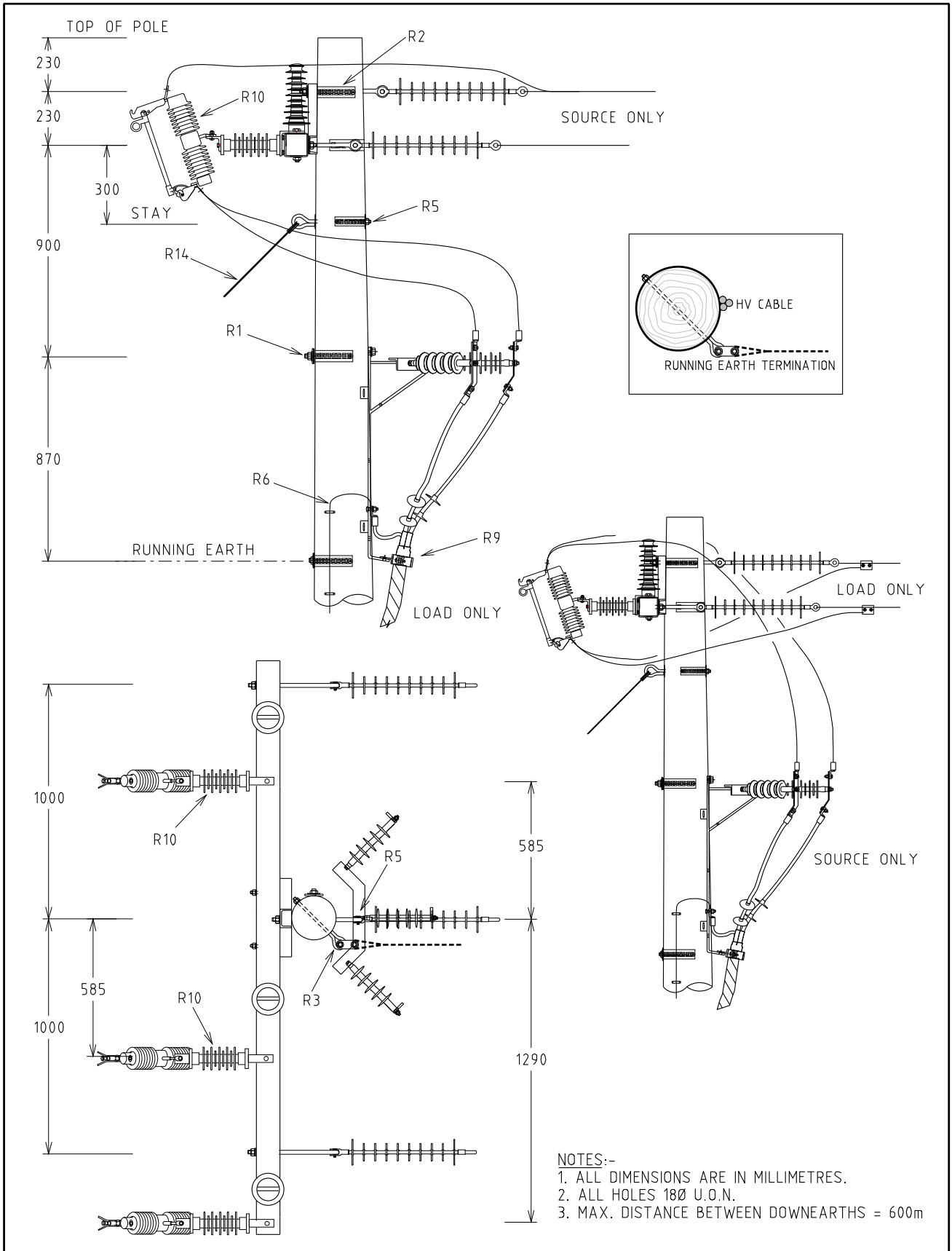
STRUCTURE

TITLE
TERMINATION CABLE
WITH DROPOUT FUSES UPSTREAM

DISTRIBUTION CONSTRN. STANDARD

DRAWN: JRR DATE: 18-03-2014
ORIGINATED: SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY

DRG. No. H09-1
REV. G
SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAX. DISTANCE BETWEEN DOWNEARTHS = 600m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	05.10.18	NOTES REVISED AND MORE DETAILS ADDED	REE	NN	GS
D	08.09.16	SOURCE AND LOAD INDICATED	FK	REE	ME
C	15.01.16	STAY ADDED	FK	ME	GS
B	19.11.13	ORIGINAL ISSUE			

STRUCTURE

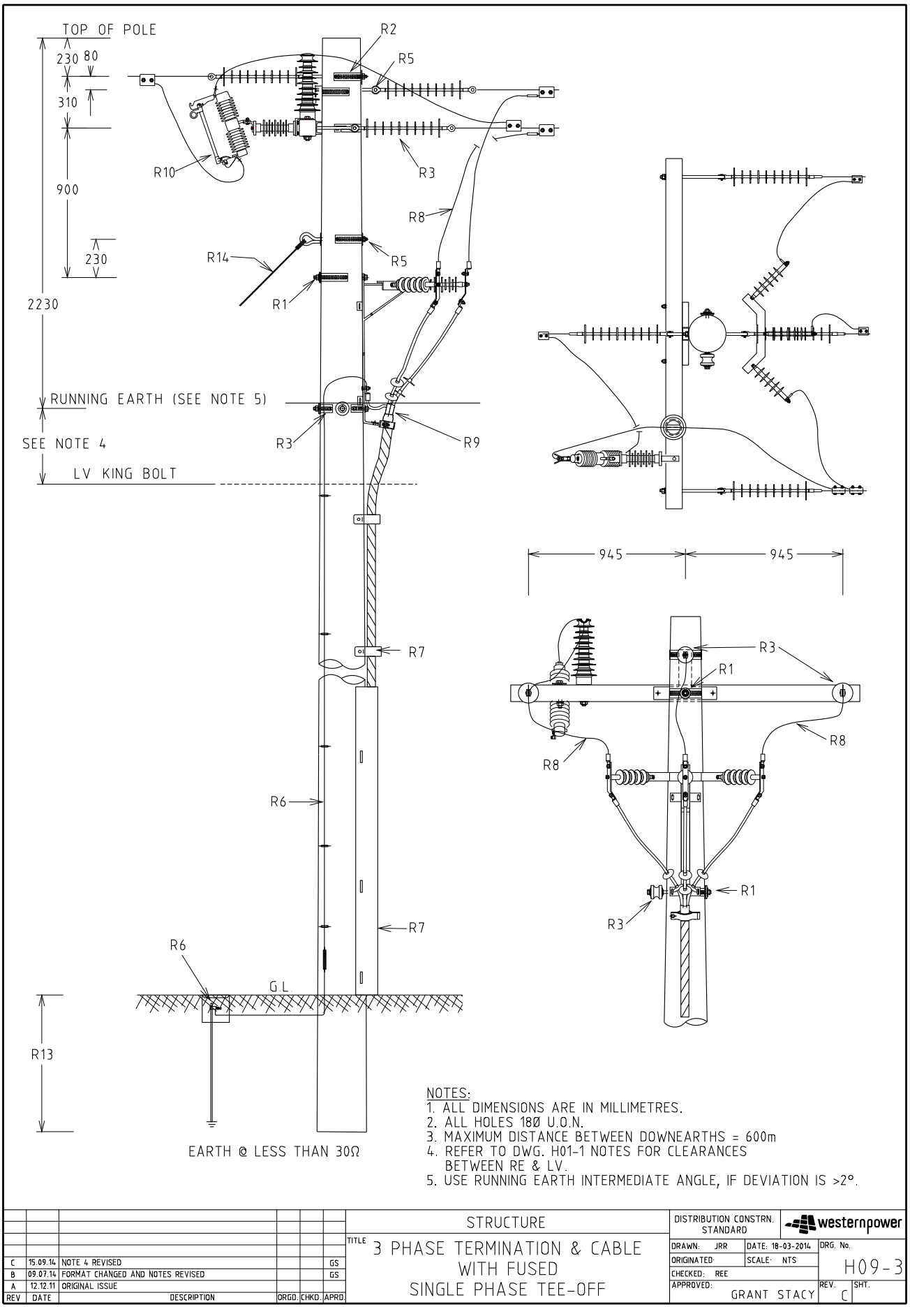
TITLE

TERMINATION & CABLE
WITH DROPOUT FUSES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H09-2	
CHECKED: REE			
APPROVED: GRANT STACY		REV. E	SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
5. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	15.09.14	NOTE 4 REVISED			GS
B	09.07.14	FORMAT CHANGED AND NOTES REVISED			GS
A	12.12.11	ORIGINAL ISSUE			

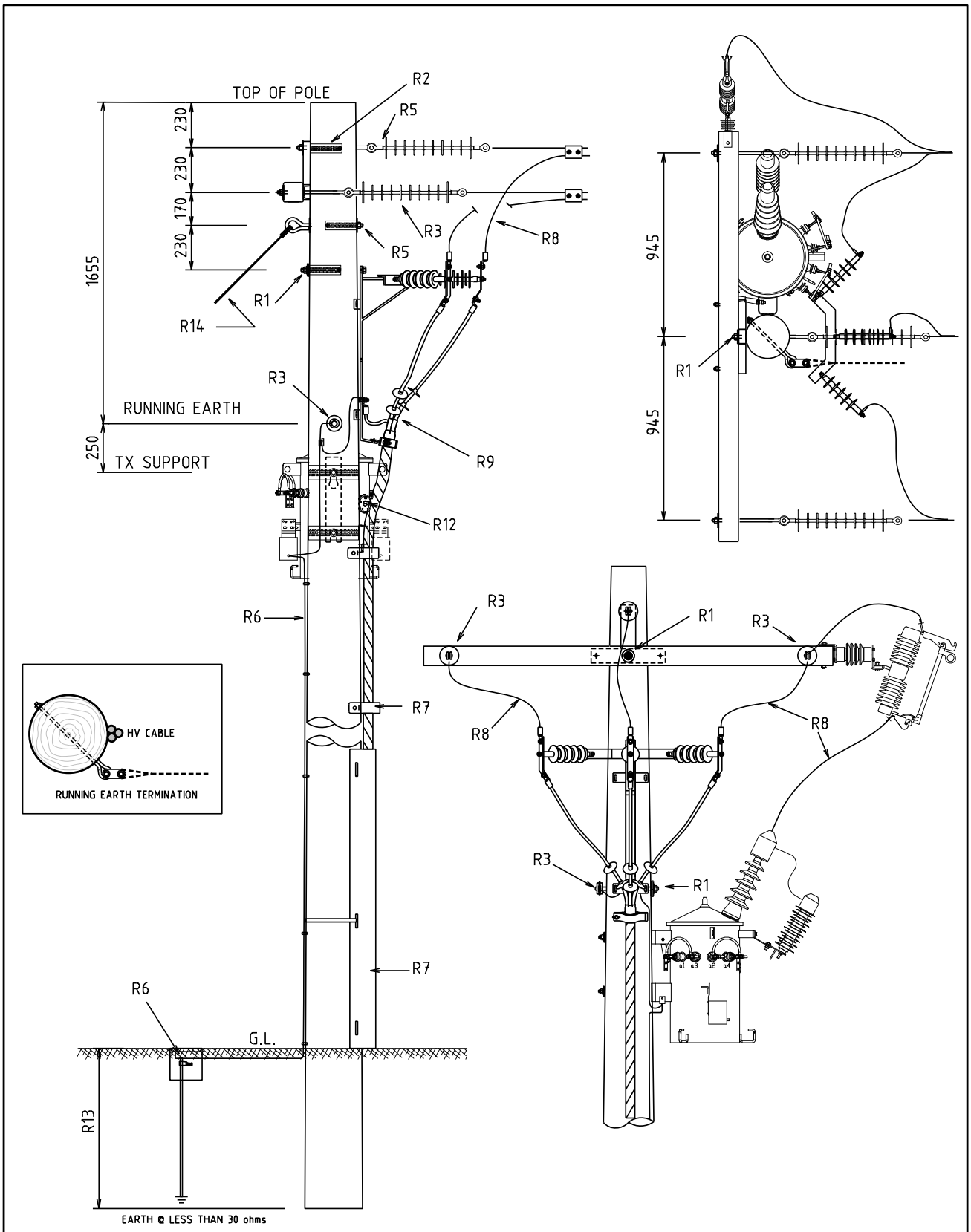
STRUCTURE

TITLE 3 PHASE TERMINATION & CABLE WITH FUSED SINGLE PHASE TEE-OFF

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No. H09-3
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. C	SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
A	18.10.19	ORIGINAL ISSUE	NN	REE	GS

STRUCTURE

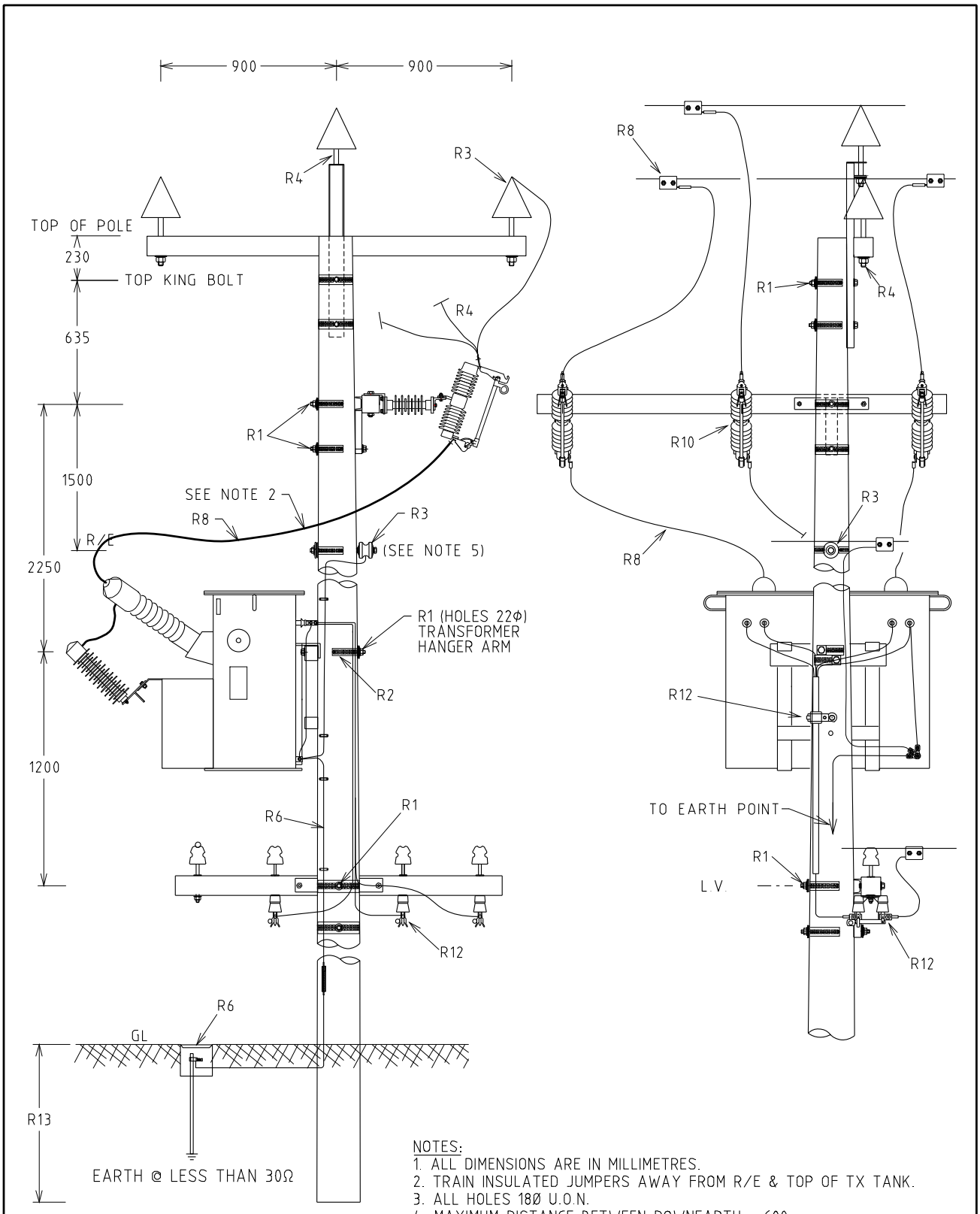
TITLE

TERMINATION CABLE
SINGLE PHASE TX AND DOF

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 01-10-2019	DRG. No. H09-4
ORIGINATED: NN	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. TRAIN INSULATED JUMPERS AWAY FROM R/E & TOP OF TX TANK.
3. ALL HOLES 18Ø U.O.N.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
5. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
6. FOR 2 BUSHING TRANSFORMER OMIT CENTRE PHASE.
7. HIGH RISE CROSSARM PREFERRED BUT LOW RISE CAN BE USED.

12.5m POLE min

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
K	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
J	17.05.16	NOTE 7 ADDED	REE	CO	GS
H	12.02.16	NOTE REVISED AND RAISER & CROSSARM WAS BRACKET	REE	JC	GS
G	12.09.14	FORMAT CHANGED AND EARTHING REVISED			GS
F	19.11.13	ORIGINAL ISSUE			

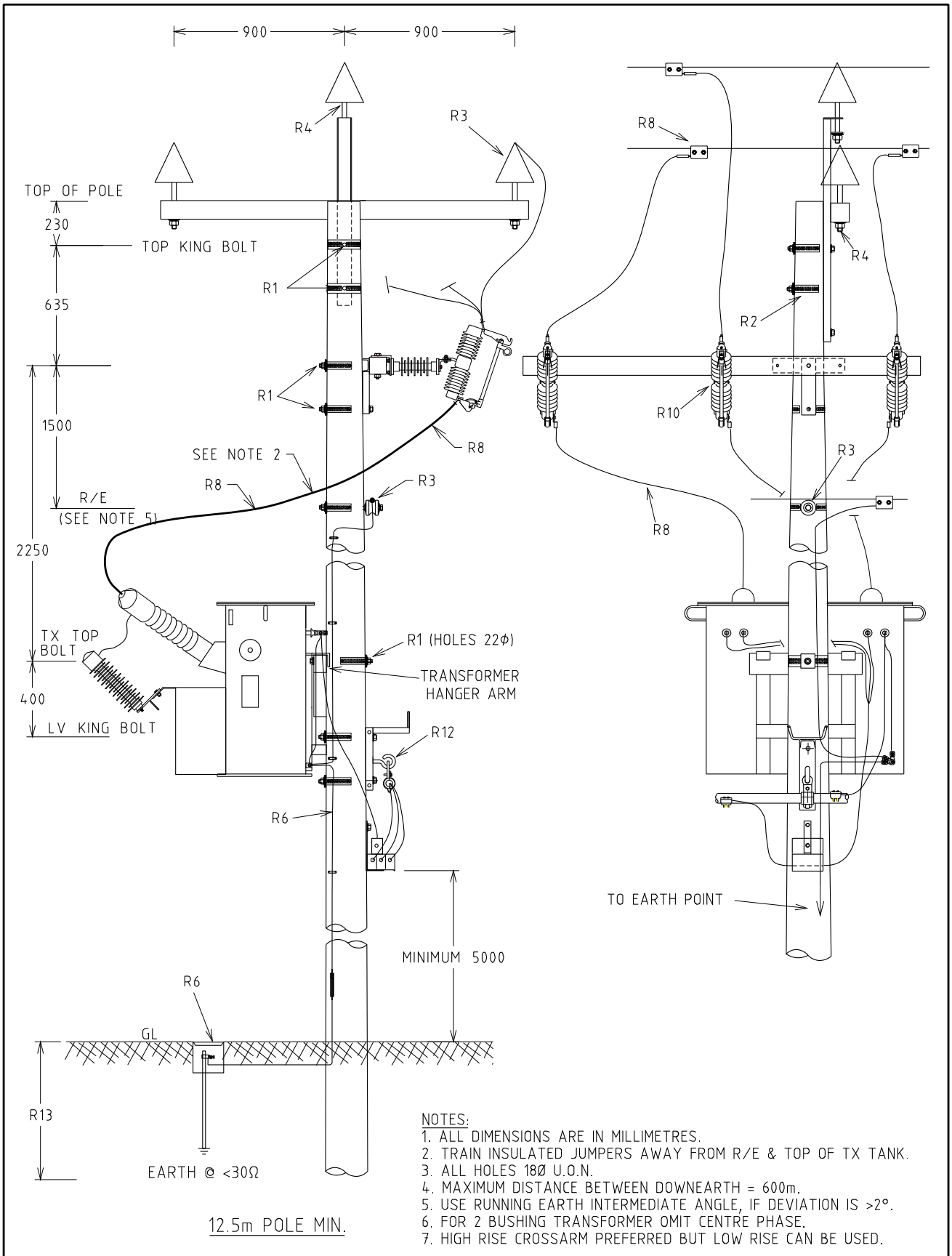
STRUCTURE

TITLE: INTERMEDIATE TRANSFORMER HV TO OPEN AERIAL

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H10-1	
CHECKED: REE			
APPROVED: GRANT STACY		REV. K	SHT.



12.5m POLE MIN.

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. TRAIN INSULATED JUMPERS AWAY FROM R/E & TOP OF TX TANK.
3. ALL HOLES 18Ø U.O.N.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
5. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
6. FOR 2 BUSHING TRANSFORMER OMIT CENTRE PHASE.
7. HIGH RISE CROSSARM PREFERRED BUT LOW RISE CAN BE USED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APPRD.
M	18.10.19	LV KING BOLT LOCATION ADDED	CO	NMc	GS
L	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
K	17.05.16	NOTE 7 ADDED	REE	CO	GS
J	15.02.16	NOTE 5 ADDED	REE	JC	GS

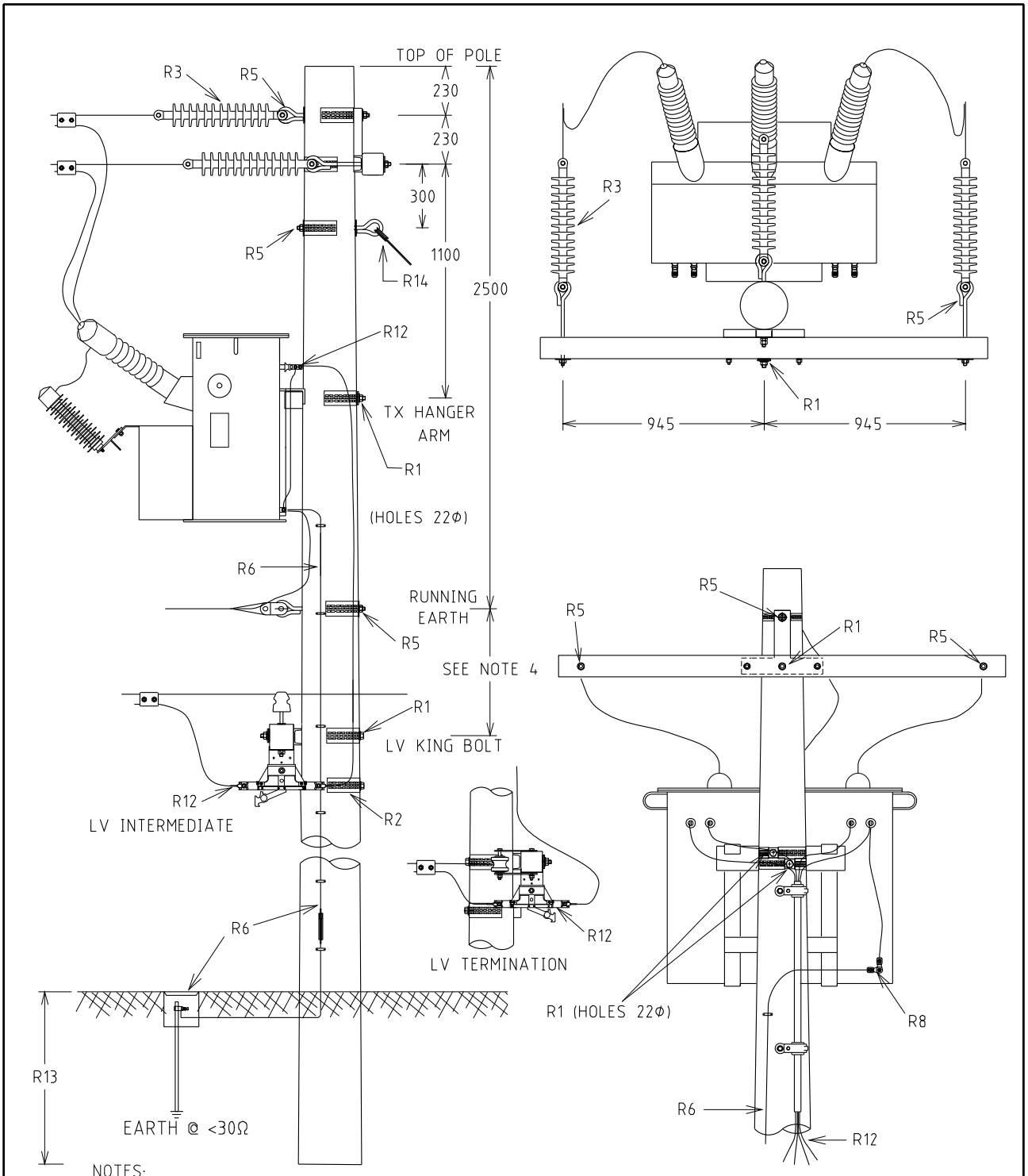
STRUCTURE

TITLE
INTERMEDIATE TRANSFORMER
HV TO ABC

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H10-2
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. M | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. 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 TYPE OF R/E CONDUCTOR

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
J	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
H	09.08.17	LV UNDERSLUNG SWITCH REVISED	REE	JC	GS
G	15.09.14	NOTE 4 REVISED			GS

STRUCTURE

TITLE

IN-LINE TERMINATION TRANSFORMER

DISTRIBUTION CONSTRN. STANDARD

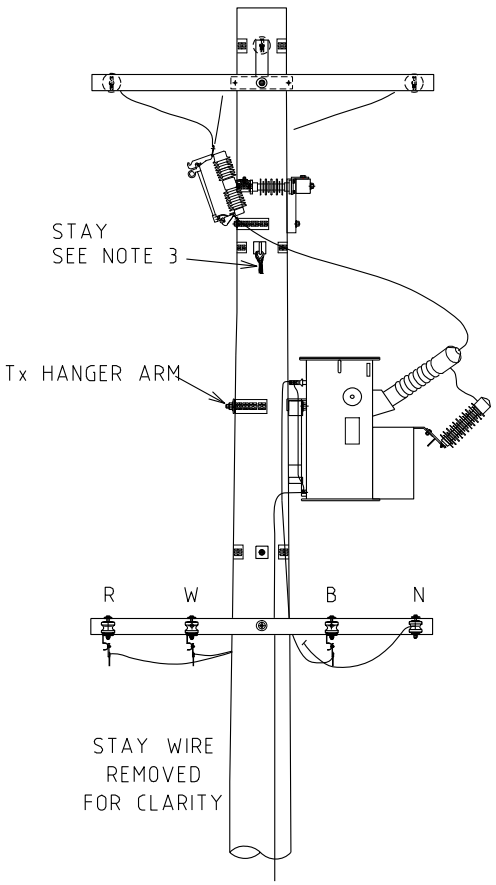
westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H11-1

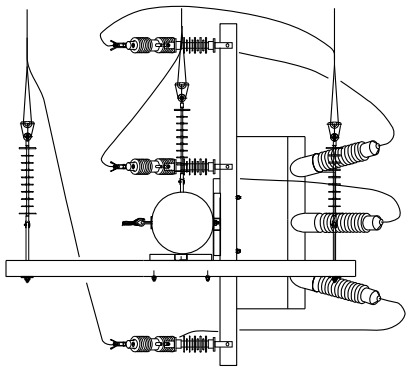
ORIGINATED: | SCALE: NTS

CHECKED: REE

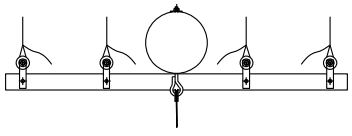
APPROVED: GRANT STACY | REV. J | SHT.



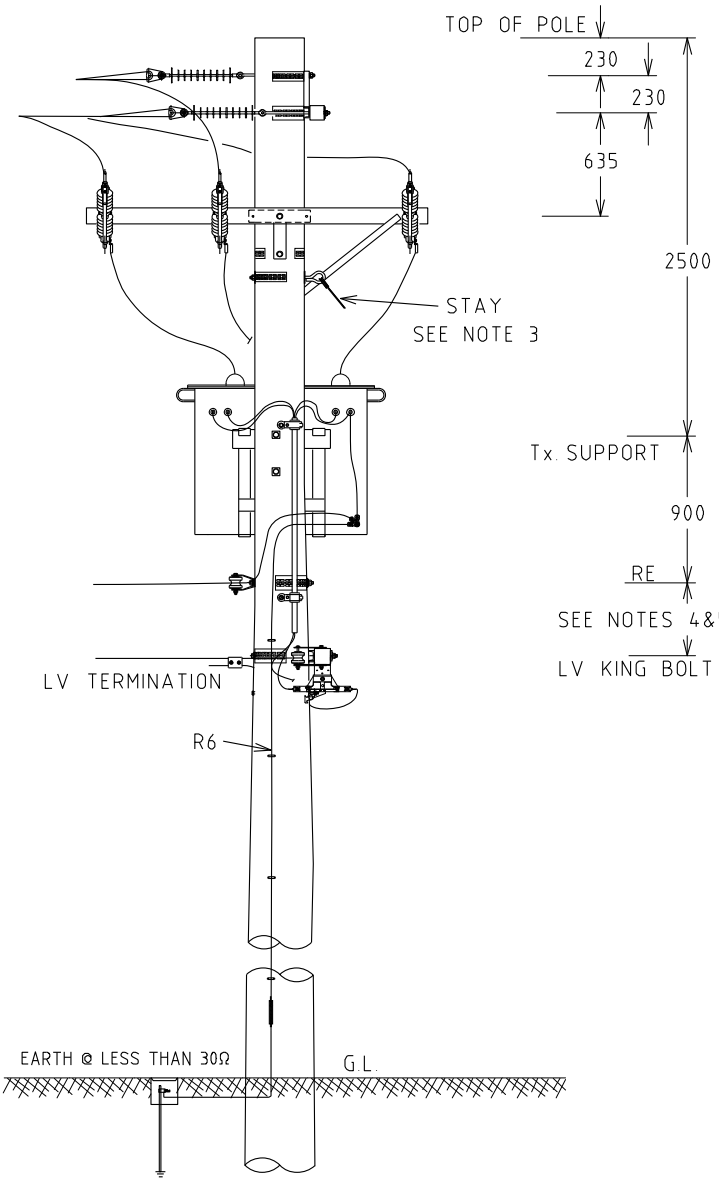
REAR VIEW



HV ARRANGEMENT



LV ARRANGEMENT



VIEW FROM FOOTPATH

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. STAY POSITION TO SUIT TAPS, MIN OF 400mm TO NEAREST HV CONDUCTOR.
4. 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 TYPE OF R/E CONDUCTOR
5. IF THERE IS NO RUNNING EARTH THIS DISTANCE IS 300.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
H	15.07.22	DOF CROSS-ARM LOCATION CHANGED	NMc	NN	GS
G	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
F	09.08.17	LV UNDERSLUNG SWITCH REVISED	REE	JC	GS
E	20 06 17	NOTES REVISED AND DIMENSION 2500 WAS 3350	GS	NMc	GS

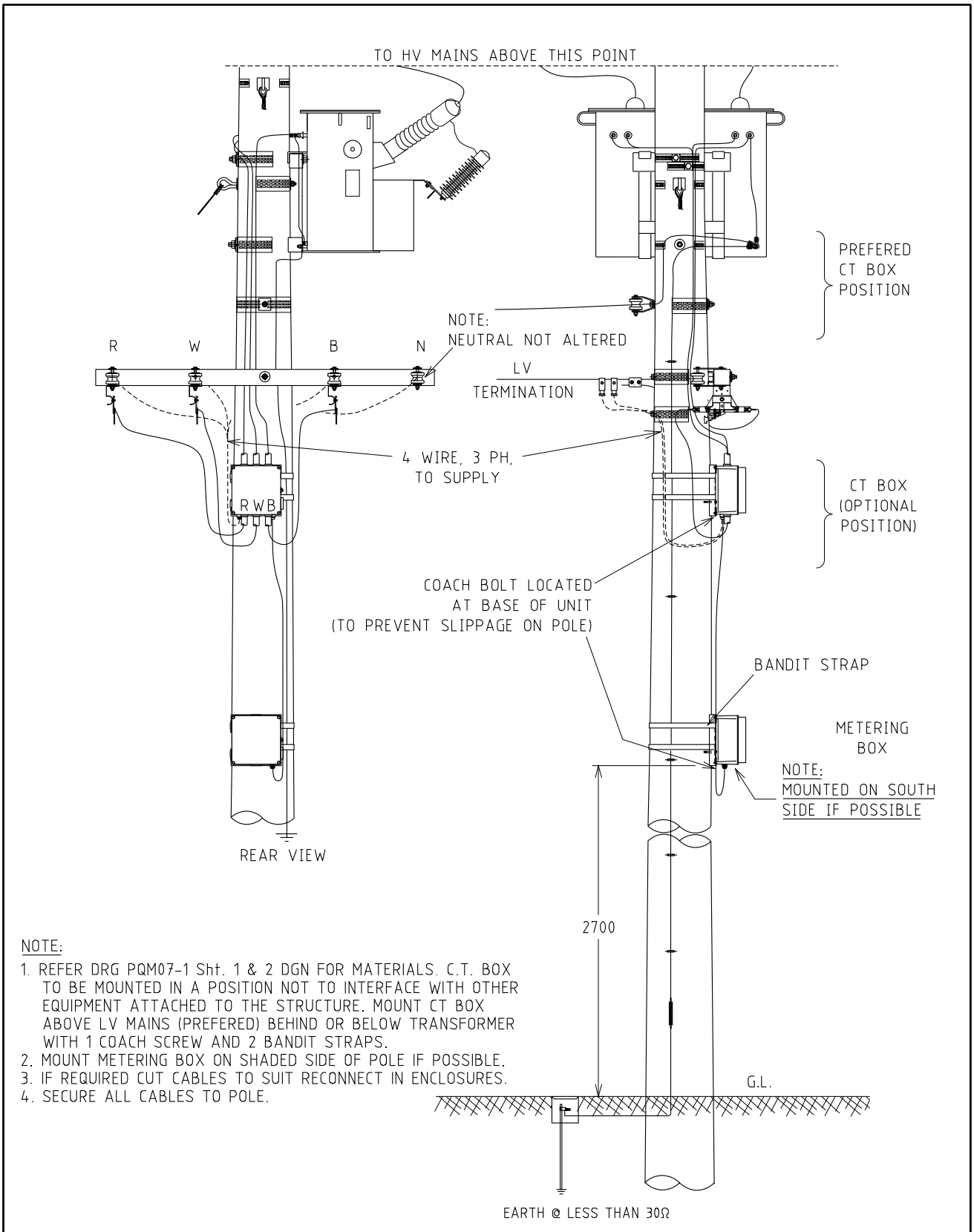
STRUCTURE

TITLE
SIDE MOUNTED
TERMINATION TRANSFORMER
WITH DROPOUT FUSES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	H11-2
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. H	SHT.



NOTE:

1. REFER DRG PQM07-1 Sht. 1 & 2 DGN FOR MATERIALS. C.T. BOX TO BE MOUNTED IN A POSITION NOT TO INTERFACE WITH OTHER EQUIPMENT ATTACHED TO THE STRUCTURE. MOUNT CT BOX ABOVE LV MAINS (PREFERED) BEHIND OR BELOW TRANSFORMER WITH 1 COACH SCREW AND 2 BANDIT STRAPS.
2. MOUNT METERING BOX ON SHADED SIDE OF POLE IF POSSIBLE.
3. IF REQUIRED CUT CABLES TO SUIT RECONNECT IN ENCLOSURES.
4. SECURE ALL CABLES TO POLE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
B	09.08.17	LV UNDERSLUNG SWITCH REVISED	REE	JC	GS
A	12.12.11	ORIGINAL ISSUE			

STRUCTURE

TITLE

REMOTE DATA AQUISITION FOR Tx TERMINATION TRANSFORMER

DISTRIBUTION CONSTRN. STANDARD

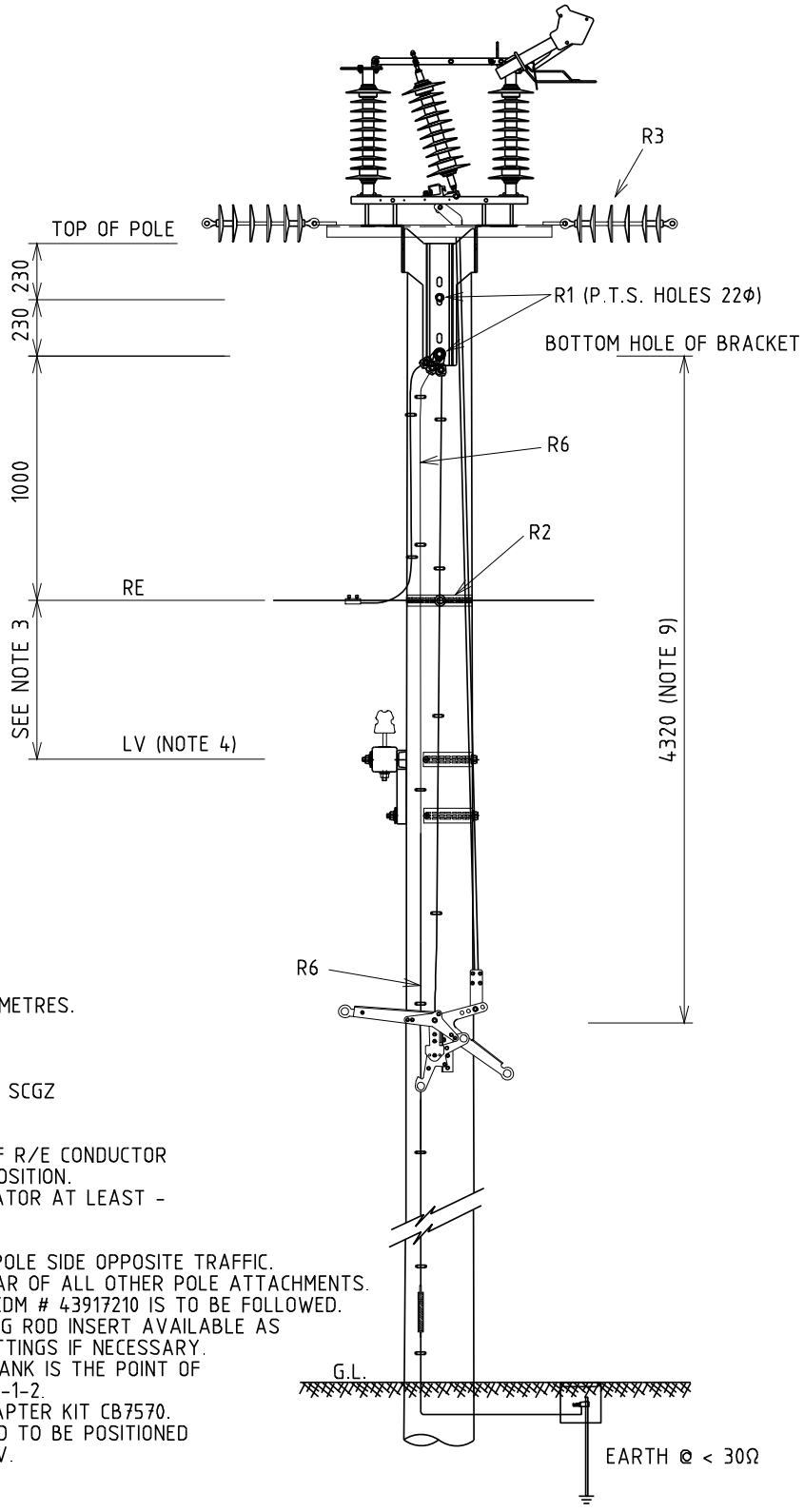
westernpower

DRAWN: JRR | DATE: 18-03-2014 | DRG. No. H11-3

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. C | 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
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. IF TRANSFORMER ON POLE, TANK IS THE POINT OF COMMON CONNECTION. SEE R6-1-2.
11. ON CONCRETE POLES USE ADAPTER KIT CB7570.
12. PVC COVERED OPERATING ROD TO BE POSITIONED WHERE ROD PASSES BARE LV.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	20.09.19	NOTE 12 ADDED	REE	NN	GS
D	29.11.18	NOTE 11 ADDED, EARTHING SYSTEM CHANGED	REE	NN	GS
C	23.01.18	TITLE AND DRAWING NUMBER CHANGED	REE	NMc	GS
B	30.11.17	NOTES REVISED	REE	JC	GS
A	26.10.17	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

TITLE

POLE TOP SWITCH INCLUDING EARTH

DISTRIBUTION CONSTRN. STANDARD

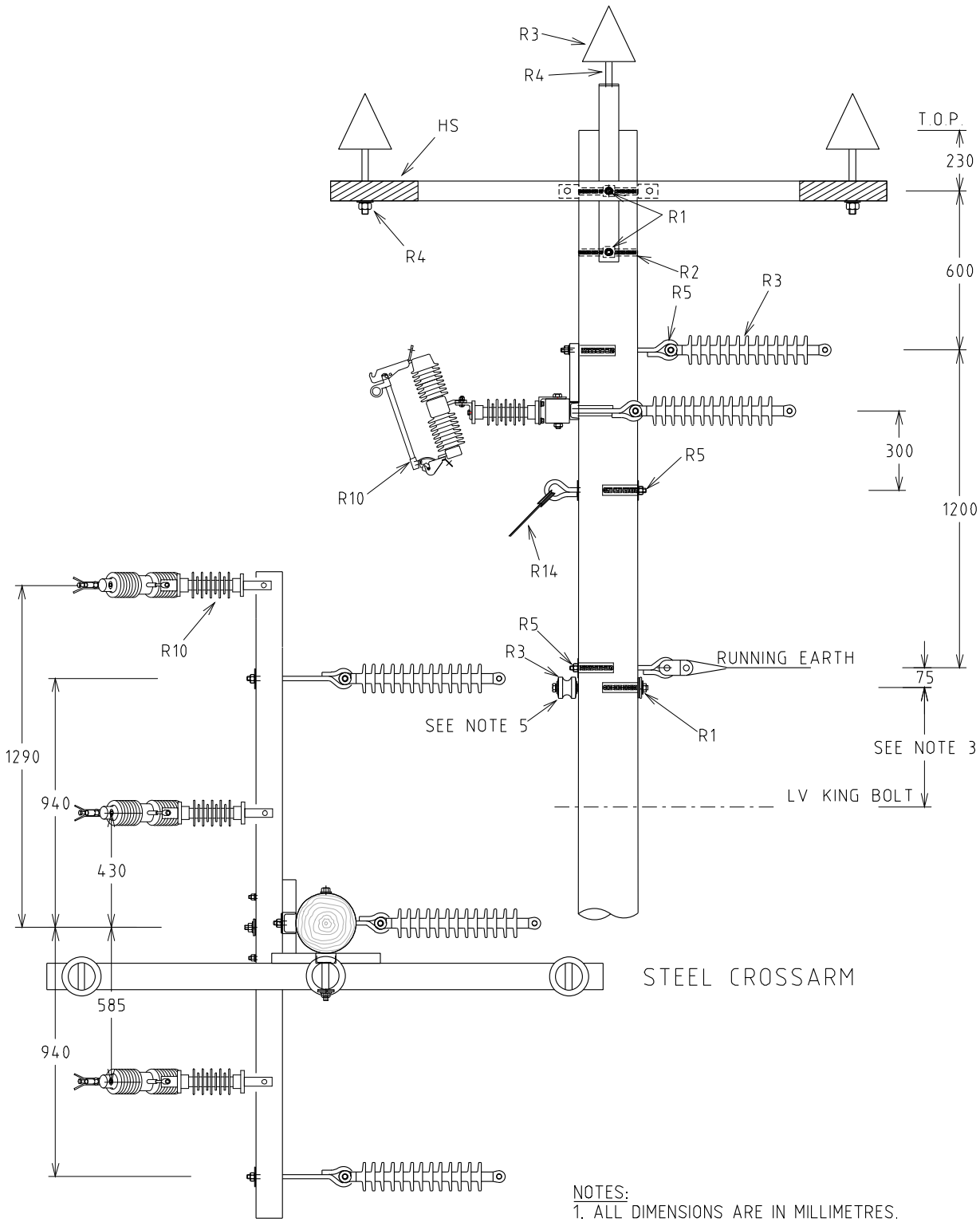
westernpower

DRAWN: JRR | DATE: 26-10-2017 | DRG. No. H12

ORIGINATED: REE | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. E | SHT.



RECOMMEND TO BE INSTALL ON A 12.5m POLE FOR ALL RURAL AREA.

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. REFER TO DWG. H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV.
5. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION ANGLE IS >2°.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	02.09.15	DRG # & TITLE CHANGED AND DRAWING REVISED TO SUIT	REE	REE	GS
D	10.02.15	NOTE 5 ADDED	JC	REE	GS
C	15.09.14	NOTE 4 REVISED			GS
B	09.07.14	FORMAT CHANGED AND NOTES REVISED			GS
A	11.07.12	ORIGINAL ISSUE			

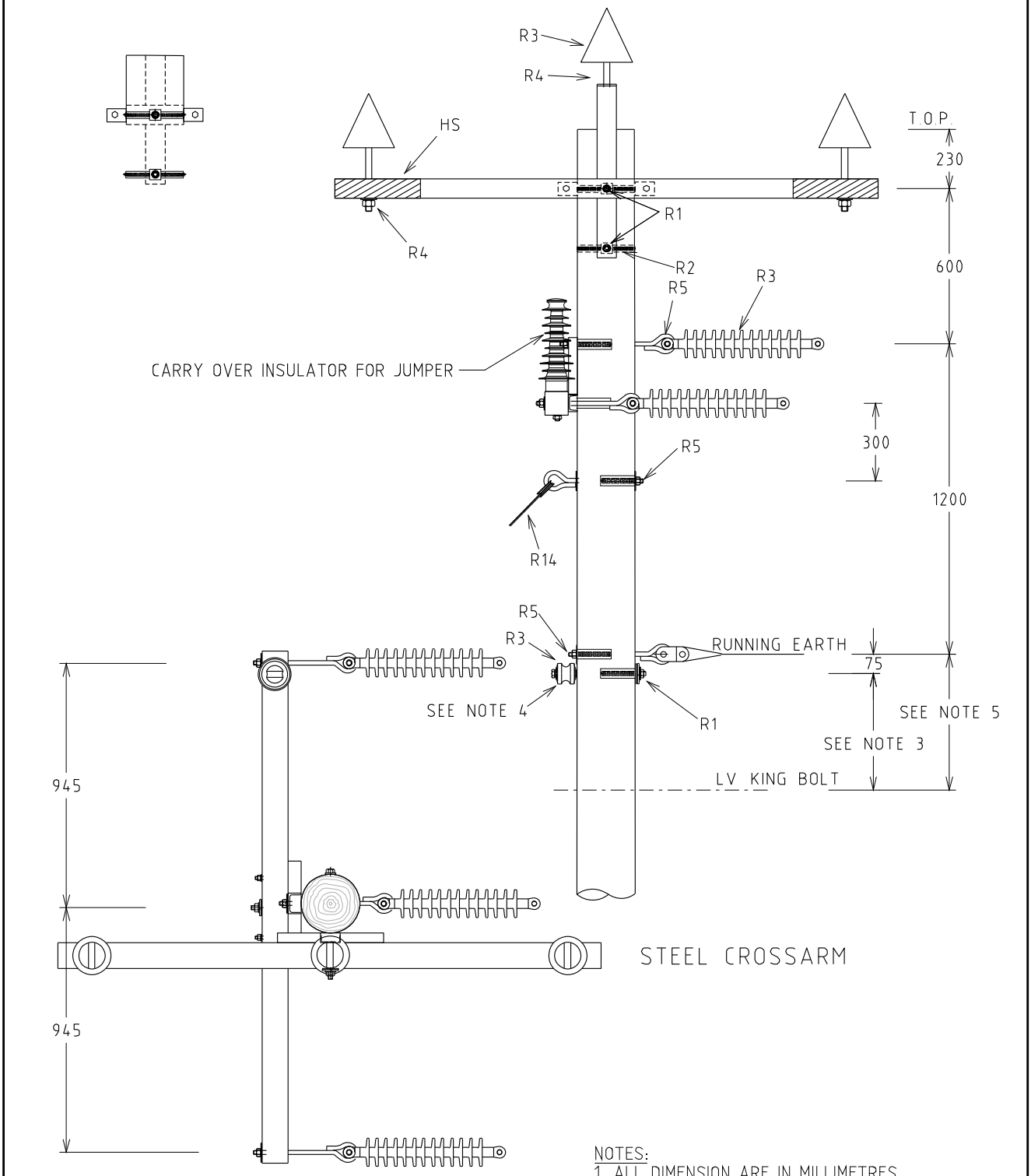
STRUCTURE

TITLE: TEE-OFF WITH DROPOUT FUSES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-03-2014	DRG. No.	H13-1
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. E	SHT.



NOTES:
1. ALL DIMENSION ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. REFER TO DWG H01-1 NOTES FOR CLEARANCES BETWEEN RE & LV..
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION ANGLE IS >2°.
5. IF NO R/E, 250.

RECOMMEND TO BE INSTALL ON A 12.5m POLE FOR ALL RURAL AREA.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	19.12.17	NOTES REVISED	JC	REE	GS
A	02.09.15	ORIGINAL ISSUE	REE	REE	GS

STRUCTURE

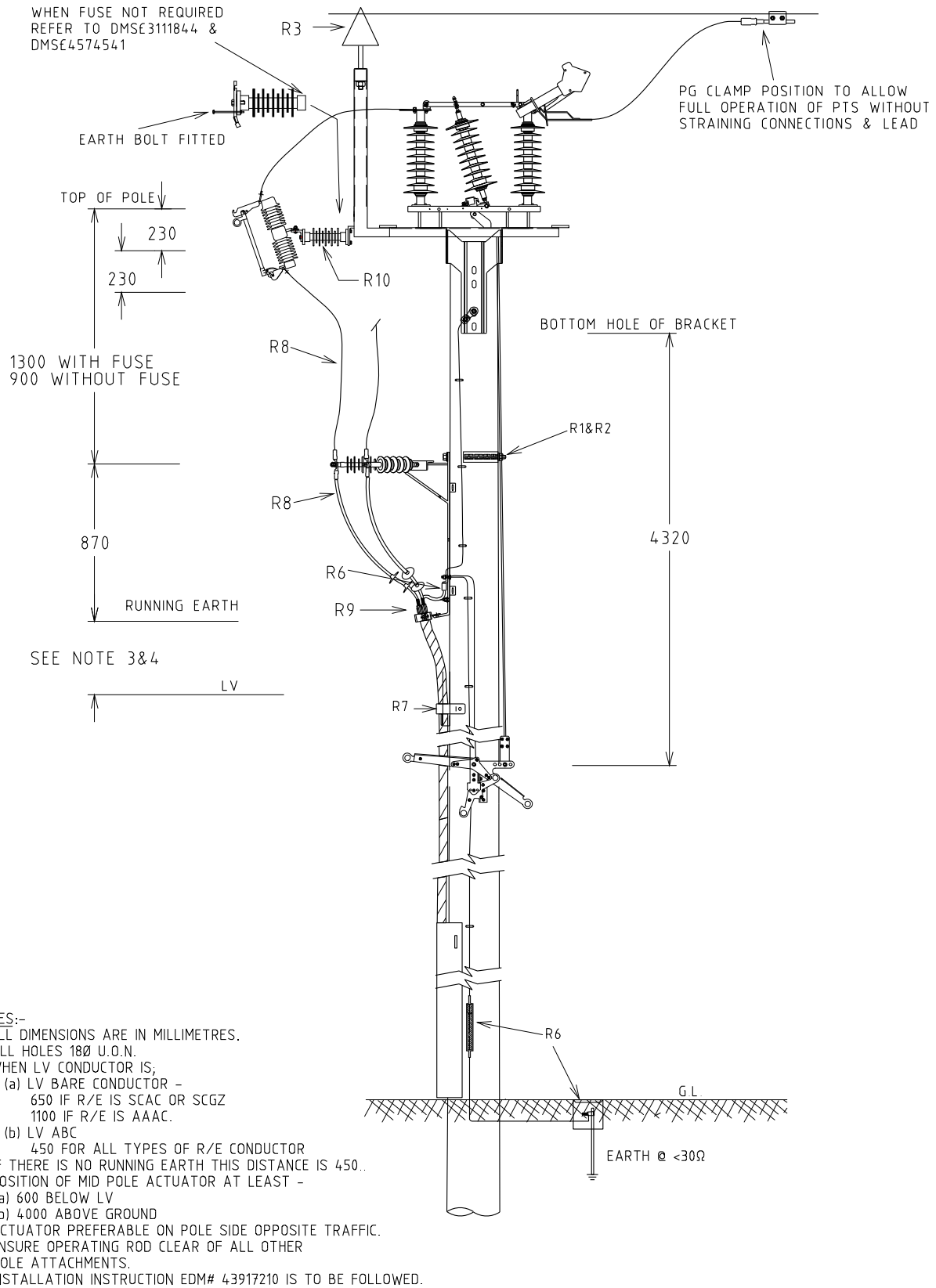
TITLE

TEE-OFF WITHOUT DROPOUT FUSES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 11-06-2015	DRG. No.	
ORIGINATED: REE	SCALE: NTS	H13-2	
CHECKED: REE			
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 THERE IS NO RUNNING EARTH THIS DISTANCE IS 450..
5. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
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.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	29.11.18	NOTE 8 ADDED	REE	NN	GS
B	19.06.18	EARTHING CONNECTION AND HANDLE DIMENSION CHANGED	REE	NMc	GS
A	31.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

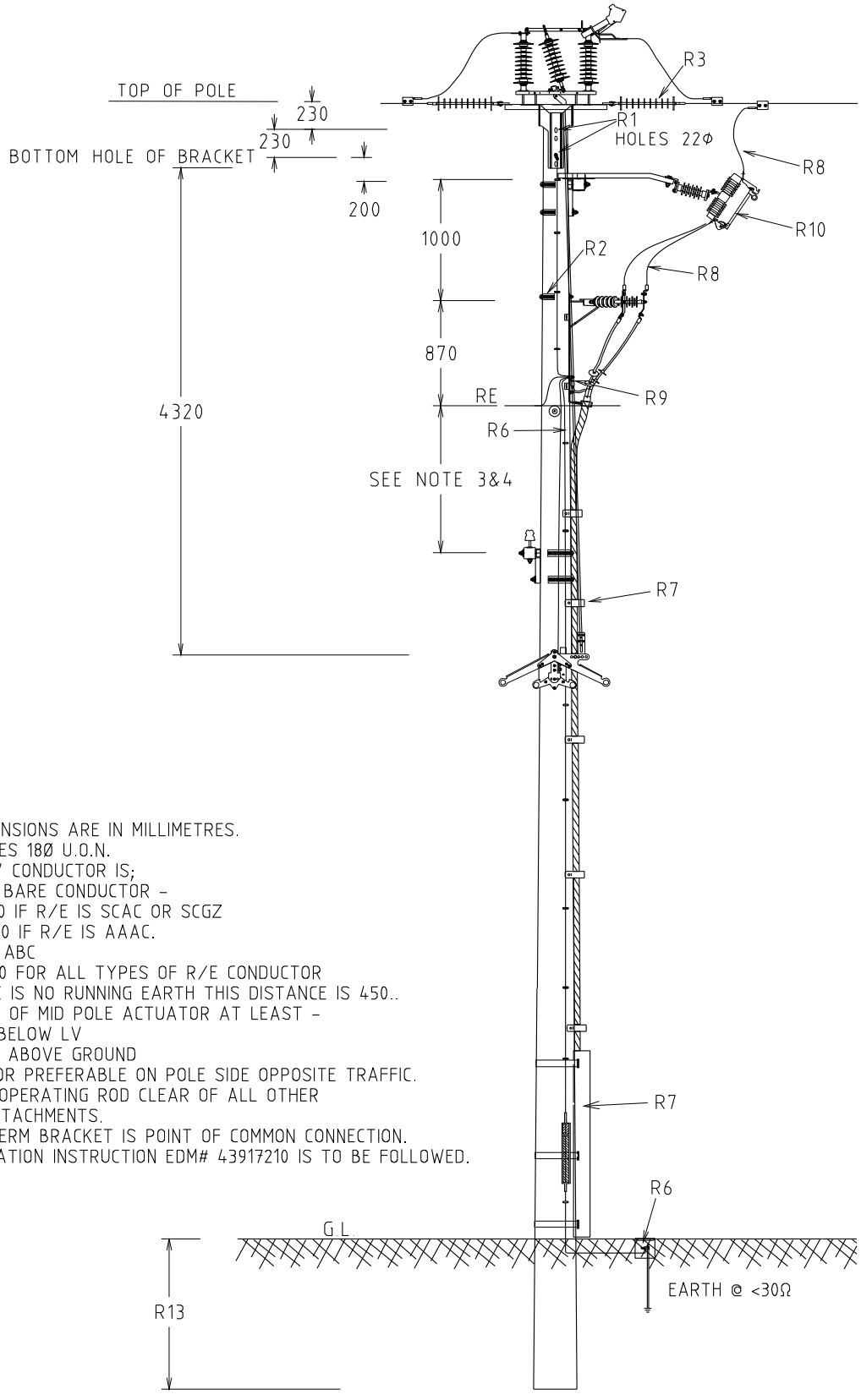
TITLE

COMBINATION SWITCH & FUSE
WITH RAISER (FLY-OVER SWITCH)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 09-01-2018	DRG. No.	
ORIGINATED: REE	SCALE: NTS	H14-1	
CHECKED: JC			
APPROVED: GRANT STACY		REV. C	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 THERE IS NO RUNNING EARTH THIS DISTANCE IS 450..
5. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
6. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
7. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
8. CABLE TERM BRACKET IS POINT OF COMMON CONNECTION.
9. INSTALLATION INSTRUCTION EDM# 43917210 IS TO BE FOLLOWED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	19.06.18	EARTHING SYSTEM AND HANDLE DIMENSION CHANGED	REE	NMc	GS
A	23.01.18	ORIGINAL ISSUE	REE	JC	GS

STRUCTURE

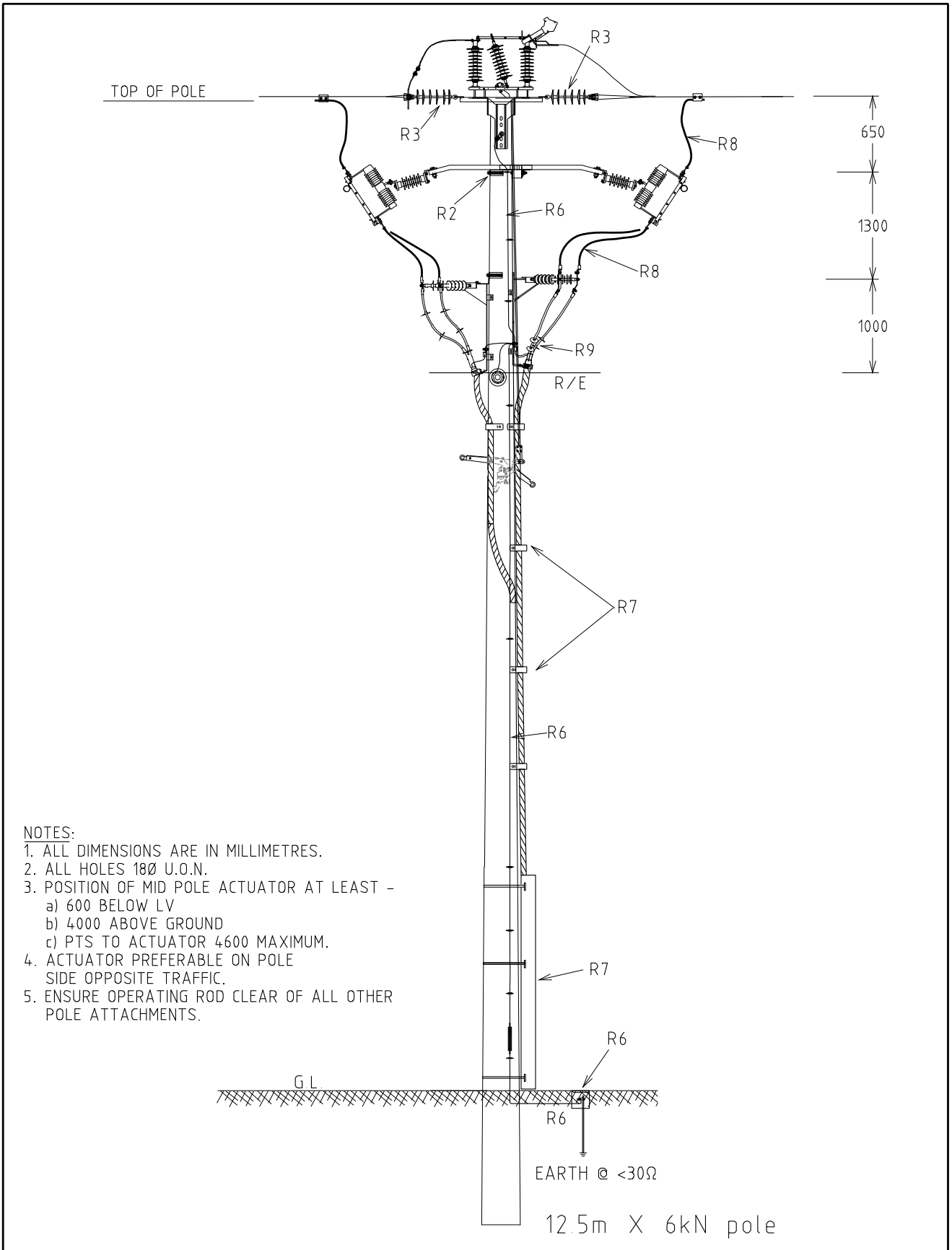
TITLE

COMBINATION SWITCH & FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

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



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM.
4. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
5. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.

REV.	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	31.01.18	PTS TYPE CHANGED	REE	JC	GS
C	16.11.17	NOTES ADDED	REE	JC	GS

STRUCTURE

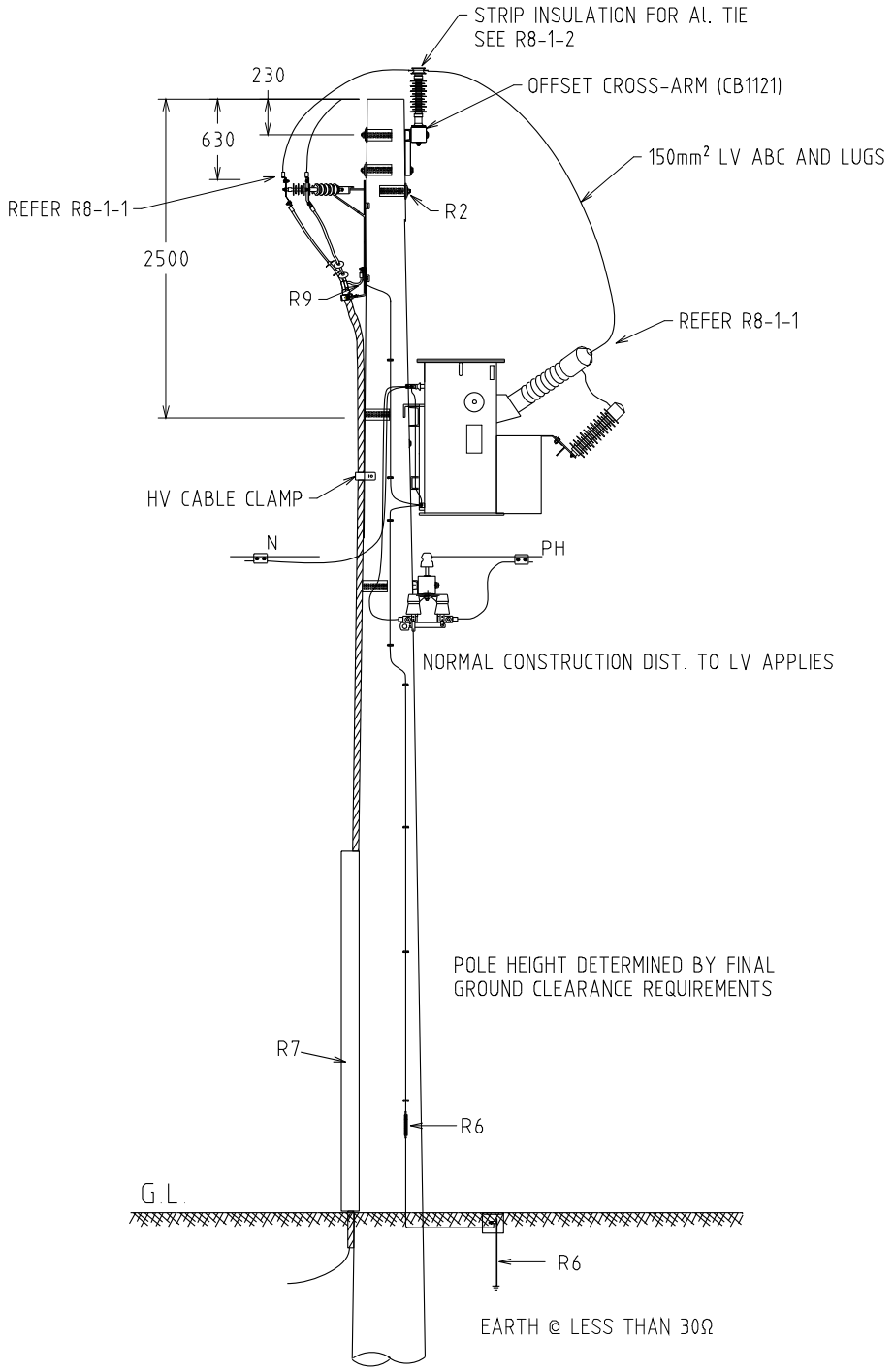
TITLE

PTS & FUSES/ISOLATORS
LAYOUT FOR 2 CABLES

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN JRR	DATE: 18-03-2014	DRG. No.	H14-3
ORIGINATED	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV D	SHT



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø UON.
3. CROSS ARM NOT TO BE EARTHED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	05.02.24	STRIP REFERENCE UPDATED	NMc	SH	CO
B	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	REE
A	20.11.13	ORIGINAL ISSUE			

STRUCTURE

TITLE

TRANSFORMER CABLE SUPPLIED

DISTRIBUTION CONSTRN. STANDARD

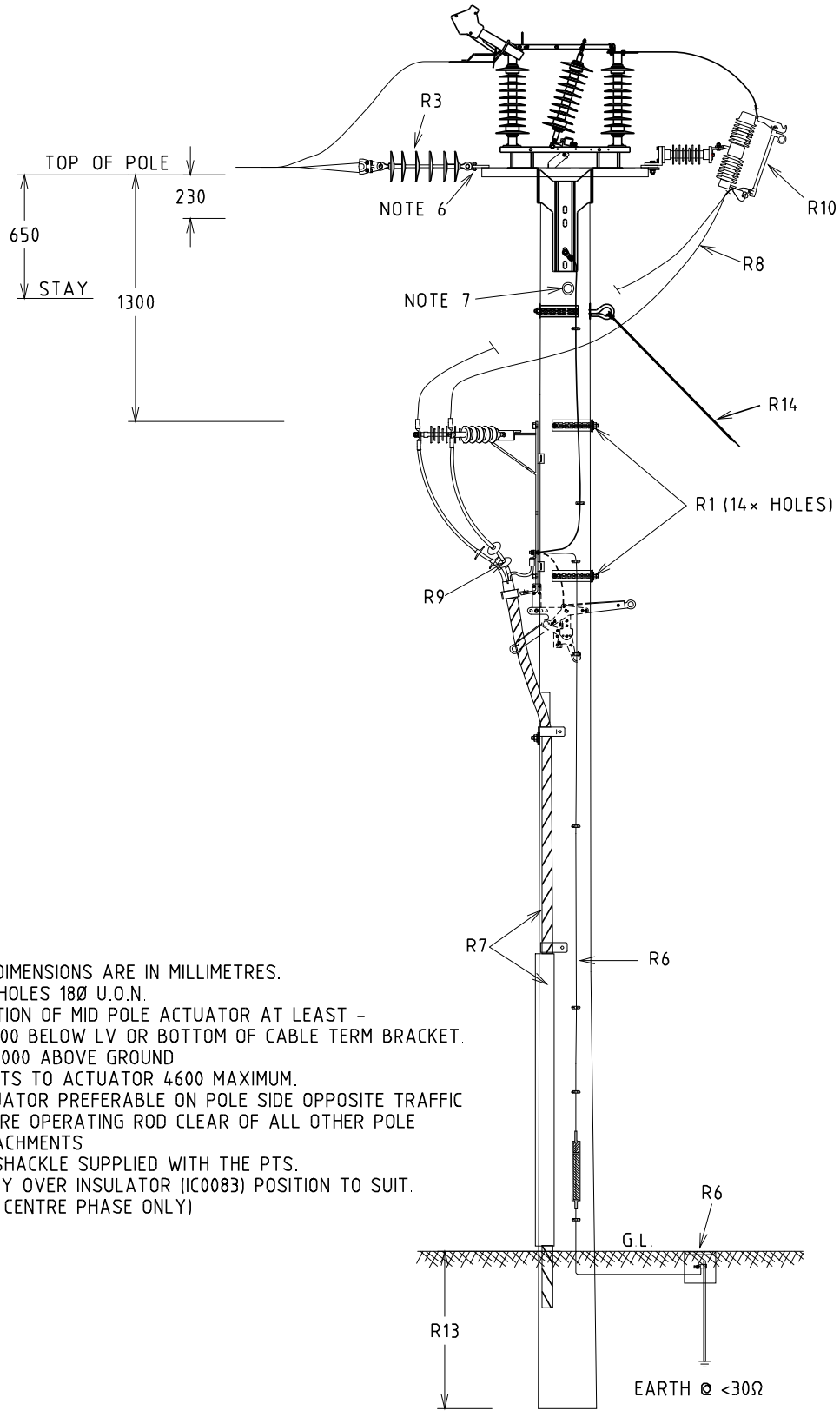
westernpower

DRAWN: JRR | DATE: 19-03-2014 | DRG. No. H17-4

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. C | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV OR BOTTOM OF CABLE TERM BRACKET.
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM.
4. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
5. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
6. "D" SHACKLE SUPPLIED WITH THE PTS.
7. CARRY OVER INSULATOR (IC0083) POSITION TO SUIT. (FOR CENTRE PHASE ONLY)

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	03.12.20	EARTHING AND DOF INSTALLATION METHOD MODIFIED	REE	NMc	GS
D	31.01.18	PTS TYPE CHANGED	REE	JC	GS
C	16.11.17	NOTES REVISED	REE	JC	GS
B	23.03.16	STAY ADDED	JC	REE	GS
A	20.11.13	ORIGINAL ISSUE			

STRUCTURE

TITLE

TERMINATION POLE TOP SWITCH WITH CABLE & DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

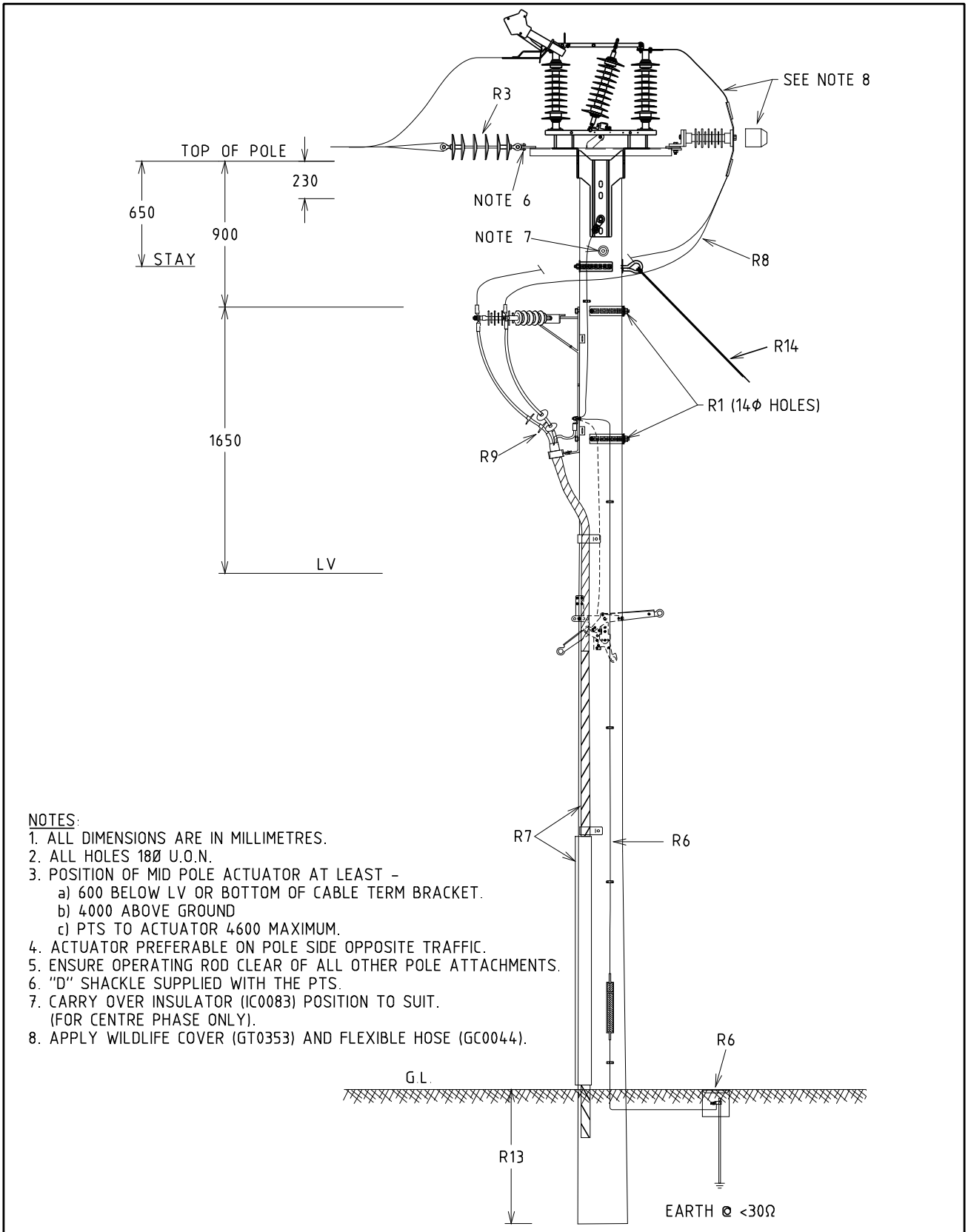
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H18

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. E | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV OR BOTTOM OF CABLE TERM BRACKET.
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM.
4. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
5. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
6. "D" SHACKLE SUPPLIED WITH THE PTS.
7. CARRY OVER INSULATOR (IC0083) POSITION TO SUIT. (FOR CENTRE PHASE ONLY).
8. APPLY WILDLIFE COVER (GT0353) AND FLEXIBLE HOSE (GC0044).

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	03.12.20	EARTHING & SURGE ARRESTOR INSTA. METHOD MODIFIED	REE	NMc	GS
D	31.01.18	PTS TYPE CHANGED	REE	JC	GS
C	16.11.17	NOTES REVISED	REE	JC	GS
B	23.03.16	STAY ADDED, DWG. No AND TITLE CHANGED	JC	REE	GS

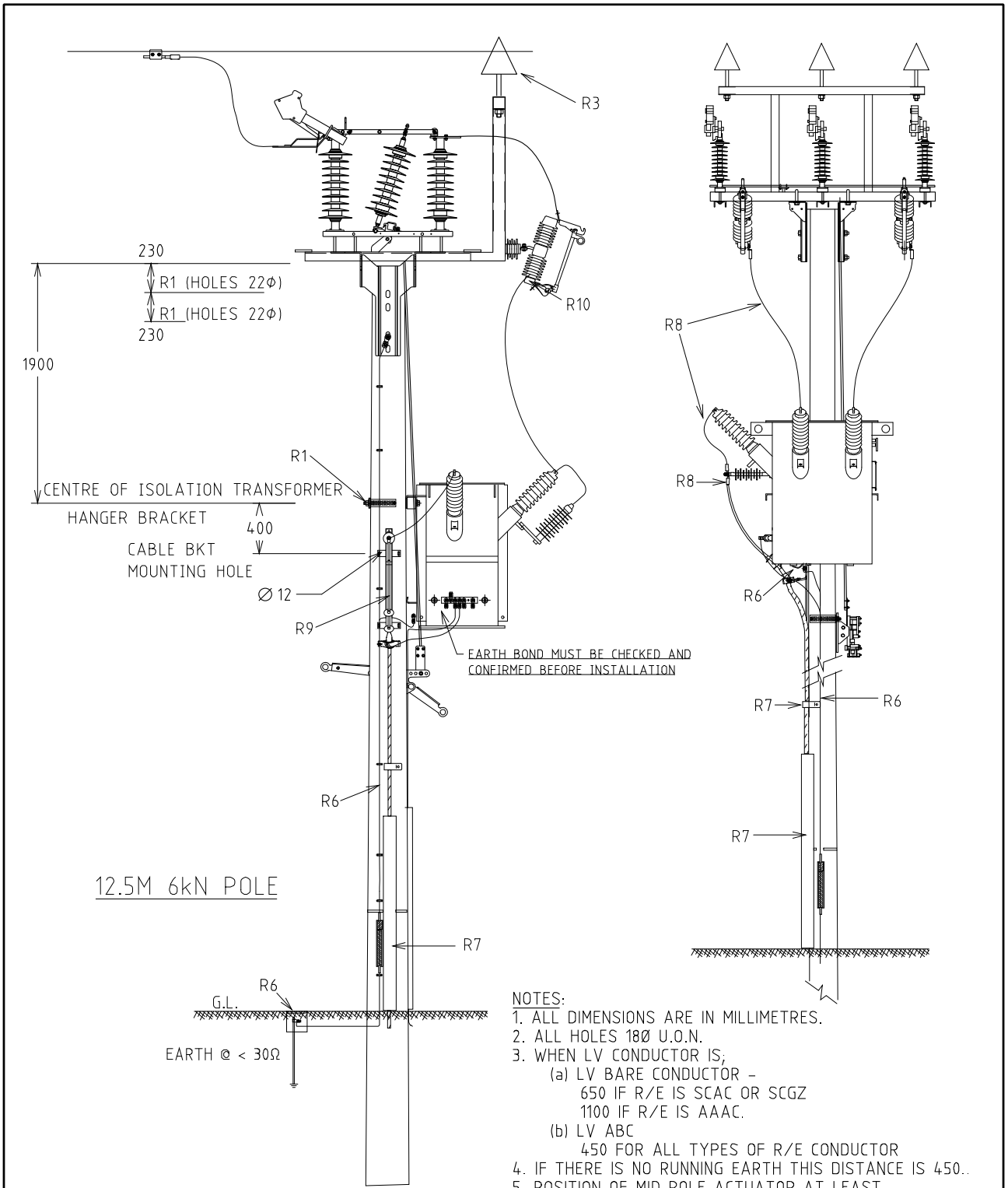
STRUCTURE

TITLE
TERMINATION POLE TOP SWITCH WITH CABLE ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H19
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. E | 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 THERE IS NO RUNNING EARTH THIS DISTANCE IS 450..
5. POSITION OF MID POLE ACTUATOR AT LEAST –
   a) 600 BELOW LV
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM.
6. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
7. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	31.01.18	PTS TYPE CHANGED	REE	JC	GS
D	16.11.17	TITLE AND DRAWING NUMBER CHANGED	REE	JC	GS
C	20.03.14	FORMAT CHANGED			GS
B	20.11.13	ORIGINAL ISSUE			

STRUCTURE

TITLE

ISOLATION TRANSFORMER

DISTRIBUTION CONSTRN. STANDARD

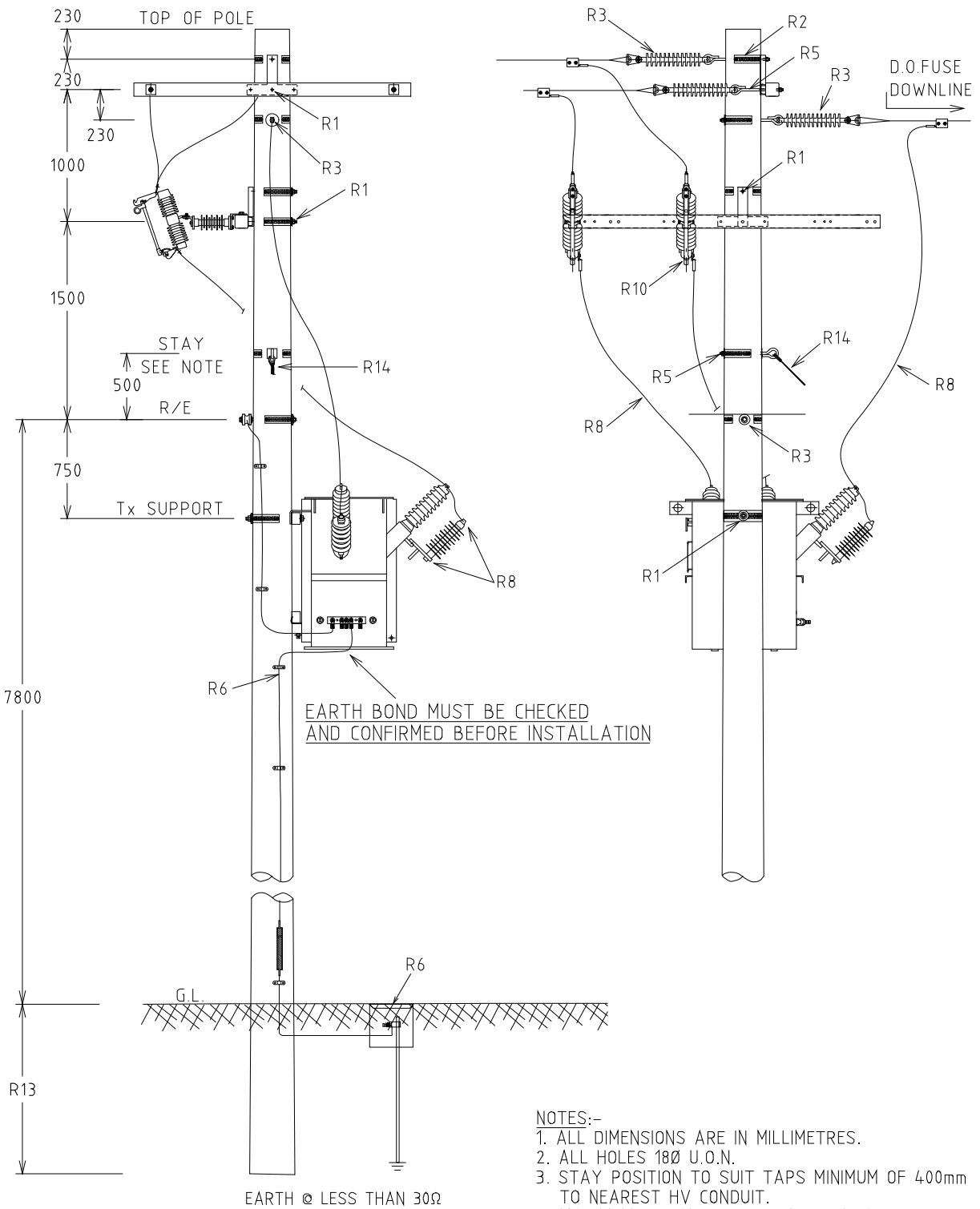
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H20-1

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. E | SHT.



12.5M 6kN POLE COUNTRY NETWORKS

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. STAY POSITION TO SUIT TAPS MINIMUM OF 400mm TO NEAREST HV CONDUIT.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
5. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
6. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
E	31.07.17	TITLE CHANGED	CO	NMc	GS
D	20.03.14	FORMAT CHANGED			GS
C	20.11.13	ORIGINAL ISSUE			

STRUCTURE

TITLE: ISOLATION TRANSFORMER 3 PH TERMINATION 1 PH IN-LINE WITHOUT 1 PH DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

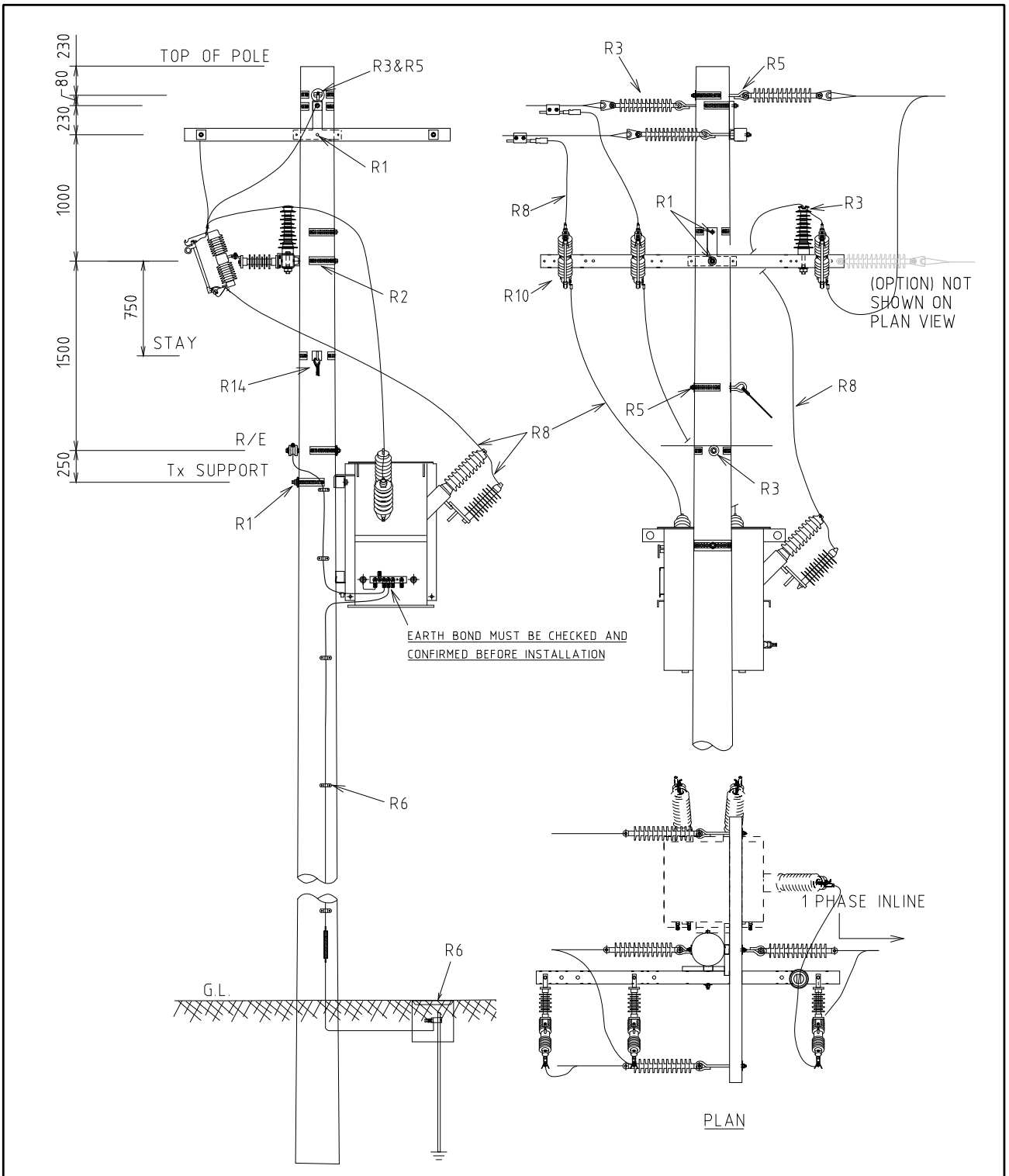
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H20-2

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. E | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
4. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
5. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	20.03.14	FORMAT CHANGED	CO	REE	GS
C	20.11.13	ORIGINAL ISSUE			

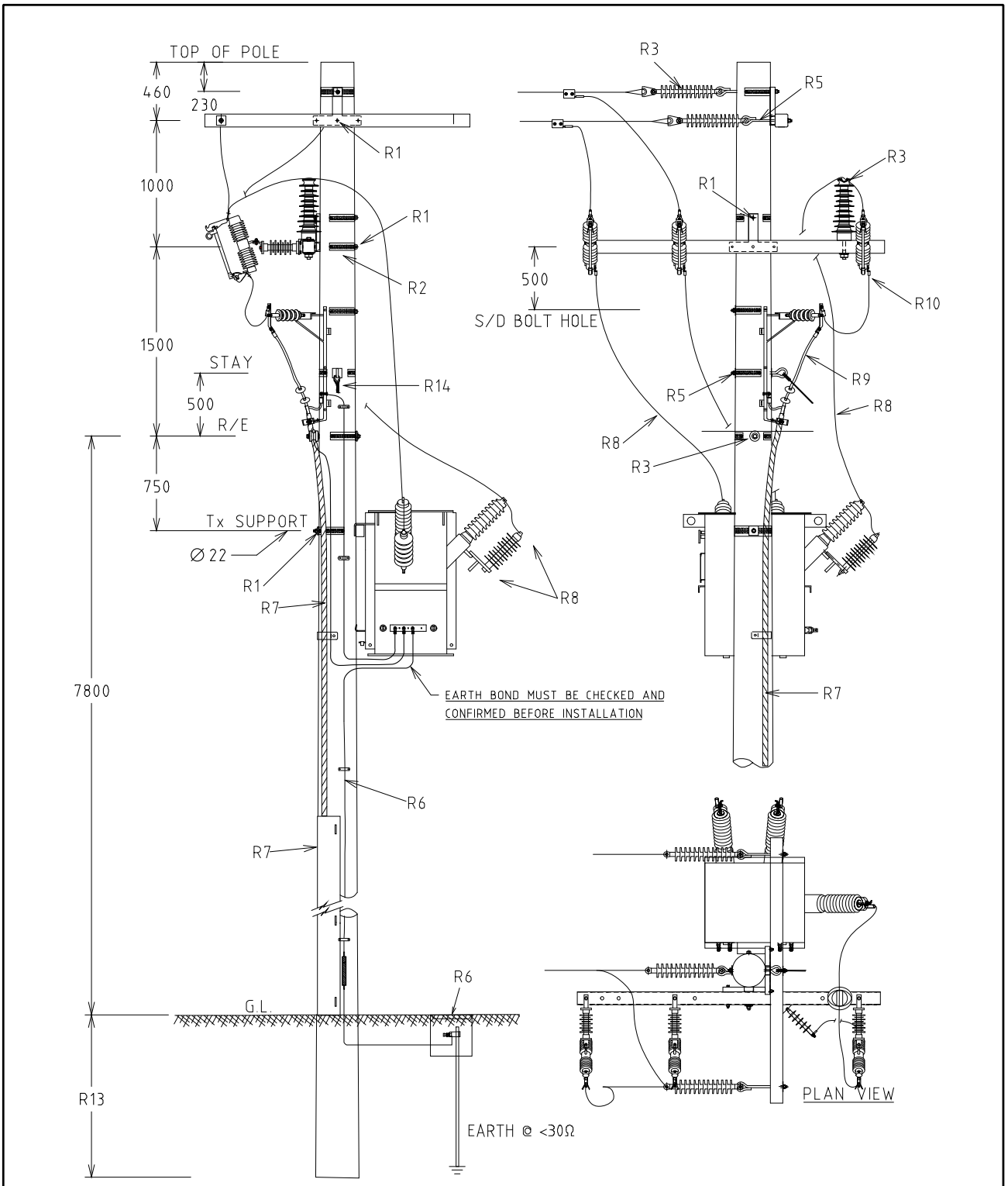
STRUCTURE

TITLE: ISOLATION TRANSFORMER
3 PH TERMINATION 1 PH IN-LINE
WITH DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H20-3
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. D	SHT.



12.5M 6kN POLE COUNTRY NETWORKS

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
4. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
5. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	20.03.14	FORMAT CHANGED			GS
C	20.11.13	ORIGINAL ISSUE			

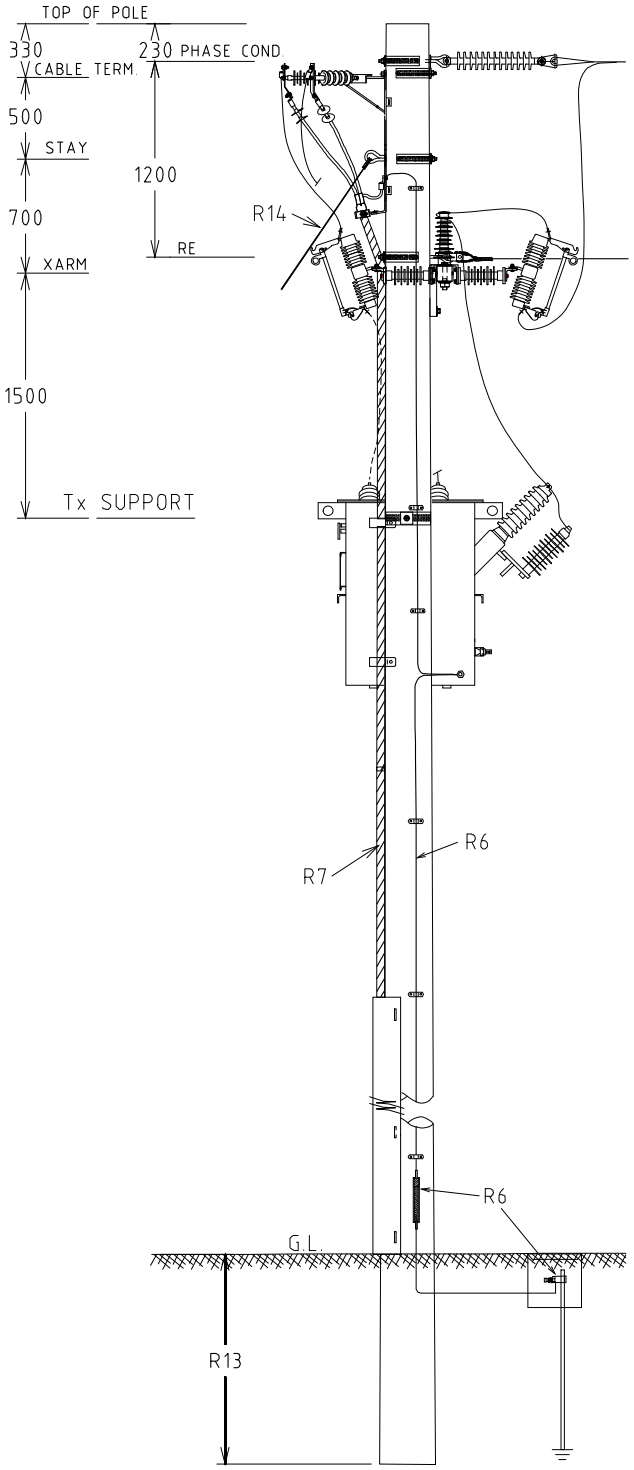
STRUCTURE

TITLE: ISOLATION TRANSFORMER 3 PH TERMINATION 1 PH IN-LINE WITH/WITHOUT DROPOUT FUSE

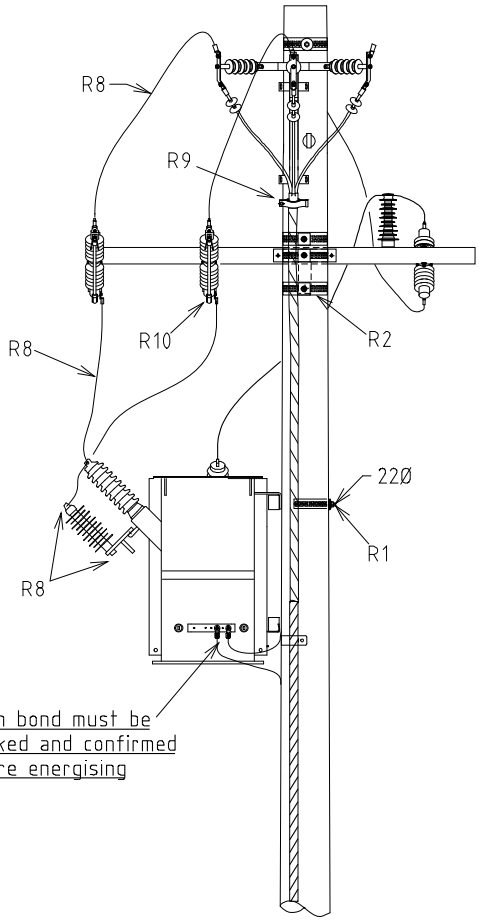
DISTRIBUTION CONSTRN. STANDARD

westernpower

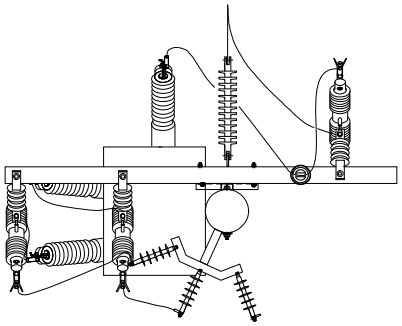
DRAWN: JRR	DATE: 20-03-2014	DRG. No. H20-4
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. D	SHT.



EARTH @ <30Ω



Earth bond must be checked and confirmed before energising



PLAN VIEW

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. HOLES 18Ø U.O.N.
3. R9 - CABLE TERM. BRACKET OFFSET TO INSTALL STAY.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
5. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
6. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	21.09.18	EARTH & LIVE LINE CONNECTION METHOD MODIFIED	NMc	NN	GS
E	30.04.15	FORMAT AND TRANSFORMER LOCATION CHANGED	CO	AK	GS
D	23.05.13	ORIGINAL ISSUE			

STRUCTURE

TITLE: ISOLATION TRANSFORMER 3 PH CABLE / 1 PH TEE-OFF WITH DROPOUT FUSE / LINK

DISTRIBUTION CONSTRN. STANDARD

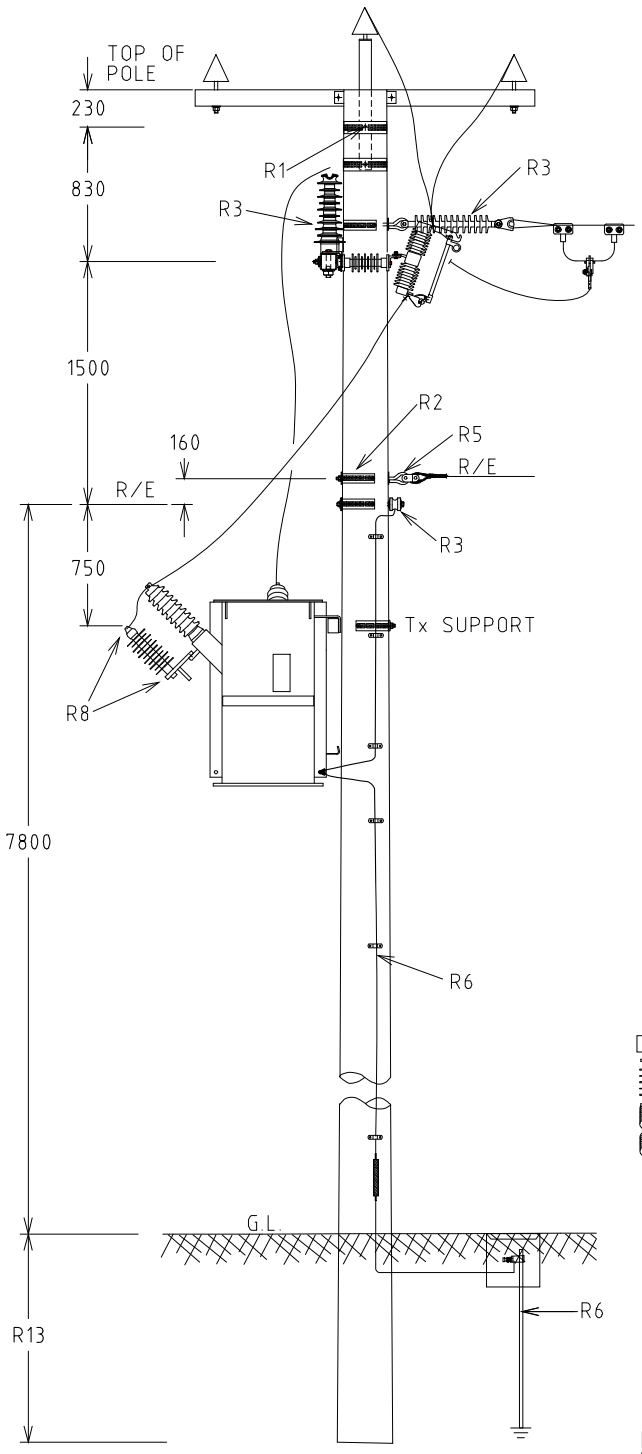
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H20-5

ORIGINATED: | SCALE: NTS

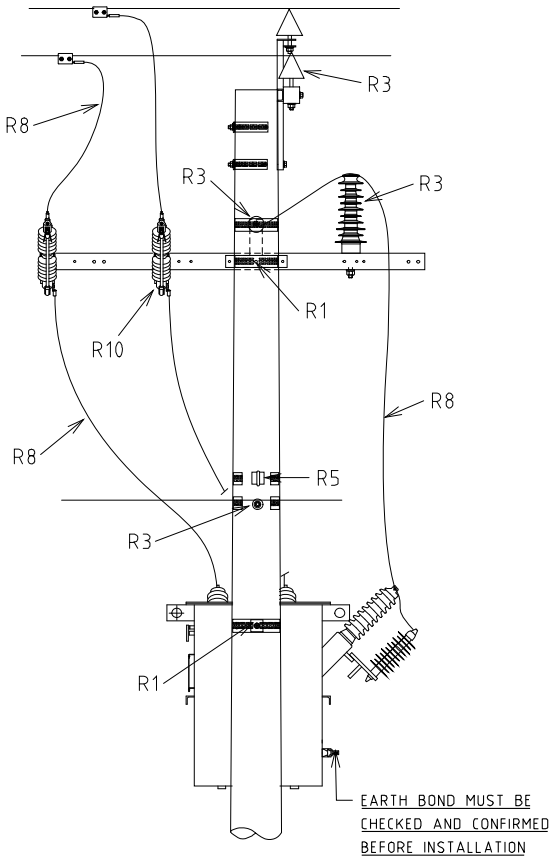
CHECKED: CO

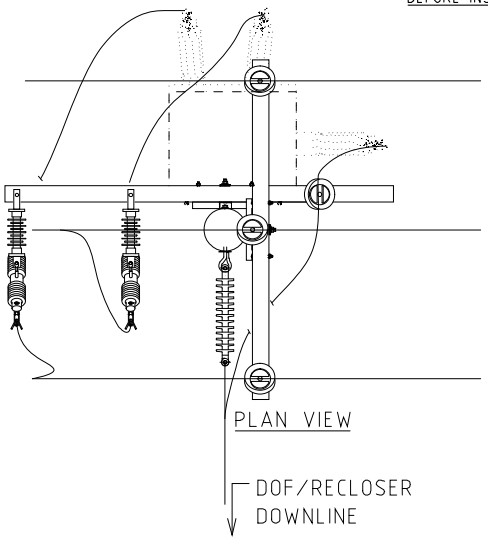
APPROVED: GRANT STACY | REV. F | SHT.



EARTH @ LESS THAN 30Ω

12.5M 6kN POLE COUNTRY NETWORKS





NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
5. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	20.03.14	FORMAT CHANGED			GS
C	20.07.11	ORIGINAL ISSUE			

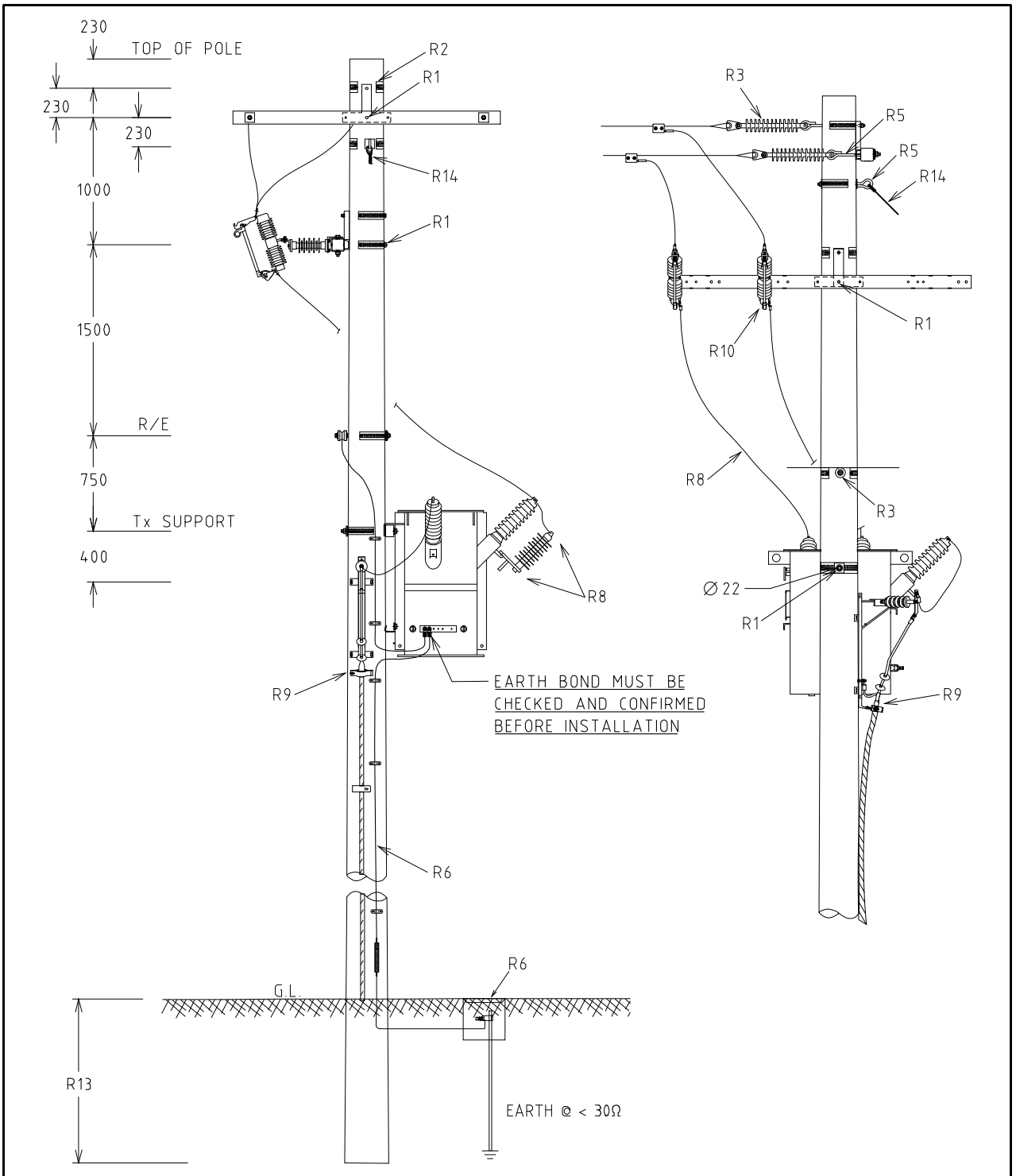
STRUCTURE

TITLE: ISOLATION TRANSFORMER PH IN-LINE / 1 PH TEE-OFF WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H20-6
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. D / SHT.



12.5M 6kN POLE COUNTRY NETWORKS

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m
4. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
5. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	20.03.14	FORMAT CHANGED			GS
C	23.05.13	ORIGINAL ISSUE			

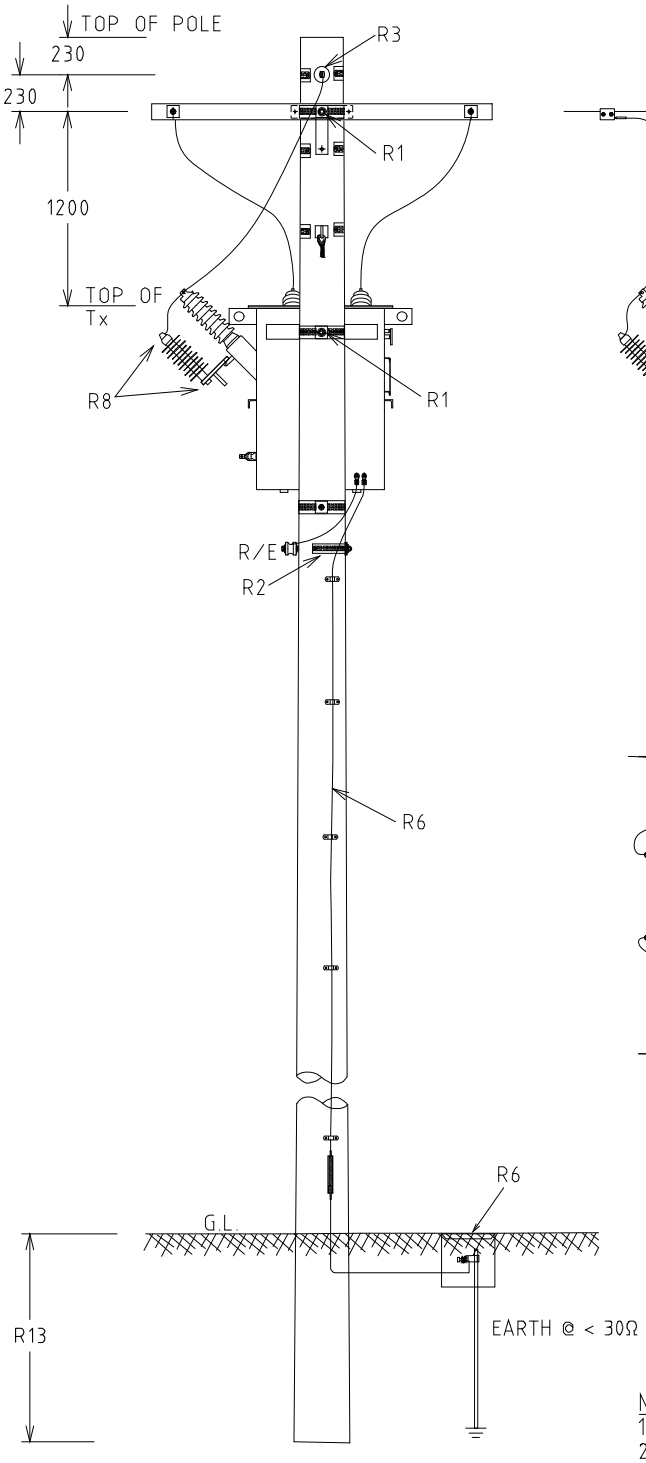
STRUCTURE

TITLE: ISOLATION TRANSFORMER 3 PH TERMINATION / 1 PH CABLE WITH DROPOUT FUSE

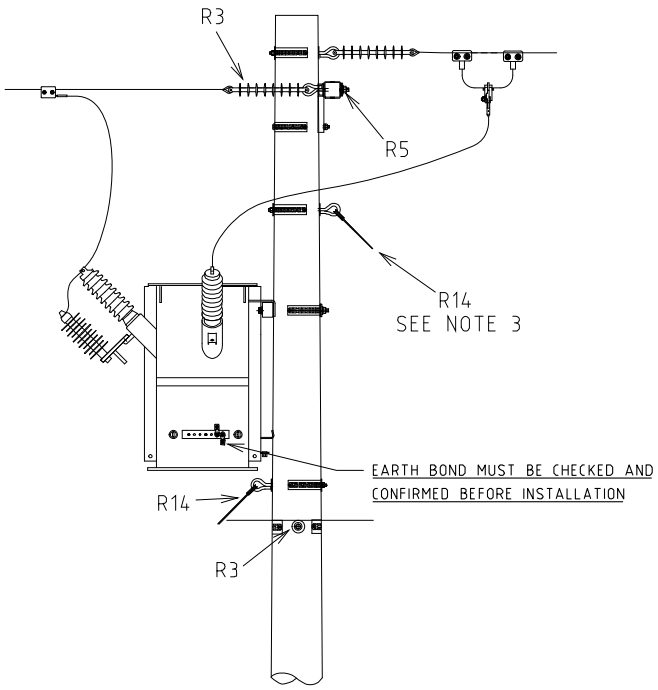
DISTRIBUTION CONSTRN. STANDARD

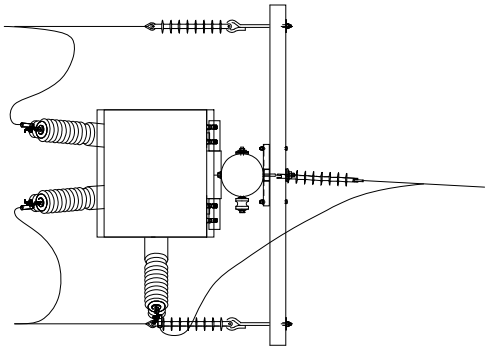
westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H20-7
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. D	SHT.



12.5M 6kN POLE COUNTRY NETWORKS





PLAN VIEW

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18ϕ U.O.N.
3. STAY POSITION TO SUIT TAPS MINIMUM OF 400mm TO NEAREST HV CONDUIT
4. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
5. DO NOT INSTALL DOF ON THE LOAD SIDE IF 1PH RECLOSER IS INSTALLED DOWNSTREAM.
6. PLANNING ENGINEERS TO BE CONSULTED TO DETERMINE FUSE GRADING.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	20.03.14	FORMAT CHANGED			GS
A	20.07.11	ORIGINAL ISSUE			

STRUCTURE

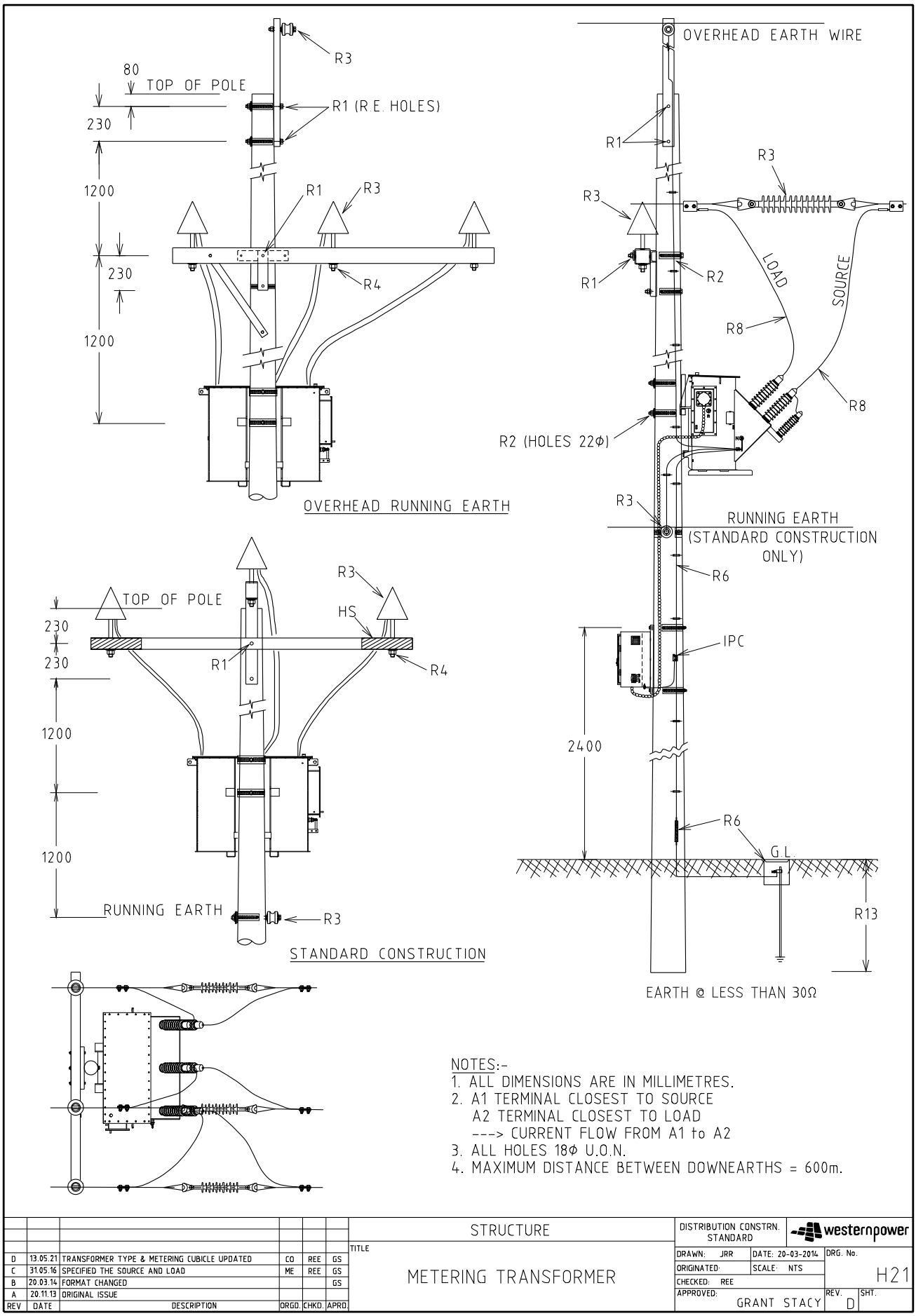
TITLE

TERMINATION TRANSFORMER
2 PHASE LINE / 1 PHASE SPUR

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H20-8
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. B SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. A1 TERMINAL CLOSEST TO SOURCE
   A2 TERMINAL CLOSEST TO LOAD
   ---> CURRENT FLOW FROM A1 to A2
3. ALL HOLES 18Φ U.O.N.
4. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	13.05.21	TRANSFORMER TYPE & METERING CUBICLE UPDATED	CO	REE	GS
C	31.05.16	SPECIFIED THE SOURCE AND LOAD	ME	REE	GS
B	20.03.14	FORMAT CHANGED			GS
A	20.11.13	ORIGINAL ISSUE			

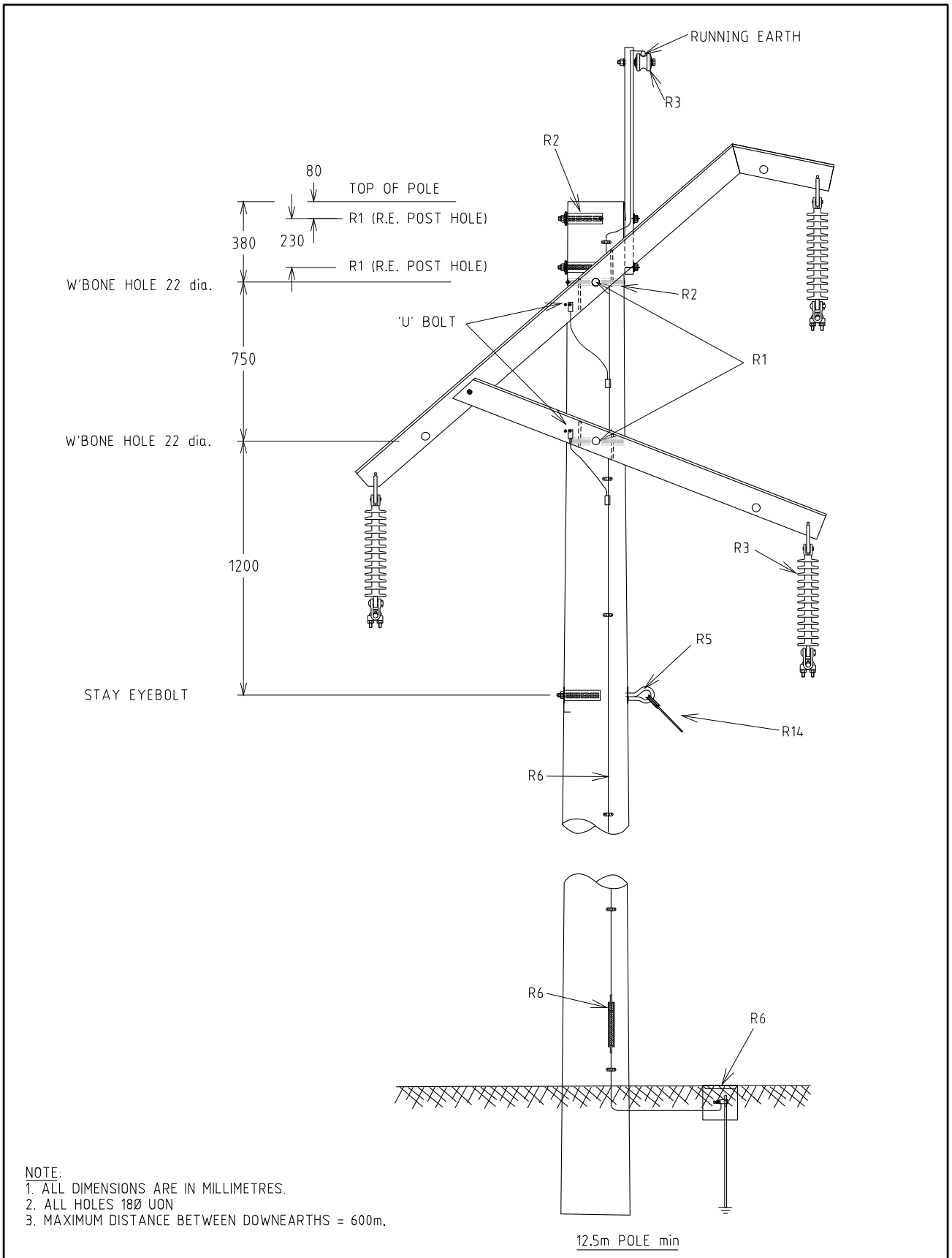
STRUCTURE

TITLE: METERING TRANSFORMER

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H21
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. D | SHT.



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø UON
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	11.10.08	EARTHING SYSTEM MODIFIED	REE	JC	GS
B	29.07.13	ORIGINAL ISSUE			

STRUCTURE

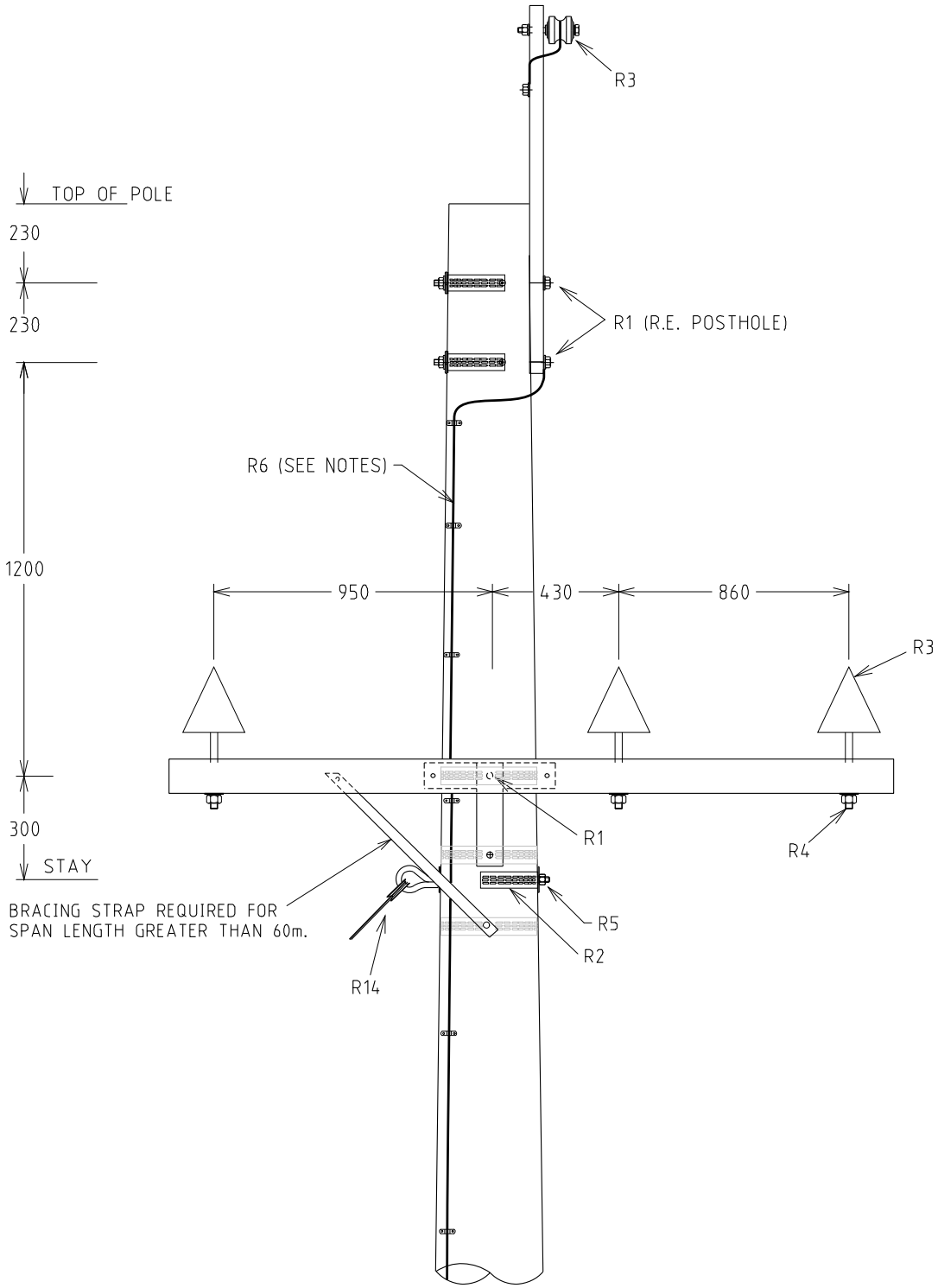
TITLE

INTERMEDIATE WISHBONE
WITH OVERHEAD EARTHWIRE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H22
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. C	SHT.



NOTES:
1. ALL HOLES 18Ø U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
3. DOWN EARTH APPLIED ON OPPOSITE SIDE OF POLE TO CENTRE PHASE INSULATOR, AS SHOWN.
4. CROSS-ARM BRACING STRAP MAY BE REQUIRED, SEE H3.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	03.02.17	CHANGED DISTANCE BETWEEN POLE TOP & BOLT HOLE	CO	REE	GS
B	13.08.14	FORMAT CHANGED AND BRACING STRAP ADDED	JC	REE	GS
A	03.07.13	ORIGINAL ISSUE			

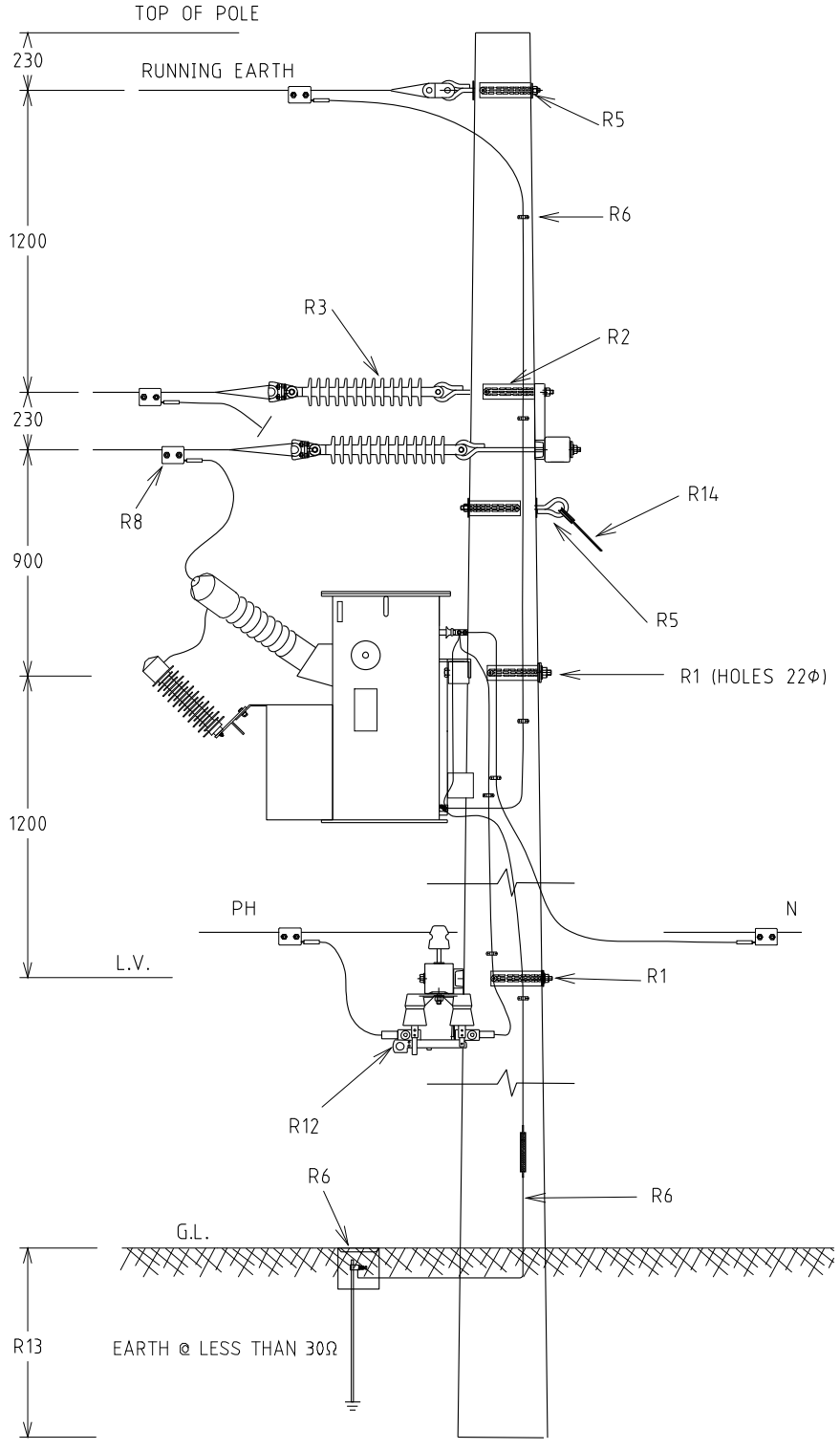
STRUCTURE

TITLE
INTERMEDIATE FLAT CONSTRUCTION WITH OVERHEAD EARTHWIRE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H23
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. C | SHT.



12.5m POLE

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
B	20.03.14	FORMAT CHANGED			GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

TITLE

TERMINATION TRANSFORMER WITH OVERHEAD EARTHWIRE

DISTRIBUTION CONSTRN. STANDARD

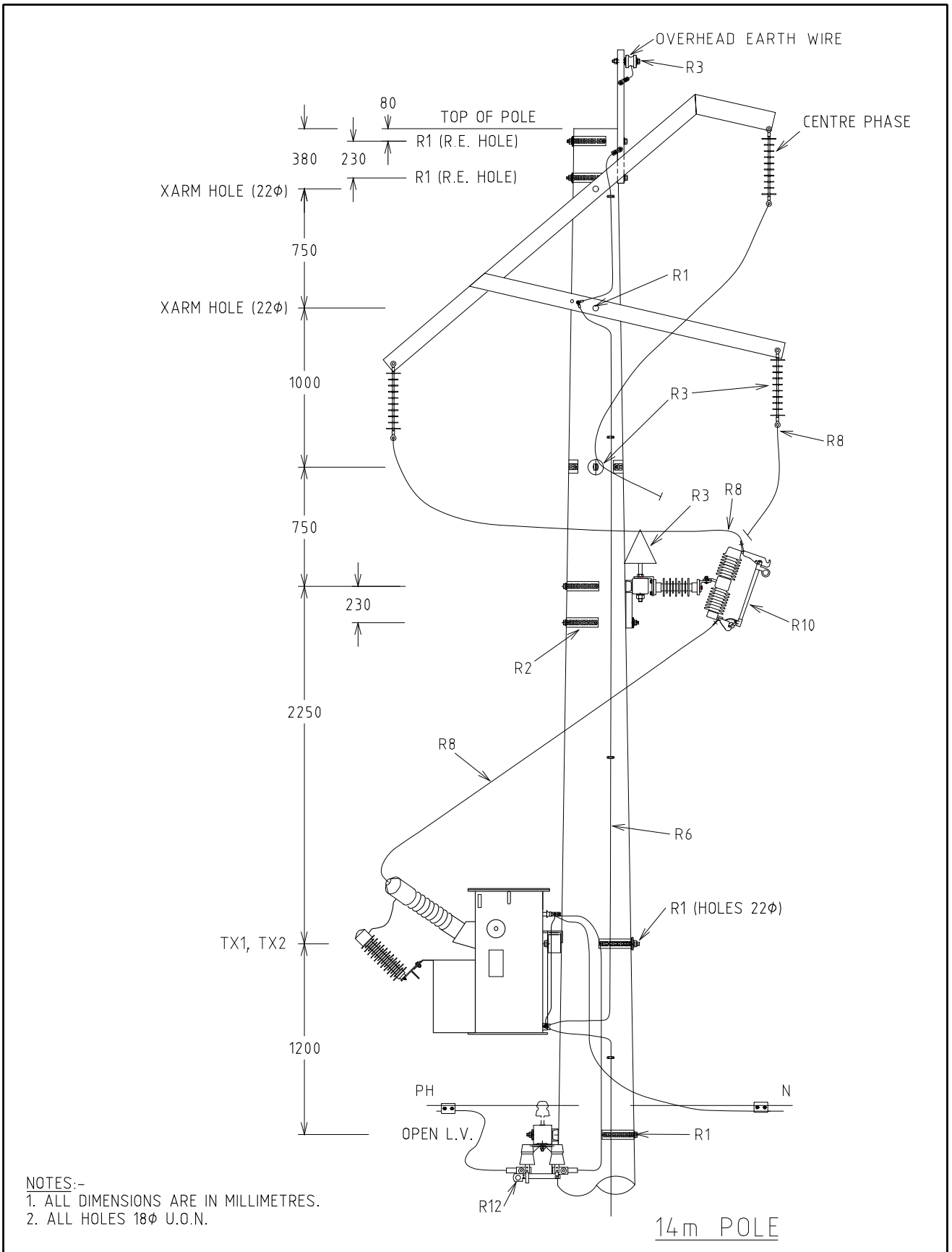
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H24

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. C | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	16.11.18	EARTHING SYSTEM MODIFIED & TX MODEL CHANGED	NMc	NN	GS
A	20.11.13	ORIGINAL ISSUE			

STRUCTURE

TITLE: INTERMEDIATE TRANSFORMER WISHBONE CONSTRUCTION

DISTRIBUTION CONSTRN. STANDARD

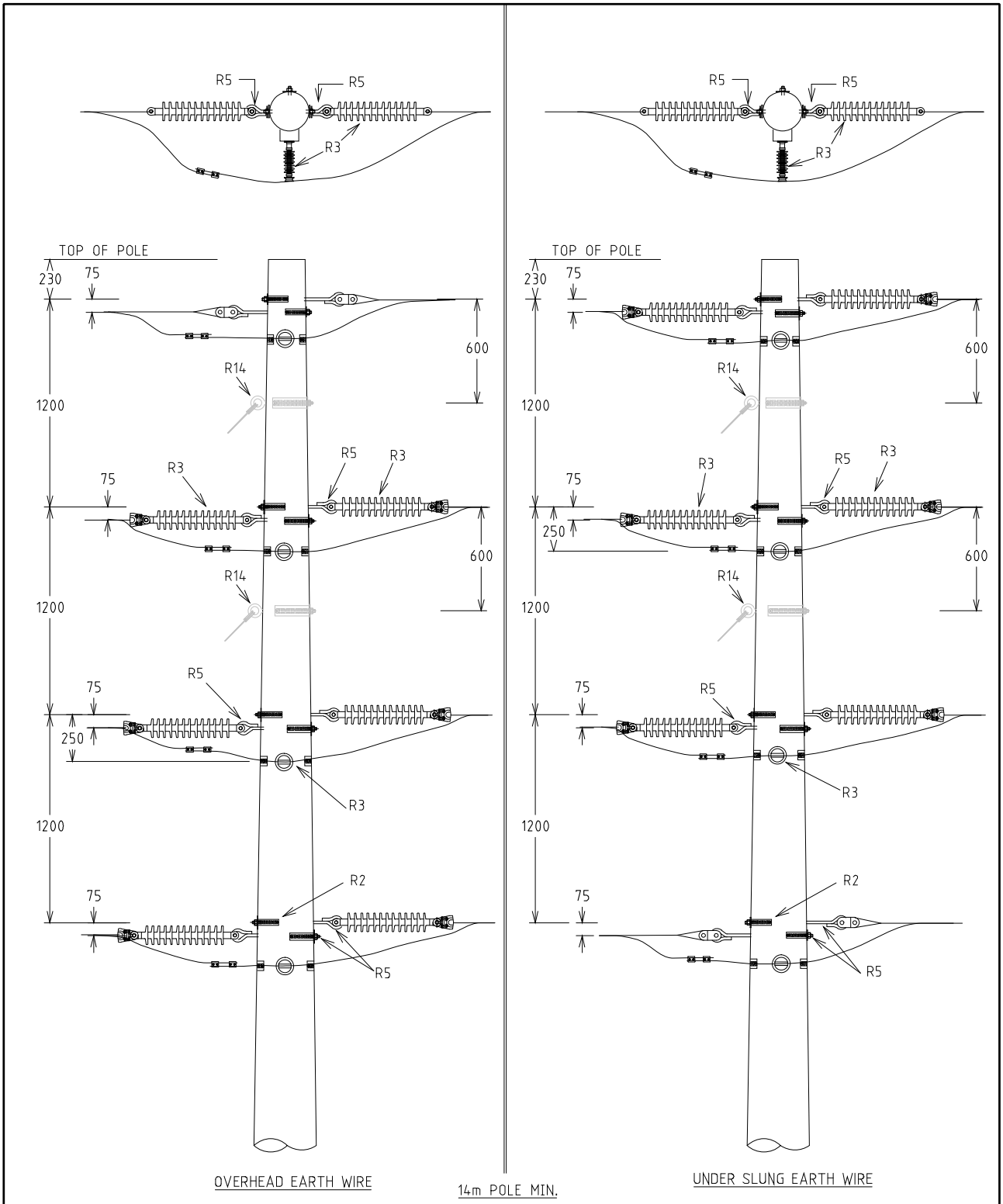
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H25

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. B | SHT.



NOTES:-
1. ALL HOLES 18ϕ U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTHS = 600m.
3. INSTALL STAYS IF REQUIRED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	03.02.17	DRAWING NUMBER CHANGED TO H26-1	CO	RE	GS
B	15.01.16	EARTHING & STAY SYSTEM MODIFIED AND TITLE REVISED	FK	ME	GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

TITLE

VERTICAL STRAIN

DISTRIBUTION CONSTRN. STANDARD

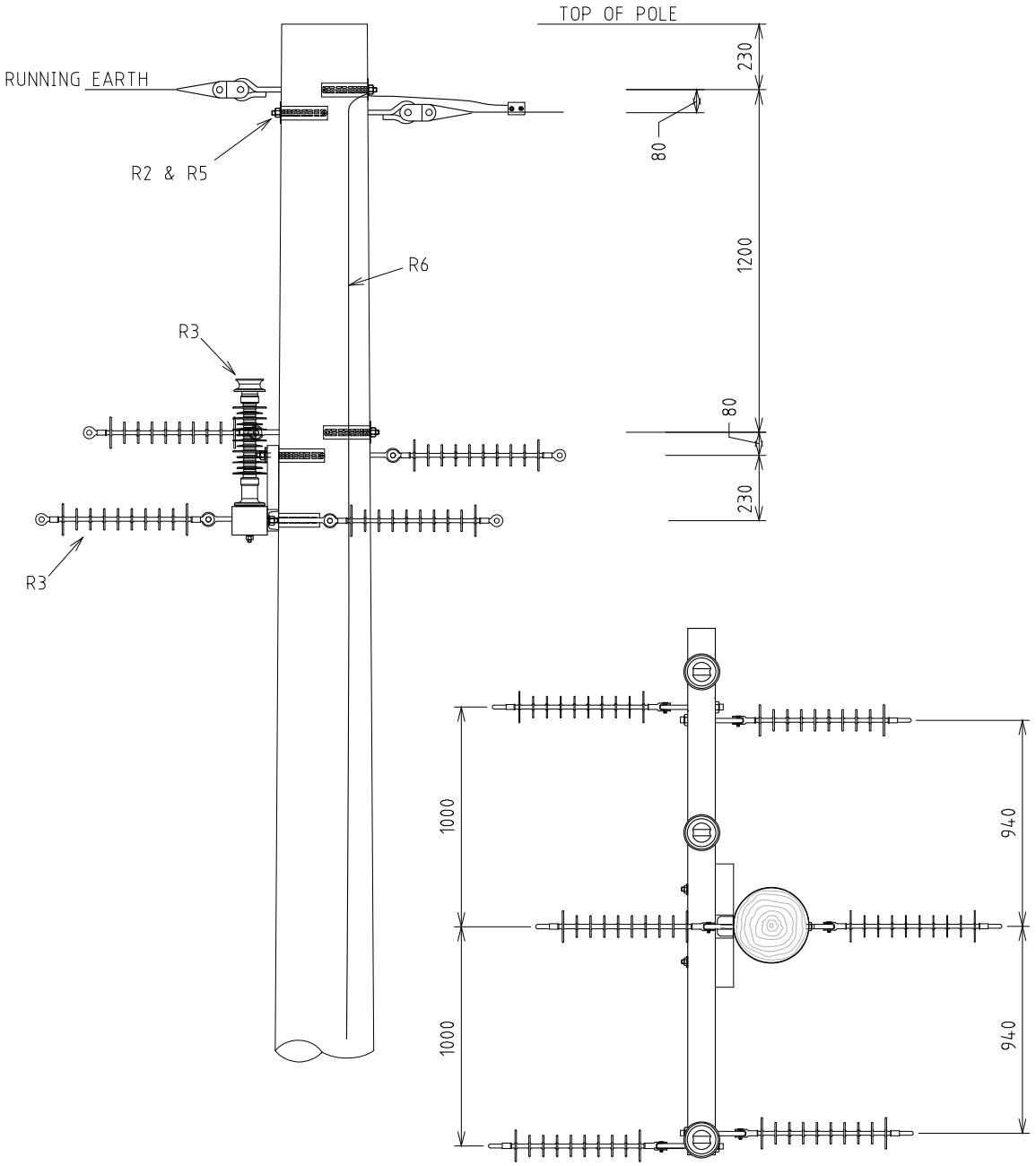
westernpower

DRAWN: JRR | DATE: 20-03-2014 | DRG. No. H26-1

ORIGINATED: | SCALE: NTS

CHECKED: FK

APPROVED: GRANT STACY | REV. C | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMTRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	03.02.17	ORIGINAL ISSUE	CO	REE	GS

STRUCTURE

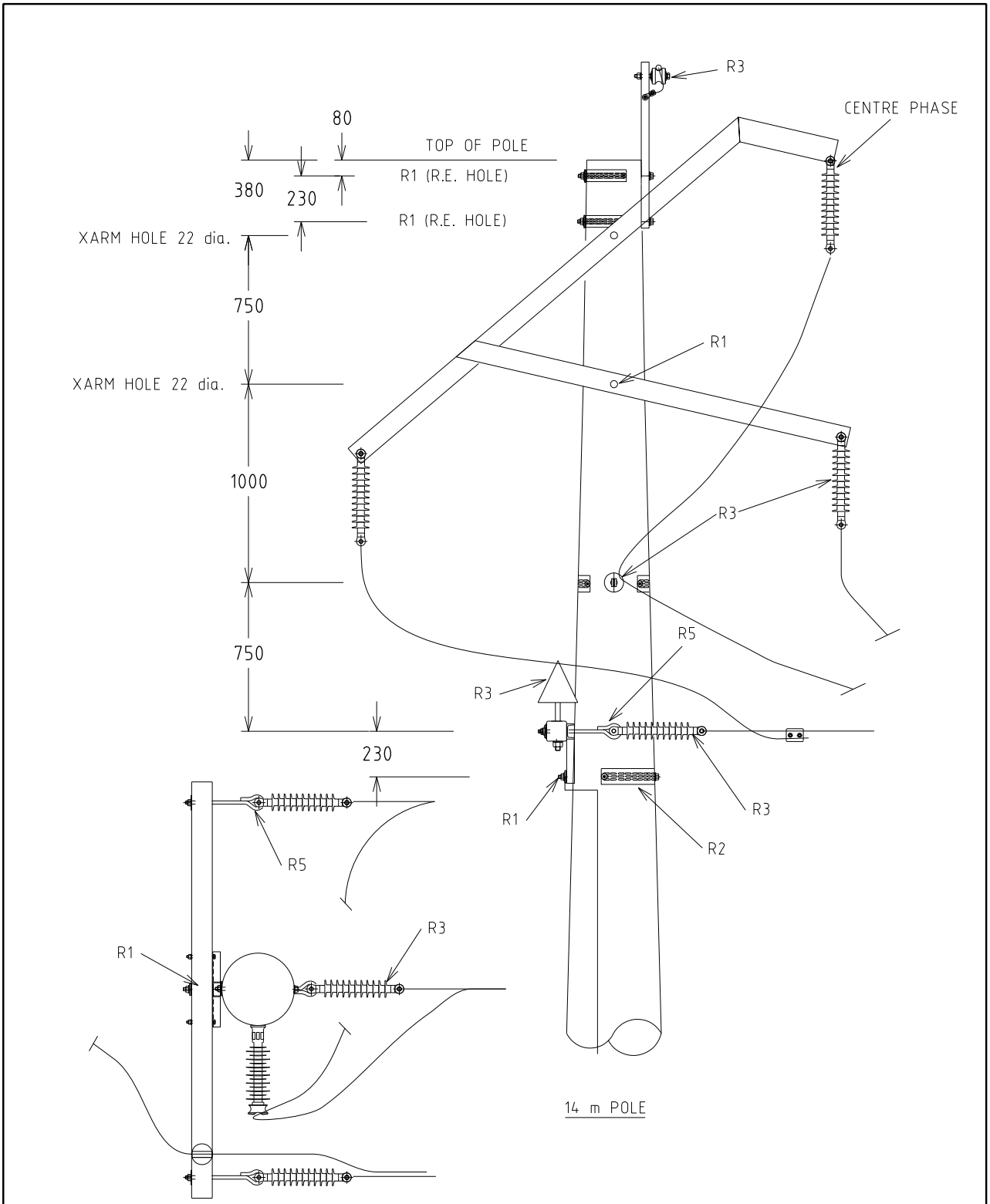
TITLE

INLINE STRAIN
WITH OVER HEAD EARTH WIRE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 01-12-2016	DRG. No. H26-2
ORIGINATED: CO	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A SHT.



NOTE:-
1. ALL HOLES 18DIA U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
B	30.04.15	FORMAT AND TITLE CHANGED	REE	REE	GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

TITLE: WISHBONE CONSTRUCTION WITH TEE-OFF

DISTRIBUTION CONSTRN. STANDARD

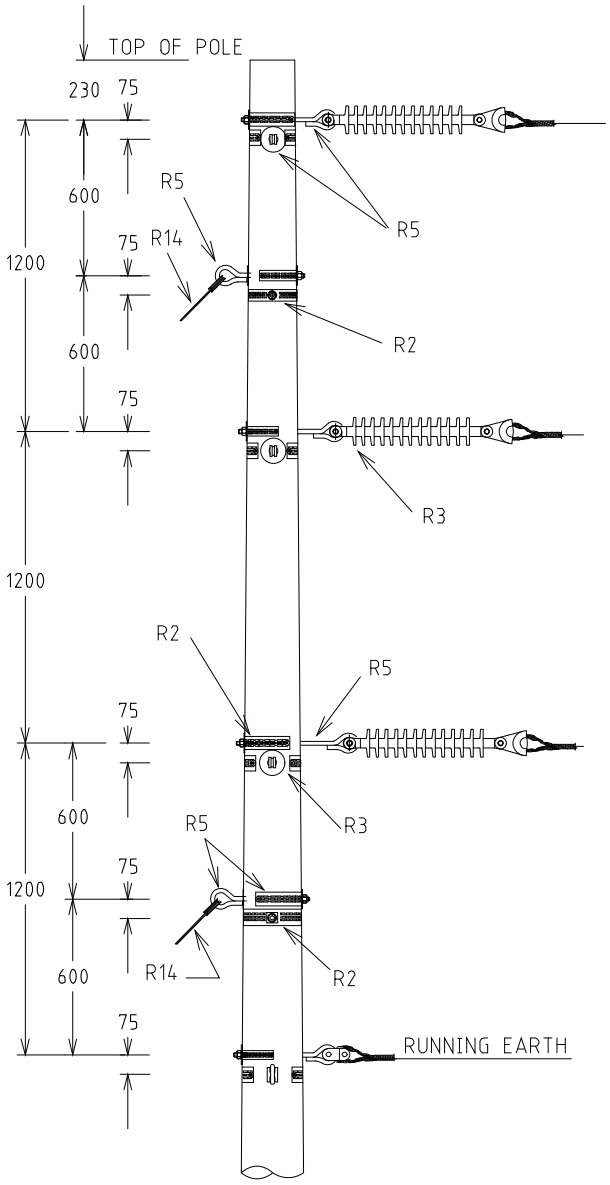
westernpower

DRAWN: JRR | DATE: 10-03-2014 | DRG. No. H27

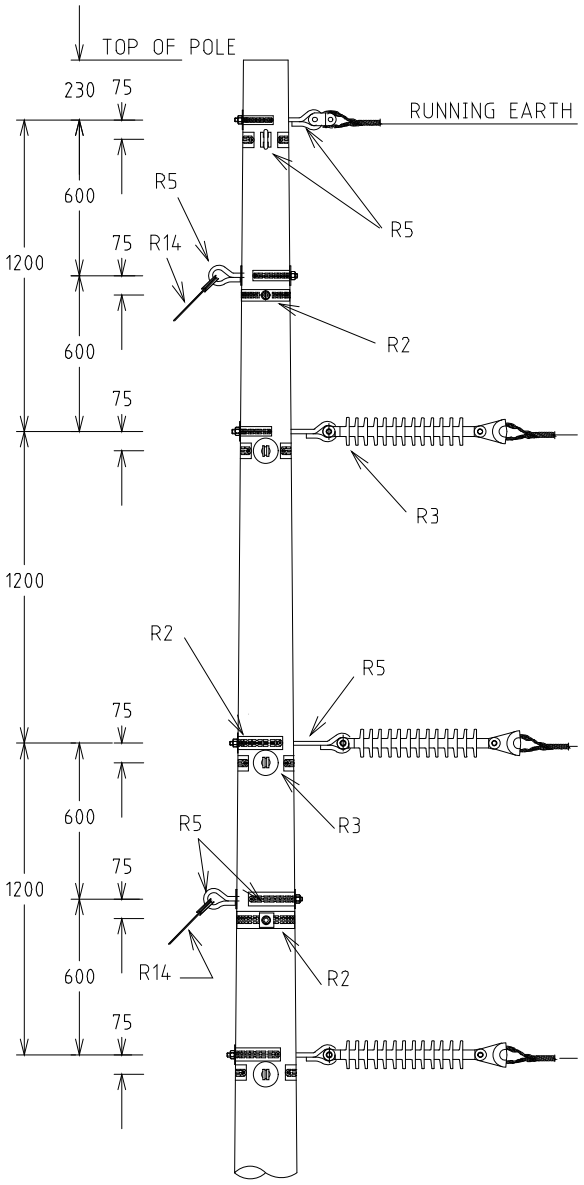
ORIGINATED: | SCALE: NTS

CHECKED: REE

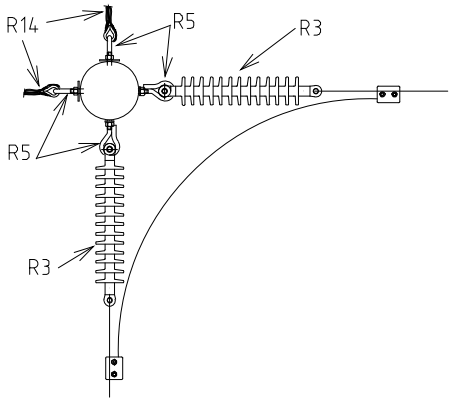
APPROVED: GRANT STACY | REV. B | SHT.



UNDER SLUNG EARTH WIRE



OVERHEAD EARTH WIRE



NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18DIA U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	30.01.17	TITLE CHANGED & UNDER SLUNG EARTH WIRE ADDED	CO	REE	GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

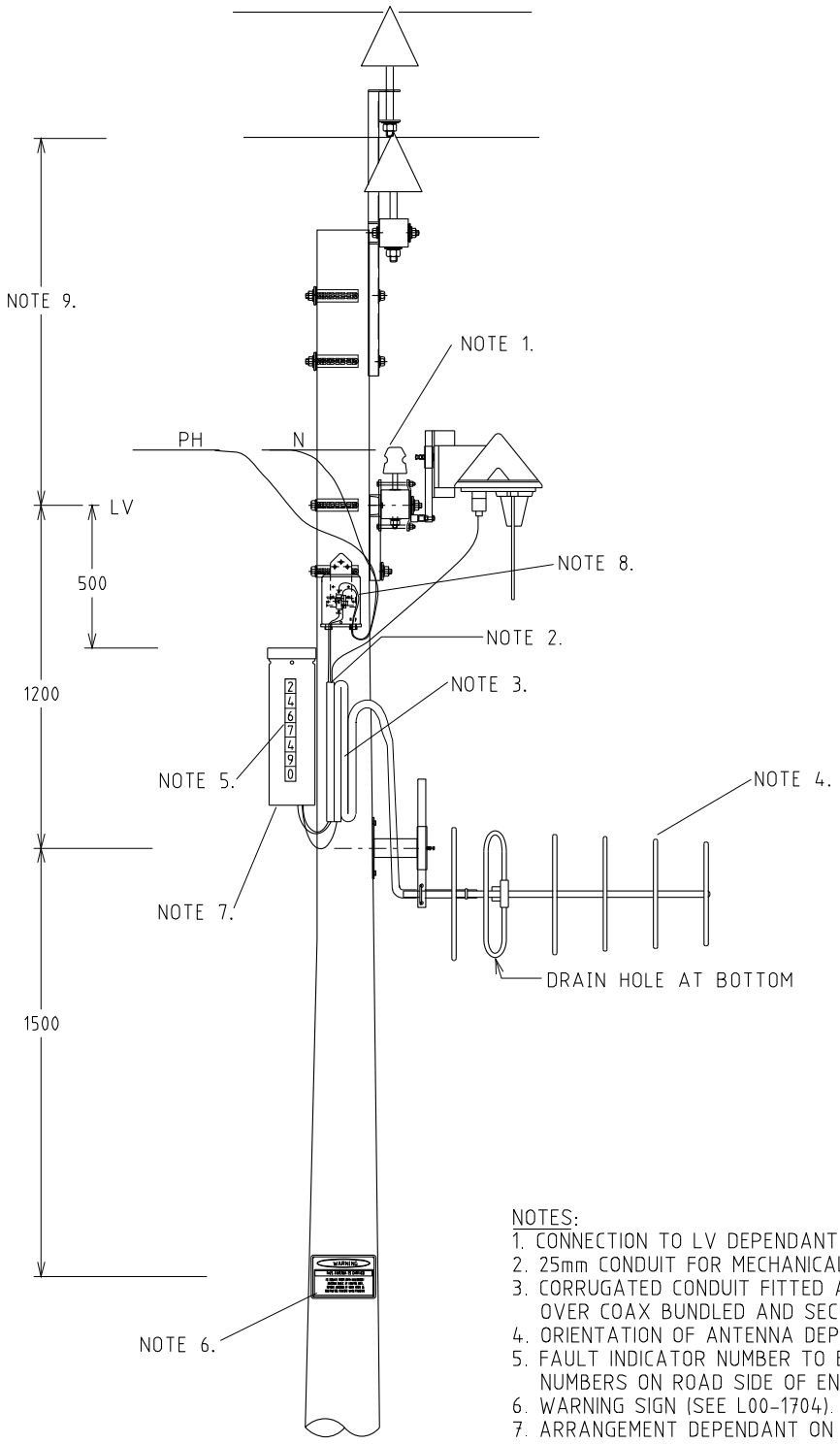
TITLE

VERTICAL STRAIN ANGLE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H28
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. B / SHT.



NOTES:
1. CONNECTION TO LV DEPENDANT ON SUPPLY ARRANGEMENT.
2. 25mm CONDUIT FOR MECHANICAL PROTECTION OF CABLES.
3. CORRUGATED CONDUIT FITTED AS MECHANICAL PROTECTION OVER COAX BUNDLED AND SECURED AGAINST POLE.
4. ORIENTATION OF ANTENNA DEPENDANT ON SELECTED RADIO BASE.
5. FAULT INDICATOR NUMBER TO BE DISPLAYED WITH REFLECTIVE NUMBERS ON ROAD SIDE OF ENCLOSURE.
6. WARNING SIGN (SEE L00-1704).
7. ARRANGEMENT DEPENDANT ON ANTENNA, USUALLY INSTALLED ON SOUTH SIDE OF POLE TO MINIMISE UV EXPOSURE.
8. SINGLE PHASE CONNECTION BOX - ENCLOSURE TO BE ISOLATED PRIOR TO MAINTENANCE.
9. FOR HV ONLY STRUCTURE,SEPARATION TO LOWEST CONDUCTOR SHOULD BE 2-3 METRES. FOR HV/LV, LOCATE AT NULL POINT.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	07.09.03	ORIGINAL ISSUE			

STRUCTURE

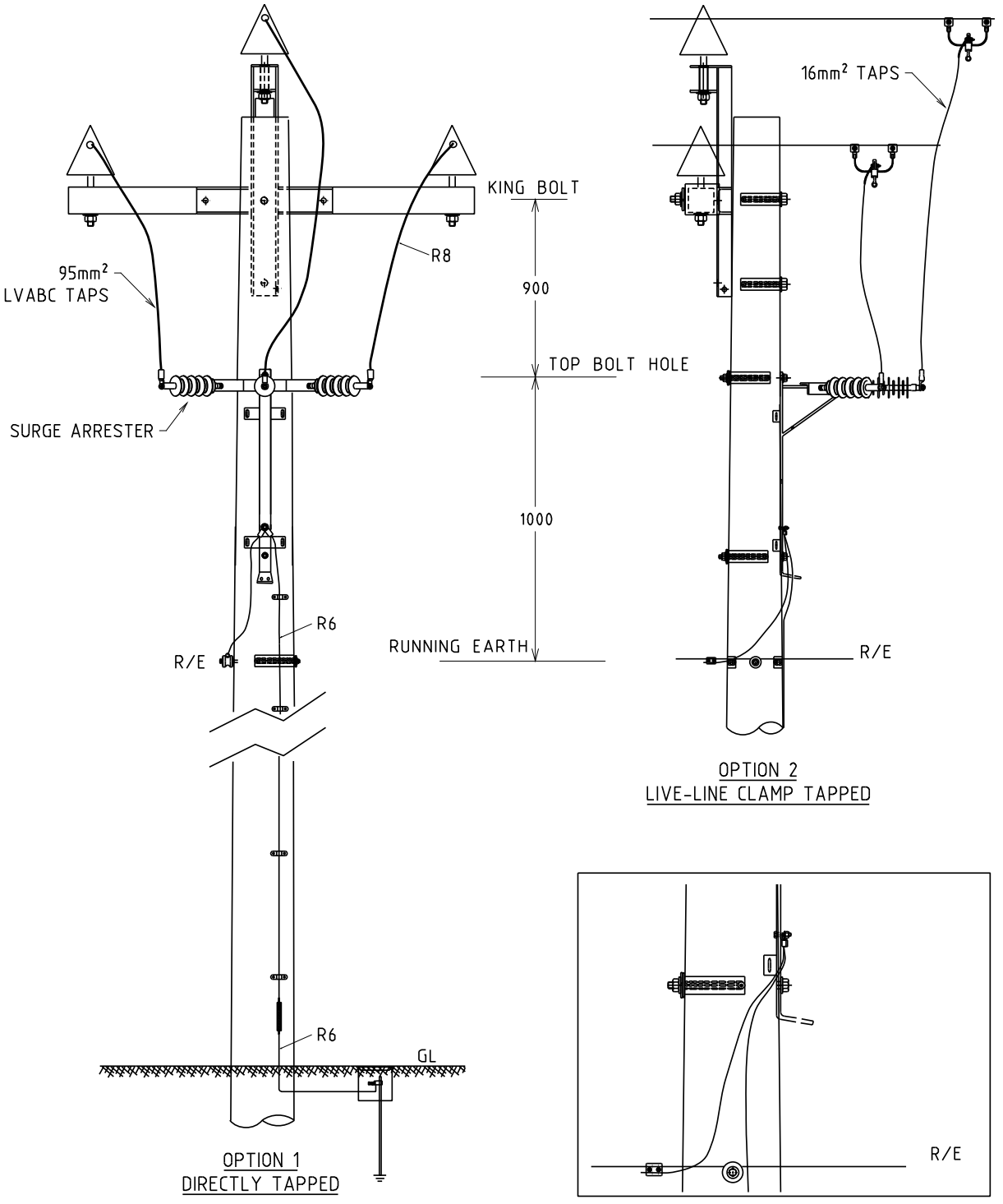
TITLE

FAULT INDICATOR
LV AERIAL SUPPLY ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H29-1
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. C SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. SELECT SURGE ARRESTER ACCORDING TO NETWORK VOLTAGE AND TO BE SPARK PRODUCTION CLASS-A.
3. RUNNING EARTH AND DOWN EARTH CONNECTED TO SURGE ARRESTER BRACKET

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	24.02.21	OPTIONS TITLE ADDED	BP	NMc	GS
B	07.10.11	ORIGINAL ISSUE			

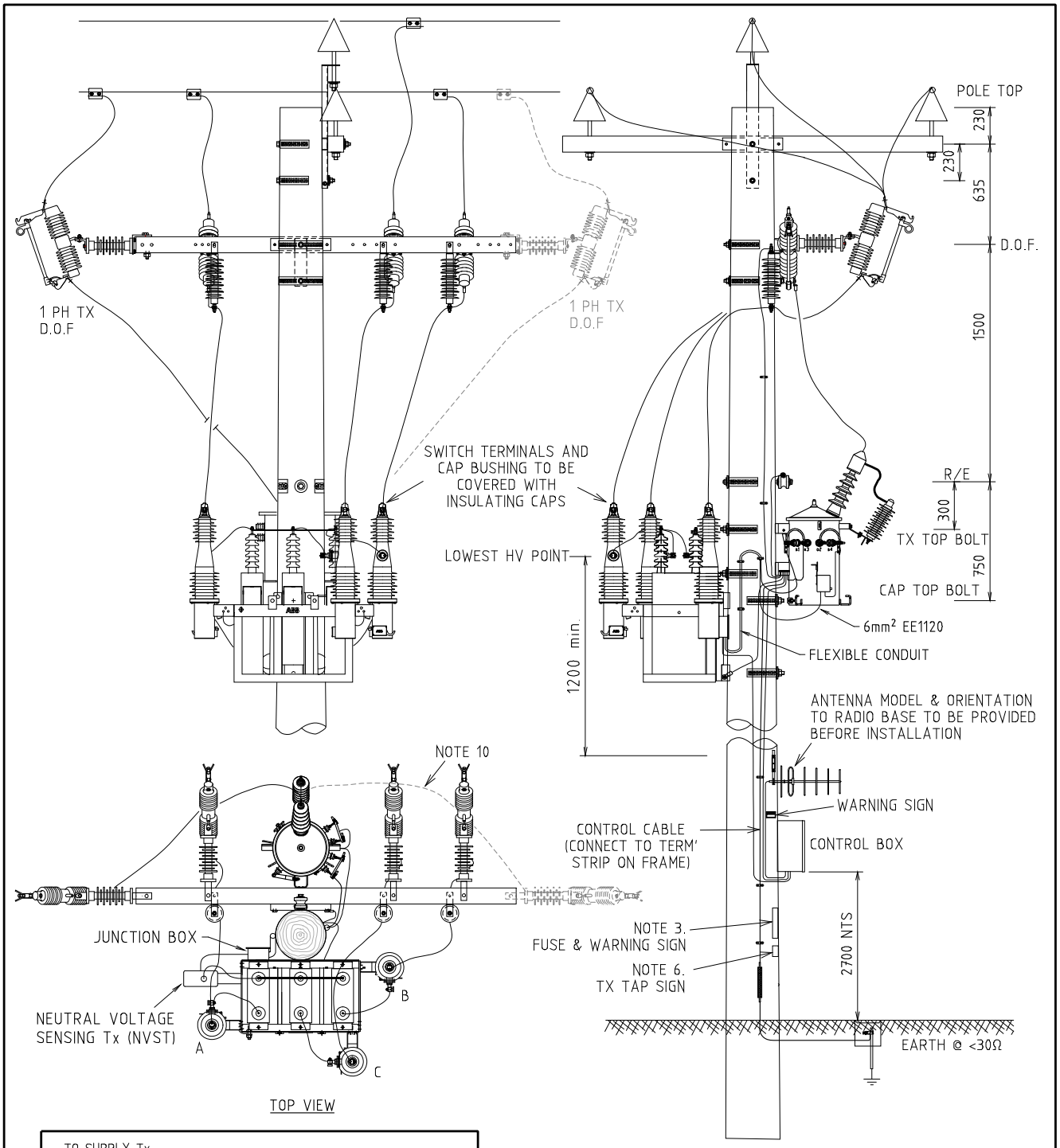
STRUCTURE

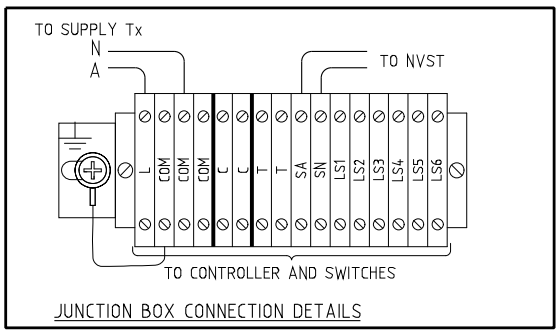
TITLE
SURGE ARRESTER
STANDARD LINE INSTALLATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H30
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. C / SHT.





JUNCTION BOX CONNECTION DETAILS

NOTES:-
1. ALL HOLES 18Φ UNLESS NOTED OTHERWISE.
2. FRAME & CONTROL BOX MUST BE GROUNDED WITH 70mm² STRANDED COPPER CABLE.
3. WARNING SIGN FITTED 1.8m-2m ON CAPACITOR FUSE SIDE
4. LV ABC CABLE TO BE USED FOR PHASE CONNECTIONS
5. 1000kVA BANKS REQUIRE 40A DOFs
   500kVA BANKS REQUIRE 25A DOFs
6. FIT SIGN "TRANSFORMER MUST BE SET TO TAP 1.
7. ADJUST TRANSFORMER TAP POSITION & TX DATA PLATE.
8. LV FUSE ON TX - 32A.
9. TRAIN JUMPERS TO MAINTAIN MINIMUM CLEARANCE
10. ADDITIONAL DOF REQUIRED FOR DOUBLE BUSHING TRANSFORMERS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
F	15.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
E	12 06 17	DRAWINGS H31-1 AND 31-2 CONSOLIDATED	NMc	REE	GS
D	09.10.15	NOTES REVISED	ME	REE	CO

STRUCTURE

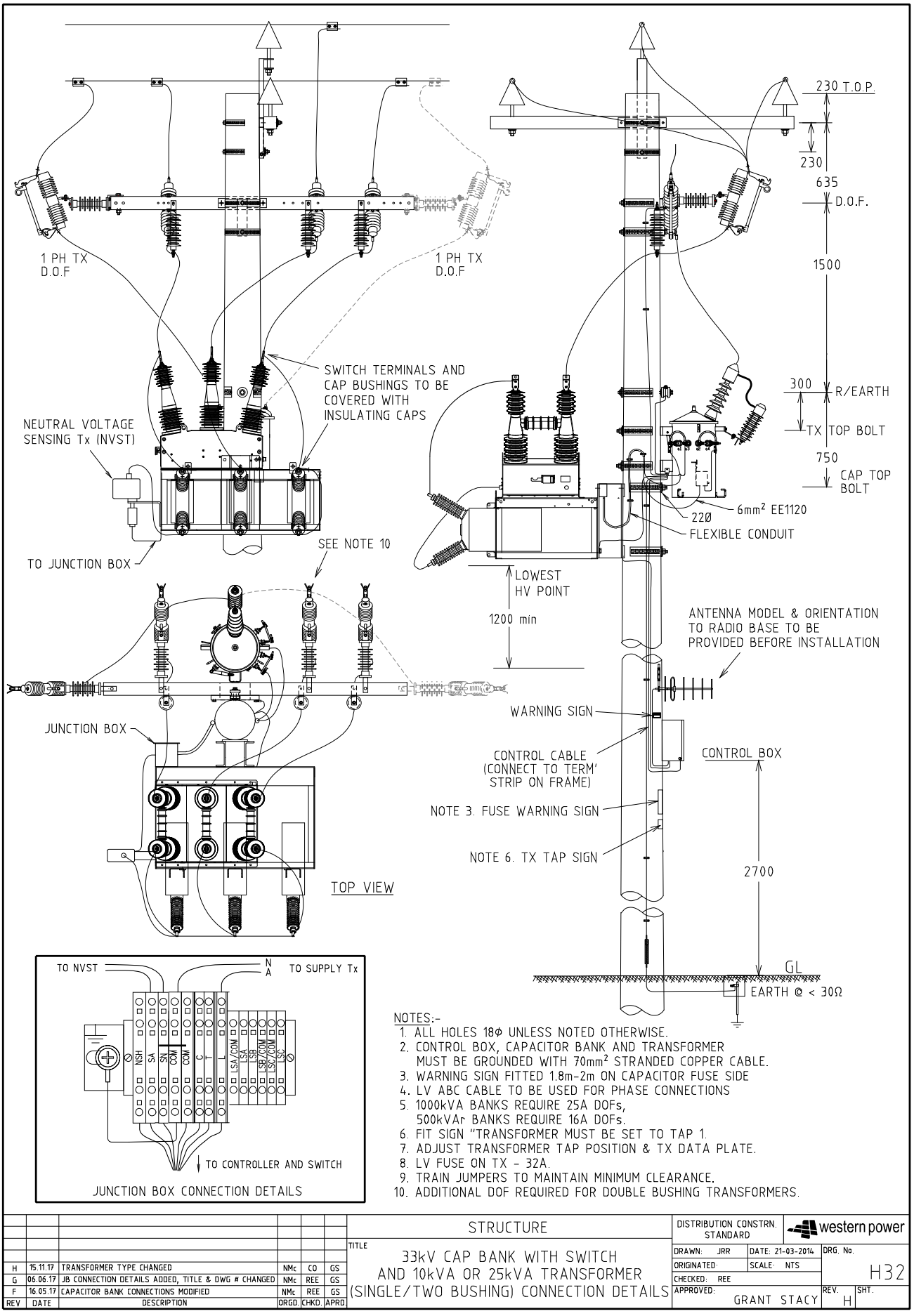
TITLE

22kV CAPACITOR BANK WITH 10 kVA TRANSFORMER (SINGLE/DOUBLE BUSHING)

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H31	
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	SHT.



NOTES:-

1. ALL HOLES 18Φ UNLESS NOTED OTHERWISE.
2. CONTROL BOX, CAPACITOR BANK AND TRANSFORMER MUST BE GROUNDED WITH 70mm² STRANDED COPPER CABLE.
3. WARNING SIGN FITTED 1.8m-2m ON CAPACITOR FUSE SIDE
4. LV ABC CABLE TO BE USED FOR PHASE CONNECTIONS
5. 1000kVA BANKS REQUIRE 25A DOFs, 500kVAr BANKS REQUIRE 16A DOFs.
6. FIT SIGN "TRANSFORMER MUST BE SET TO TAP 1.
7. ADJUST TRANSFORMER TAP POSITION & TX DATA PLATE.
8. LV FUSE ON TX - 32A.
9. TRAIN JUMPERS TO MAINTAIN MINIMUM CLEARANCE.
10. ADDITIONAL DOF REQUIRED FOR DOUBLE BUSHING TRANSFORMERS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
H	15.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
G	06.06.17	JB CONNECTION DETAILS ADDED, TITLE & DWG # CHANGED	NMc	REE	GS
F	16.05.17	CAPACITOR BANK CONNECTIONS MODIFIED	NMc	REE	GS

STRUCTURE

TITLE: 33kV CAP BANK WITH SWITCH AND 10kVA OR 25kVA TRANSFORMER (SINGLE/TWO BUSHING) CONNECTION DETAILS

DISTRIBUTION CONSTRN. STANDARD

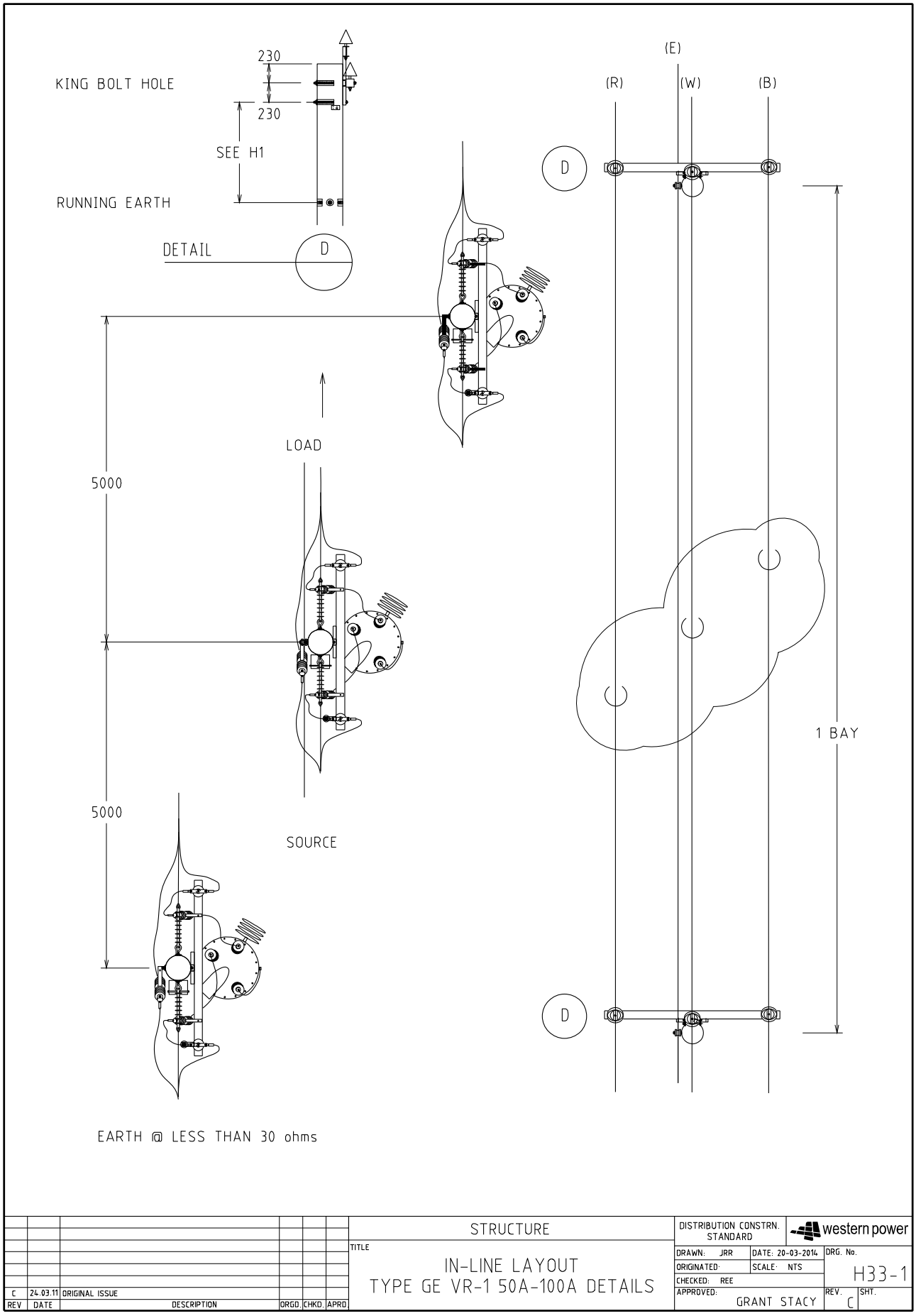
western power

DRAWN: JRR | DATE: 21-03-2014 | DRG. No. H32

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. H | SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	24.03.11	ORIGINAL ISSUE			

STRUCTURE

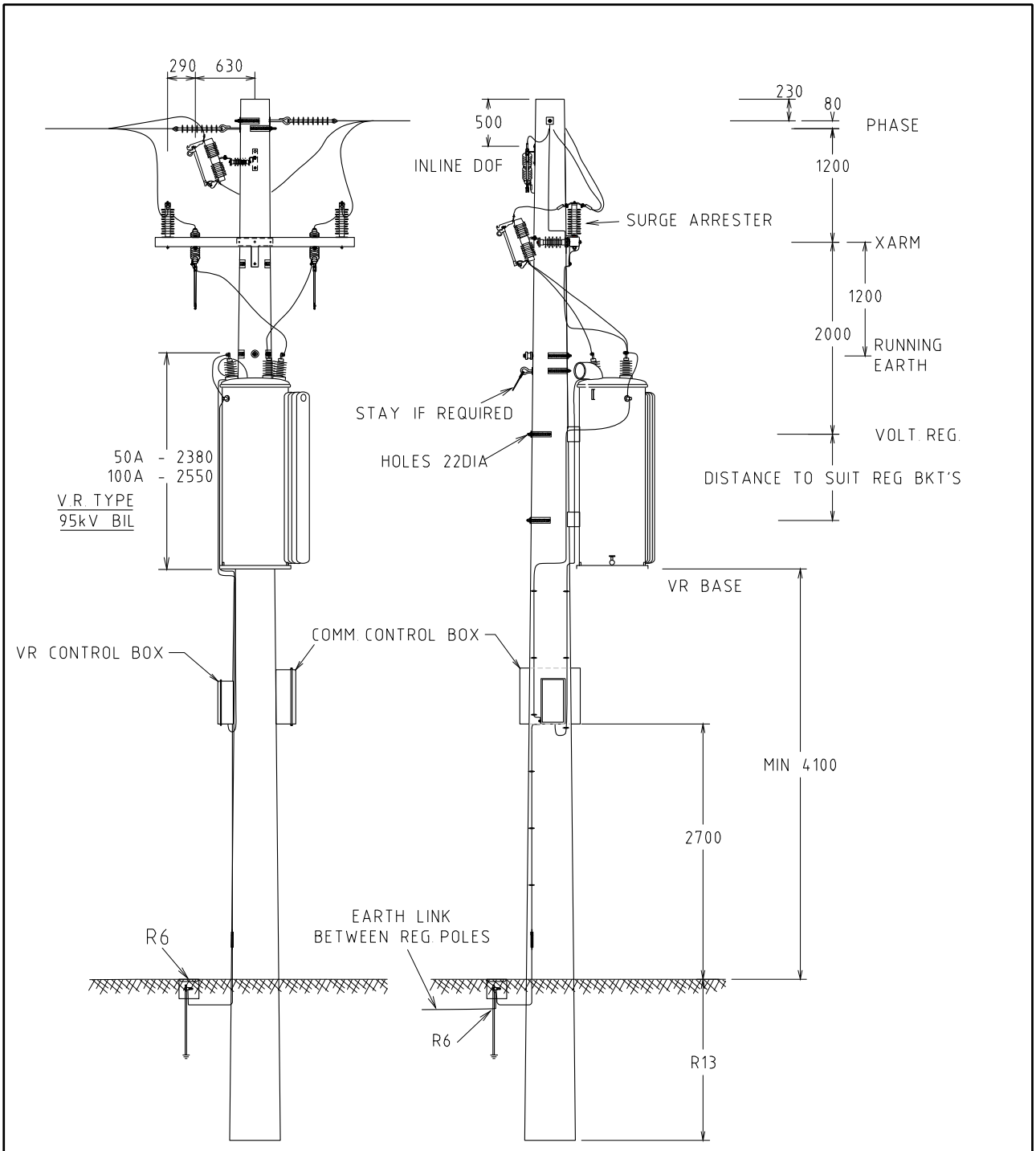
TITLE

IN-LINE LAYOUT
TYPE GE VR-1 50A-100A DETAILS

DISTRIBUTION CONSTRN. STANDARD

western power

DRAWN: JRR	DATE: 20-03-2014	DRG. No. H33-1
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. C SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MIN. 6kN POLE
4. LOCAL/SOIL CONDITIONS MAY REQUIRE STAYS

11 METRE POLE

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	15.03.12	ORIGINAL ISSUE			

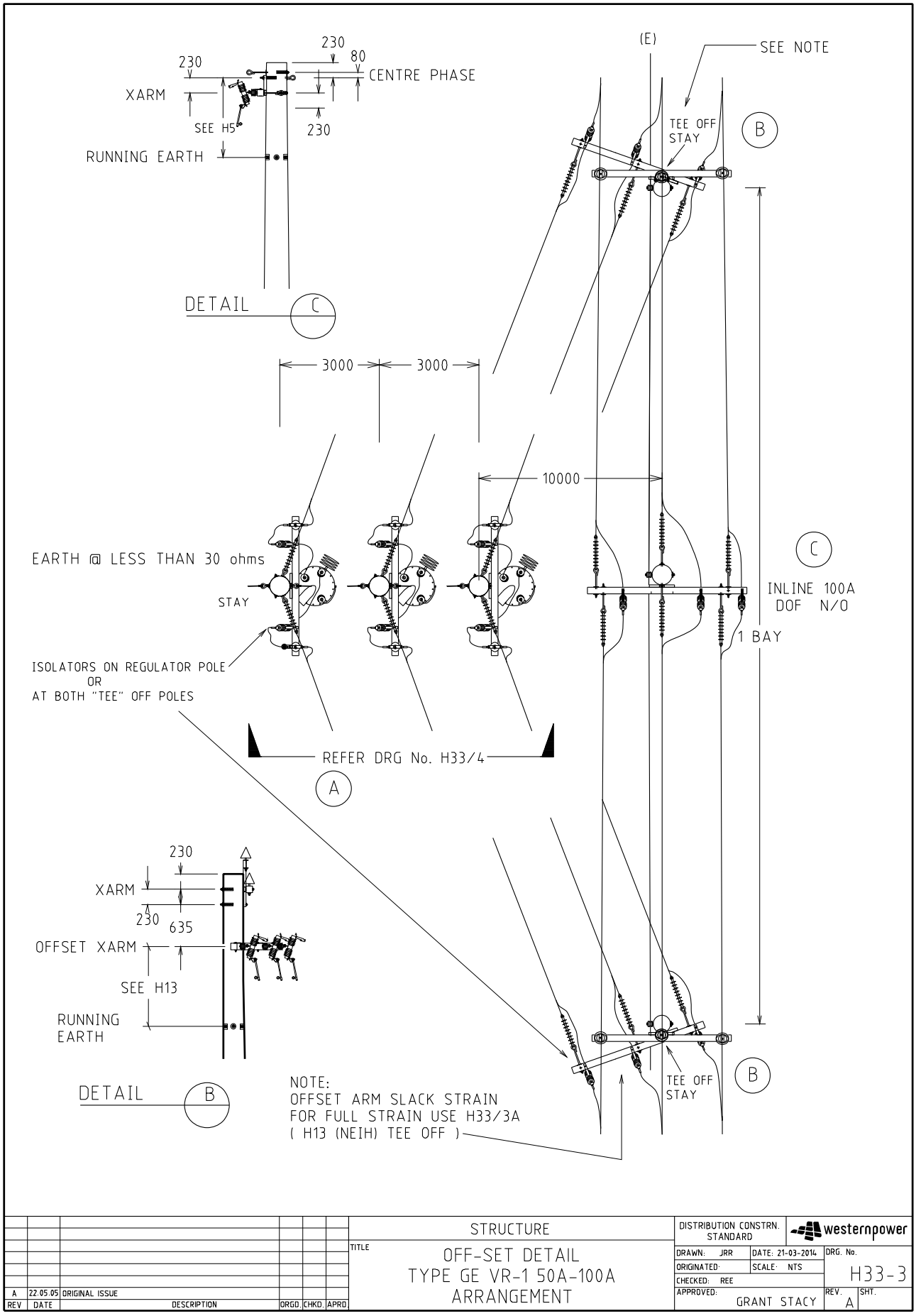
STRUCTURE

TITLE: IN-LINE DETAIL
TYPE GE VR-1 50A-100A
CONSTRUCTION DETAIL

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No. H33-2
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. C	SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	22.05.05	ORIGINAL ISSUE			

STRUCTURE

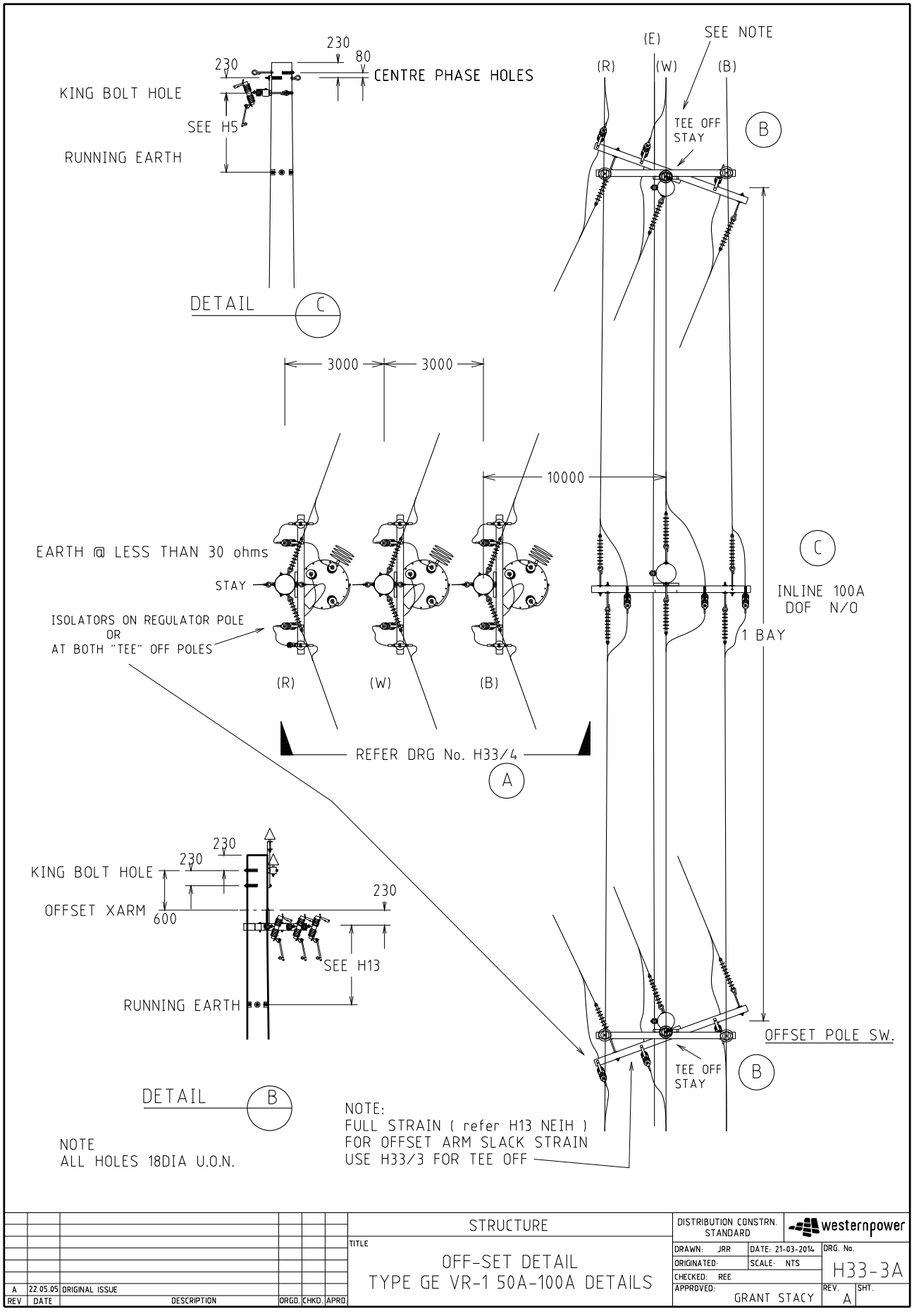
TITLE

OFF-SET DETAIL
TYPE GE VR-1 50A-100A
ARRANGEMENT

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No. H33-3
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. A	SHT.



REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	22.05.05	ORIGINAL ISSUE			

STRUCTURE

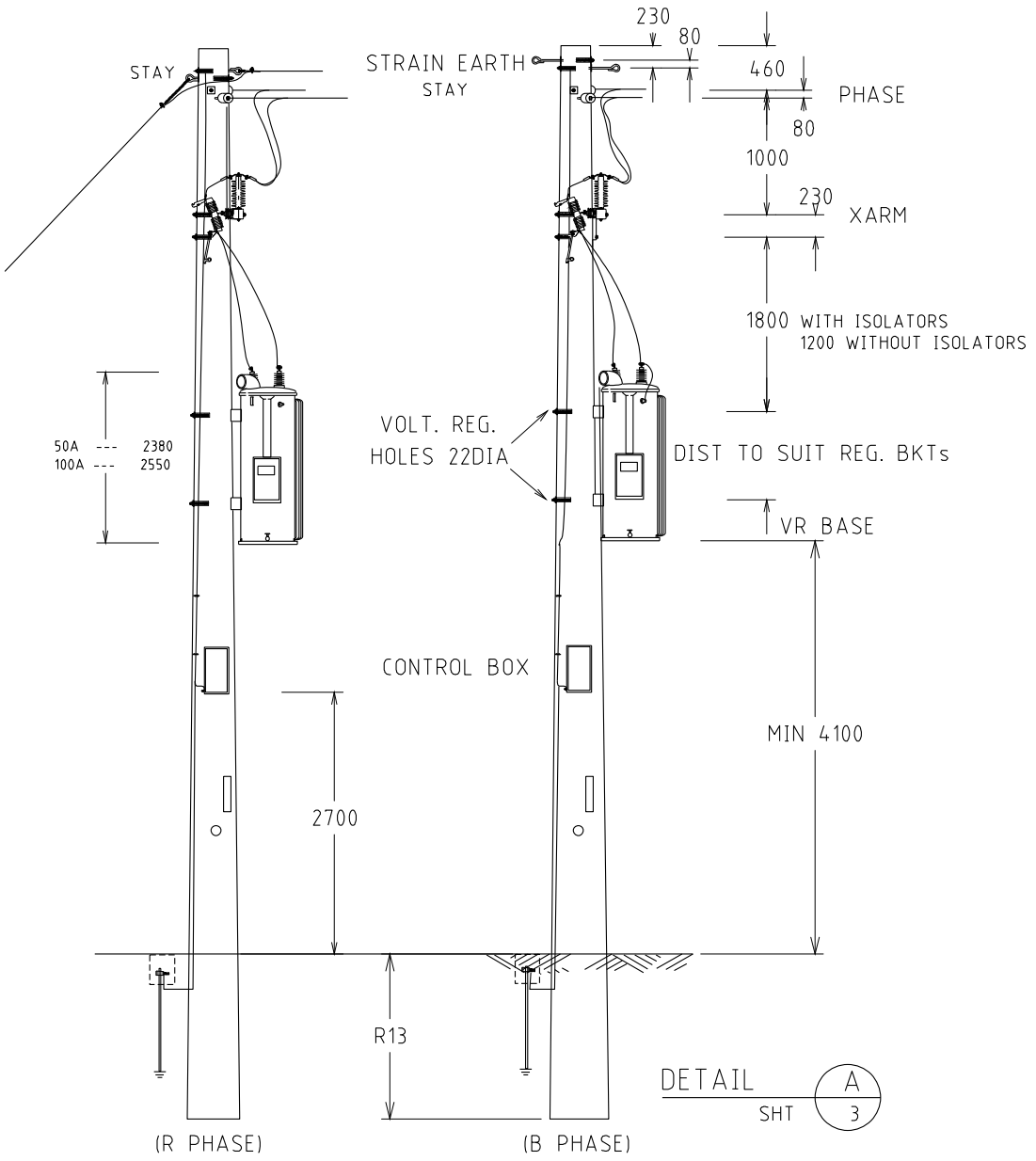
TITLE

OFF-SET DETAIL
TYPE GE VR-1 50A-100A DETAILS

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No. H33-3A
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A SHT.



NOTE
1. ALL HOLES 18DIA U.O.N.
2. MIN. 6kN POLE.
3. LOCAL/SOIL CONDITIONS MAY REQUIRE STAYS.
4. EARTH LINK REQUIRED BETWEEN REG. POLES
5. ISOLATORS ON REGULATOR POLE OR AT BOTH "TEE" OFF POLES

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	22.05.05	ORIGINAL ISSUE			

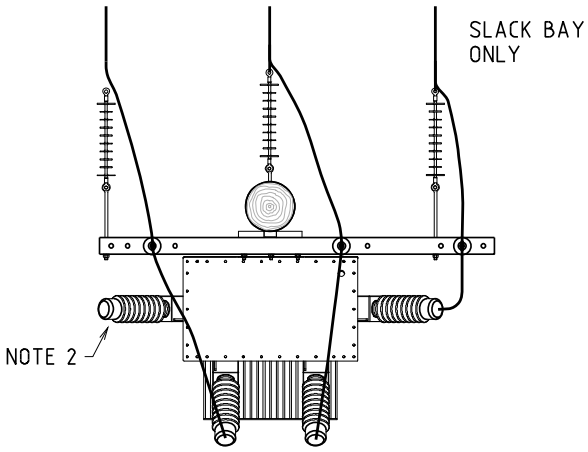
STRUCTURE

TITLE: OFF-SET DETAIL
TYPE GE VR-1 50A-100A
CONSTRUCTION DETAIL

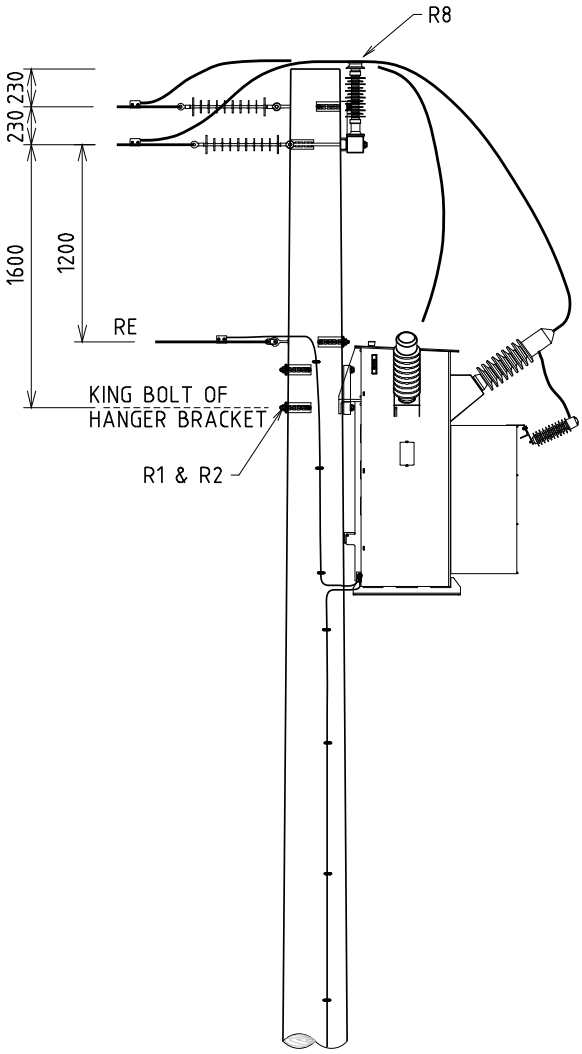
DISTRIBUTION CONSTRN. STANDARD

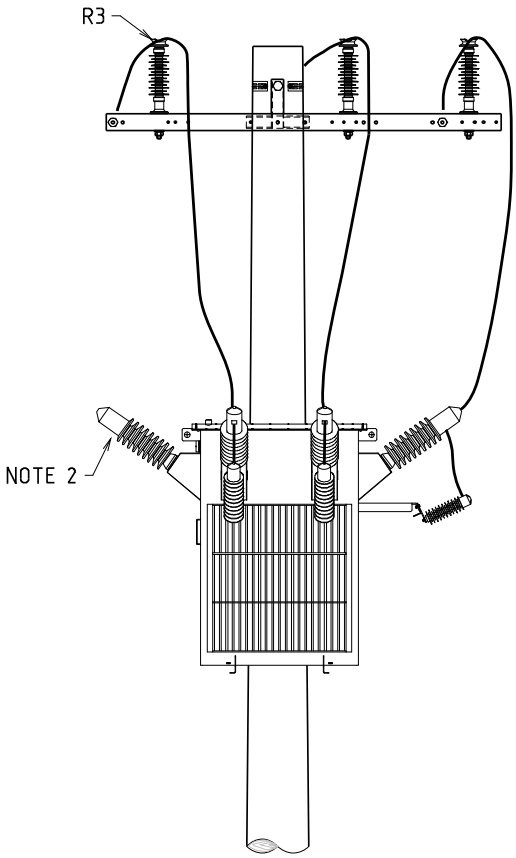
westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No. H33-4
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.

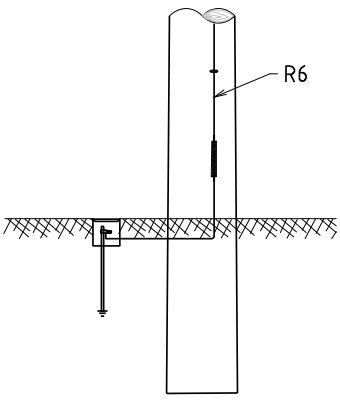


PLAN





FRONT ELEVATION



SIDE ELEVATION

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. NEUTRAL TERMINAL NOT CONNECTED.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	08.11.19	ORIGINAL ISSUE	NMc	CO	GS

STRUCTURE

TITLE: SHUNT REACTOR

DISTRIBUTION CONSTRN. STANDARD

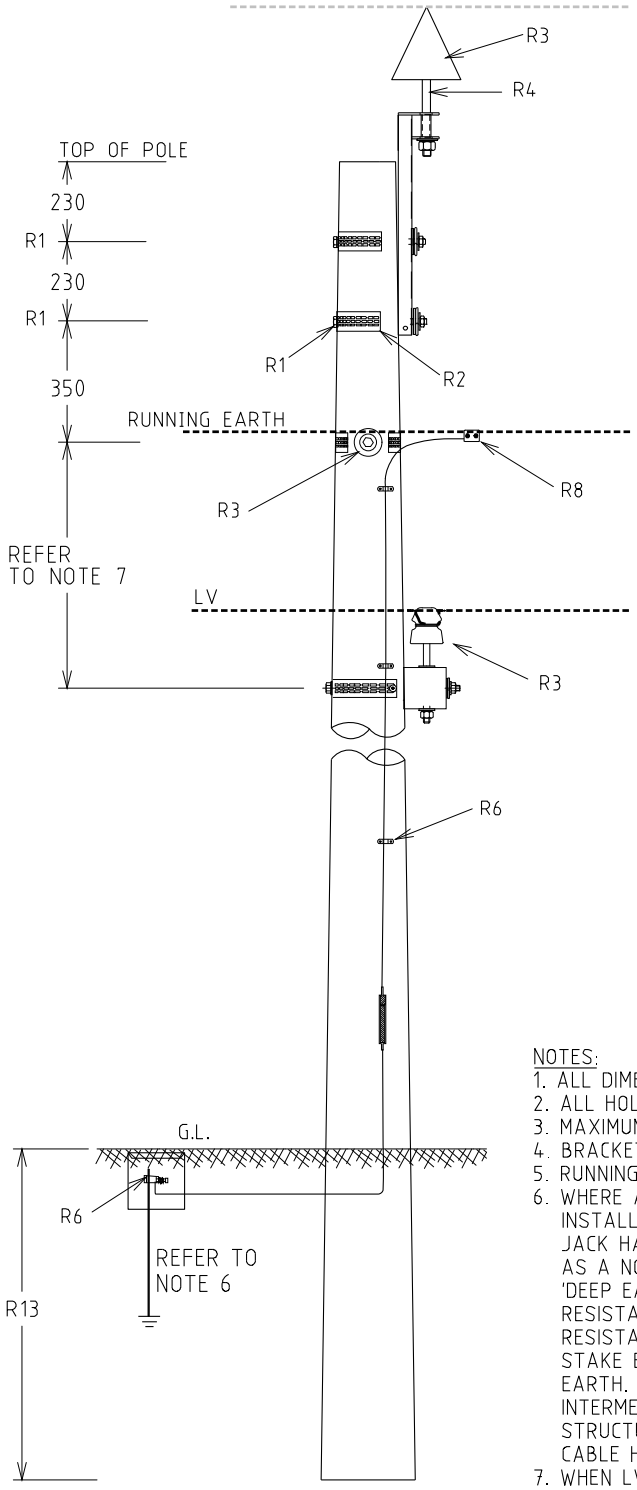
westernpower

DRAWN: JRR | DATE: 05-11-2019 | DRG. No. H34

ORIGINATED: NMc | SCALE: NTS

CHECKED: CO

APPROVED: GRANT STACY | REV. A | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLILMETRES.
2. ALL HOLES 18ϕ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. BRACKET ON SIDE, OPPOSITE SIDE OF POLE TO ANGLE OF DEV.
5. RUNNING EARTH (R/E) DETAILS SEE R3/1.
6. WHERE A VALUE OF <30Ω CANNOT BE ACHIEVED (AFTER INSTALLING THE MAXIMUM NUMBER OF RODS POSSIBLE USING A JACK HAMMER), THE VALUE SHOULD BE RECORDED AND FLAGGED AS A NON-CONFORMANCE ON THE CHECK SHEET. A DRILLED 'DEEP EARTH' SHOULD NOT BE INSTALLED TO OBTAIN AN EARTH RESISTANCE READING LESS <30Ω. PLEASE NOTE THAT THE EARTH RESISTANCE MEASUREMENT SHOULD BE TAKEN OFF THE EARTH STAKE BEFORE IT IS CONNECTED TO THE UNDERSLUNG RUNNING EARTH. PLEASE NOTE THAT THIS RELAXATION APPLIES TO INTERMEDIATE POLES. EARTH RESISTANCE VALUES AT KEY STRUCTURE POLES SUCH AS TRANSFORMERS, POLE TOP SWITCHES, CABLE HEADS ETC. ARE STILL REQUIRED TO BE EARTHED TO <30Ω.
7. 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

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	14.11.18	NOTE 6&7 ADDED	REE	JC	GS
E	15.01.16	LV ADDED	FK	ME	GS
D	11.12.13	ORIGINAL ISSUE			

STRUCTURE

TITLE

INTERMEDIATE

DISTRIBUTION CONSTRN. STANDARD

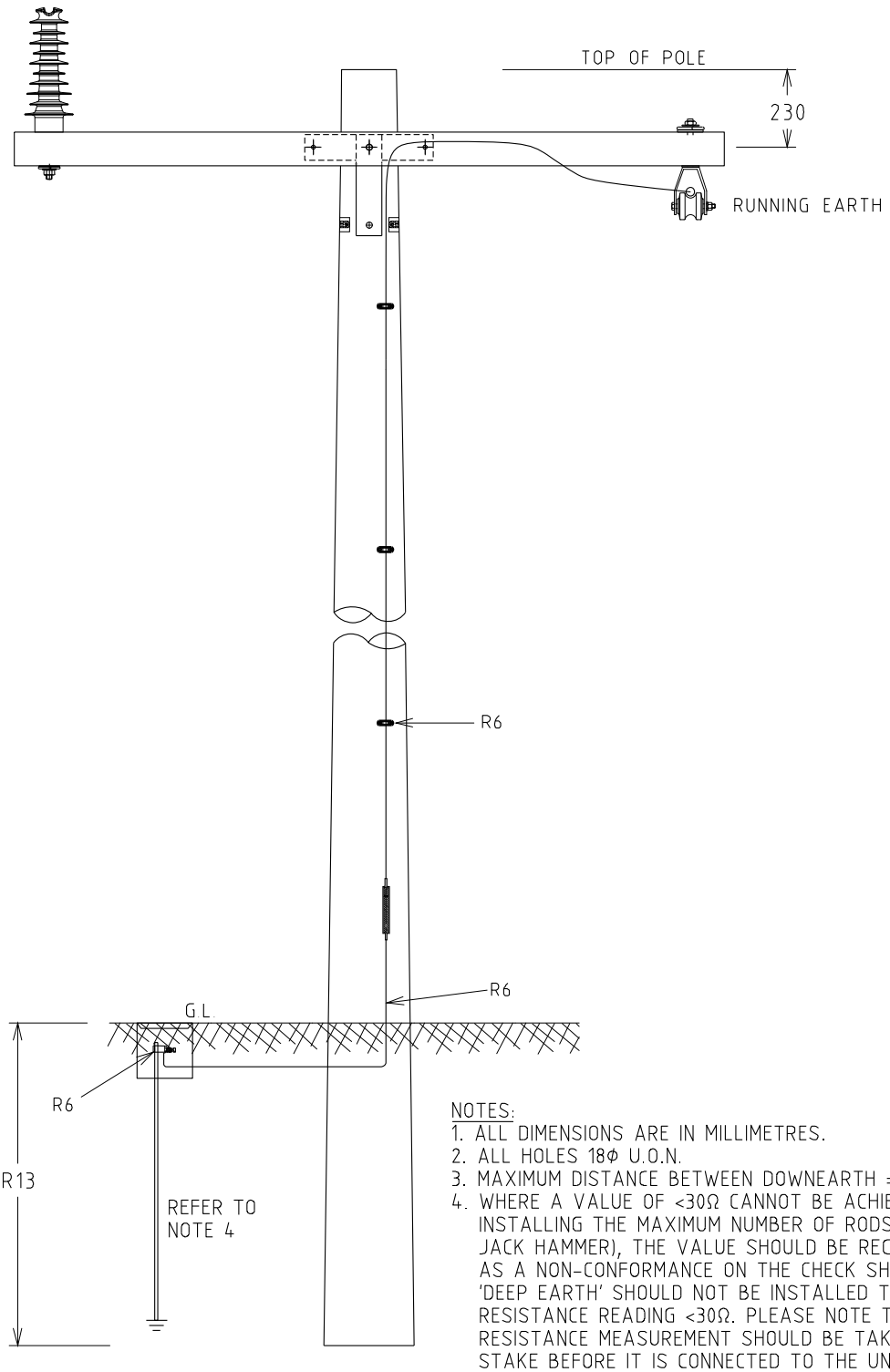
westernpower

DRAWN: JRR | DATE: 10-03-2014 | DRG. No. H40-1

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. F | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. WHERE A VALUE OF <30Ω CANNOT BE ACHIEVED (AFTER INSTALLING THE MAXIMUM NUMBER OF RODS POSSIBLE USING A JACK HAMMER), THE VALUE SHOULD BE RECORDED AND FLAGGED AS A NON-CONFORMANCE ON THE CHECK SHEET. A DRILLED 'DEEP EARTH' SHOULD NOT BE INSTALLED TO OBTAIN AN EARTH RESISTANCE READING <30Ω. PLEASE NOTE THAT THE EARTH RESISTANCE MEASUREMENT SHOULD BE TAKEN OFF THE EARTH STAKE BEFORE IT IS CONNECTED TO THE UNDERSLUNG RUNNING EARTH. PLEASE NOTE THAT THIS RELAXATION APPLIES TO INTERMEDIATE POLES. EARTH RESISTANCE VALUES AT KEY STRUCTURE POLES SUCH AS TRANSFORMERS, POLE TOP SWITCHES, CABLE HEADS ETC. ARE STILL REQUIRED TO BE EARTHED TO <30Ω.

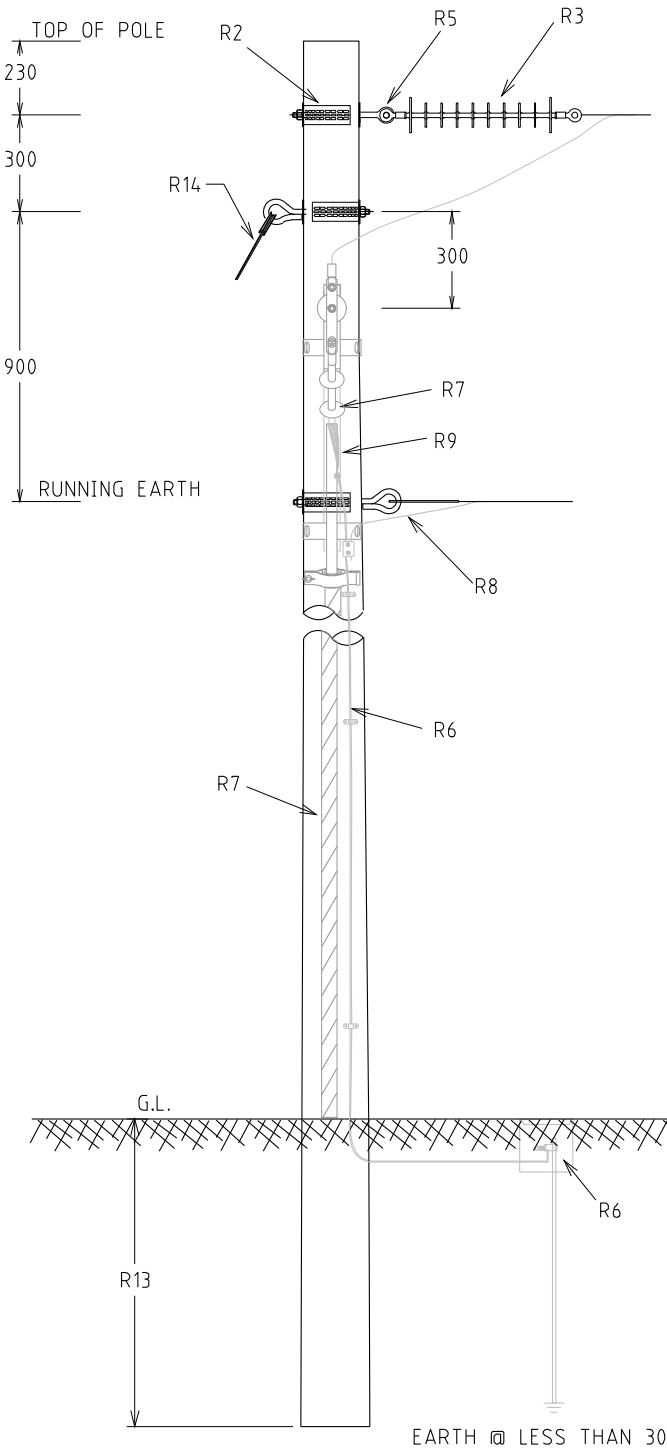
REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	09.03.21	ANNOTATION OF EARTH CONNECTION CABLE DELETED	REE		GS
D	14.11.18	NOTE 4 ADDED	REE	CO	GS
C	03.08.15	BIRD COVER DELETED	REE	REE	GS
B	12.01.15	FORMAT AND TITLE CHANGED	REE	REE	GS
A	02.12.05	ORIGINAL ISSUE			

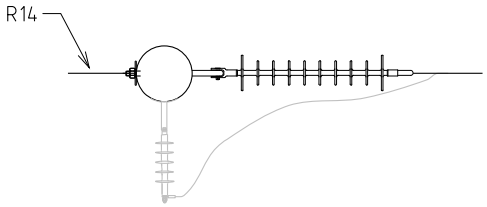
STRUCTURE

TITLE
1 PHASE ANTI CLASH / ANTI GALAH
INTERMEDIATE

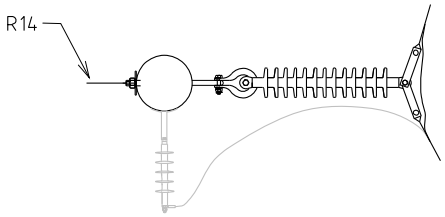
DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 21-03-2014	DRG. No. H40-2
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. E	SHT.





PLAN
TERMINATION



PLAN
RUNNING DISC ANGLE

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

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	09.05.16	CABLE TERMINATION ADDED AND TITLE CHANGED	FK	CO	GS
A	10.10.13	ORIGINAL ISSUE			

STRUCTURE

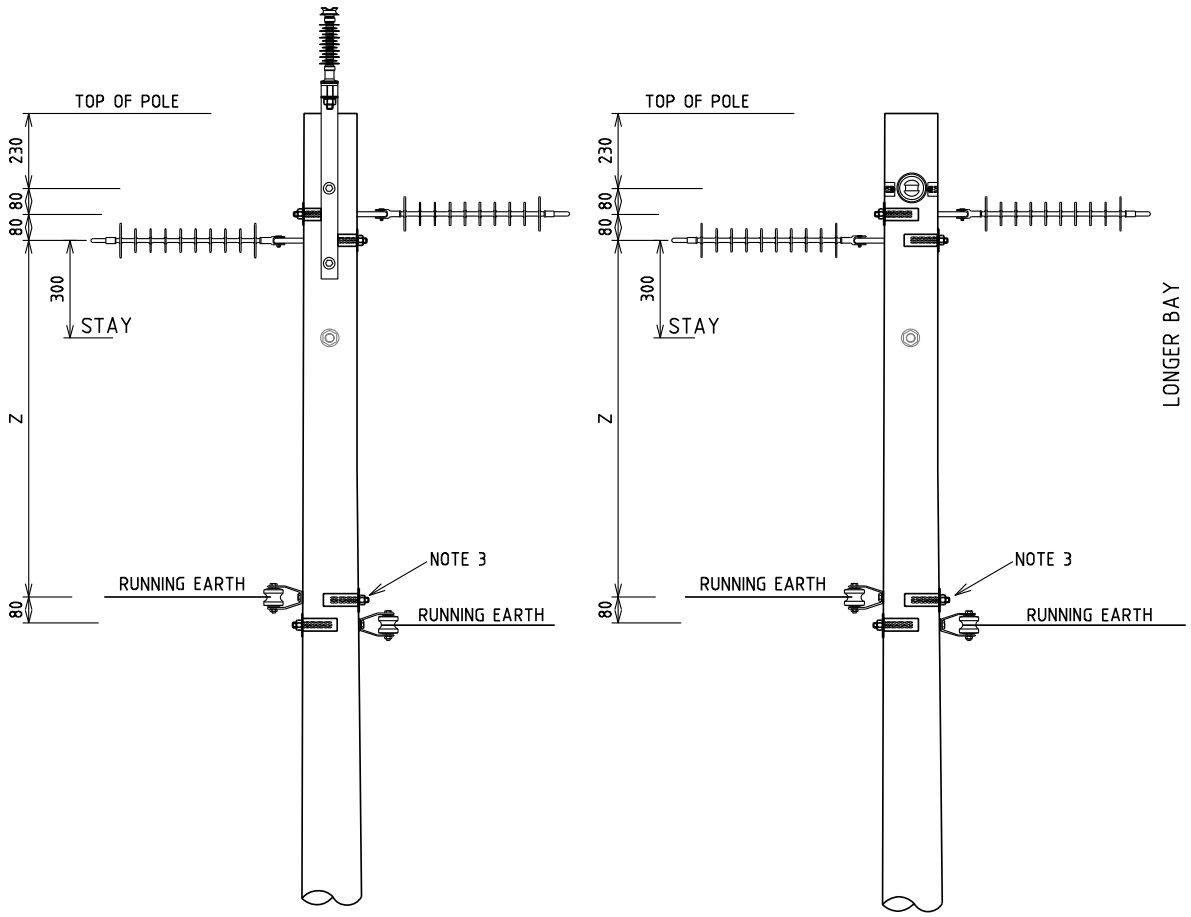
TITLE
RUNNING DISC OR TERMINATION
WITH/WITHOUT CABLE TERMINATION

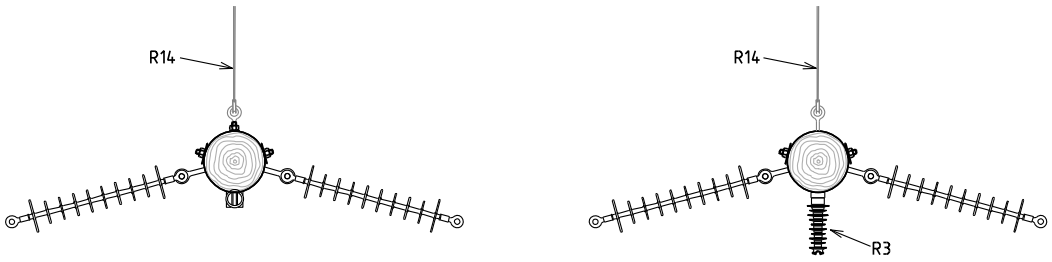
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 21-03-2014 | DRG. No. H41-1
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. B | SHT.

TAP OVER OR TAP AROUND





PLAN PLAN

SPAN	Z
UP TO 250m	1200
400m	2000

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. ALTERNATIVE INTERMEDIATE RUNNING EARTH CAN BE USED IF DEVIATION IS <2° AND ATTACHED AT THE HIGHER POSITION.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	13.02.19	NOTES REVISED AND DIMENSION CHANGED	CO	GS	FK
C	04.04.18	MORE DETAILS ADDED	CO	NMc	GS
B	24.02.17	TITLE & NOTES CHANGED AND PLAN & TABLE ADDED	DVT	CO	GS
A	23.06.13	ORIGINAL ISSUE			

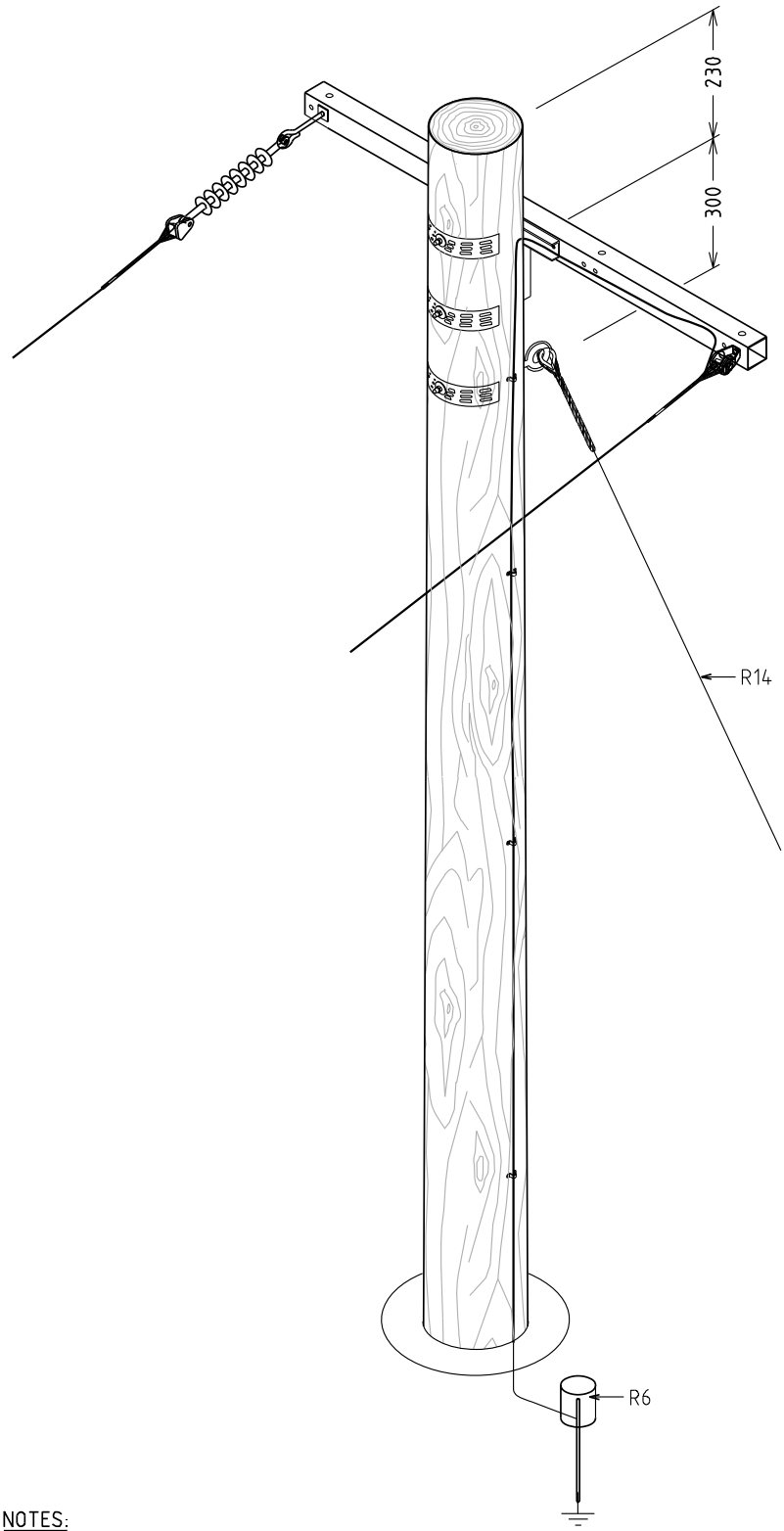
STRUCTURE

TITLE
SINGLE PHASE STRAIN ANGLE

DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR DATE: 21-03-2014
ORIGINATED: SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY

DRG. No. H41-2
REV. D SHT.



NOTES:
1. ALL HOLES 18Ø (UNLESS SHOWN).
2. DOWNEARTH – R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	09.03.17	ORIGINAL ISSUE	JC	CO	GS

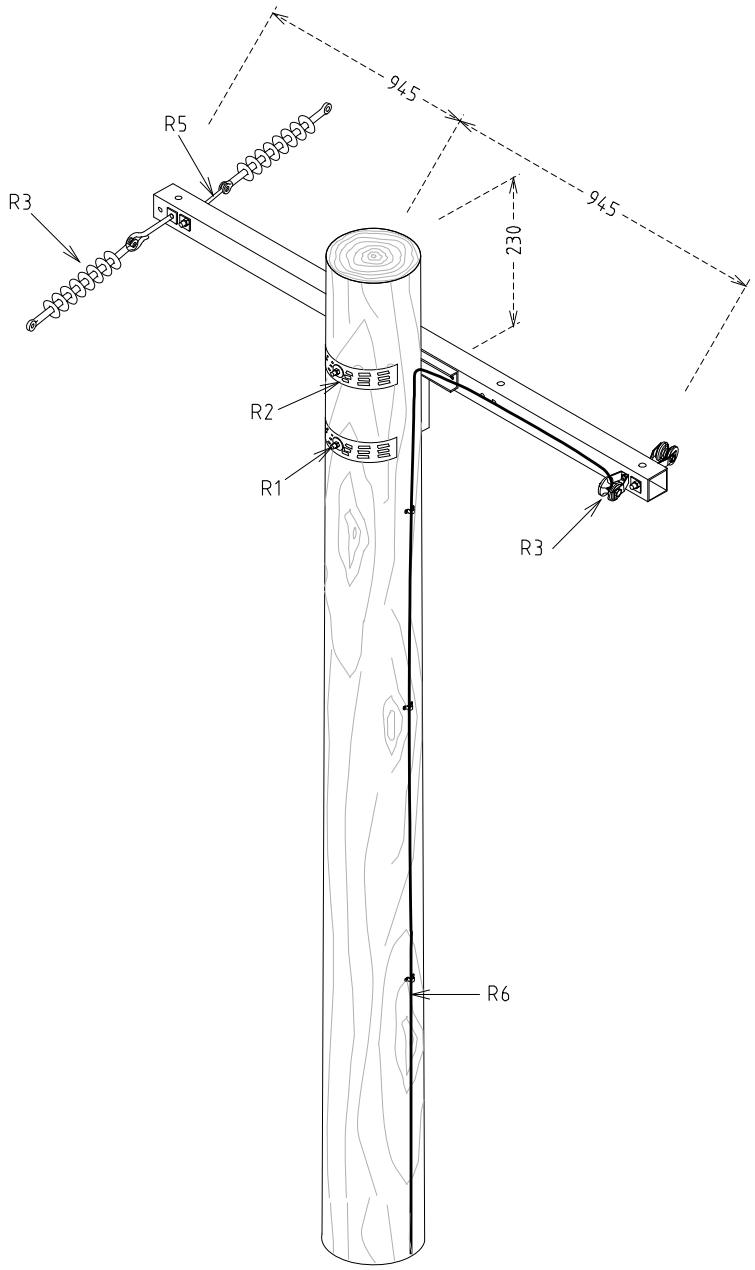
STRUCTURE

TITLE
1 PHASE ANTI CLASH / ANTI GALAH TERMINATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 17-11-2016	DRG. No. H41-3
ORIGINATED: JC	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY		REV. A / SHT.



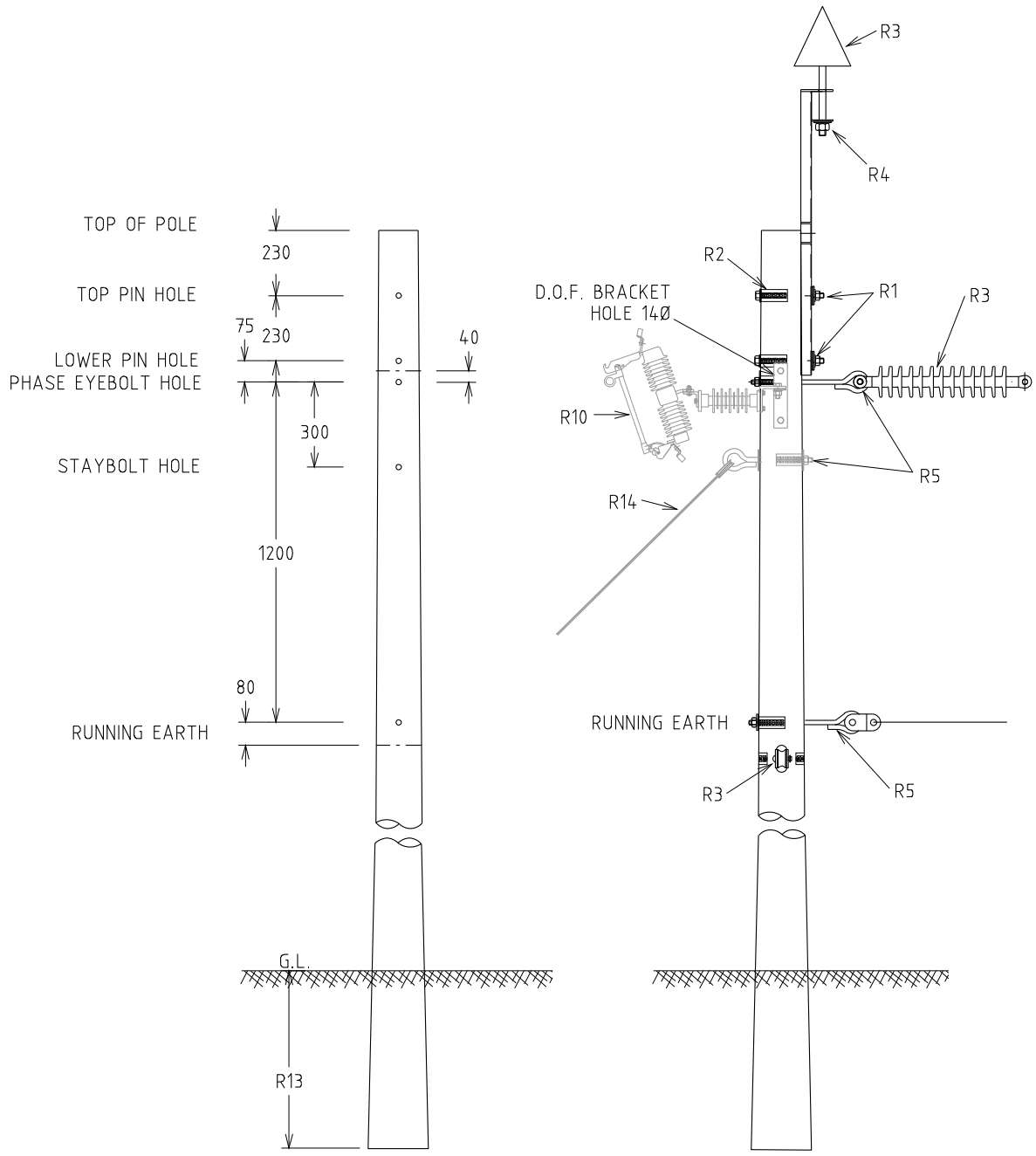
NOTES:
1. ALL DIMENSIONS ARE IN MILLIMTERS.
2.ALL HOLES 18ϕ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	09.03.17	ORIGINAL ISSUE	JC	CO	GS

TITLE: STRUCTURE
SINGLE PHASE
ANTI CLASH / ANTI GALAH
STRAIN

DISTRIBUTION CONSTRN. STANDARD — westernpower

DRAWN: JRR	DATE: 19-09-2016	DRG. No. H41-4
ORIGINATED: JC	SCALE: NTS	
CHECKED: CO		
APPROVED: GRANT STACY	REV. A	SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.N.O.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
5. USE CROSSARM STRAP (CB0485) IF DEVIATION IS >10°.
6. FOR TWO PHASE CONSTRUCTION, POSITION CONDUCTORS ON EITHER END OF CROSSARM.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	15.01.16	NOTES REVISED AND DWG # REVISED TO H42-1	FK	ME	GS
B	12.12.11	ORIGINAL ISSUE			

STRUCTURE

SINGLE PHASE TEE-OFF TO STRAIN WITH OR WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

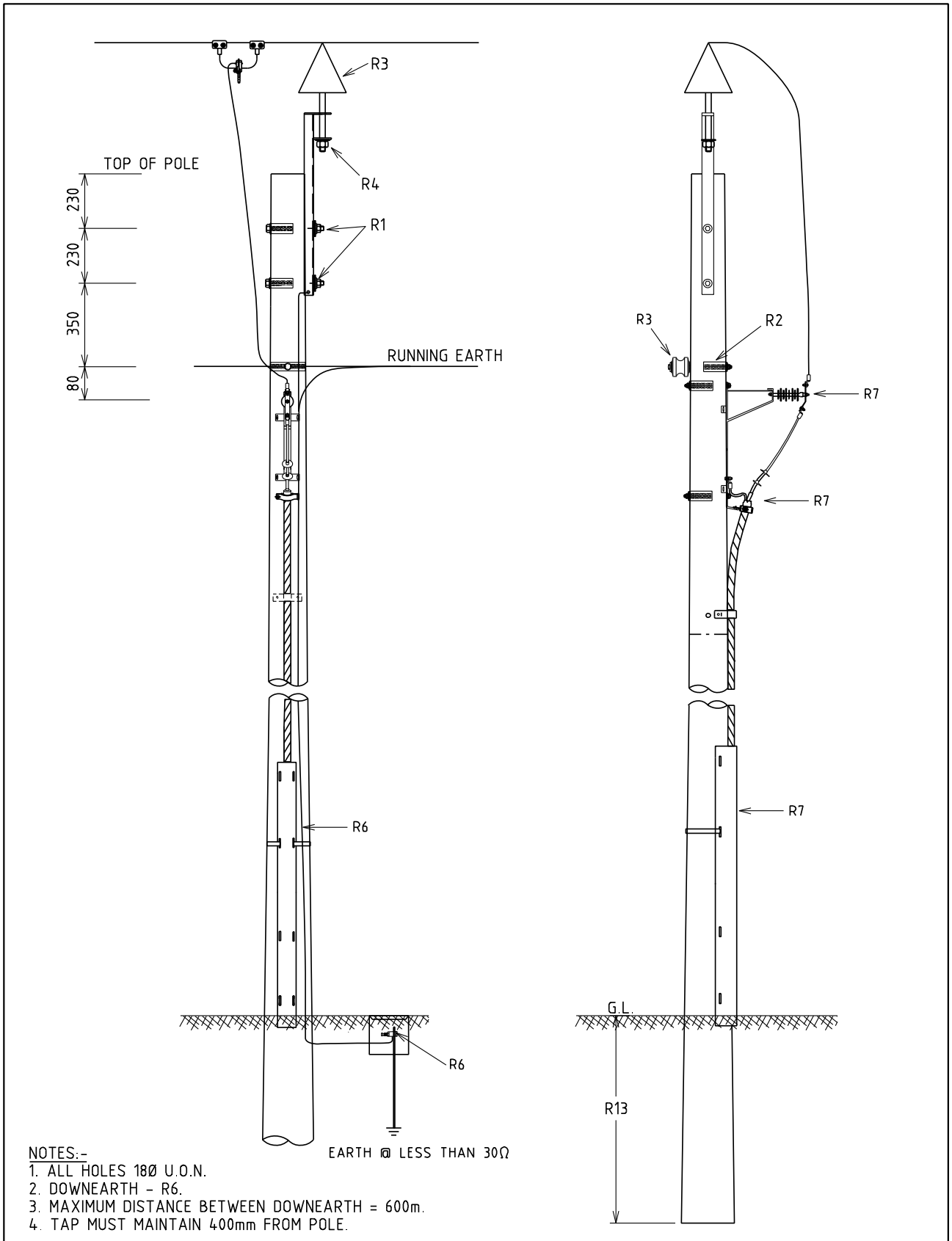
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H42-1

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. C | SHT.



NOTES:-
1. ALL HOLES 18Ø U.O.N.
2. DOWNEARTH - R6.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. TAP MUST MAINTAIN 400mm FROM POLE.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	15.01.16	ORIGINAL ISSUE	FK	ME	GS

STRUCTURE

TITLE: INTERMEDIATE WITH CABLE TERMINATION

DISTRIBUTION CONSTRN. STANDARD

western power

DRAWN: JRR | DATE: 03-12-2015 | SCALE: NTS

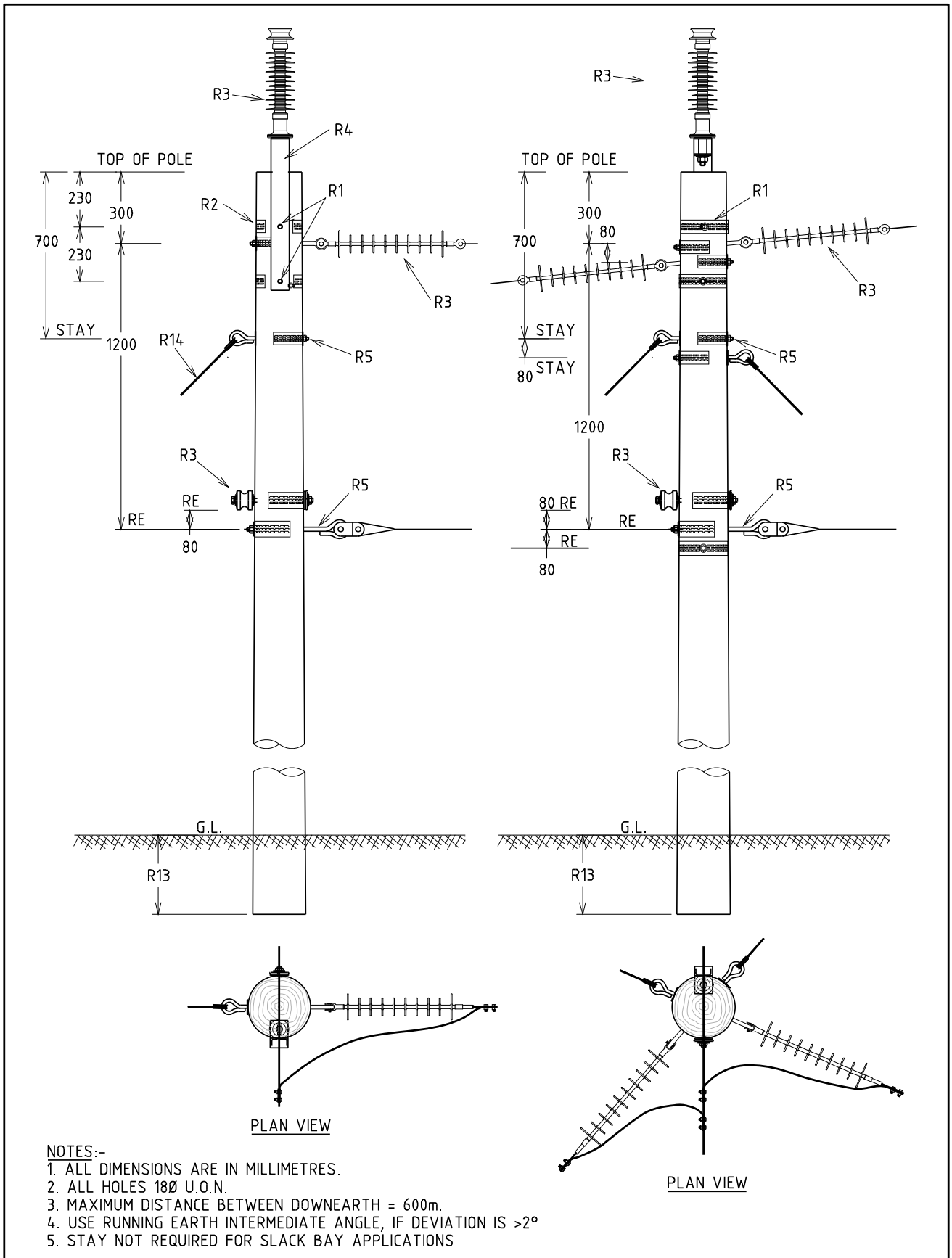
ORIGINATED: FK

CHECKED: ME

APPROVED: GRANT STACY

DRG. No. H42-2

REV. A | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
4. USE RUNNING EARTH INTERMEDIATE ANGLE, IF DEVIATION IS >2°.
5. STAY NOT REQUIRED FOR SLACK BAY APPLICATIONS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
D	20.12.19	DOUBLE TEE-OFF ADDED	NN	REE	GS
C	13.06.18	STAY BONDING DELETED	BP	CO	GS
B	23.03.15	FORMAT CHANGED & NOTES REVISED	CO	REE	GS
A	09.10.12	ORIGINAL ISSUE			

STRUCTURE

TITLE

TEE-OFF WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

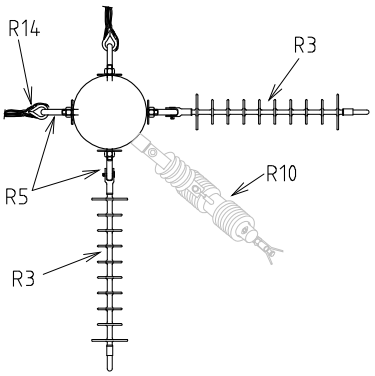
westernpower

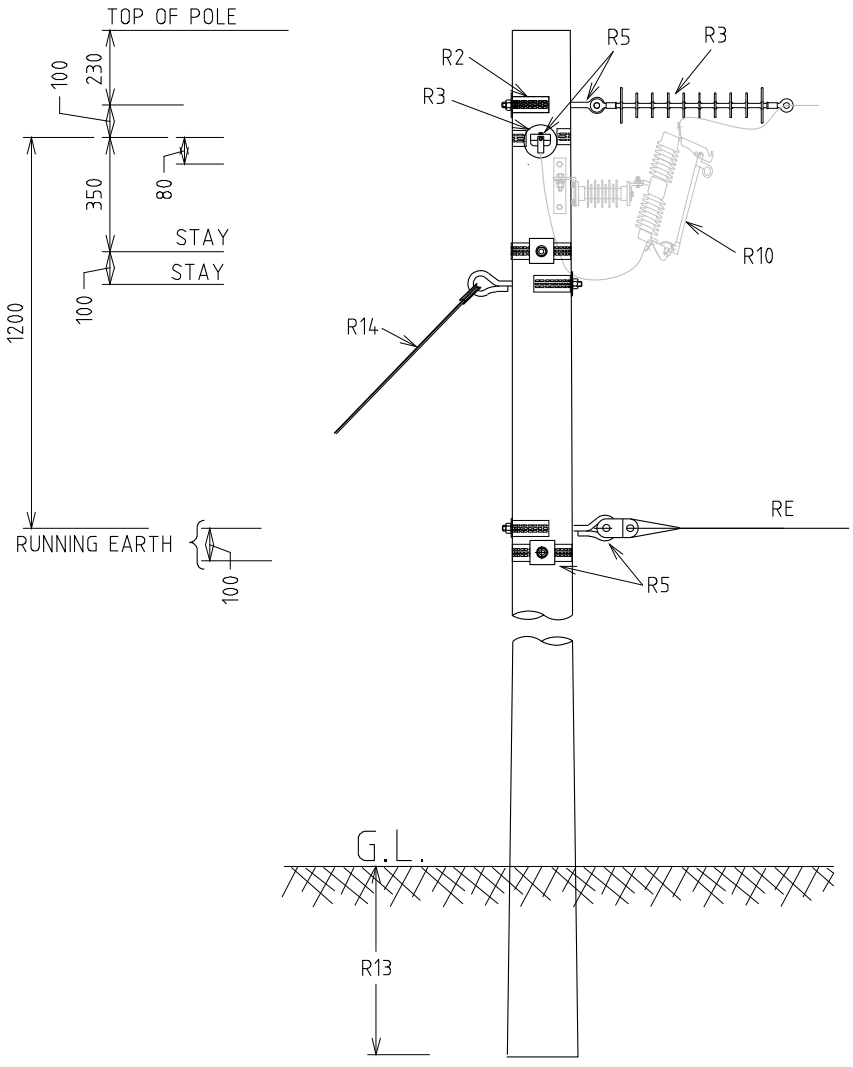
DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H43

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. D | SHT.





NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
E	23.08 22	DOF ADDED	CO	NMc	GS
D	15.01.16	DRAWING NUMBER CHANGED TO 44-1	FK	ME	GS
C	04.12 14	FORMAT CHANGED & BONDING WITH RE TO STAY DELETED	JC	REE	GS
B	21.05 12	ORIGINAL ISSUE			

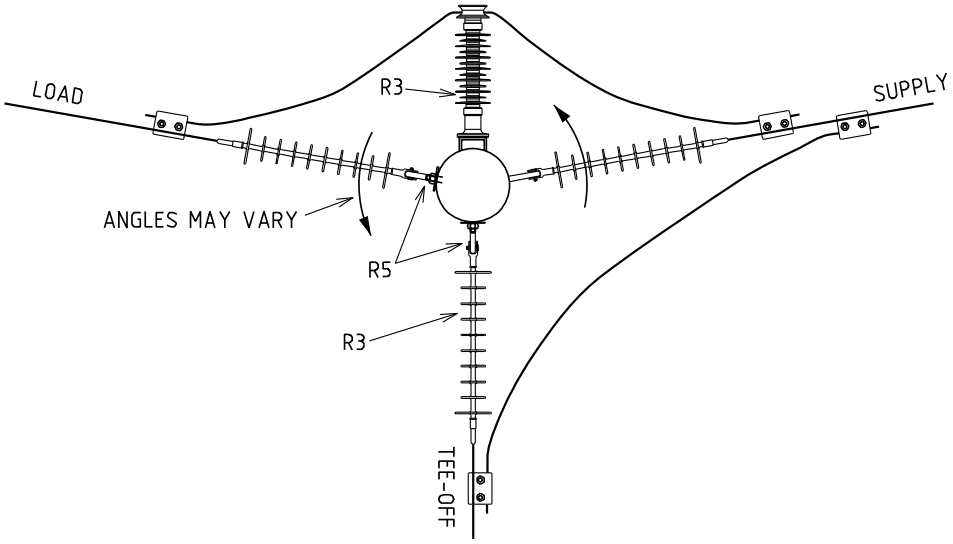
STRUCTURE

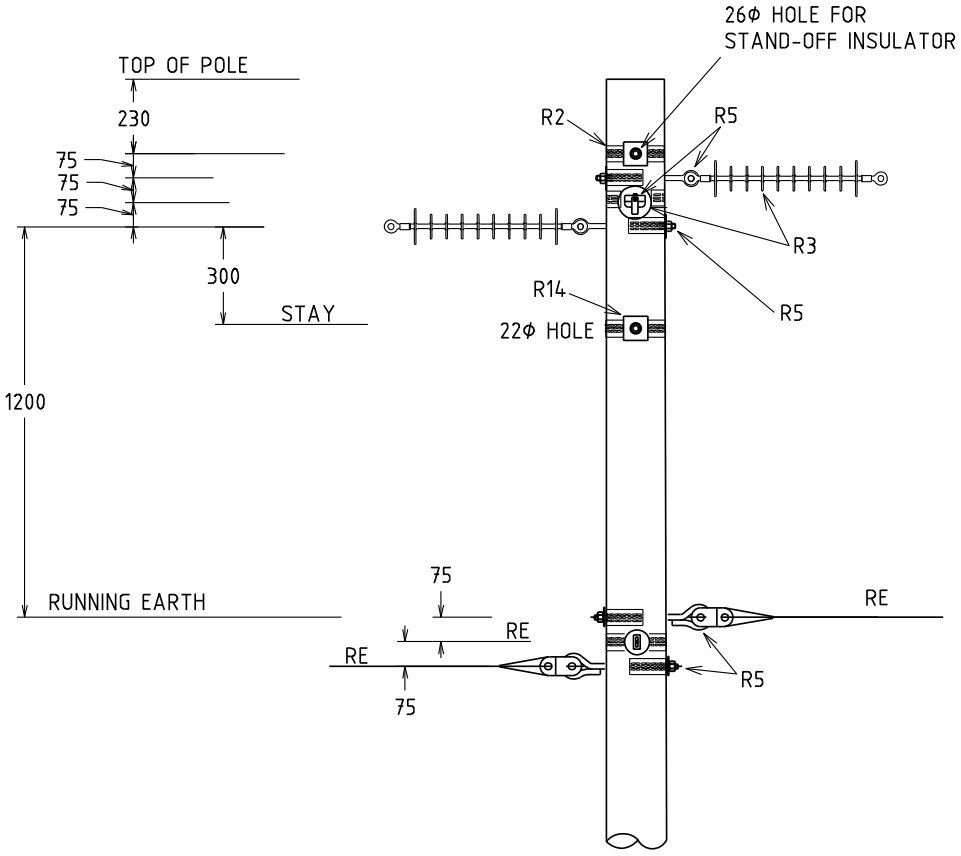
TITLE: DOUBLE TERMINATION

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	H44-1
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. E	SHT.





NOTES:
1. ALL HOLES 18ϕ U.O.N.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m.
3. STAY POSITIONING AND NUMBER OF STAYS AS PER OVERHEAD LINE DESIGN MANUAL.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	23.05.16	STAND-OFF INSULATOR ADDED	FK	CO	GS
A	15.01.16	ORIGINAL ISSUE	FK	ME	GS

STRUCTURE

TITLE: TRIPLE TERMINATION

DISTRIBUTION CONSTRN. STANDARD

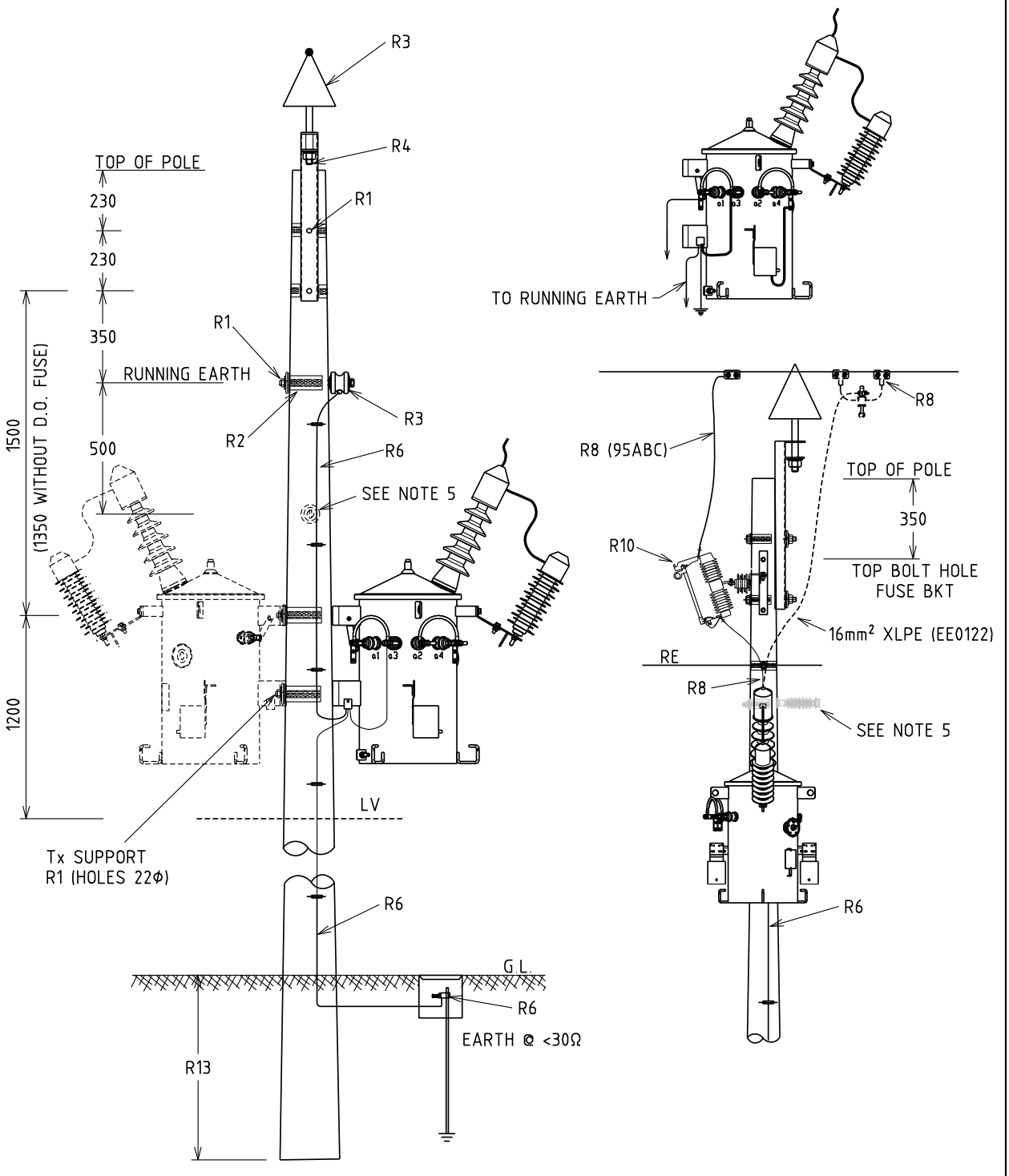
westernpower

DRAWN: JRR | DATE: 30-11-2015 | DRG. No. H44-2

ORIGINATED: FK | SCALE: NTS

CHECKED: ME

APPROVED: GRANT STACY | REV. B | SHT.



SINGLE PHASE - ONE BUSHING

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
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

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
H	08.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
G	21.12.15	NOTES & Tx LOCATION REVISED	ME	REE	GS
F	16.11.15	TRANSFORMER LOCATION OPTIONS ADDED	ME	REE	GS
E	19.12.14	FORMAT CHANGED AND RUNNING EARTH RELOCATED	JC	REE	GS
D	28.05.12	ORIGINAL ISSUE			

STRUCTURE

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

DISTRIBUTION CONSTRN. STANDARD

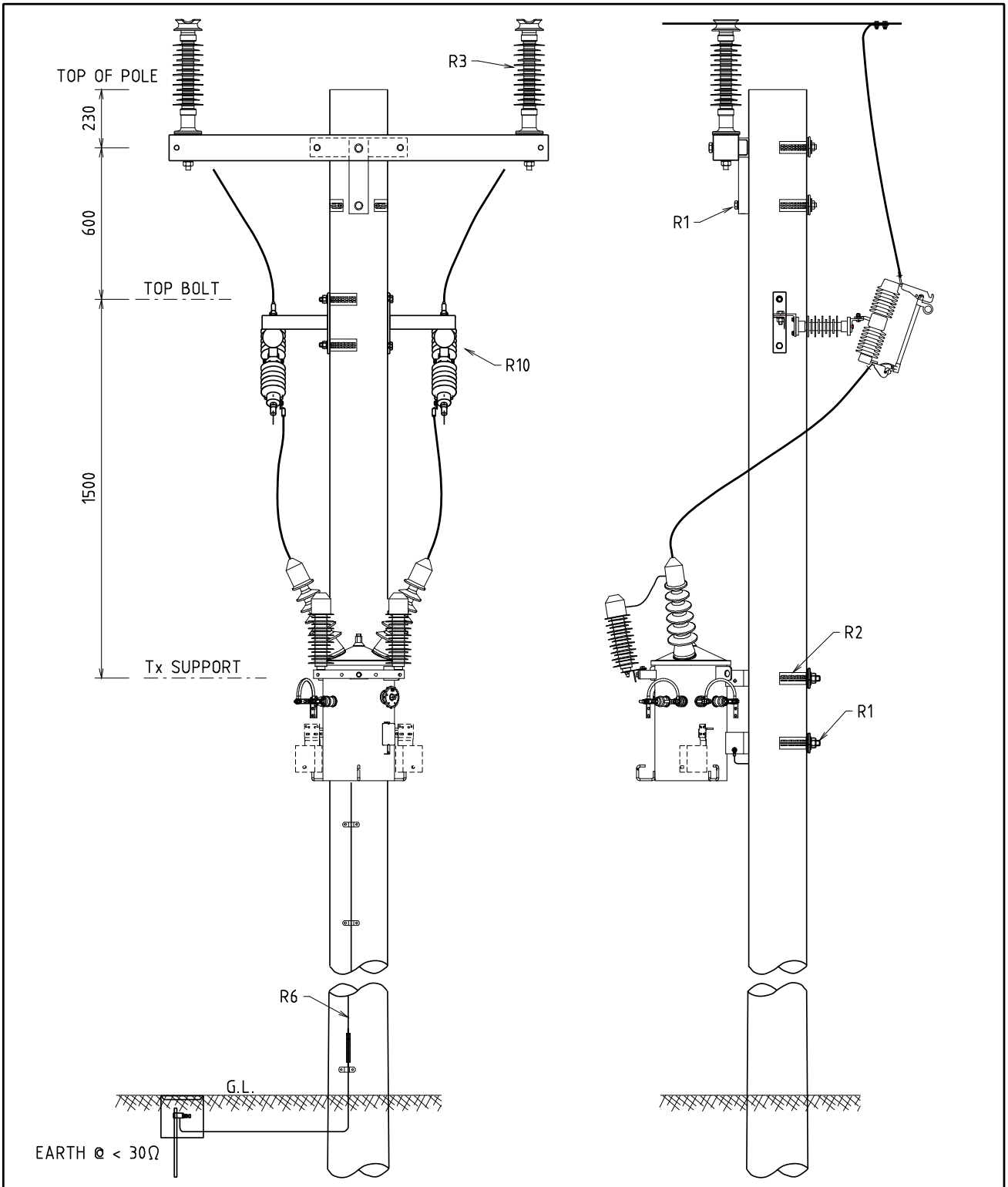
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H46

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. H | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
3. ALL HOLES 18Φ U.O.N.
4. SEE R12/1 FOR LV ARRANGEMENT DETAILS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	28.01.20	ORIGINAL ISSUE	NN	REE	GS

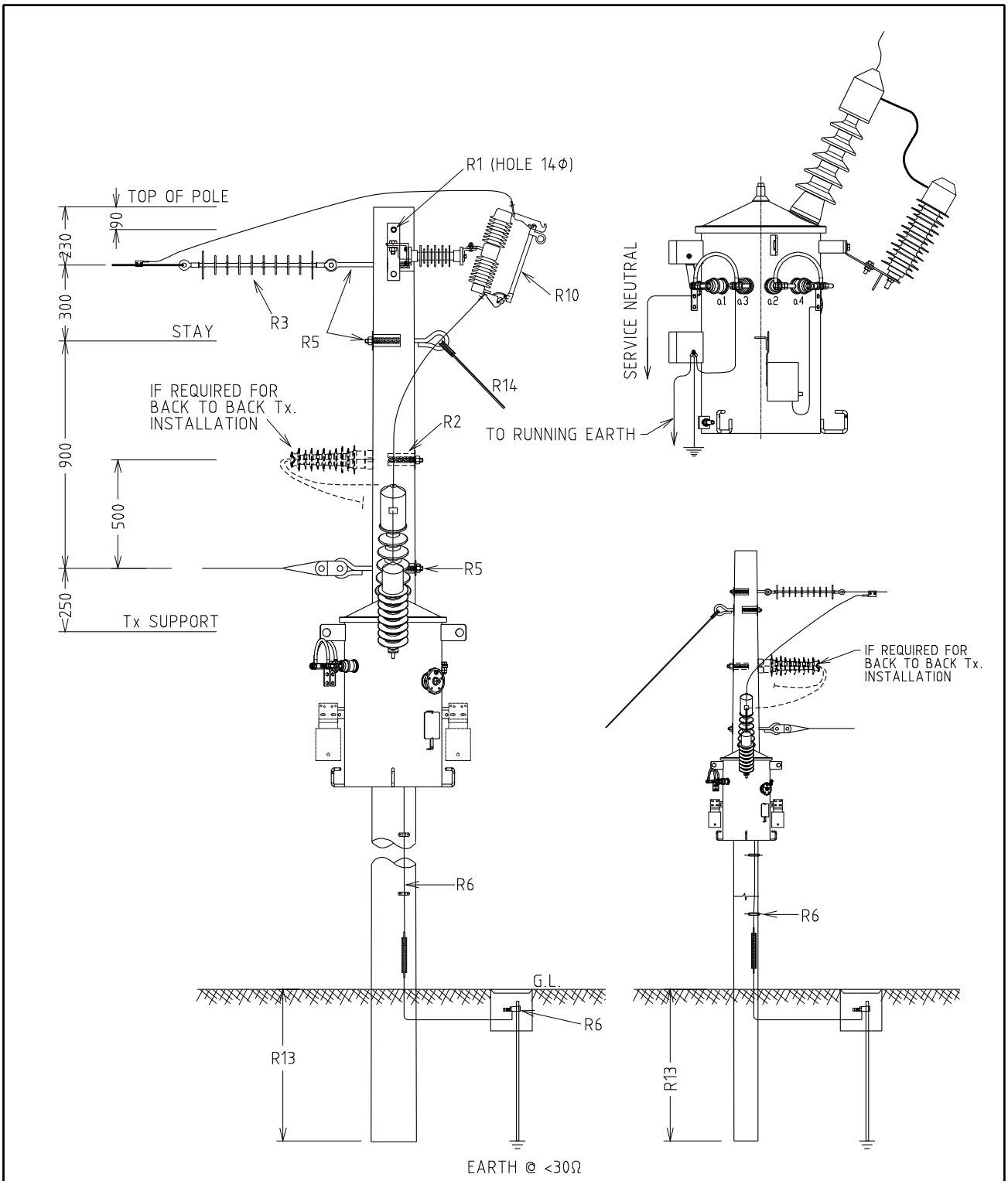
STRUCTURE

TITLE: 2Ph IN-LINE 2Ph TRANSFORMER WITH DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 16-01-2020	DRG. No. H46-2
ORIGINATED: NN	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES U.O.N.
2. ALL HOLES 18Φ U.O.N.

SINGLE PHASE – ONE BUSHING

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	31.10.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
E	05.01.15	FORMAT CHANGED AND RE TO STAY CONNECTION REMOVED	JC	REE	GS
D	09.05.12	ORIGINAL ISSUE			

STRUCTURE

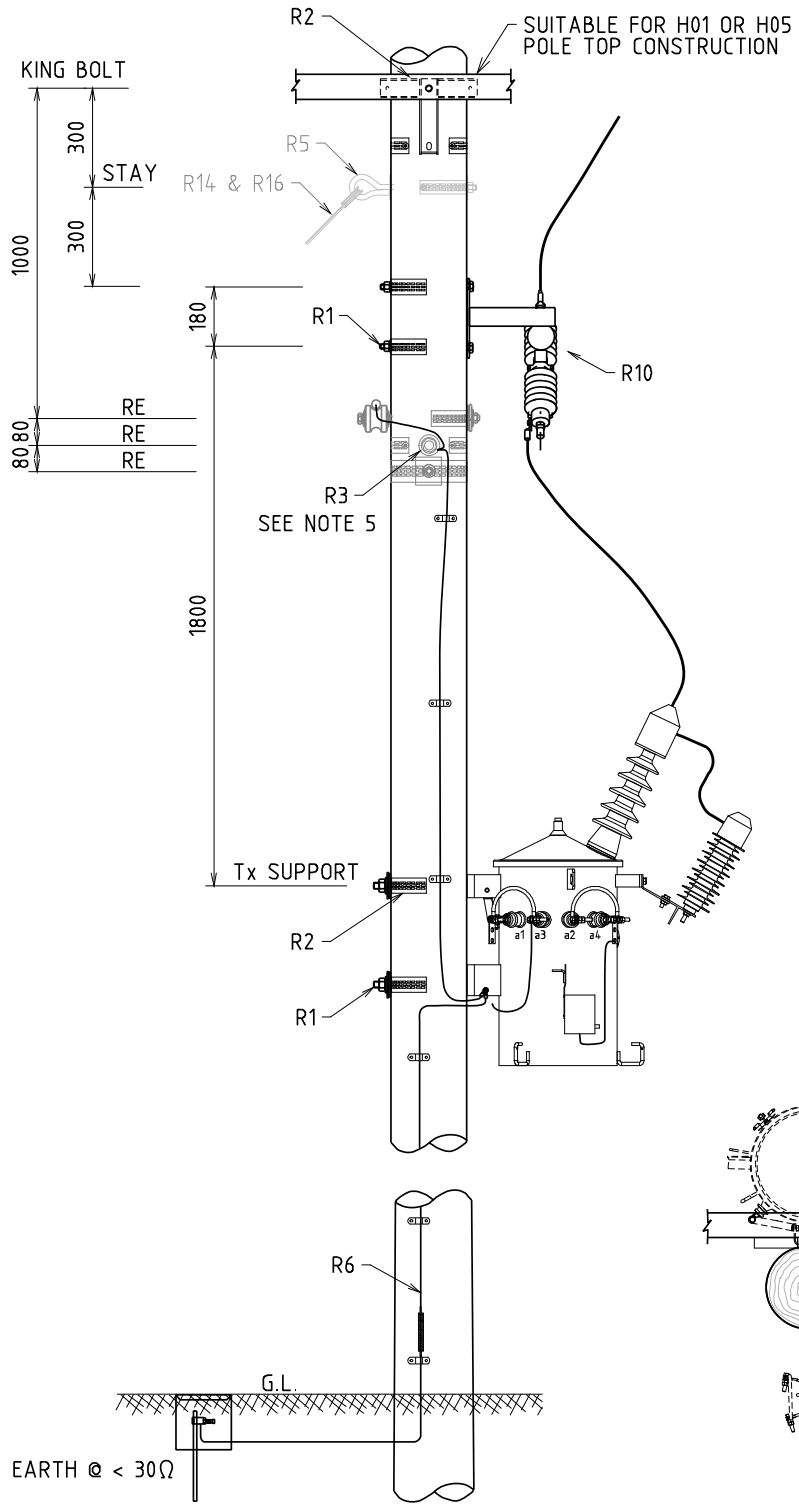
TITLE

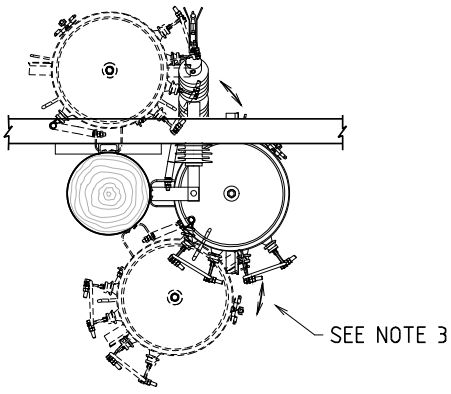
TERMINATION TRANSFORMER
WITH OR WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H47-1	
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	SHT.





PLAN VIEW

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
3. Tx & DOF ORIENTED TO ACHIEVE MAXIMUM CLEARANCE.
4. MAINTAIN 400mm SEPARATION BETWEEN RUNNING EARTH AND TAPS.
5. RUNNING EARTH (RE) POSITION IS RELATED TO H01 OR H05.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	14.11.19	MODIFIED TO INCORPORATE H05	NN	NMc	GS
E	09.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
D	21.12.15	FORMAT CHANGED	ME	REE	GS
C	28.05.12	ORIGINAL ISSUE			

STRUCTURE

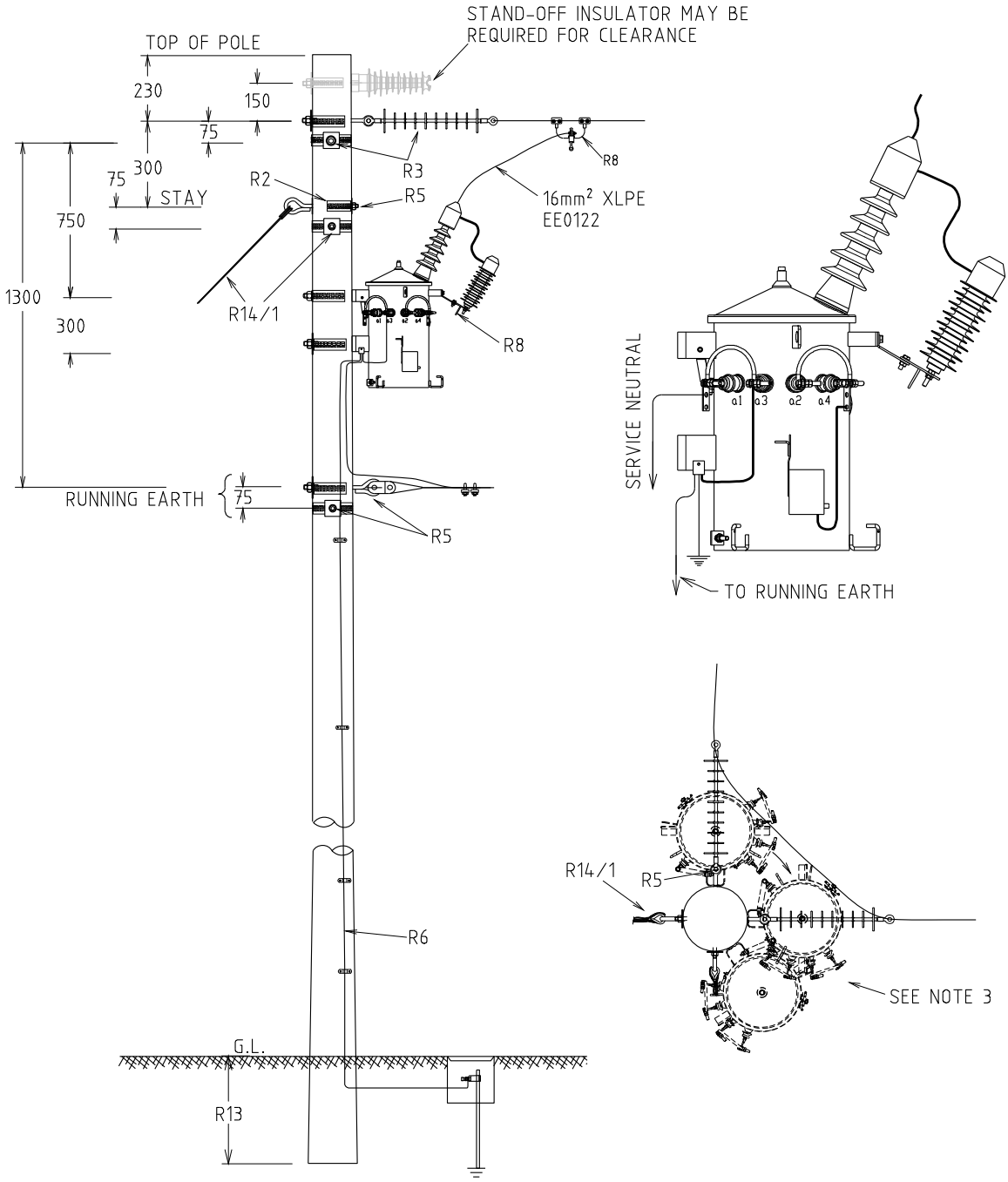
TITLE

1Ph TRANSFORMER
WITH DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	H47-2
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. POSITION Tx TO SUPPLY CUSTOMER AND MAINTAIN CLEARANCE.
4. STAY POSITIONING AND NUMBER OF STAYS AS PER OVERHEAD LINE DESIGN MANUAL.
5. SEE R12/1 FOR LV ARRANGEMENT DETAILS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	09.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
B	21.12.15	NOTE 6 ADDED	REE	ME	GS
A	16.11.15	ORIGINAL ISSUE	ME	REE	GS

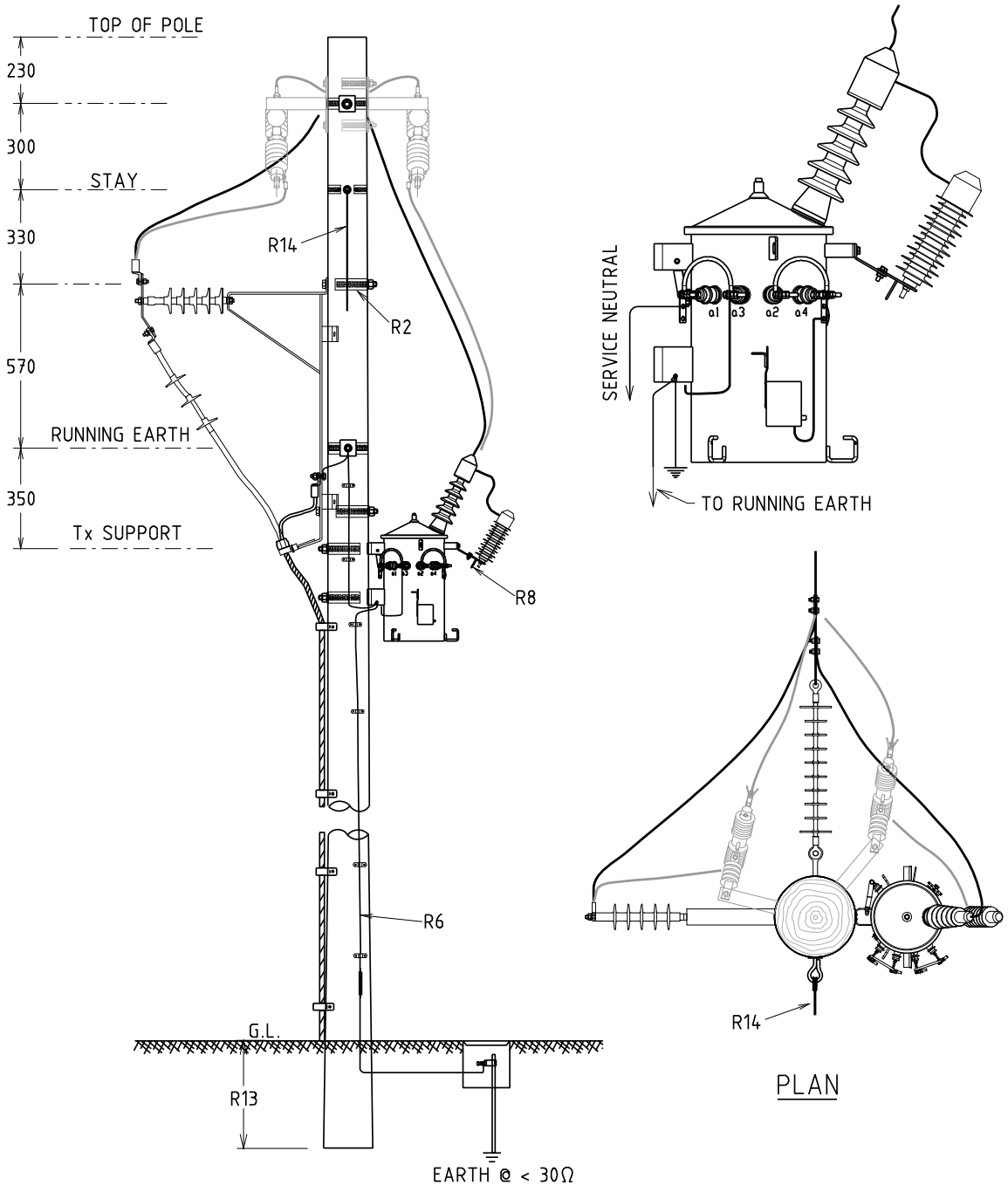
STRUCTURE

TITLE: 1Ph DOUBLE TERMINATION TRANSFORMER WITHOUT DROPOUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 18-06-2015	DRG. No.	
ORIGINATED: CO	SCALE: NTS	H47-3	
CHECKED: REE			
APPROVED: GRANT STACY		REV. C	SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. POSITION Tx TO SUPPLY CUSTOMER AND MAINTAIN CLEARANCE.
4. STAY POSITIONING AS PER OVERHEAD LINE DESIGN MANUAL.
5. SEE R12/1 FOR LV ARRANGEMENT DETAILS.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	24.01.20	ORIGINAL ISSUE	NN	REE	GS

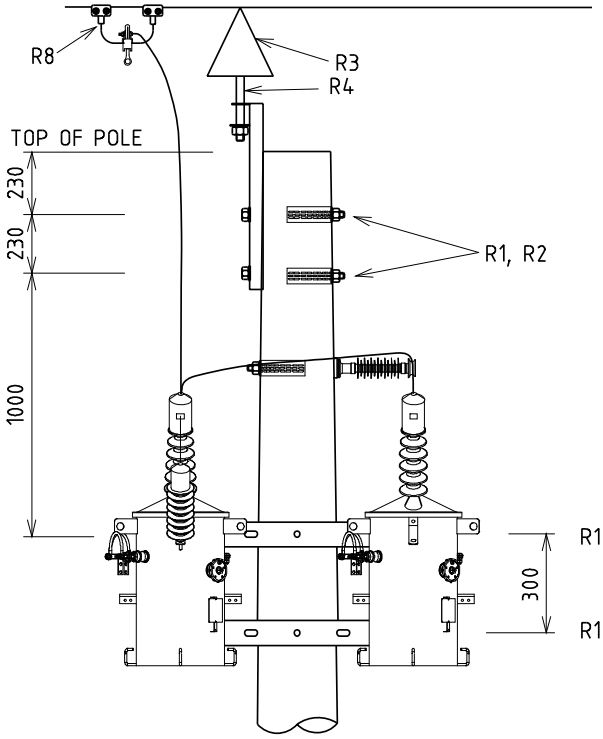
STRUCTURE

TITLE: 1Ph CABLE TERMINATION TRANSFORMER WITH/WITHOUT DROPOUT FUSE

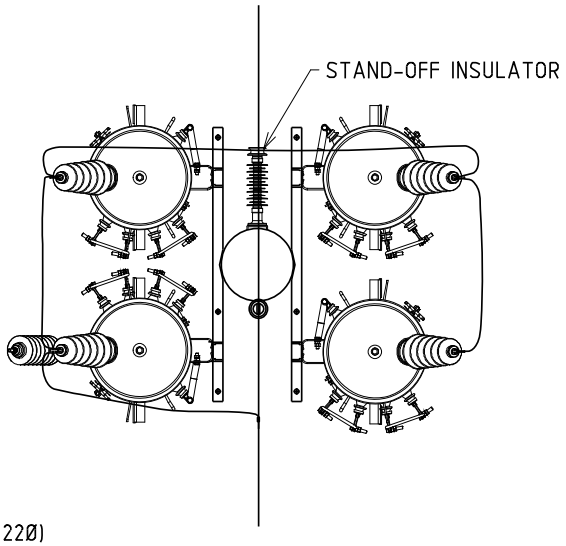
DISTRIBUTION CONSTRN. STANDARD

westernpower

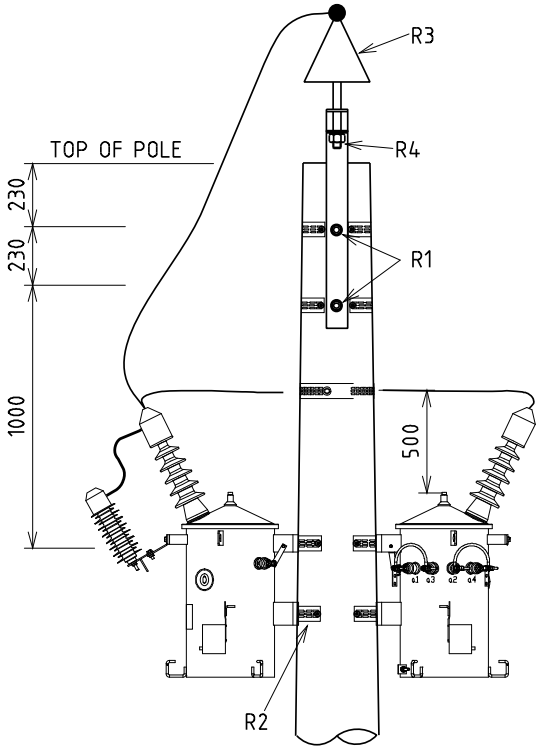
DRAWN: JRR	DATE: 15-01-2020	DRG. No. H47-4
ORIGINATED: NN	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. A / SHT.



QUAD TX's ARRANGEMENT



PLAN VIEW



TWIN TX's ARRANGEMENT

NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. TWIN TX's ARE TO BE MOUNTED IN BACK TO BACK CONFIGURATION ONLY.
4. SEE R12/1 FOR LV ARRANGEMENT DETAILS.
5. SEE H49 & H50 FOR EARTH & LV PHASE CONNECTIONS.
6. ALL TRANSFORMERS MUST BE SAME MANUFACTURER AND SIZE.

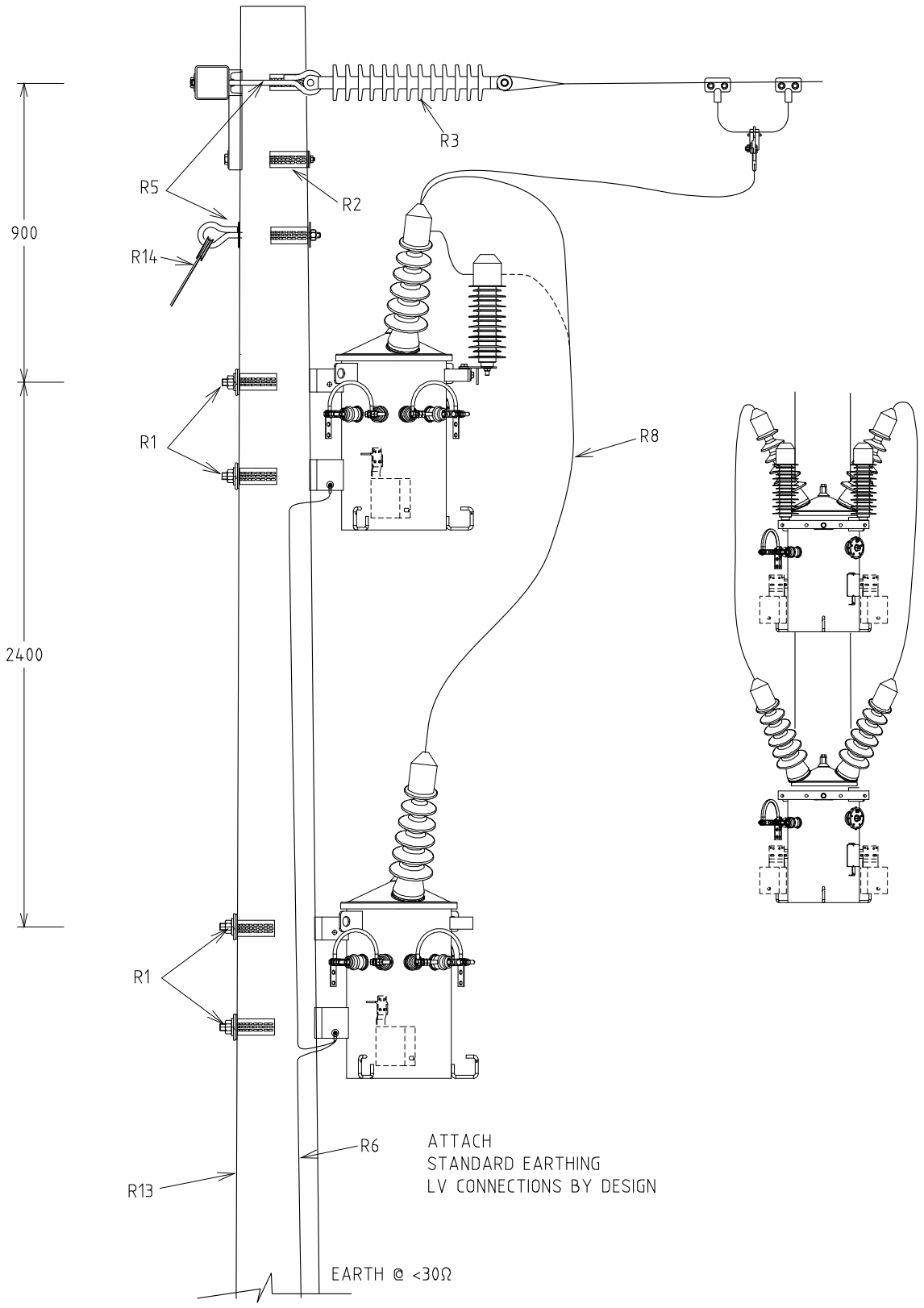
REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
G	29.05.20	SPARE SURGE ARRESTER REMOVED	NMc	NN	GS
F	16.11.18	TRANSFORMER TYPE CHANGED	NMc	NN	GS
E	21.12.15	NOTE 5 ADDED	ME	REE	GS
D	16.11.15	TX OFFSET AND STAND-OFF INSULATOR ADDED	ME	REE	GS

STRUCTURE

TITLE
TWIN/QUAD MOUNTED TRANSFORMER (1 PHASE) EACH SIDE OF POLE

DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No. H48-1
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. G SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	16.11.18	TRANSFORMER TYPE CHANGED	NMc	NN	GS
A	28.02.11	ORIGINAL ISSUE			

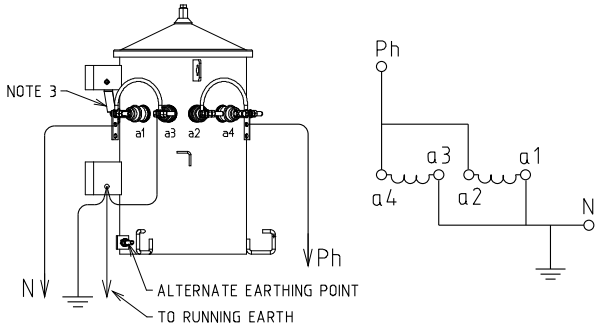
STRUCTURE

TITLE
VERTICAL MOUNTED TRANSFORMER
SINGLE PHASE 2 BUSHING

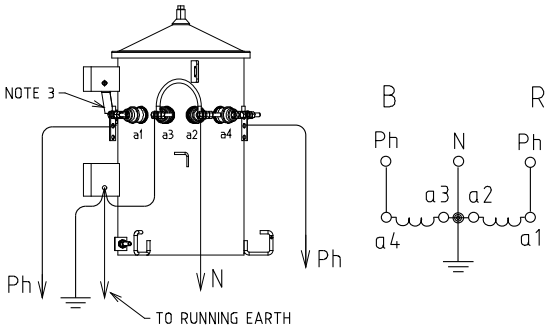
DISTRIBUTION CONSTRN. STANDARD

westernpower

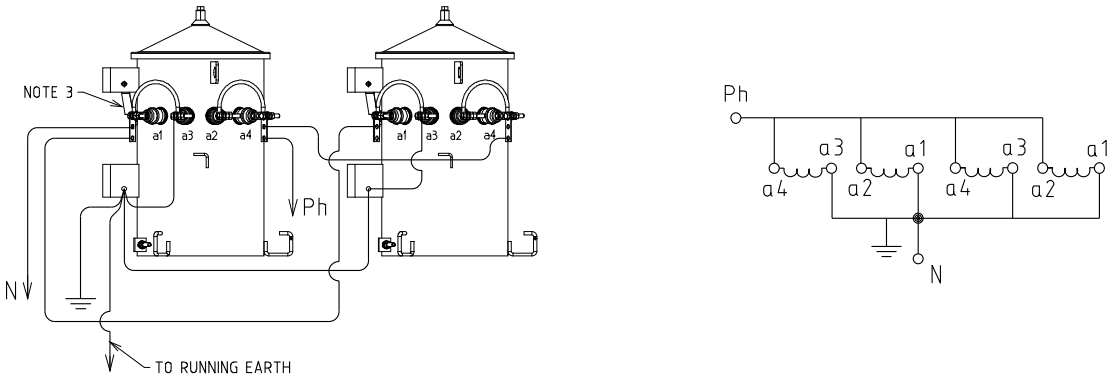
DRAWN: JRR	DATE: 21-03-2014	DRG. No. H48-2
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. B / SHT.



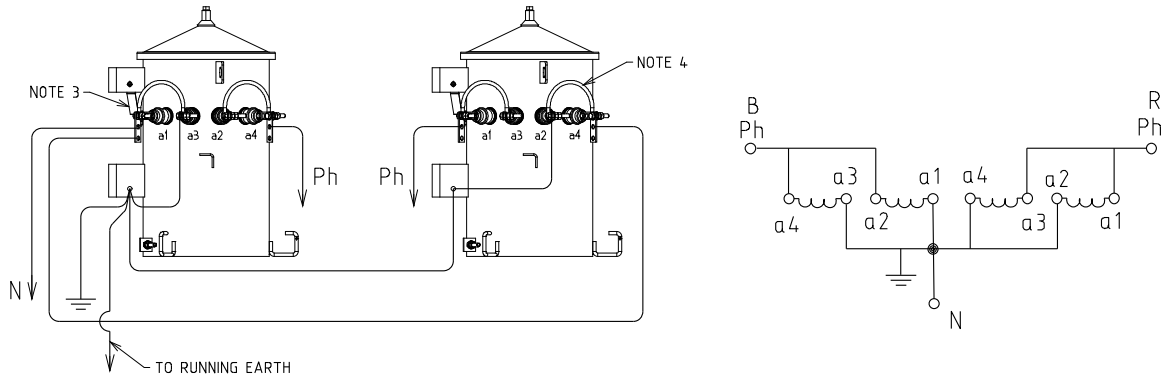
CONNECTION FOR 240V LV SUPPLY



CONNECTION FOR 480V LV SUPPLY



PARALLEL TX's FOR 240V LV SUPPLY



PARALLEL TX's FOR 480V LV SUPPLY

NOTE:-
1. SEE R12/1 FOR LV ARRANGEMENT DETAILS.
2. HV BUSHINGS NOT SHOWN.
3. ENSURE ER (EARTH RETURN) LINK TO THE TANK IN PLACE - SEE R12-1.
4. BUSHING WITH LV LINKS CAN BE USED INTERCHANGABLY.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	31.10.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
B	13.10.14	FORMAT CHANGED AND NOTE ADDED	FK	REE	GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

TITLE

EARTH & LV PHASE CONNECTIONS

DISTRIBUTION CONSTRN. STANDARD

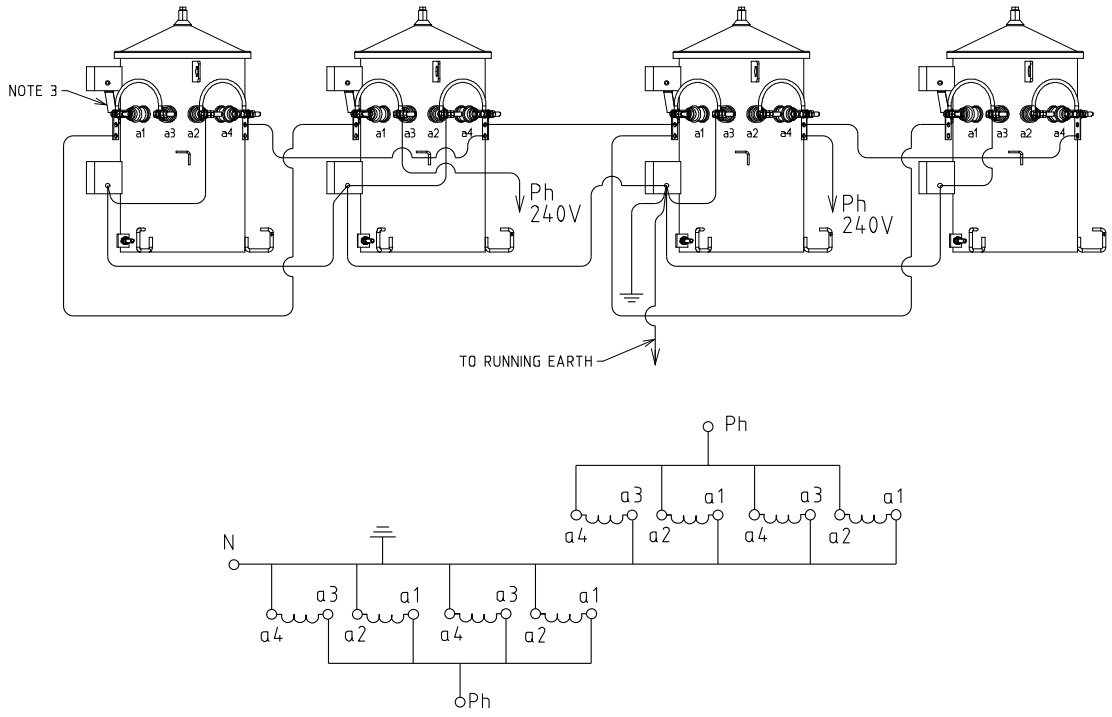
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H49

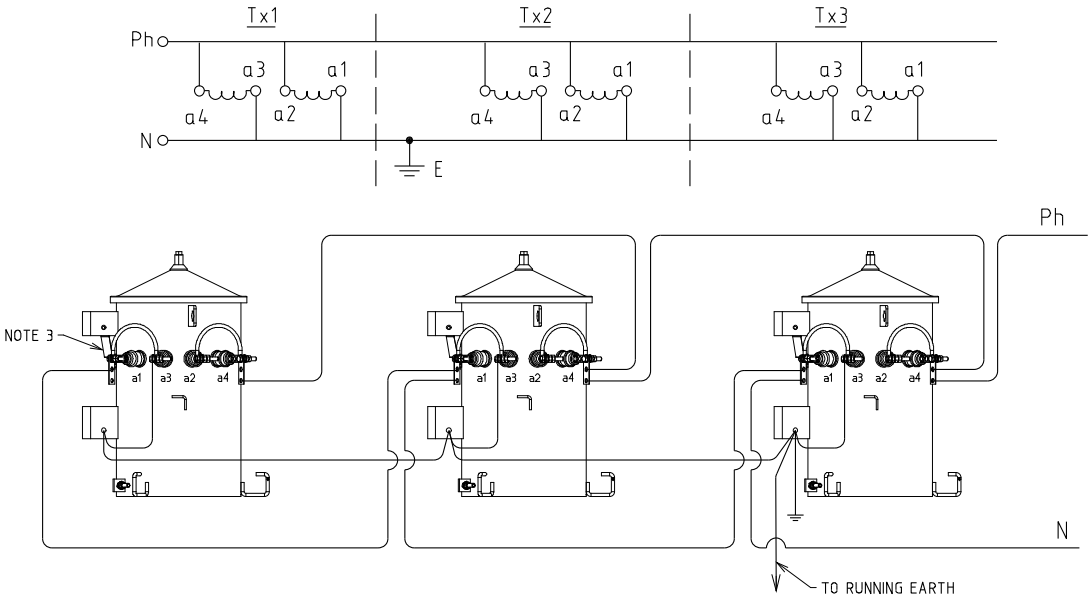
ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. C | SHT.



4 TX's FOR 480V LV SUPPLY



CONNECTIONS FOR THREE PARALLEL TX's - 240 LV SUPPLY

NOTE:-
1. SEE R12/1 FOR LV ARRANGEMENT DETAILS.
2. HV BUSHINGS NOT SHOWN.
3. ENSURE ER (EARTH RETURN) LINK TO THE TANK IN PLACE - SEE R12-1.
4. BUSHING WITH LV LINKS CAN BE USED INTERCHANGABLY.

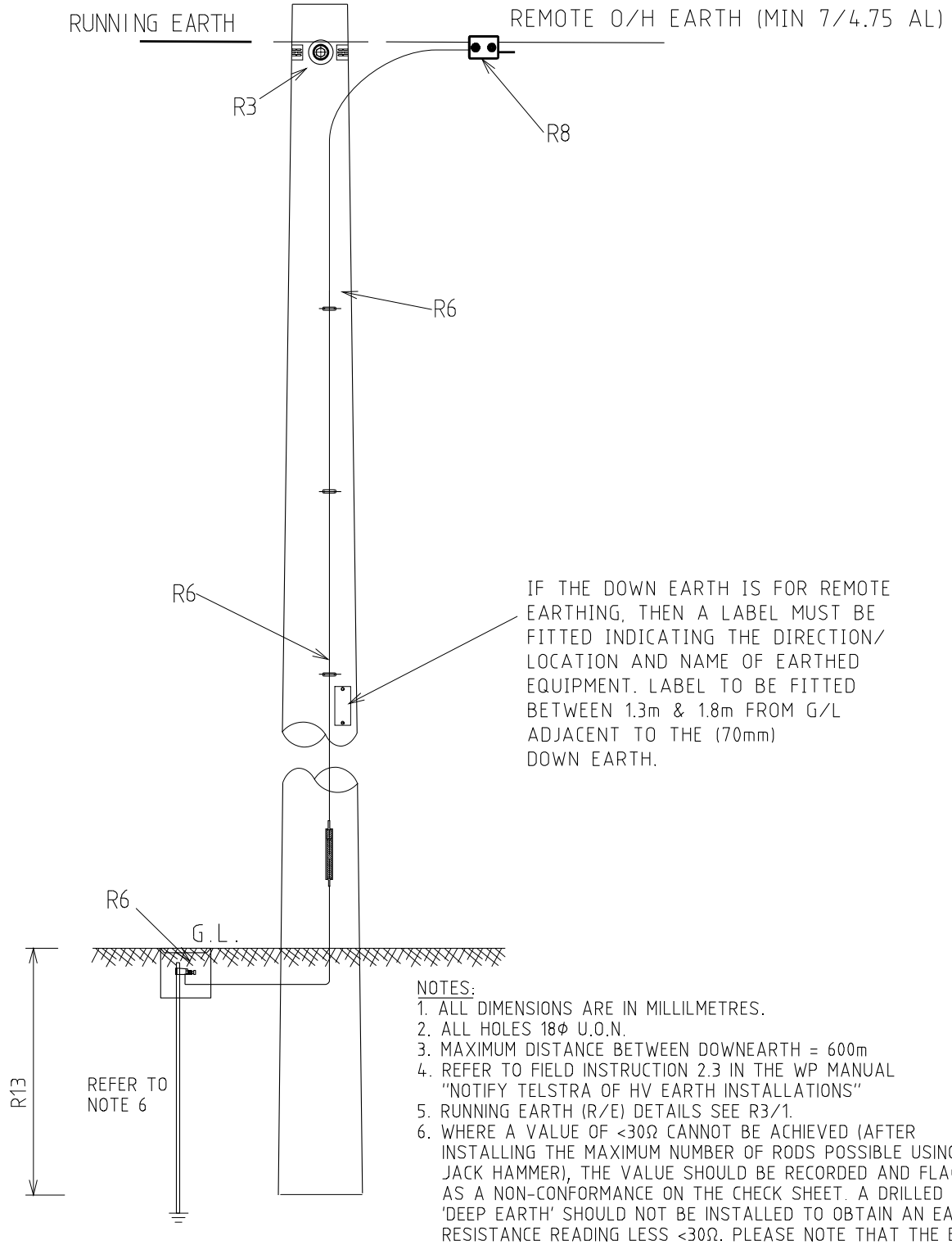
REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
C	30.10.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
B	13.10.14	FORMAT CHANGED AND NOTE ADDED	FK	REE	GS
A	13.07.00	ORIGINAL ISSUE			

STRUCTURE

TITLE
EARTH & LV PHASE CONNECTIONS
THREE & FOUR TRANSFORMERS SETUP

DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No. H50
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. C SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLILMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH = 600m
4. REFER TO FIELD INSTRUCTION 2.3 IN THE WP MANUAL "NOTIFY TELSTRA OF HV EARTH INSTALLATIONS"
5. RUNNING EARTH (R/E) DETAILS SEE R3/1.
6. WHERE A VALUE OF <30Ω CANNOT BE ACHIEVED (AFTER INSTALLING THE MAXIMUM NUMBER OF RODS POSSIBLE USING A JACK HAMMER), THE VALUE SHOULD BE RECORDED AND FLAGGED AS A NON-CONFORMANCE ON THE CHECK SHEET. A DRILLED 'DEEP EARTH' SHOULD NOT BE INSTALLED TO OBTAIN AN EARTH RESISTANCE READING LESS <30Ω. PLEASE NOTE THAT THE EARTH RESISTANCE MEASUREMENT SHOULD BE TAKEN OFF THE EARTH STAKE BEFORE IT IS CONNECTED TO THE UNDERSLUNG RUNNING EARTH. PLEASE NOTE THAT THIS RELAXATION APPLIES TO INTERMEDIATE POLES. EARTH RESISTANCE VALUES AT KEY STRUCTURE POLES SUCH AS TRANSFORMERS, POLE TOP SWITCHES, CABLE HEADS ETC. ARE STILL REQUIRED TO BE EARTHED TO <30Ω.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	14.11.18	NOTES REVISED	REE	CO	GS
A	10.05.08	ORIGINAL ISSUE			

STRUCTURE

TITLE

DOWN EARTH-RUNNING EARTH

DISTRIBUTION CONSTRN. STANDARD

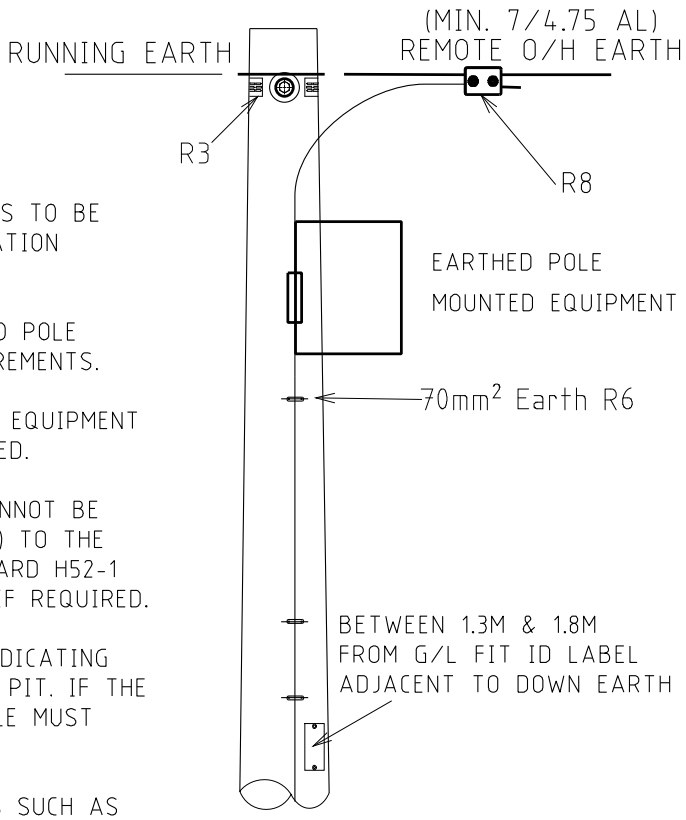
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H52-1

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. B | SHT.



REMOTE/EXTENDED EARTH INSTALLATION NOTES TO BE USED WHEN STANDARD DOWN EARTH INSTALLATION CANNOT BE APPLIED.

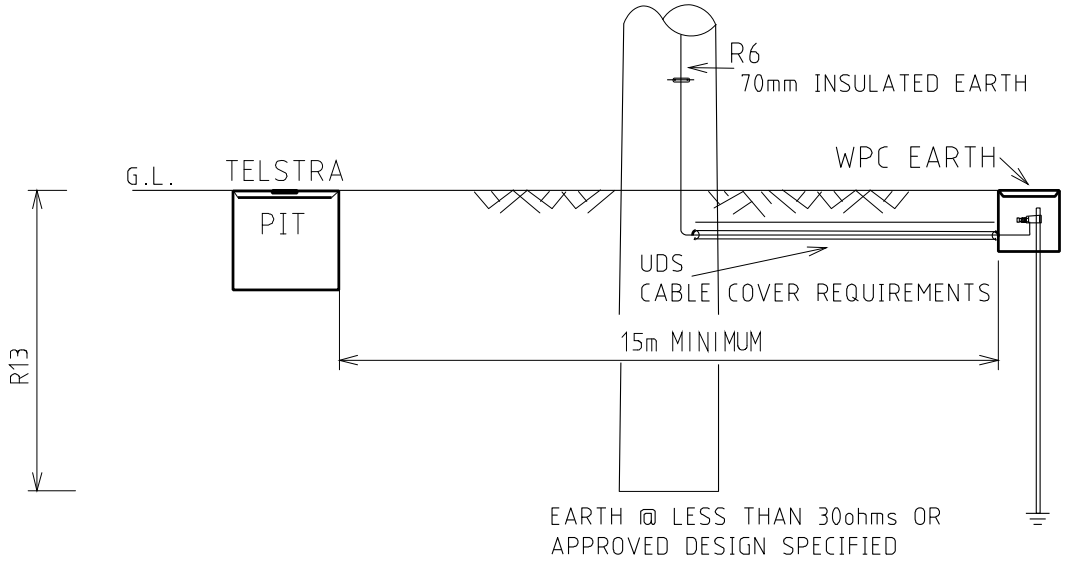
1. EARTH PIT CANNOT BE FITTED ADJACENT TO POLE DUE TO TELSTRA OR OTHER TECHNICAL REQUIREMENTS.

2. THE 15M SEPARATION APPLIES TO TELSTRA EQUIPMENT UNLESS SPECIFIC SITE VARIATION IS APPROVED.

3. IF 15Ms OR THE APPROVED SEPARATION CANNOT BE ACHIEVED, THEN A O/H EARTH (Min 7/4.75 AL) TO THE NEXT POLE MAY BE INSTALLED AND A STANDARD H52-1 CONNECTION APPLIED. UPGRADE R/E SECTION IF REQUIRED.

4. A STANDARD LABEL SIGN TO BE FITTED INDICATING DIRECTION AND LOCATION OF THE WPC EARTH PIT. IF THE DOWN EARTH IS ON THE NEXT POLE THAT POLE MUST ALSO BE LABELLED. SEE H52-1.

5. STANDARD UDS CABLE PROTECTION APPLIES SUCH AS CONDUIT AT 750mm DEPTH.



ALTHOUGH THE DRAWING OUTLINES BOTH EXTENDED & REMOTE OPTIONS ONLY ONE SELECTION IS REQUIRED. EXTENDED "E" AWAY FROM THE POLE OR O/H REMOTE "E".

REFER TO FIELD INSTRUCTION 2.3 IN THE WP MANUAL "NOTIFY TELSTRA OF HV EARTH INSTALLATIONS"

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

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
A	10.05.18	ORIGINAL ISSUE			

STRUCTURE

TITLE: EXTENDED OR REMOTE DOWN EARTH-RUNNING EARTH

DISTRIBUTION CONSTRN. STANDARD

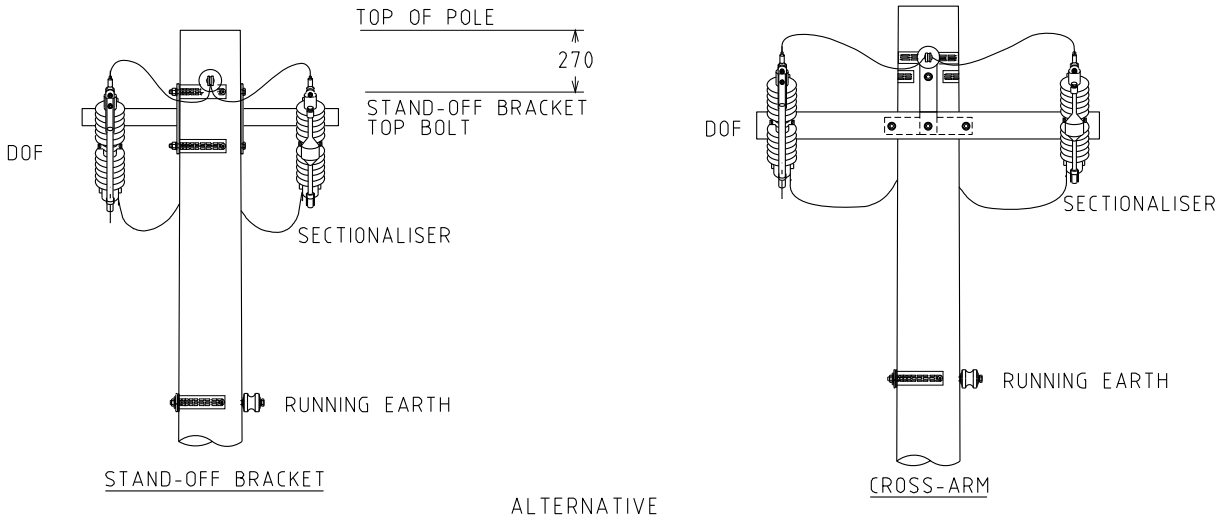
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H52-2

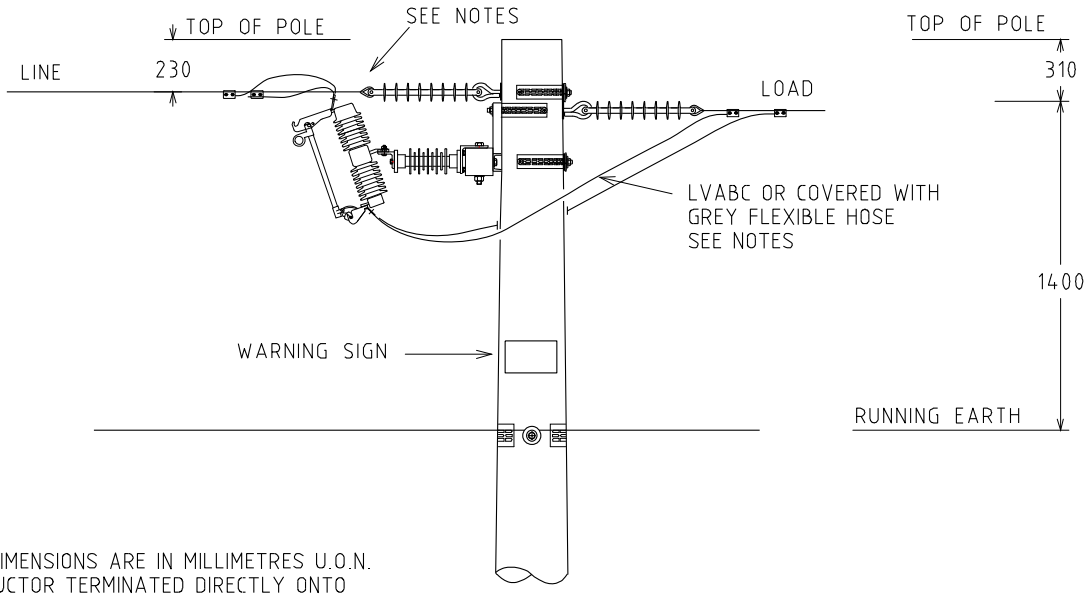
ORIGINATED: | SCALE: NTS

CHECKED: REE

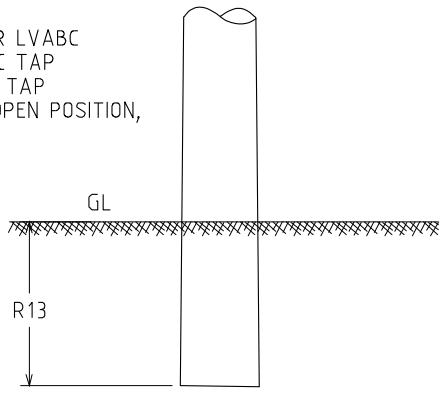
APPROVED: GRANT STACY | REV. A | SHT.



ALTERNATIVE



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES U.O.N.
2. CONDUCTOR TERMINATED DIRECTLY ONTO SECTIONALISER – PREFERRED
3. AL CONDUCTORS – TAPS COVERED OR LVABC
4. SCAC CONDUCTOR USE COVERED SCAC TAP
5. DRAIN HOLE REQUIRED IN BOTTOM OF TAP
6. BY-PASS FUSE NOT TO BE LEFT IN OPEN POSITION, REMOVE & HANG ON POLE.



USE 11m POLE
12.5m IF INADEQUATE GROUND CLEARANCE

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
B	06.12.13	ORIGINAL ISSUE			

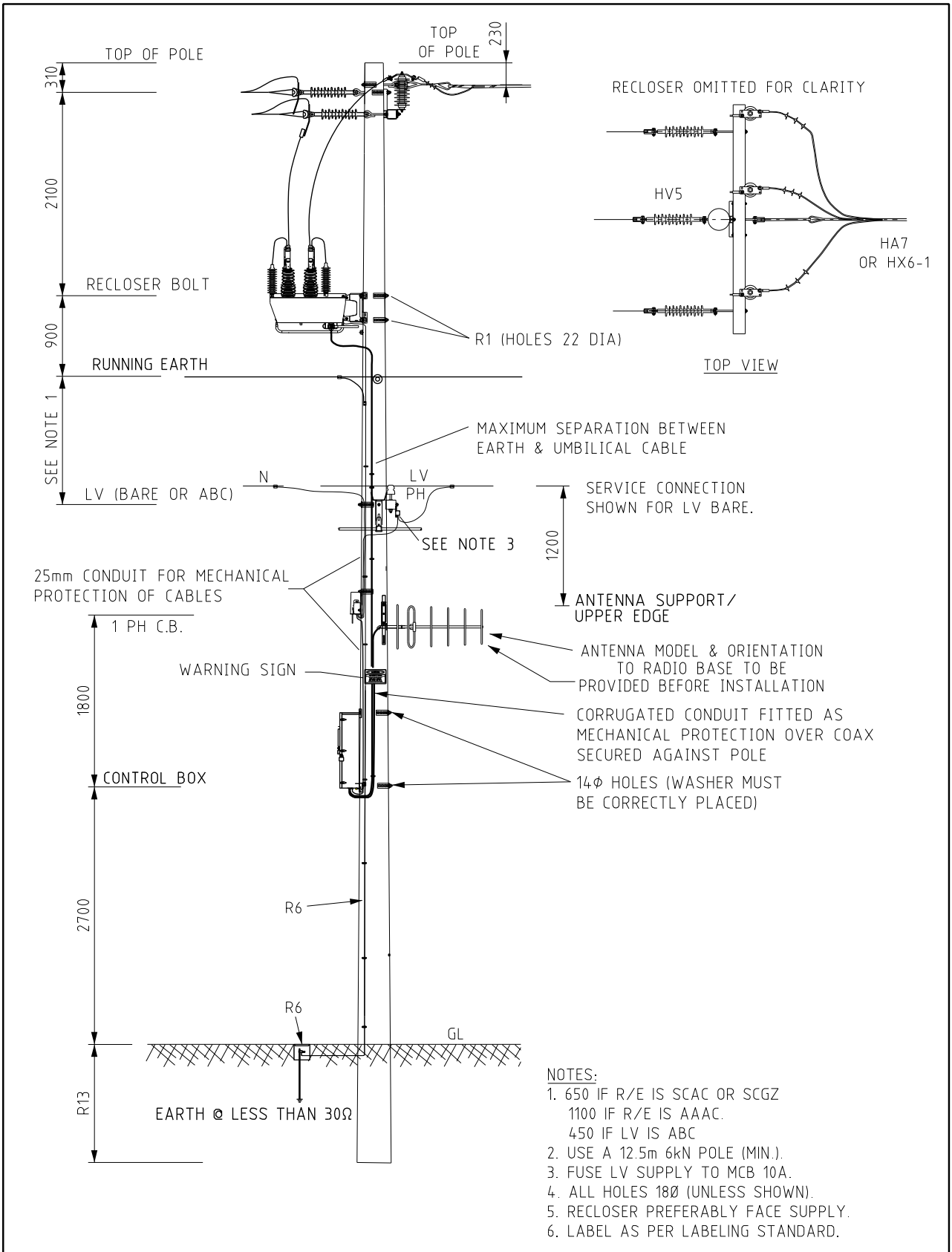
STRUCTURE

TITLE
1 PHASE IN-LINE STRAIN WITH SECTIONALISER & BY-PASS FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No. H53
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY		REV. B SHT.



R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
A	22.04.15	ORIGINAL ISSUE	REE	REE	GS

STRUCTURE

TITLE: 3 PH RECLOSER / LOAD BREAK SWITCH HV BARE - HV ABC/HENDRIX WITH LV AERIAL SUPPLY

DISTRIBUTION CONSTRN. STANDARD

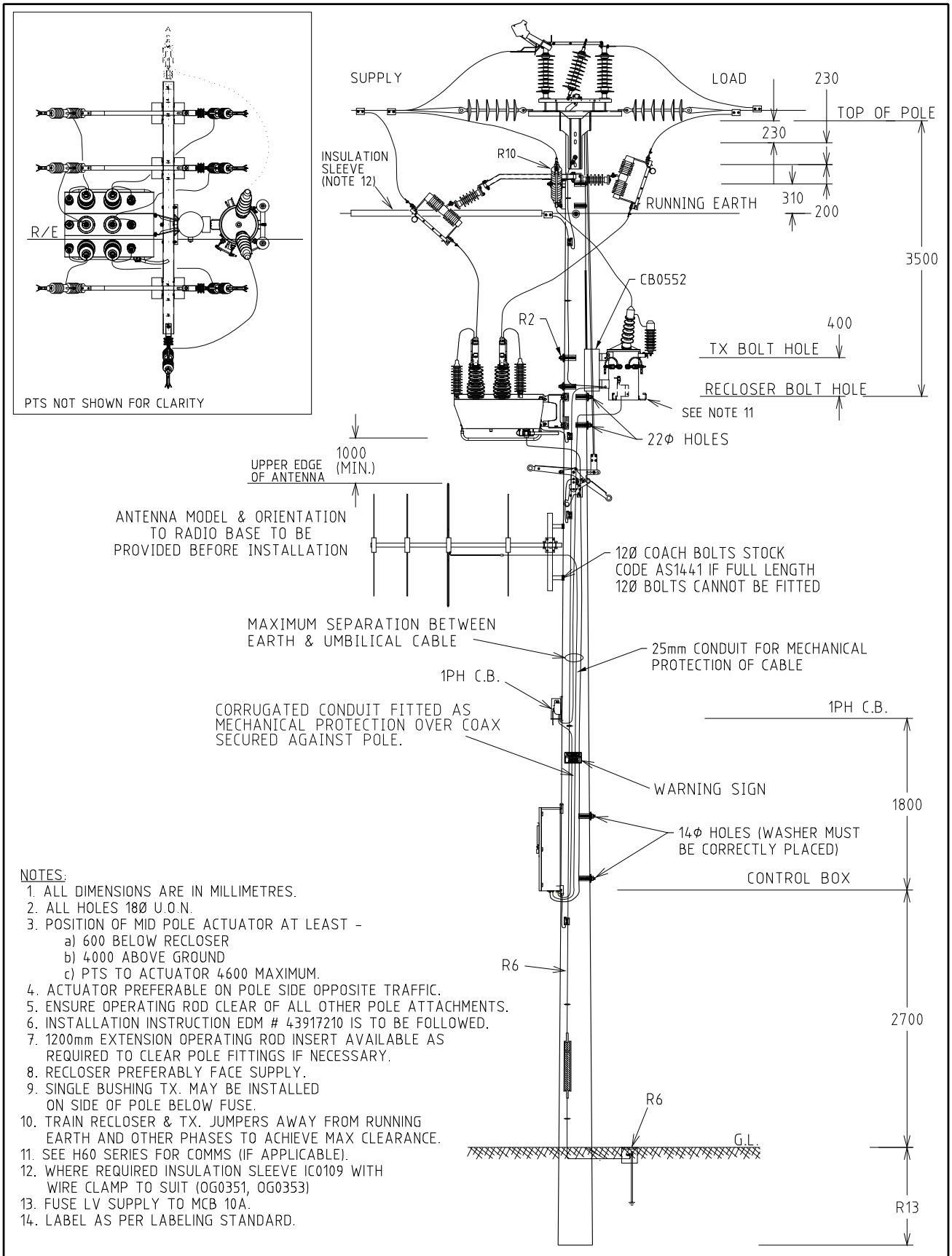
westernpower

DRAWN: JRR | DATE: 07-10-2014 | DRG. No. H60-4

ORIGINATED: REE | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. A | SHT.



NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. POSITION OF MID POLE ACTUATOR AT LEAST -
   a) 600 BELOW RECLOSER
   b) 4000 ABOVE GROUND
   c) PTS TO ACTUATOR 4600 MAXIMUM.
4. ACTUATOR PREFERABLE ON POLE SIDE OPPOSITE TRAFFIC.
5. ENSURE OPERATING ROD CLEAR OF ALL OTHER POLE ATTACHMENTS.
6. INSTALLATION INSTRUCTION EDM # 43917210 IS TO BE FOLLOWED.
7. 1200mm EXTENSION OPERATING ROD INSERT AVAILABLE AS REQUIRED TO CLEAR POLE FITTINGS IF NECESSARY.
8. RECLOSER PREFERABLY FACE SUPPLY.
9. SINGLE BUSHING TX. MAY BE INSTALLED ON SIDE OF POLE BELOW FUSE.
10. TRAIN RECLOSER & TX. JUMPERS AWAY FROM RUNNING EARTH AND OTHER PHASES TO ACHIEVE MAX CLEARANCE.
11. SEE H60 SERIES FOR COMMS (IF APPLICABLE).
12. WHERE REQUIRED INSULATION SLEEVE IC0109 WITH WIRE CLAMP TO SUIT (OG0351, OG0353)
13. FUSE LV SUPPLY TO MCB 10A.
14. LABEL AS PER LABELING STANDARD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APPD.
F	21.06.19	EARTH CONNECTION METHOD MODIFIED AND NOTES	NMc	CO	GS
E	31.01.18	PTS TYPE CHANGED	REE	JC	GS
D	16.11.17	NOTES AND TRANSFORMER TYPE REVISED	REE	JC	GS
C	05.10.15	NOTE 12 ADDED	KJ	REE	CO

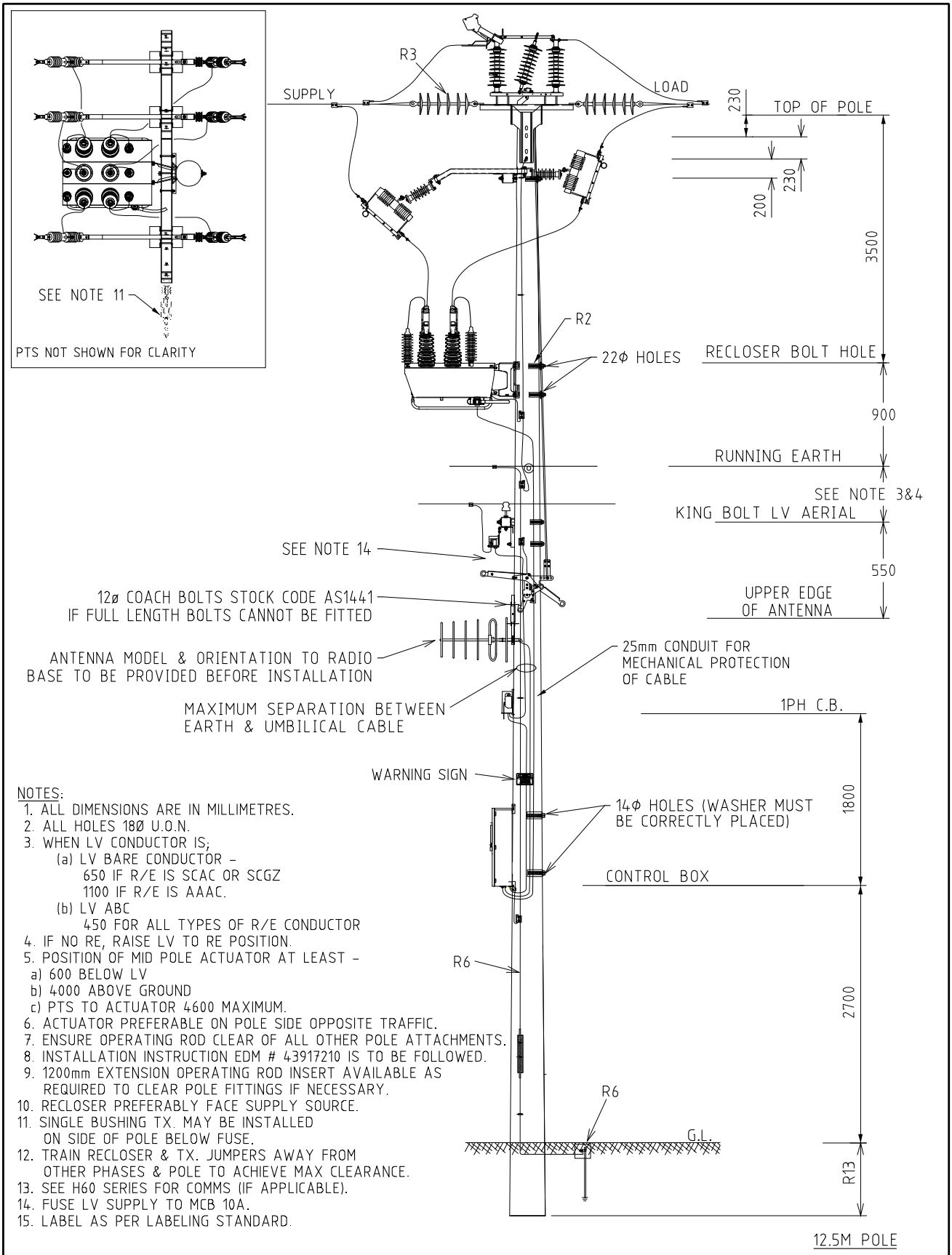
STRUCTURE

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

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 07-10-2014	DRG. No.	
ORIGINATED: REE	SCALE: NTS	H61-1	
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	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.
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. RECLOSER PREFERABLY FACE SUPPLY SOURCE.
11. SINGLE BUSHING TX. MAY BE INSTALLED ON SIDE OF POLE BELOW FUSE.
12. TRAIN RECLOSER & TX. JUMPERS AWAY FROM OTHER PHASES & POLE TO ACHIEVE MAX CLEARANCE.
13. SEE H60 SERIES FOR COMMS (IF APPLICABLE).
14. FUSE LV SUPPLY TO MCB 10A.
15. LABEL AS PER LABELING STANDARD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APPRD.
F	21.06.19	EARTH CONNECTION METHOD MODIFIED	NMc	CO	GS
E	01.02.18	PTS TYPE CHANGED	REE	JC	GS
D	16.11.17	NOTES REVISED	REE	JC	GS
C	16.06.17	NOTES REVISED	GS	NMc	GS

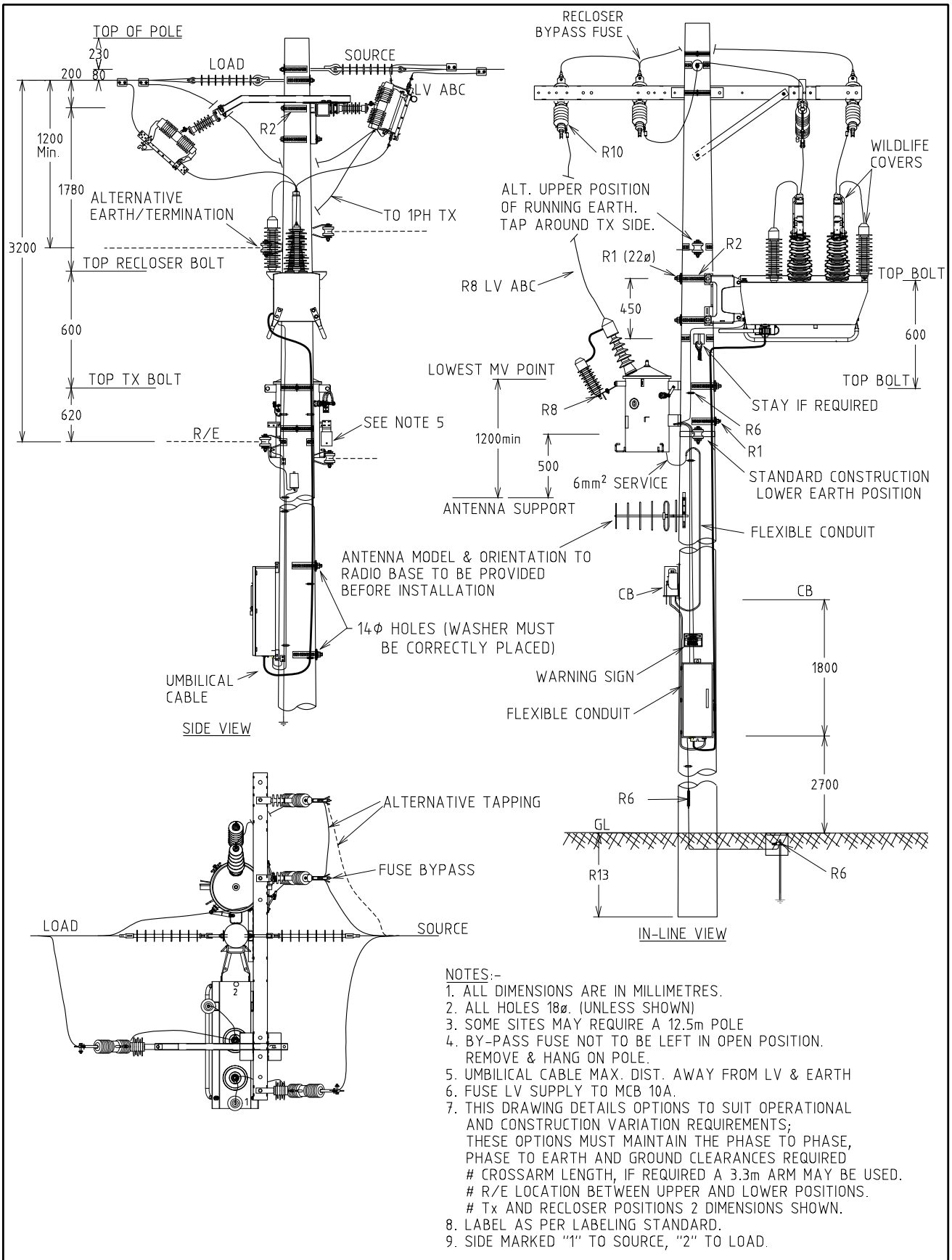
STRUCTURE

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

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 07-10-2014 | DRG. No. H61-2
ORIGINATED: REE | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. F | SHT.



NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18ø. (UNLESS SHOWN)
3. SOME SITES MAY REQUIRE A 12.5m POLE
4. BY-PASS FUSE NOT TO BE LEFT IN OPEN POSITION.
   REMOVE & HANG ON POLE.
5. UMBILICAL CABLE MAX. DIST. AWAY FROM LV & EARTH
6. FUSE LV SUPPLY TO MCB 10A.
7. THIS 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 POSITIONS.
   # Tx AND RECLOSER POSITIONS 2 DIMENSIONS SHOWN.
8. LABEL AS PER LABELING STANDARD.
9. SIDE MARKED "1" TO SOURCE, "2" TO LOAD.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	27.11.17	TRANSFORMER TYPE CHANGED	NMc	CO	GS
C	01.09.16	RECTIFIED THE WIRING SYSTEM IN PLAN VIEW	REE	JC	GS
B	05.10.15	NOTE 8 ADDED	KJ	REE	CO
A	22.04.15	ORIGINAL ISSUE	REE	REE	GS

STRUCTURE

1 PHASE RECLOSER / LOAD BREAK SWITCH
BY-PASS ISOLATORS/STRAIN TERMINATION
WITH SINGLE PHASE Tx SUPPLY

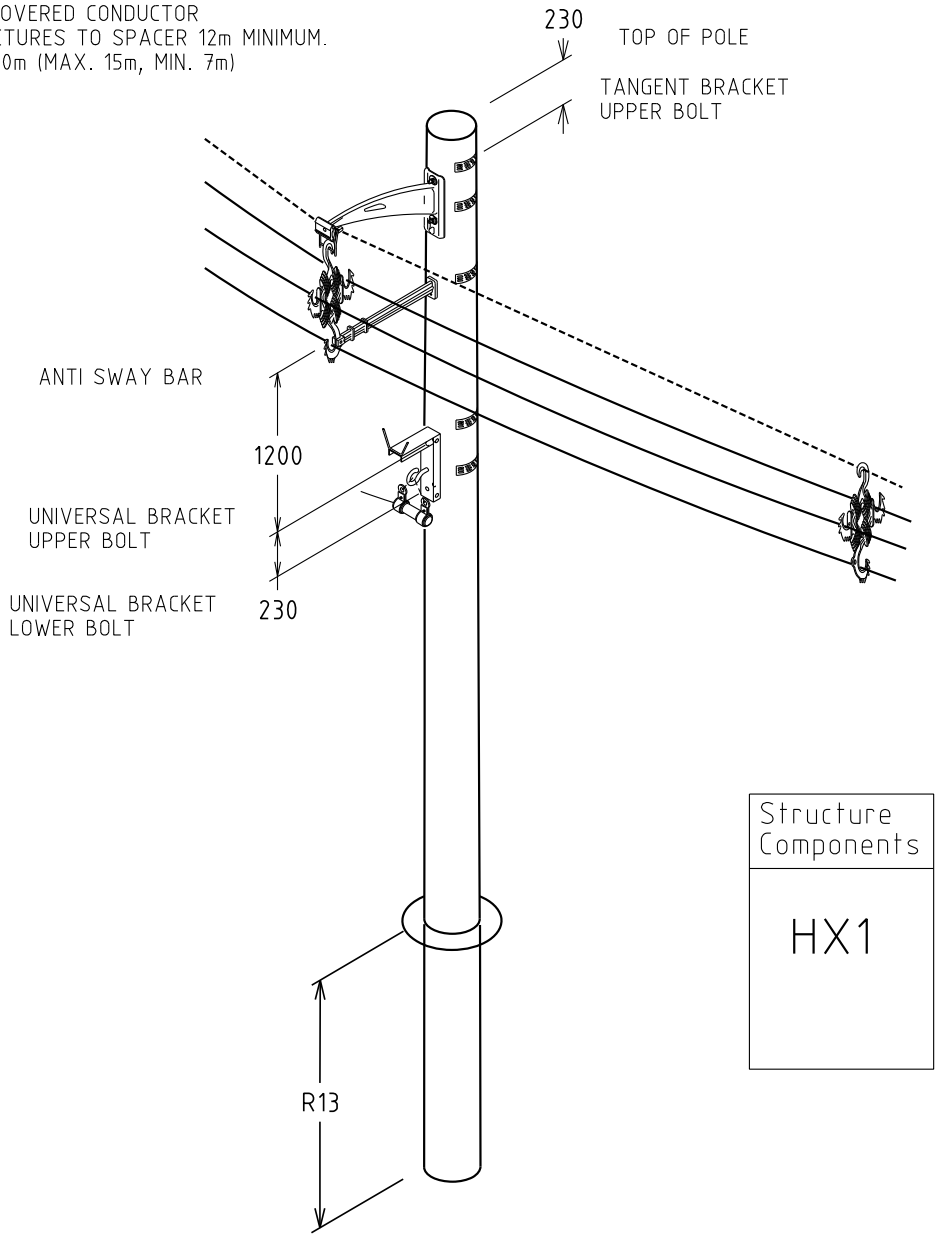
DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 07-10-2014 | DRG. No. H63
ORIGINATED: REE | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY
REV. D | SHT.

HV HENDRIX

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components

HX1

NOTE:
1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS - 150m.

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
E	09.01.15	TITLE CHANGED	AK	DVT	GS
D	24.10.14	DISPERSION PLATE ADDED	REE	REE	GS
C	16.07.14	FORMAT CHANGED AND SPANNING REVISED			GS
B	03.12.13	ORIGINAL ISSUE			

STRUCTURE

TITLE: INTERMEDIATE POLE 0° - 2°

DISTRIBUTION CONSTRN. STANDARD

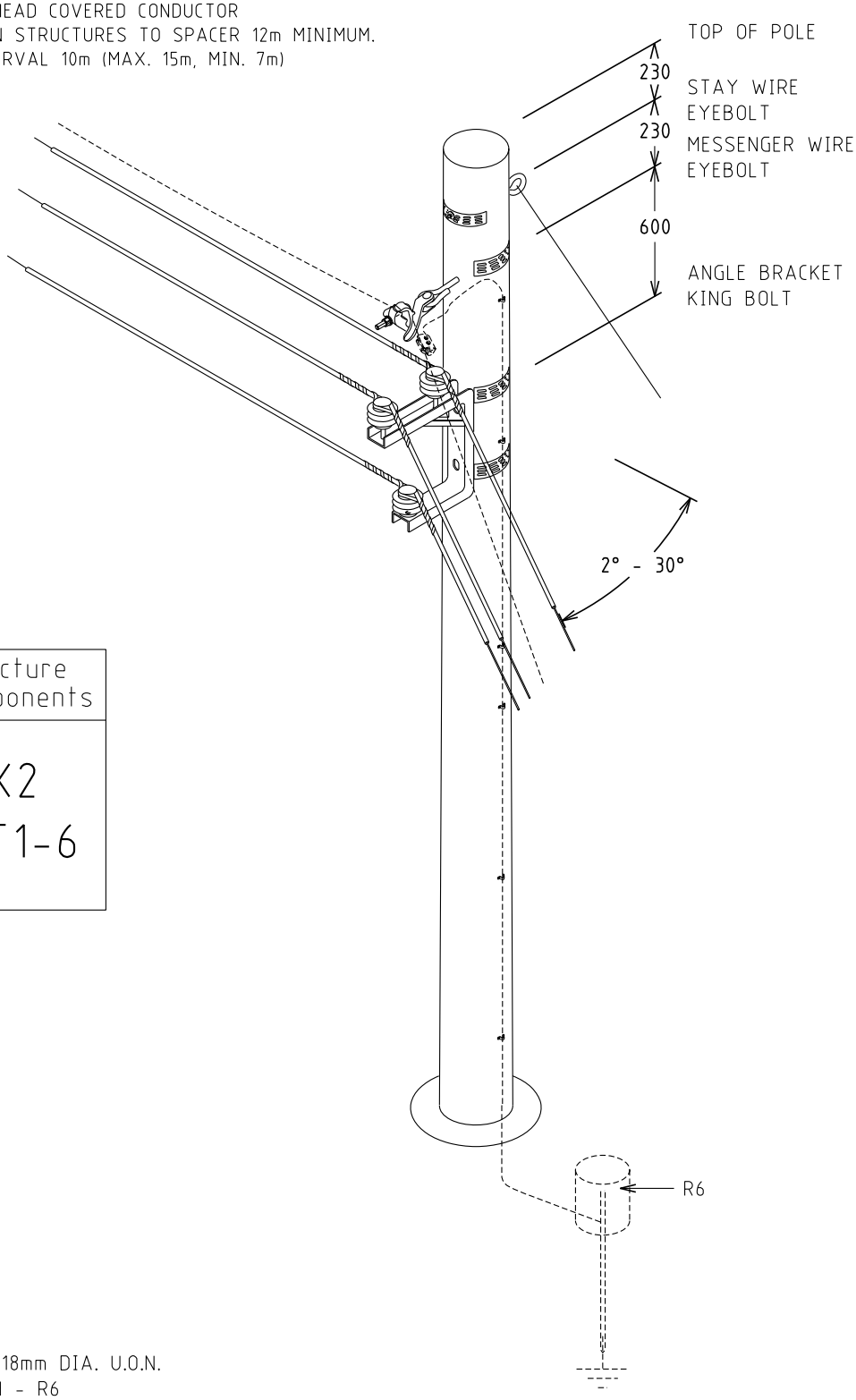
DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H100

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. E | SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components

HX2
ST1-6

NOTE:
1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
D	09.01.15	TITLE REVISED	AK	DVT	GS
C	24.10.14	DISPERSION PLATE ADDED	REE	REE	GS
B	19.03.14	FORMAT CHANGED AND DISTANCE BETWEEN EYEBOLT & KING BOLT INCREASED TO 600			GS
A	22.12.11	ORIGINAL ISSUE			

STRUCTURE

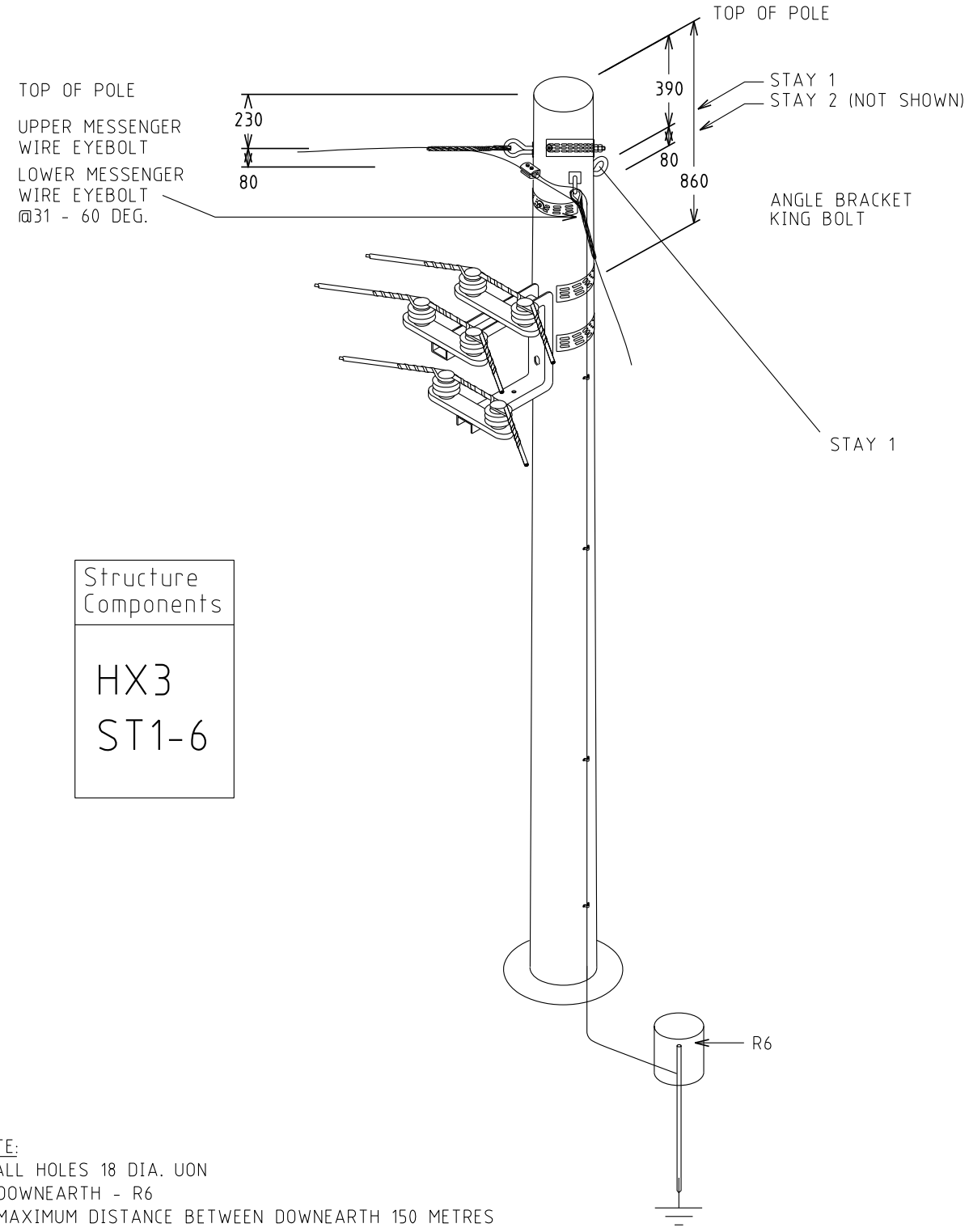
TITLE: INTERMEDIATE ANGLE POLE 2° - 30°

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR | DATE: 19-03-2014 | DRG. No. H101
ORIGINATED: | SCALE: NTS
CHECKED: REE
APPROVED: GRANT STACY | REV. D | SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components

HX3
ST1-6

NOTE:
1. ALL HOLES 18 DIA. UON
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTH 150 METRES

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
C	27.10.14	DISPERSION PLATE ADDED	REE	REE	GS
B	16.07.14	FORMAT CHANGED AND SPANNING REVISED			GS
A	22.12.11	ORIGINAL ISSUE			

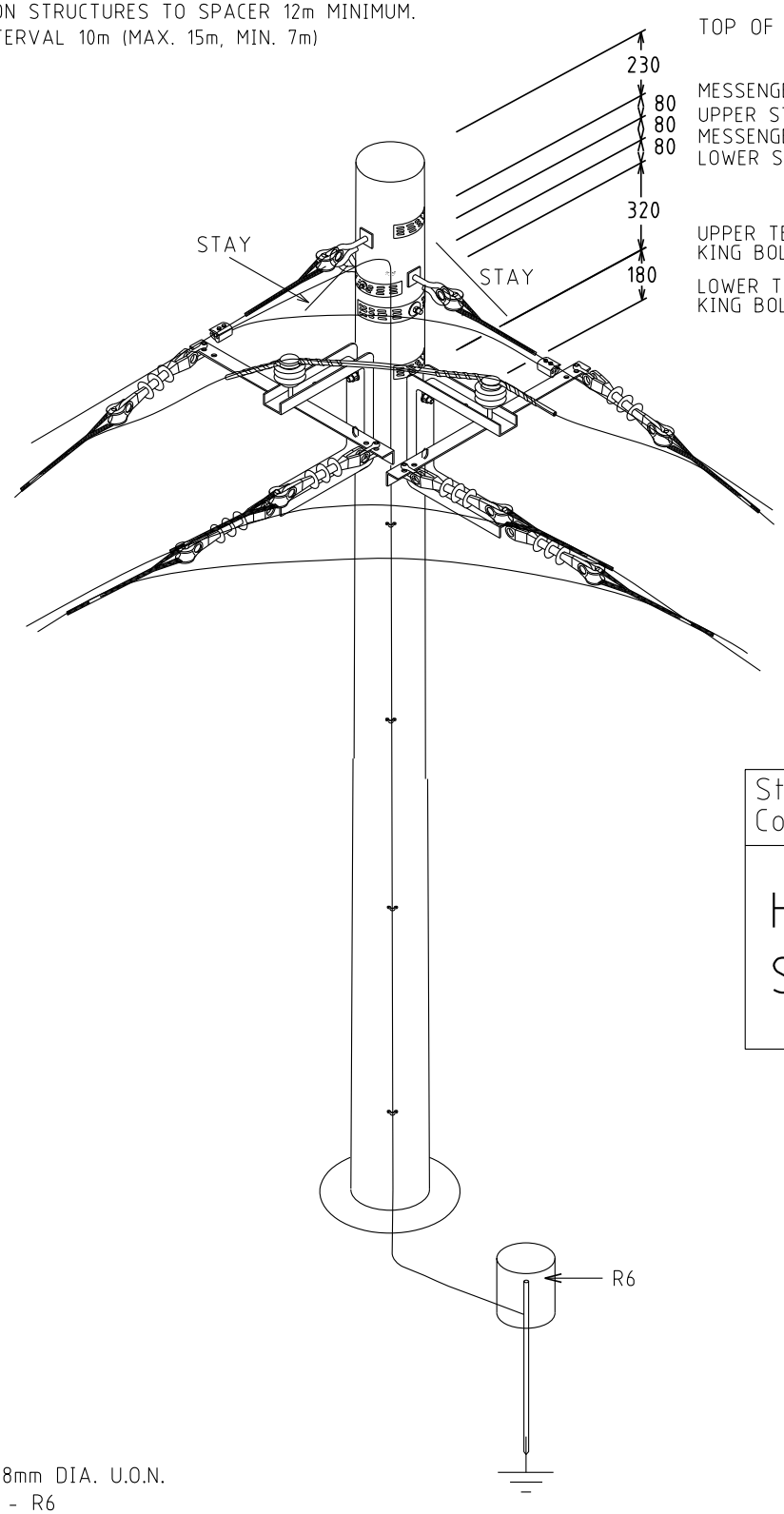
STRUCTURE

TITLE
INTERMEDIATE ANGLE POLE 31° - 60°

DISTRIBUTION CONSTRN. STANDARD
western power

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	H102
ORIGINATED:	SCALE: NTS		
CHECKED: REE			
APPROVED: GRANT STACY		REV. C	SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components

HX4
ST1-6

NOTE:
1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
D	27.10.14	DISPERSION PLATE ADDED	REE	REE	GS
C	16.07.14	FORMAT CHANGED AND SPANNING REVISED			GS
B	22.12.11	ORIGINAL ISSUE			

STRUCTURE

TITLE

DOUBLE TERMINATION 61° - 90°

DISTRIBUTION CONSTRN. STANDARD

western power

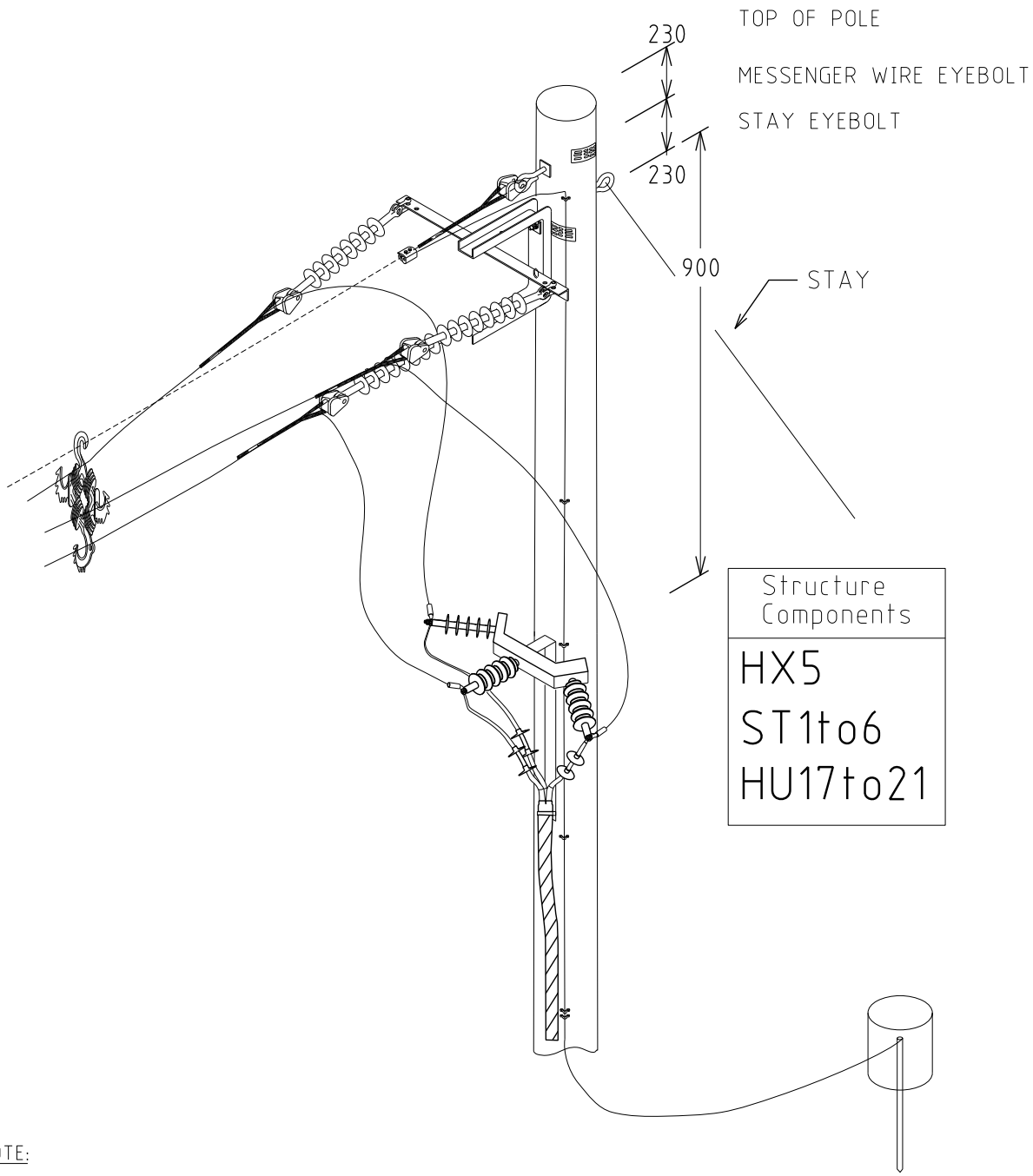
DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H103

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. D | SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



NOTE:

1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES
4. WIDEN HOLE IN BRACKET FOR STAY EYE BOLT

REV. No.	DATE	DESCRIPTION	APPRD.
B	16.07.2014	FORMAT CHANGED AND DISPERSION PLATE ADDED	GS
A	03.02.2012	ORIGINAL ISSUE	

STRUCTURE

TITLE

TERMINATION POLE
FOR CABLE CONNECTION

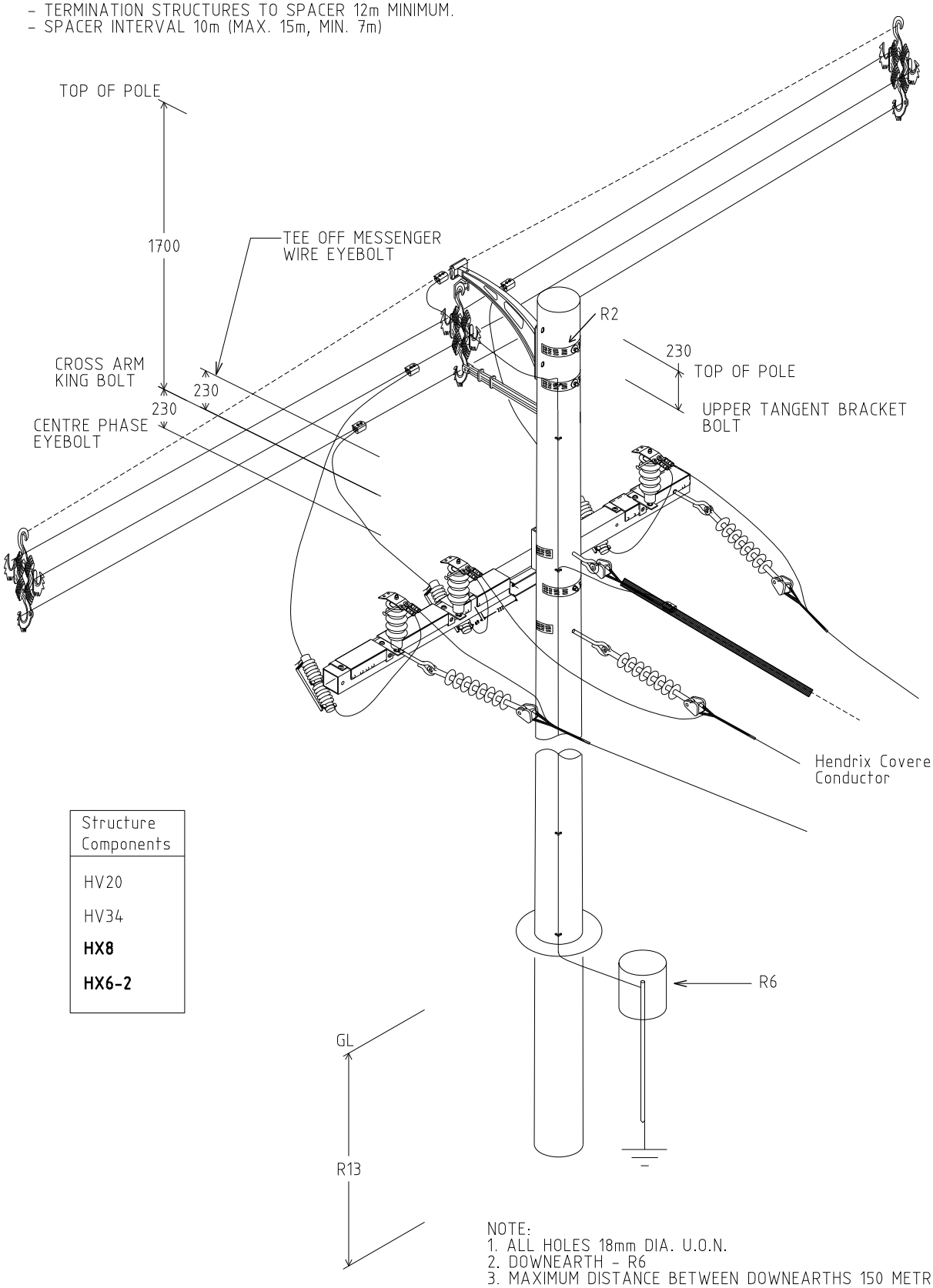
DISTRIBUTION CONSTRUCTION STANDARDS

westernpower

DRAWN: JRR DATE: 24-03-2014
CHECKED: REE SCALE: NTS
APPROVED: GRANT STACY DATE: 24-03-2014

DRG. No. H104
REV. B SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components
HV20
HV34
HX8
HX6-2

NOTE:
1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES

REV. No.	DATE	DESCRIPTION	APPRD.
C	16.07.2014	FORMAT CHANGED AND DISPERSION PLATE ADDED	GS
B	18.05.2012	ORIGINAL ISSUE	

STRUCTURE

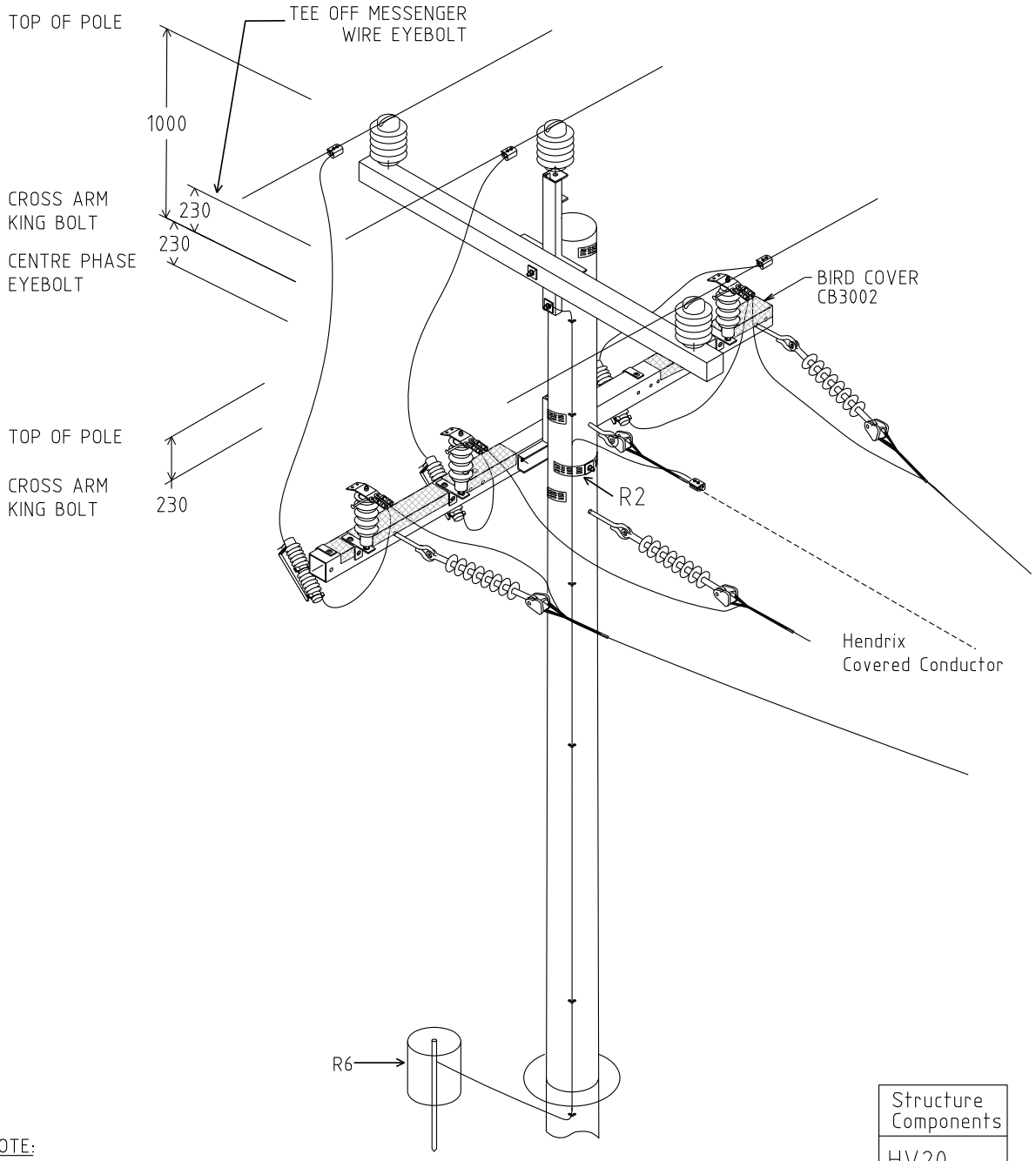
TITLE: INTERMEDIATE TEE OFF FROM EXISTING COVERED CONDUCTOR WITH DOF DRILLING DETAILS

DISTRIBUTION CONSTRUCTION STANDARDS

DRAWN: JRR DATE: 24-03-2014
CHECKED: REE SCALE: NTS
APPROVED: GRANT STACY DATE: 24-03-2014

DRG. No. H105
REV. C SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



NOTE:

1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH – R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES

Structure Components
HV20
HV34
3xCN9
HX6-2
CB3002

R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD.
D	16.01.15	BIRD COVER ADDED	JC	REE	GS
C	16.07.14	FORMAT CHANGED AND DISPERSION PLATE ADDED			GS
B	03.08.11	ORIGINAL ISSUE			

STRUCTURE

TITLE: INTERMEDIATE TEE OFF FROM EXISTING BARE CONDUCTOR WITH D.O.F DRILLING DETAILS

DISTRIBUTION CONSTRN. STANDARD

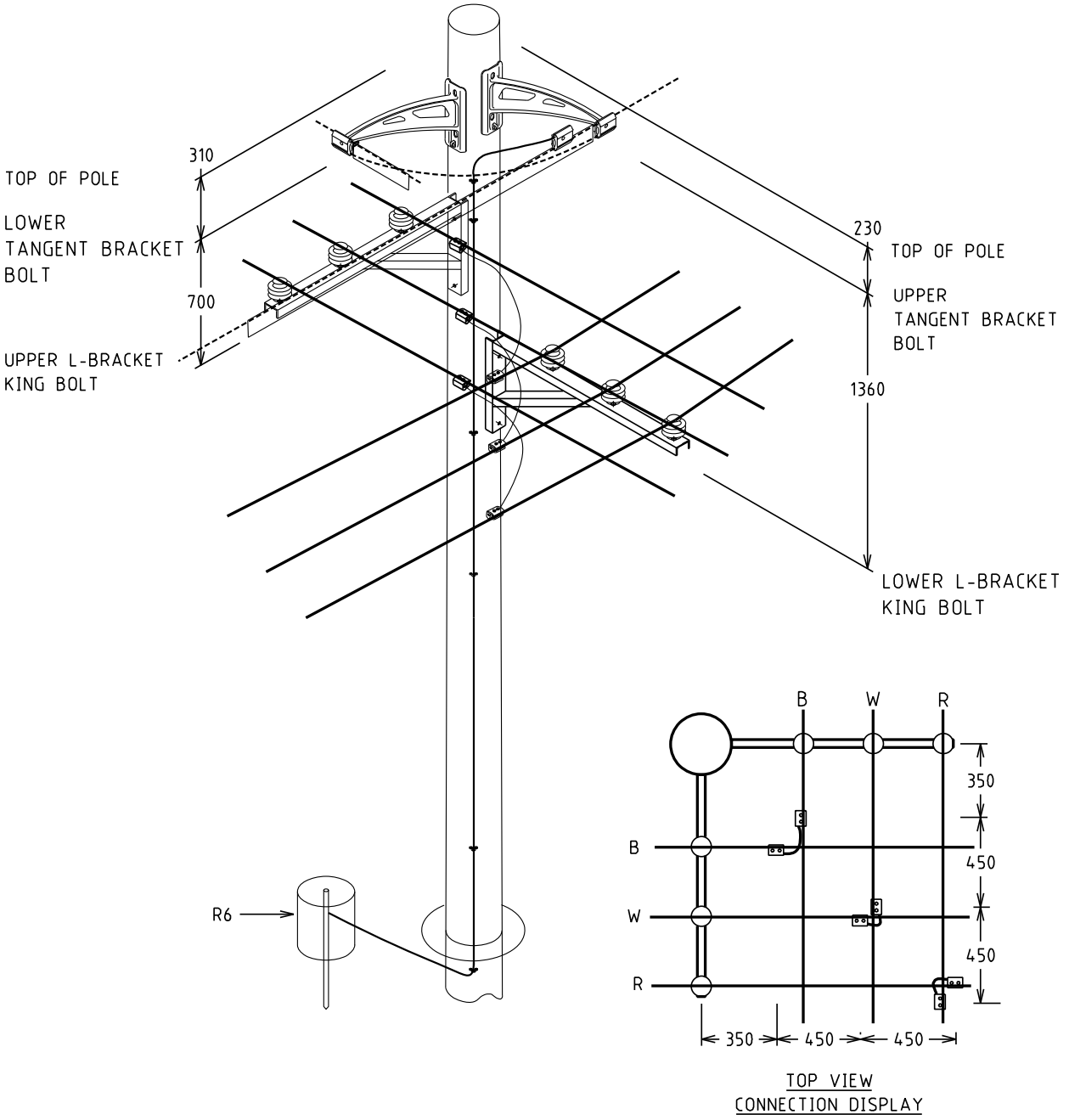
DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H106

ORIGINATED: | SCALE: NTS

CHECKED: AK

APPROVED: GRANT STACY | REV. D | SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



TOP VIEW
CONNECTION DISPLAY

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18mm DIA. U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	19.12.17	DISPERSION PLATE REMOVED AND EARTHING MODIFIED	NMc	CO	GS
C	27.10.14	DISPERSION PLATE ADDED	REE	REE	GS
B	16.07.14	FORMAT CHANGED AND SPANNING CHANGED			GS
A	22.12.11	ORIGINAL ISSUE			

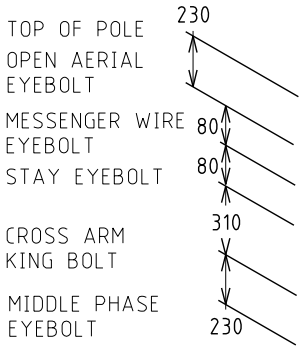
STRUCTURE

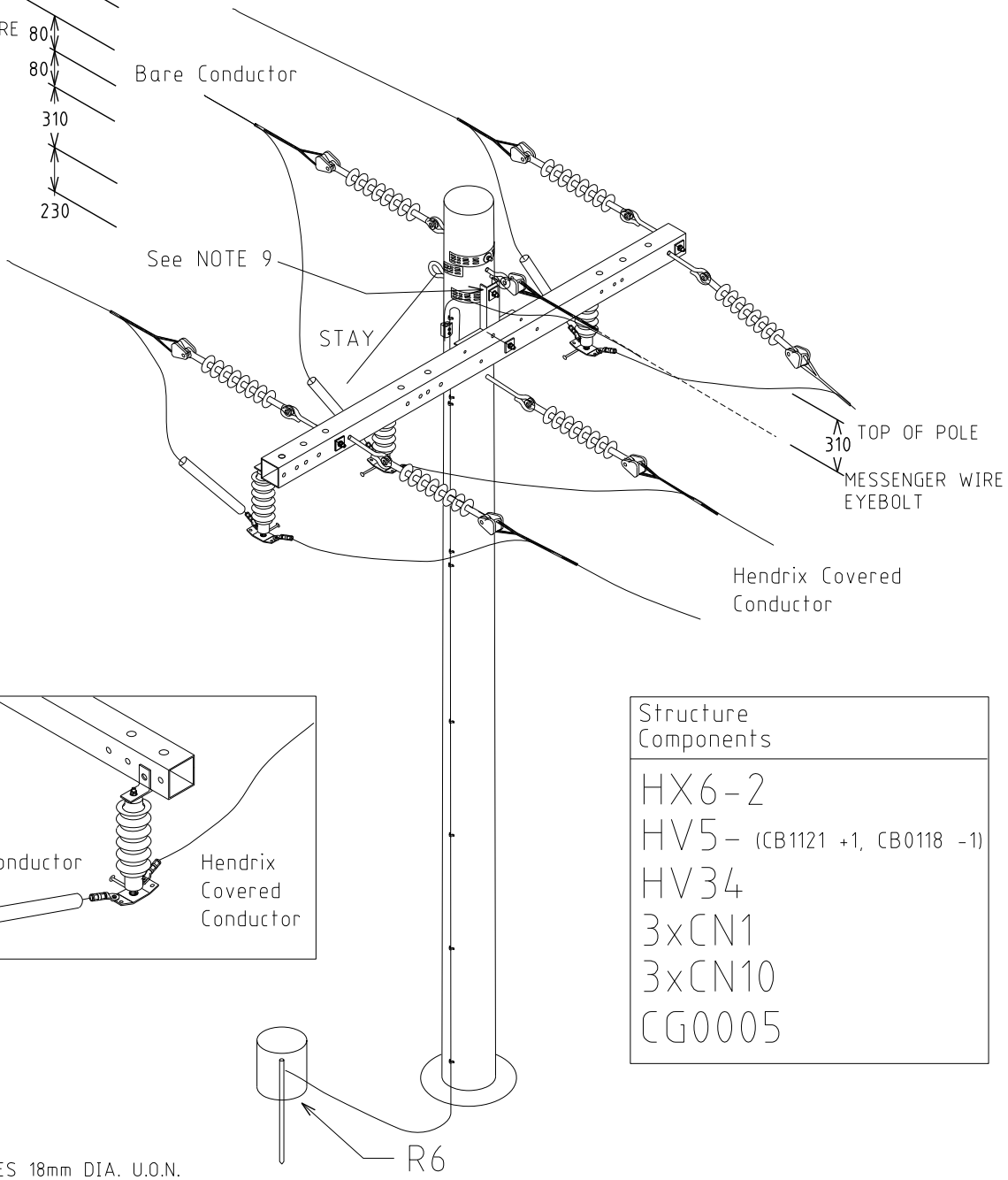
TITLE
INTERMEDIATE POLE CROSSING

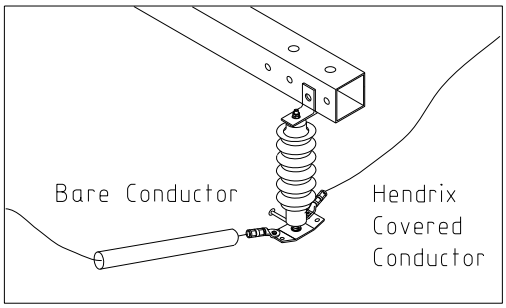
DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No. H107
ORIGINATED:	SCALE: NTS	
CHECKED: REE		
APPROVED: GRANT STACY	REV. D	SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)







Structure Components
HX6-2
HV5- (CB1121 +1, CB0118 -1)
HV34
3xCN1
3xCN10
CG0005

NOTE:

1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150 METRES
4. DOWN EARTH CONNECTED DIRECTLY TO CROSS ARM
5. MESSENGER WIRE CONNECTED TO DOWN EARTH
6. OUTER PARKING BARS ON S.A's TO FACE INWARDS
7. S.A. SHEDS FACING DOWNWARDS
8. CUT 400mm CONDUIT TO COVER BARE TAPS, SEE INSET
9. HOLE IN CROSS ARM T-BRACKET TO BE WIDENED TO 22mm DIA. AND COLD GALVANISED TO FIT STAY EYEBOLT

REV. No.	DATE	DESCRIPTION	APPRD.
B	16.07.2014	FORMAT CHANGED AND DISPERSION PLATE ADDED	GS
A	03.08.2011	ORIGINAL ISSUE	

STRUCTURE

TITLE: OPEN AERIAL TO COVERED CONDUCTOR WITH SURGE ARRESTERS

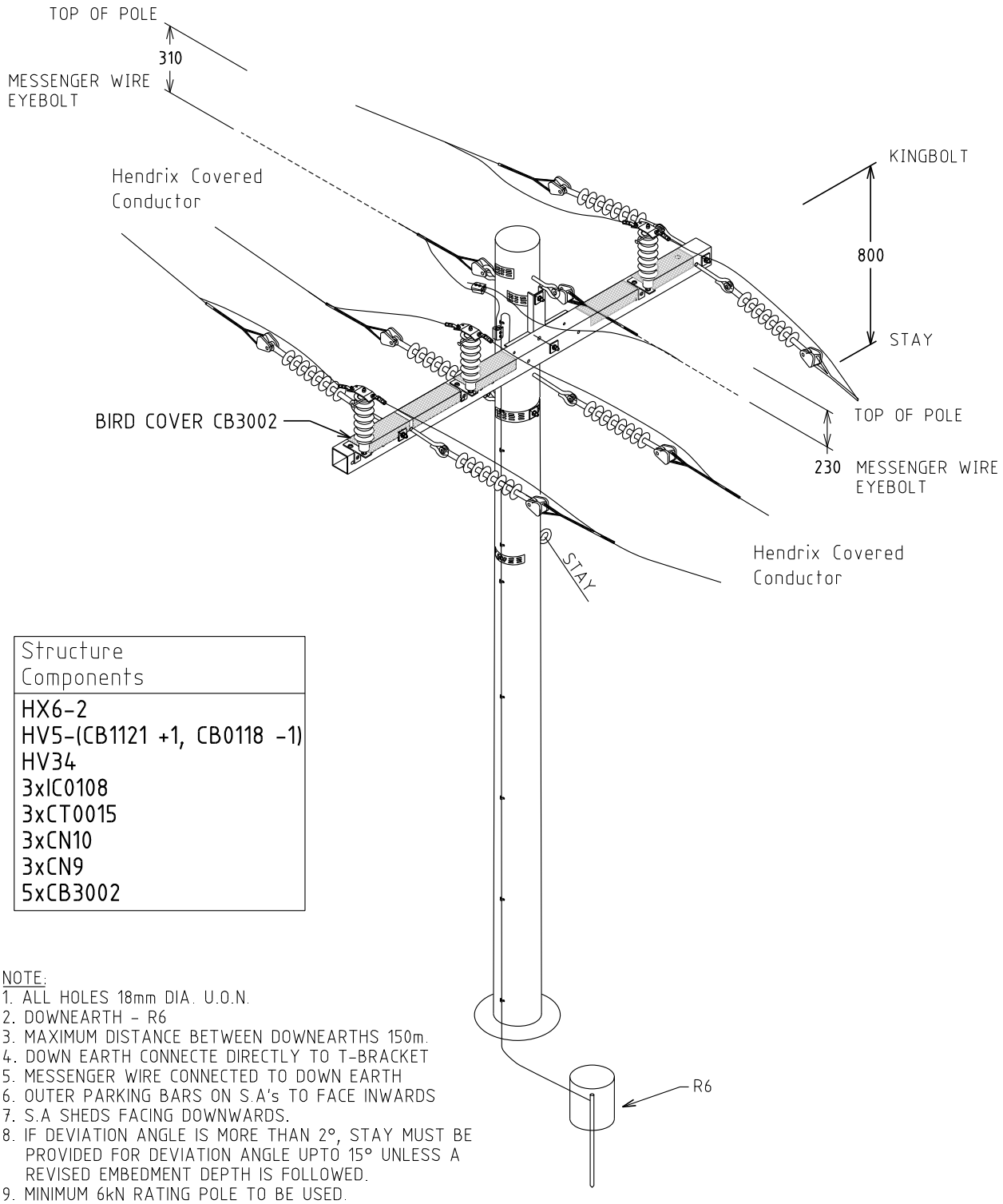
DISTRIBUTION CONSTRUCTION STANDARDS

westernpower

DRAWN: JRR DATE: 24-03-2014
CHECKED: REE SCALE: NTS
APPROVED: GRANT STACY DATE: 24-03-2014

DRG. No. H108-1
REV. B SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



Structure Components
HX6-2
HV5-(CB1121 +1, CB0118 -1)
HV34
3xIC0108
3xCT0015
3xCN10
3xCN9
5xCB3002

NOTE:
1. ALL HOLES 18mm DIA. U.O.N.
2. DOWNEARTH - R6
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150m.
4. DOWN EARTH CONNECTE DIRECTLY TO T-BRACKET
5. MESSENGER WIRE CONNECTED TO DOWN EARTH
6. OUTER PARKING BARS ON S.A's TO FACE INWARDS
7. S.A SHEDS FACING DOWNWARDS.
8. IF DEVIATION ANGLE IS MORE THAN 2°, STAY MUST BE PROVIDED FOR DEVIATION ANGLE UPTO 15° UNLESS A REVISED EMBEDMENT DEPTH IS FOLLOWED.
9. MINIMUM 6kN RATING POLE TO BE USED.

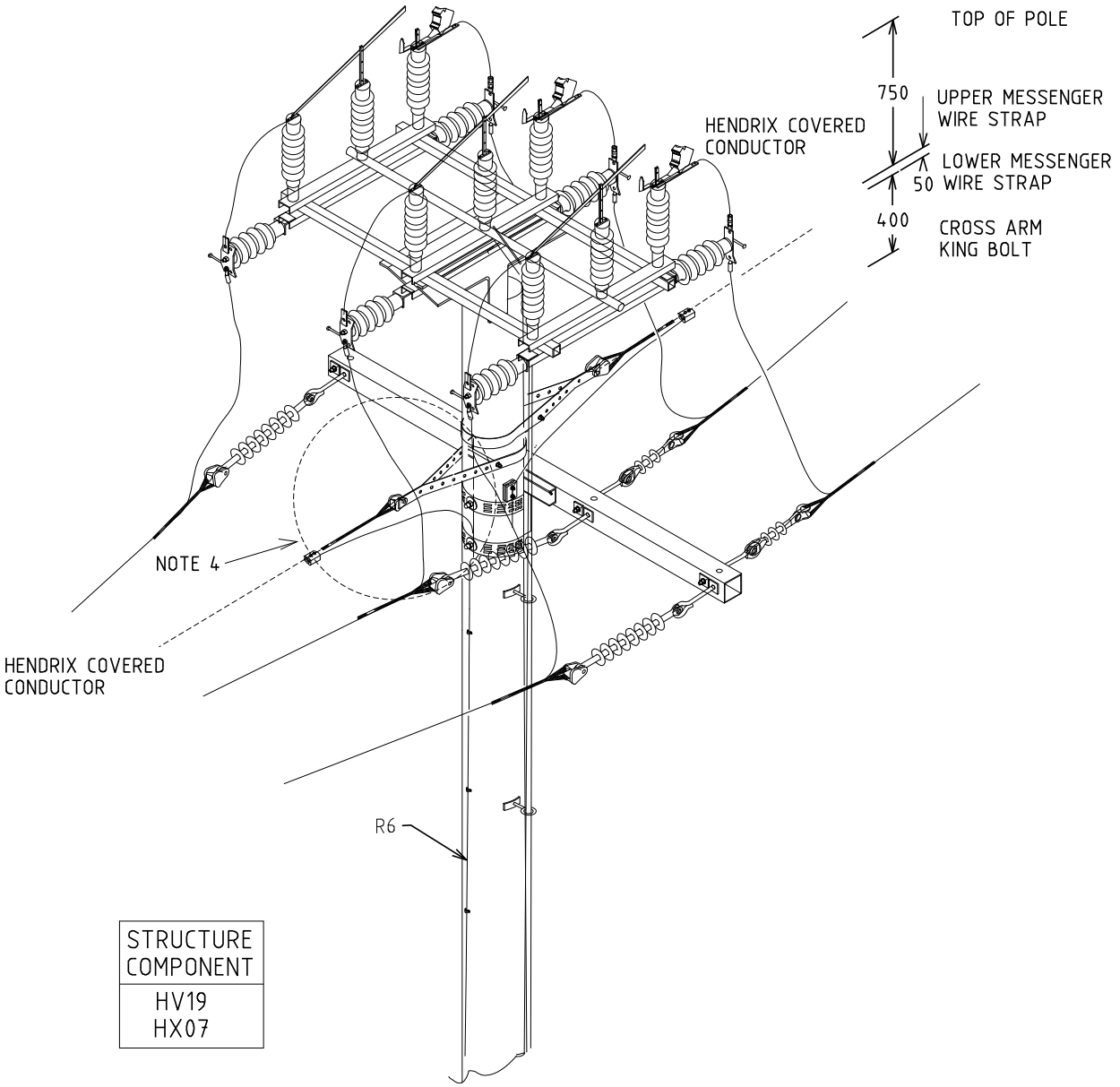
R. No.	DATE	DESCRIPTION	ORGD.	CHED.	APRD
C	16.01.15	TITLE CHANGED, DRAWING REVISED & NOTES 8 & 9 ADDED	AK	JC	GS
B	16.07.14	FORMAT CHANGED AND SPANNING CHANGED			GS
A	03.08.11	ORIGINAL ISSUE			

STRUCTURE

TITLE
STRAIN COVERED CONDUCTOR WITH SURGE ARRESTERS

DISTRIBUTION CONSTRN. STANDARD

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H108-2
ORIGINATED: | SCALE: NTS
CHECKED: AK
APPROVED: GRANT STACY | REV. C | SHT.



STRUCTURE COMPONENT
HV19 HX07

NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150m
4. TRAIN CENTRE PHASE CONDUCTOR TO MAINTAIN 400 CLEARANCE FROM MESSENGER WIRE.
5. REFER TO DWG. H12 FOR POLE TOP SWITCH AND MID POLE ACTUATOR INSTALLATION DETAILS.
6. TERMINATION STRUCTURES TO SPACER MAX. 15m, MIN. 12m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
D	24.09.19	TITLE CHANGED AND PTS UPDATED	REE	AN	GS
C	16.07.14	FORMAT CHANGED AND DISPERSION PLATE ADDED			GS
B	28.11.11	ORIGINAL ISSUE			

STRUCTURE

TITLE: PTS COVERED CONDUCTOR TERMINATED MESSENGER WIRE

DISTRIBUTION CONSTRN. STANDARD

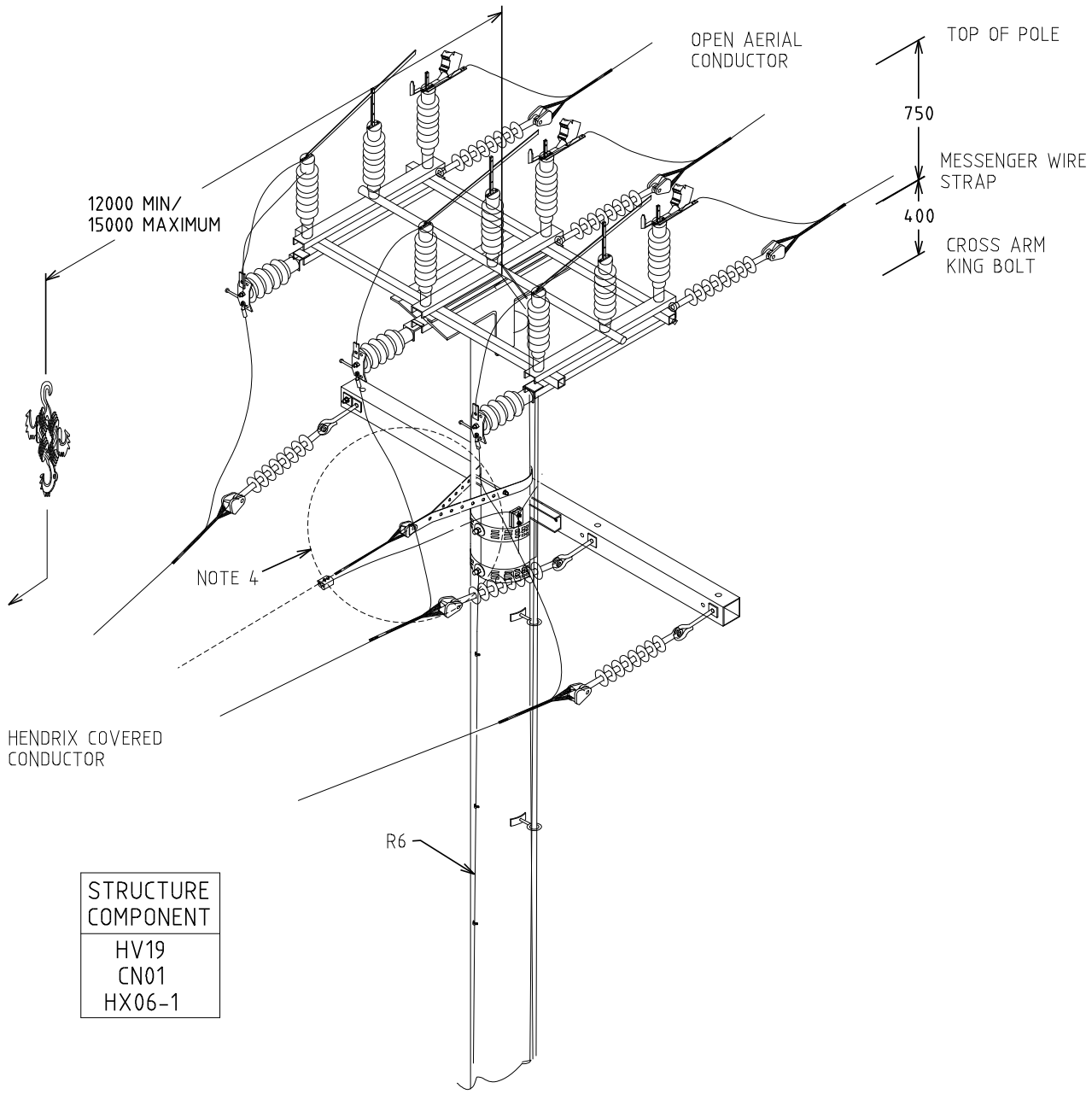
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H109

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. D | SHT.



STRUCTURE COMPONENT
HV19
CN01
HX06-1

NOTE:-
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Φ U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150m
4. TRAIN CENTRE PHASE CONDUCTOR TO MAINTAIN 400 CLEARANCE FROM MESSENGER WIRE.
5. REFER TO DWG. H12 FOR POLE TOP SWITCH AND MID POLE ACTUATOR INSTALLATION DETAILS.
6. TERMINATION STRUCTURES TO SPACER MAX. 15m, MIN. 12m.

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD
D	24.09.19	TITLE CHANGED AND PTS UPDATED	REE	AN	GS
C	16.07.14	FORMAT CHANGED AND DISPERSION PLATE ADDED			GS
B	28.11.11	ORIGINAL ISSUE			

STRUCTURE

TITLE: PTS COVERED CONDUCTOR TO OPEN AERIAL

DISTRIBUTION CONSTRN. STANDARD

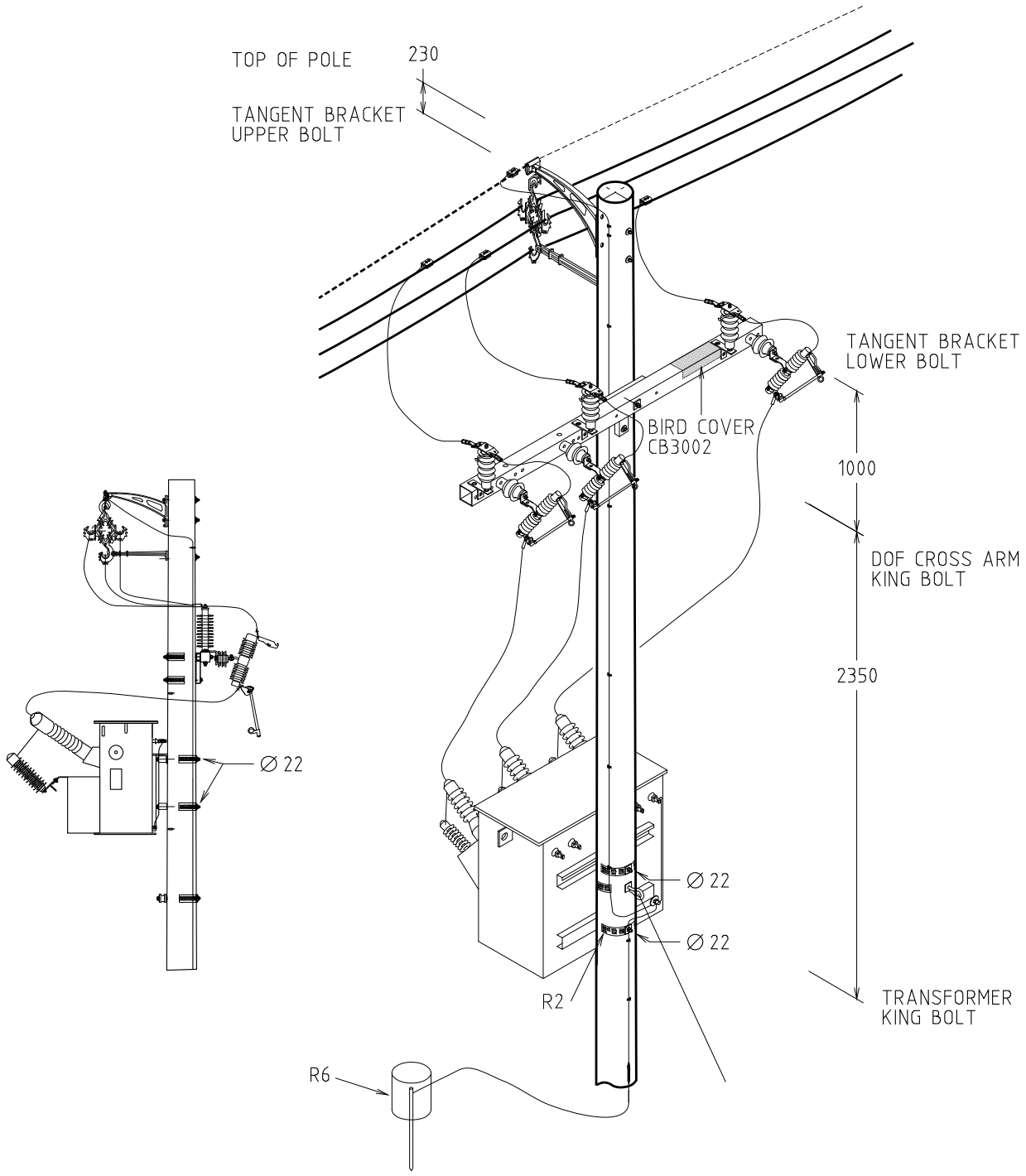
westernpower

DRAWN: JRR | DATE: 24-03-2014 | DRG. No. H110

ORIGINATED: | SCALE: NTS

CHECKED: REE

APPROVED: GRANT STACY | REV. D | SHT.



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18mm DIA. U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS – 150m

REV	DATE	DESCRIPTION	ORGD.	CHKD.	APRD.
F	16.11.18	EARTHING SYSTEM MODIFIED & Tx MODEL CHANGED	NMc	NN	GS
E	19.01.15	BIRD COVER ADDED	JC	REE	GS
D	16.07.14	FORMAT CHANGED AND DISPERSION PLATE ADDED			GS
C	21.05.12	ORIGINAL ISSUE			

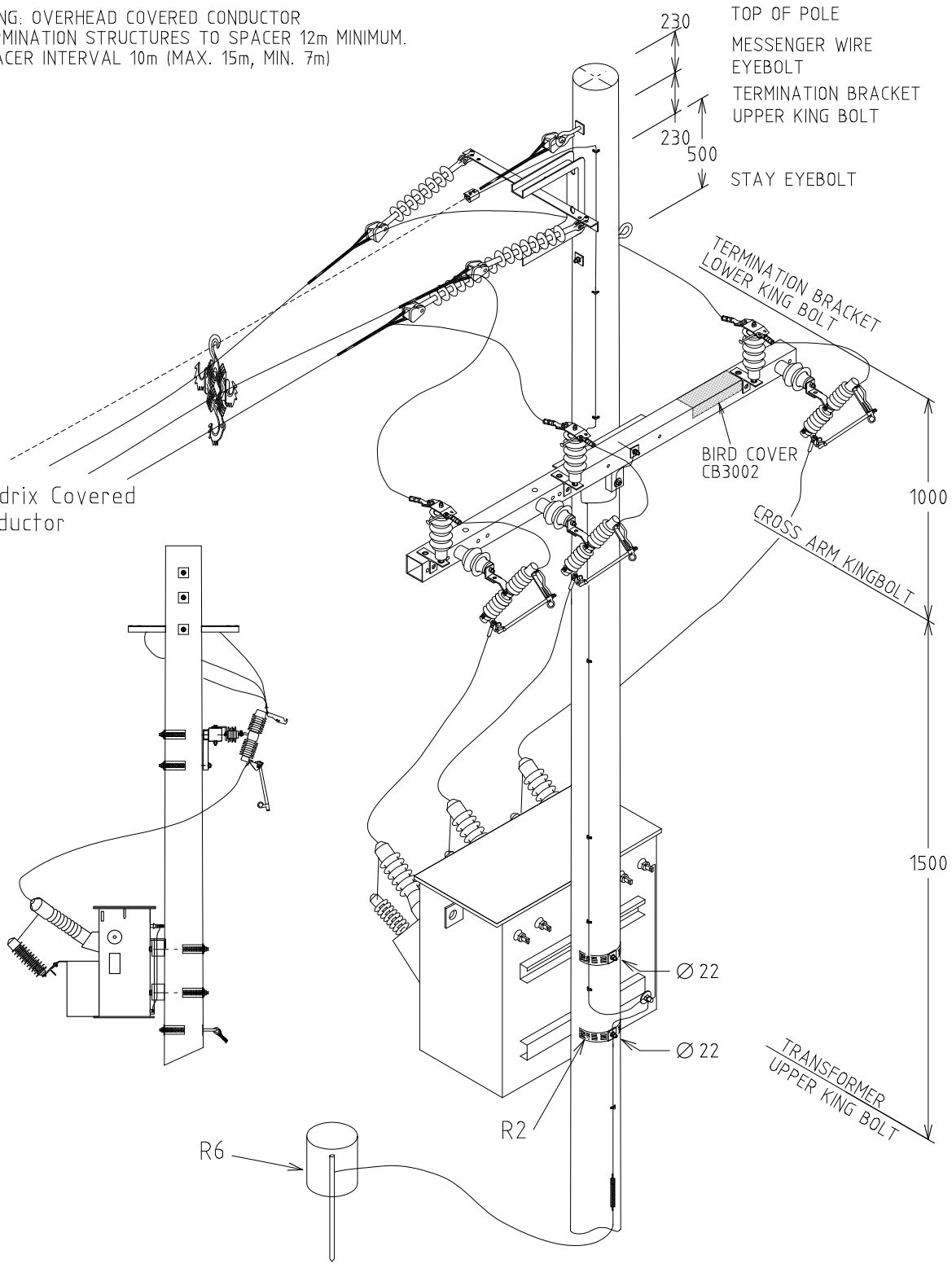
STRUCTURE

TITLE
INTERMEDIATE TRANSFORMER
COVERED CONDUCTOR

DISTRIBUTION CONSTRN. STANDARD
westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H111	
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	SHT.

SPANNING: OVERHEAD COVERED CONDUCTOR
- TERMINATION STRUCTURES TO SPACER 12m MINIMUM.
- SPACER INTERVAL 10m (MAX. 15m, MIN. 7m)



NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. ALL HOLES 18Ø U.O.N.
3. MAXIMUM DISTANCE BETWEEN DOWNEARTHS 150m.

REV	DATE	DESCRIPTION	ORGD	CHKD	APRD
F	16.11.18	EARTHING SYSTEM MODIFIED & Tx MODEL CHANGED	NMc	NN	GS
E	19.01.15	BIRD COVER ADDED	JC	REE	GS
D	17.06.14	FORMAT CHANGED AND CLARIFICATION OF DIMENSION			GS
C	21.05.12	ORIGINAL ISSUE			

STRUCTURE

TITLE
TERMINATION TRANSFORMER WITH DROP OUT FUSE

DISTRIBUTION CONSTRN. STANDARD

westernpower

DRAWN: JRR	DATE: 24-03-2014	DRG. No.	
ORIGINATED:	SCALE: NTS	H112	
CHECKED: REE			
APPROVED: GRANT STACY		REV. F	SHT.