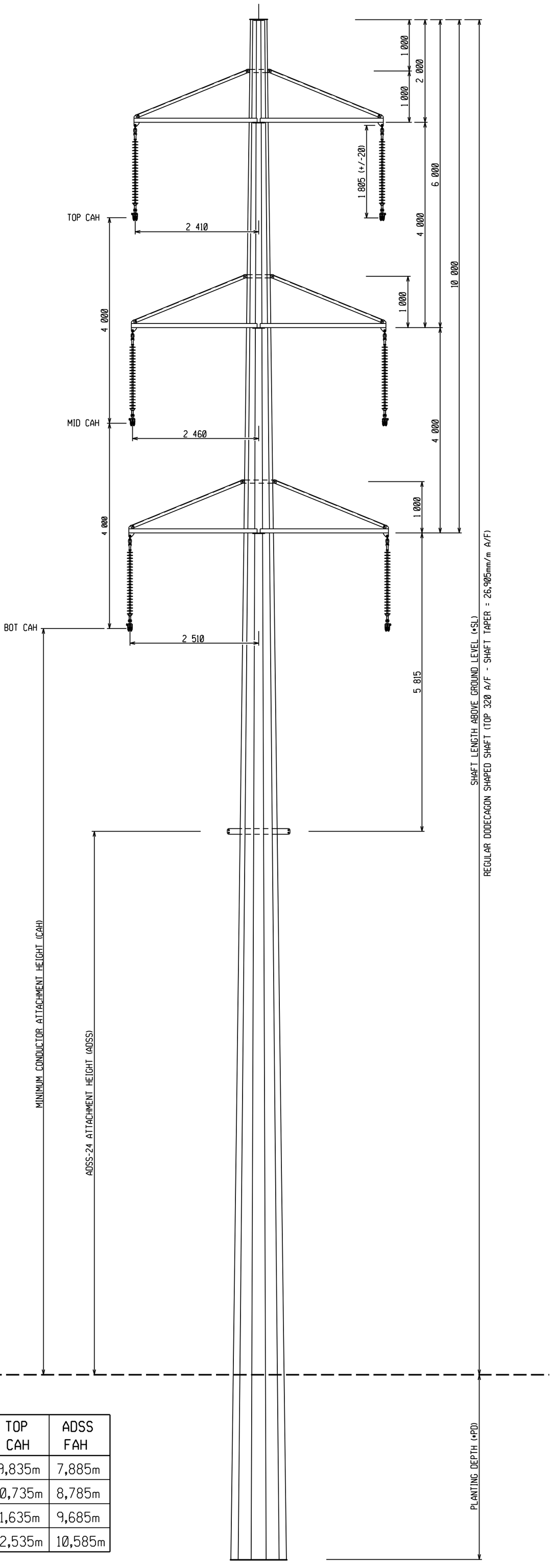


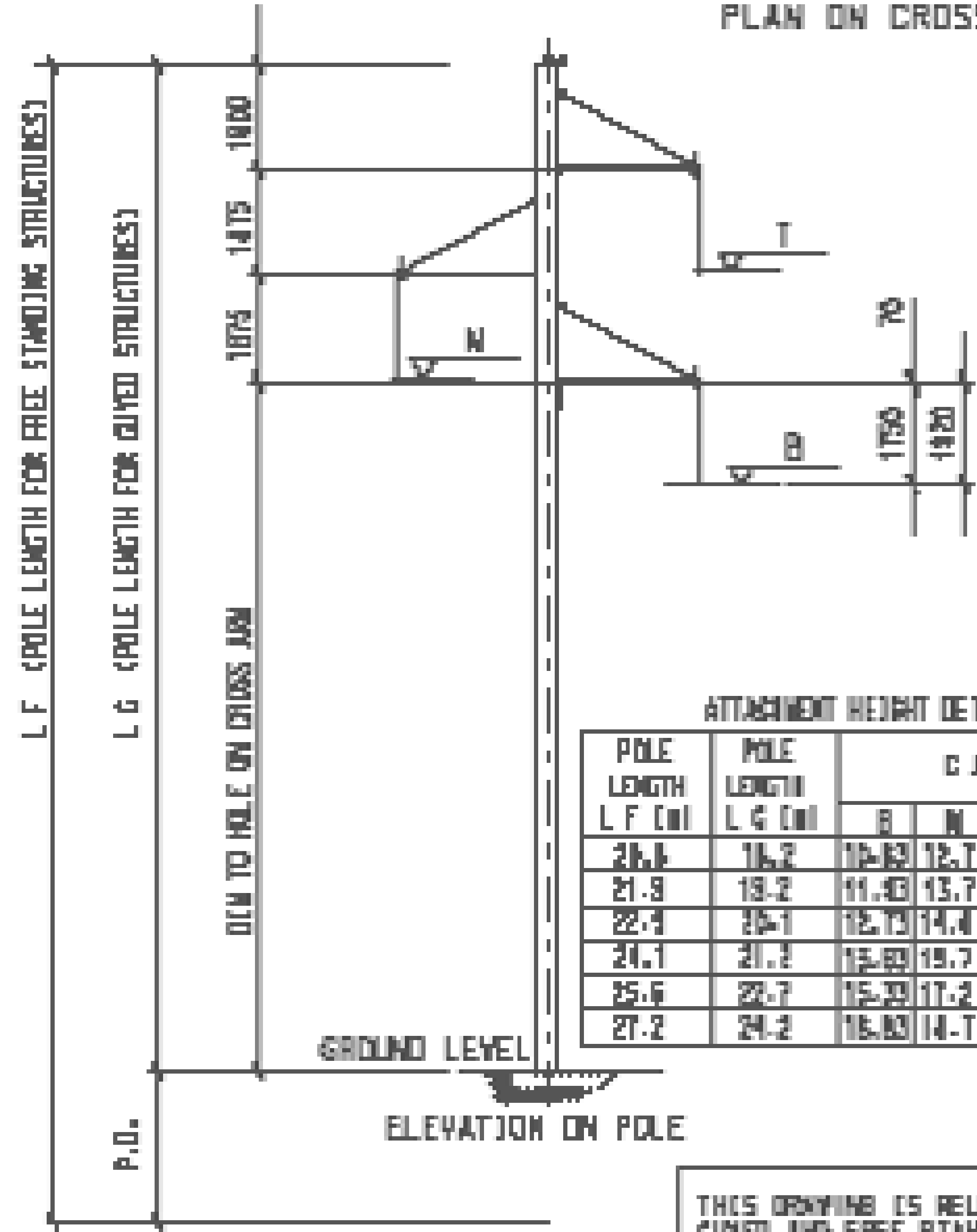
STRUCTURE LENGTH	•SL	•PD	BOT CAH	MID CAH	TOP CAH	ADSS FAH
27,0m	23,7m	3,3m	11,835m	15,835m	19,835m	7,885m
28,0m	24,6m	3,4m	12,735m	16,735m	20,735m	8,785m
29,0m	25,5m	3,5m	13,635m	17,635m	21,635m	9,685m
30,0m	26,4m	3,6m	14,535m	18,535m	22,535m	10,585m

50kN MONO-POLE DOUBLE CIRCUIT INTERMEDIATE SUSPENSION STRUCTURE

REGULAR DODECAGON (TWELVE-SIDED) SHAPED SHAFT

(6 x "TERN" ACSR PHASE CONDUCTORS; 1 X "KINGBIRD" ACSR SHIELD-WIRE; 1 X 24-CORE ADSS)

PLAN ON CROSS ARM ANGLES



ELEVATION ON POLE

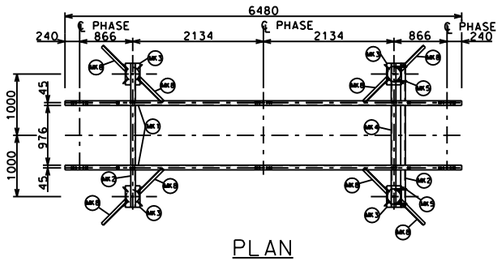
ATTACHMENT HEIGHT DETAIL

POLE LENGTH L F (m)	POLE LENGTH L G (m)	C J H (m)				P.D. (m)
		B	N	T	E/T	
20.6	16.2	10.83	12.7	14.58	16.2	2.6
21.9	19.2	11.83	13.7	15.58	19.2	2.7
22.9	20.1	12.73	14.4	16.48	20.1	2.8
24.1	21.2	13.83	15.7	17.58	21.2	2.9
25.6	22.7	15.33	17.2	19.08	22.1	2.9
27.2	24.2	16.83	18.7	20.58	24.2	3.0

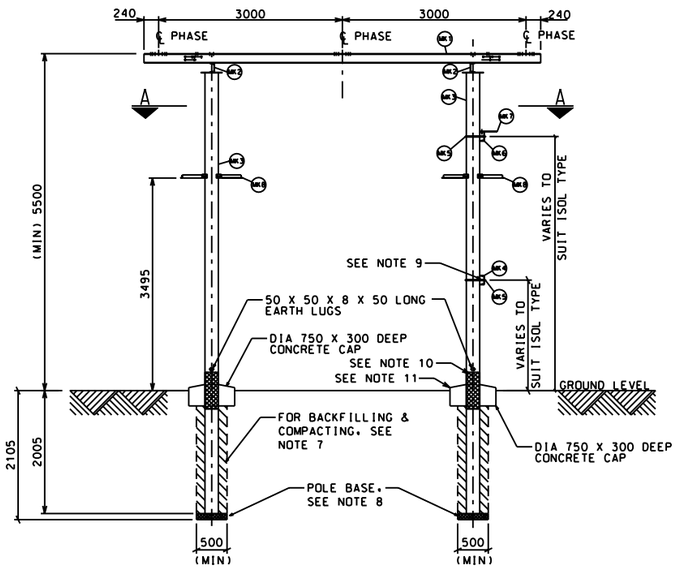
THIS DRAWING IS RELEVANT FOR
GUYED AND FREE STANDING STRUCTURES

DISTRIBUTION TECHNOLOGY
132KV SUSPENSION X-ARM
GENERAL ARRANGEMENT FOR
SINGLE STEEL POLE STRUCTURE

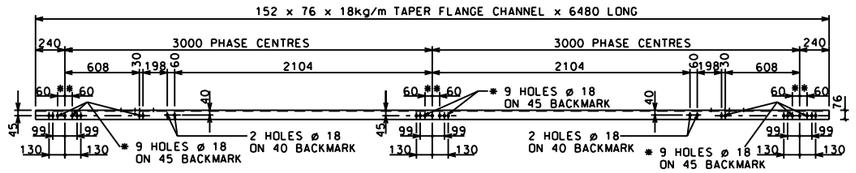
0



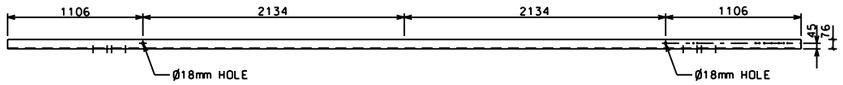
PLAN
SCALE 1:50



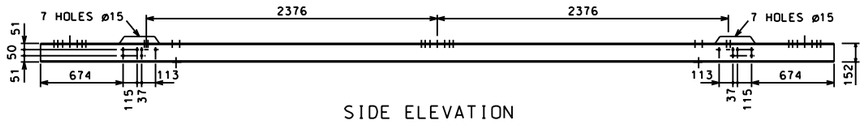
FRONT ELEVATION
SCALE 1:50



TOP ELEVATION
SCALE 1:25

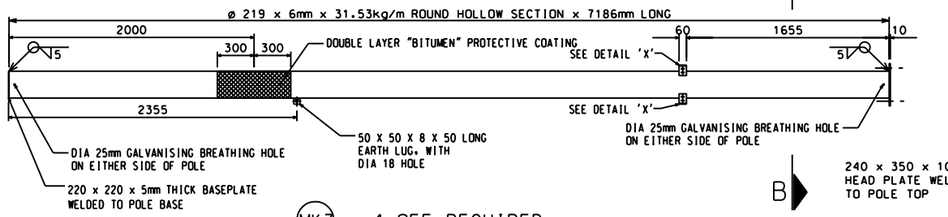


BOTTOM ELEVATION
SCALE 1:25



SIDE ELEVATION
SCALE 1:25

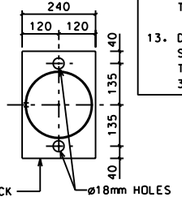
(MK1) - 2 OFF REQUIRED



(MK3) - 4 OFF REQUIRED
SCALE 1:25

B

B



240 x 350 x 10mm THICK HEAD PLATE WELDED TO POLE TOP

SECTION B-B
SCALE 1:10

NOTES:

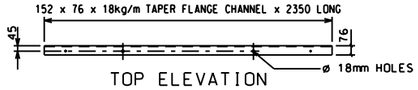
1. STEELWORK, BOLTS, NUTS & WASHERS TO BE HOT DIPPED GALVANISED AS PER SABS ISO 1461 & SABS 10240 1997.
2. ALL HOLES 18 DIA. FOR M16 BOLTS UNLESS OTHERWISE INDICATED.
3. MOUNTING BOLTS SECURING EQUIPMENT TO STRUCTURES, TO BE SUPPLIED BY ELECTRICAL EQUIPMENT CONTRACTOR/ERECTOR.
4. ANY SUPPORT STEELWORK REQUIRED ADDITIONAL TO WHAT IS SHOWN ON THIS DRAWING IS TO BE SUPPLIED BY ISOLATOR MANUFACTURER.
5. ALL STEELWORK FABRICATED, ERECTED & LEVELLED TO A TOLERANCE OF + 1,5mm
6. ALL PARTS TO BE CLEARLY STAMPED WITH ITEM MARK No. BEFORE GALVANISING.
7. HOLES FOR ISOLATOR SUPPORT STRUCTURE LEGS TO BE BACKFILLED WITH 8:1 SOIL/CEMENT MIXTURE, SLIGHTLY WATERED AND THOROUGHLY COMPACTED IN LAYERS NOT EXEEDING 300mm IN THICKNESS.
8. ISOLATOR SUPPORT STRUCTURE LEGS TO BE LEVELLED WITH DIA 500 x 100 THICK REINFORCED CONCRETE POLE BASIS TO DWG. 7.18/18481 REV 7. PROVIDED IN BOTTOM OF POLE HOLES.
9. ISOLATOR OPERATING HANDLE SUPPORT BRACKET ITEM MK4 TO BE DRILLED TO SUIT ISOLATOR TYPE TO BE INSTALLED.
10. STRUCTURE SUPPORT MK3 TO BE TREATED WITH A DOUBLE COAT BITUMIN CORROSION PROTECTION AT INDICATED POSITION.
11. DIA. 750 x 500mm DEEP, 15 MPa CONCRETE COLLARS TO BE CAST ARROUND STRUCTURE LEGS AS INDICATED. CONCRETE COLLAR TOPS TO BE BEVELLED MIN. 25mm.
12. 3 x 4mm CLASS 'A' HEAVY GALVANISED STRAIN WIRES TO BE STRAINED THROUGH ANTI-CLIMBING SUPPORT ANGLE SLOTS ALL ROUND.
13. DIA. 500mm COILS FLAT WRAP RAZOR WIRE TO BE TIED TO ANTI-CLIMBING STRAIN WIRE AT 400mm INTERVALS WITH 2mm CLASS 'A' GALVANISED WIRE TIES, WITH MIN. 3 TWITS AT EACH TIE. FLAT WRAP RAZOR COILS TO A MIN. 30% OVERLAP AT EACH COIL.

BOLT SCHEDULE

MK.	DIA.	LENGTH	No.OFF	WASHERS-No.OFF	MASS (kg)
A	M16	40	4	BEVELLED 16 OFF	0.667
B	M16	40	8	FLAT 8 OFF	1.078
C	M12	40	2	FLAT 2 OFF	1.078
D	M12	25	16	FLAT 16 OFF	0.73

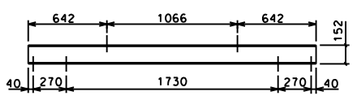
MASS (kg)

STRUCTURE	BOLTS	TOTAL
1336.99	8.31	1345.30
ZINC + 3.5%		46.08
TOTAL		1391.38



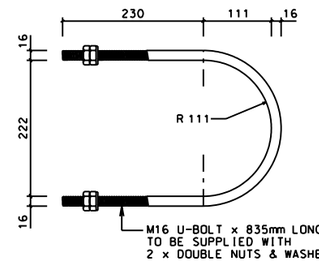
TOP ELEVATION
SCALE 1:25

BOTTOM ELEVATION
SCALE 1:25



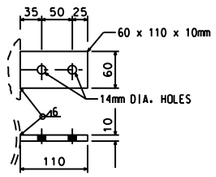
SIDE ELEVATION
SCALE 1:25

(MK2) - 2 OFF REQUIRED

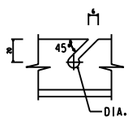


U-BOLT
SCALE 1:2.5

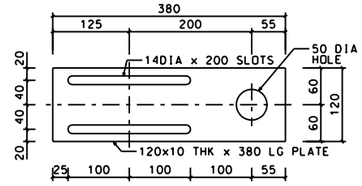
(MK5) - 4 OFF REQUIRED
MASS PER ITEM = 1,46kg



DETAIL 'X'
16 REQUIRED
SCALE 1:5

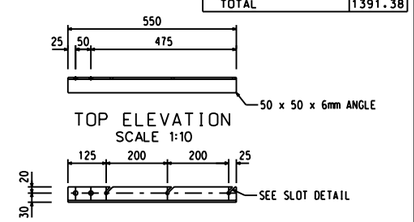


STRAIN WIRE SLOT DETAIL
N.T.S.



OPERATING HANDLE GUIDE
SCALE 1:2.5

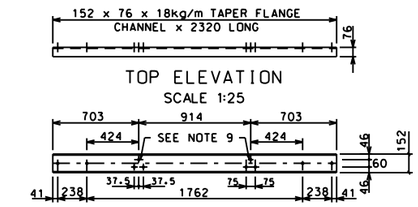
(MK7) - 1 OFF REQUIRED



TOP ELEVATION
SCALE 1:10

SIDE ELEVATION
SCALE 1:10

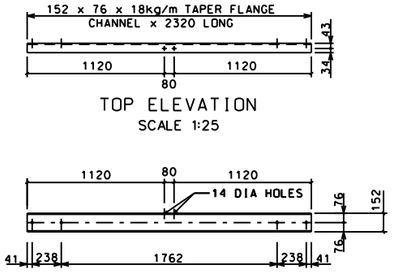
(MK8) - 8 OFF REQUIRED
MASS PER ITEM = 2.46kg



TOP ELEVATION
SCALE 1:25

SIDE ELEVATION
SCALE 1:25

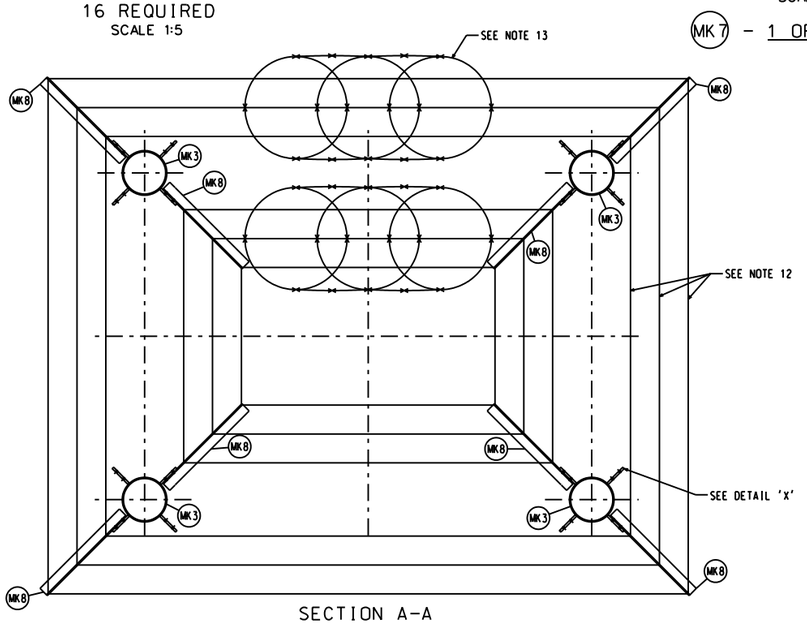
(MK4) - 1 OFF REQUIRED



TOP ELEVATION
SCALE 1:25

SIDE ELEVATION
SCALE 1:25

(MK6) - 1 OFF REQUIRED



SECTION A-A
SCALE 1:15

PRELIMINARY - AWAITING REVISION 5 APPROVAL

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	ANTI-CLIMBING SUPPORT & DETAIL ADDED	FDS	P v/d H		02/07/07	
4	ITEMS MK 4, MK 5, MK 6 & MK 7 DETAILS CORRECTED	FDS	P v/d H	R.L.	17/01/06	
3	EARTH LUGS, BITUMEN LAYER & CONCRETE CAPS ADDED	FDS	P v/d H	R.L.		
2	ITEMS 6 & 7 ADDED	IAN	P v/d H	R.L.	/ /	
1	DRAWING RENAMED AND CORRECTED	IAN	P v/d H	P.P.	/ /	

Eskom Distribution

NORTH WESTERN REGION

132kV SUB-TRANSMISSION LINES
5,5m LINE ISOLATOR SUPPORT MOUNTED ON POLES

AUTH:	P.PIETERSE
DATE:	28/01/2002
CHKD:	P. VD HEEVER
DATE:	28/01/2002
DRAWN:	PROPPIE
DATE:	AUG 2001

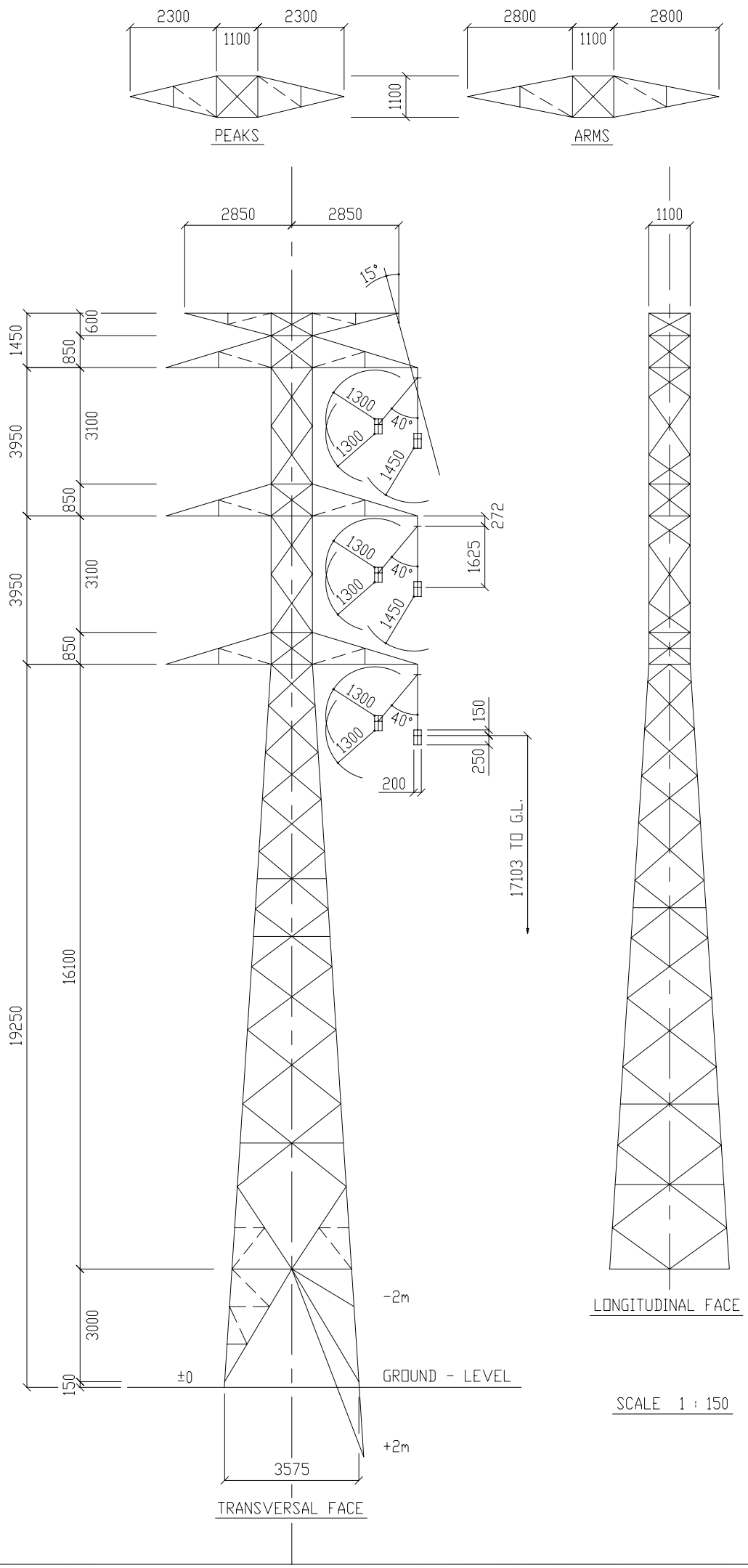
SCALE 1 : 50

THIS DRAWING IS THE PROPERTY OF ESKOM

D-FS-11757

SET	SHEET	REVISION
	Ø1	5

AIL



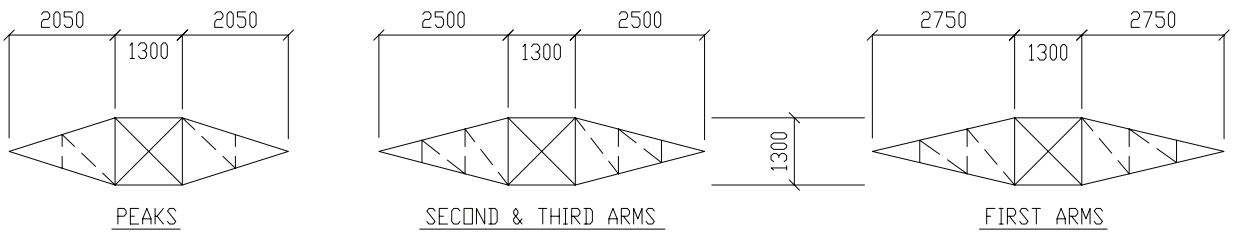
DATE:

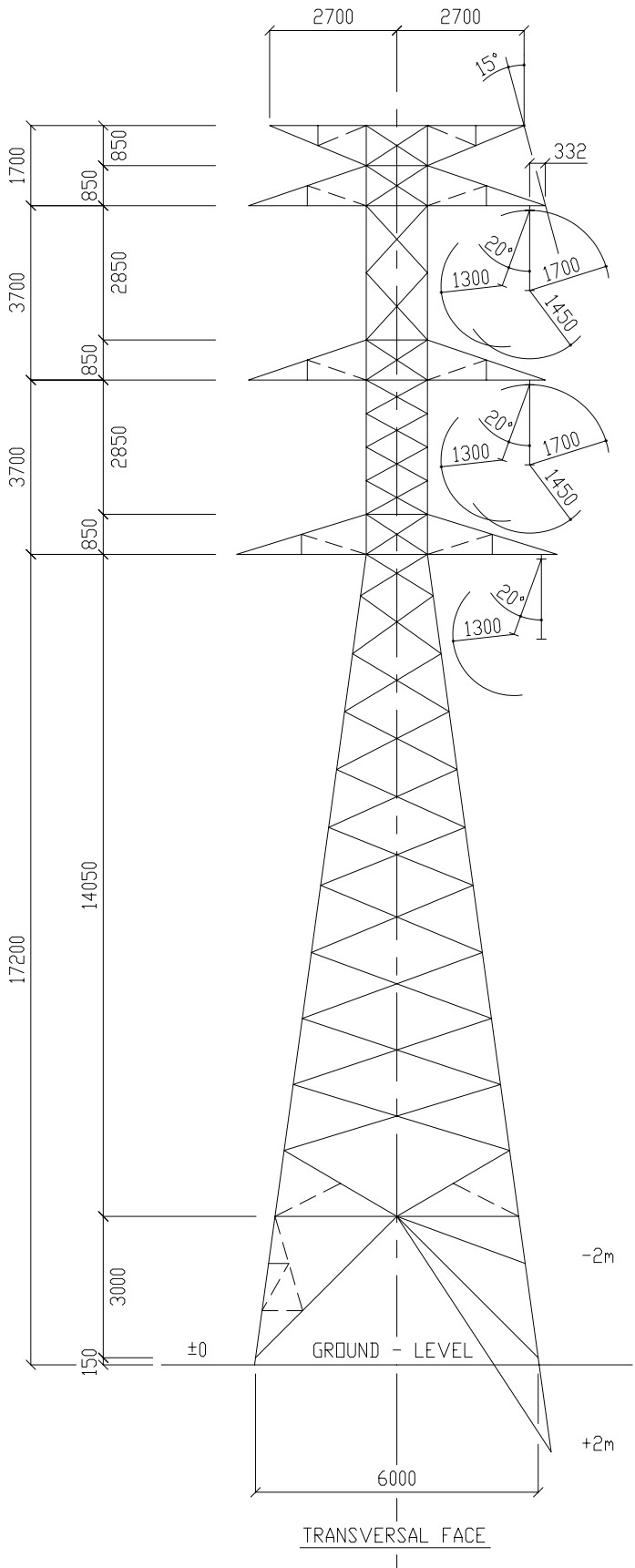
DWG. No 2036

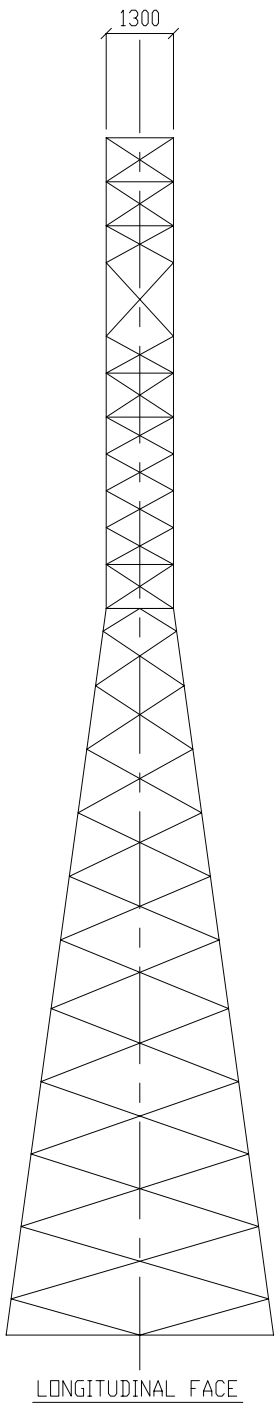
PROJECT: 132 KV. TRANSMISSION LINE

TITLE: SUSPENSION TOWER TYPE "245A"

Babcock Ntuthuko Powerlines







SCALE 1 : 150

DATE:

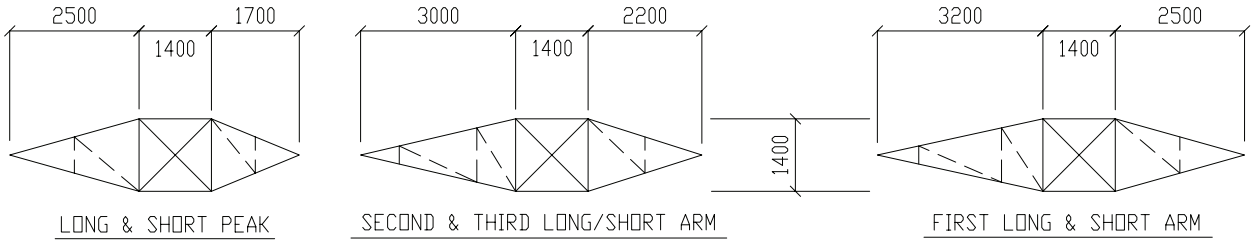
DWG. No 2037

PROJECT: 132 KV. TRANSMISSION LINE

TITLE: 0°–15° ANGLE STRAIN TOWER TYPE "245B"

Babcock Ntuthuko Powerlines

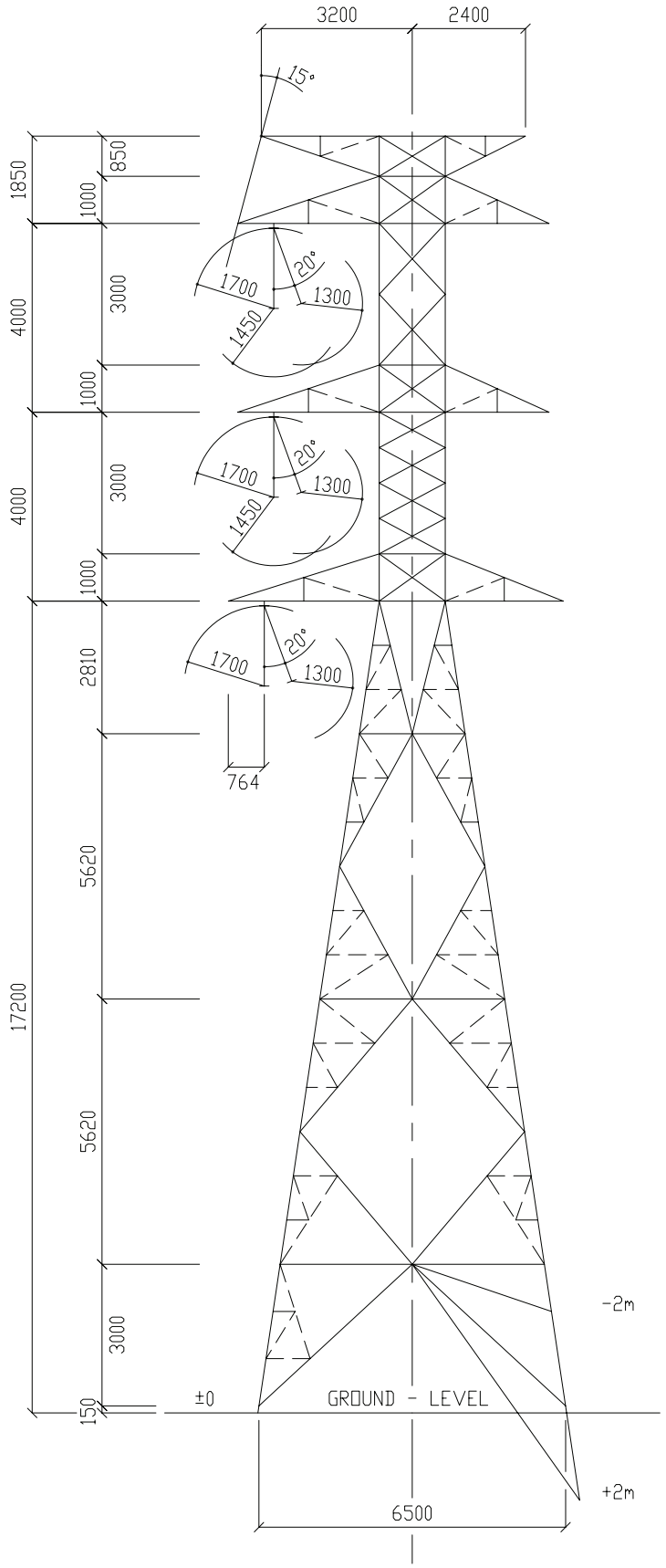
babcock



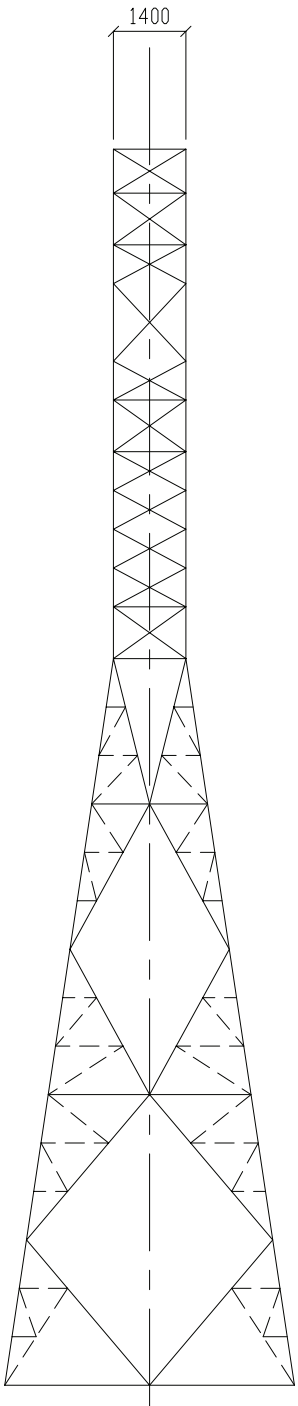
LONG & SHORT PEAK

SECOND & THIRD LONG/SHORT ARM

FIRST LONG & SHORT ARM



TRANSVERSAL FACE



LONGITUDINAL FACE

SCALE 1 : 150

DATE:

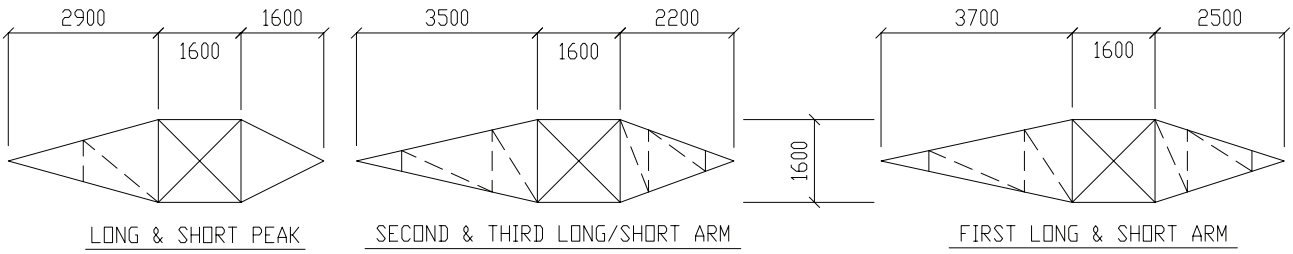
DWG. No 2038

PROJECT: 132 KV. TRANSMISSION LINE

TITLE: 15°-35° ANGLE STRAIN TOWER TYPE "245C"

Babcock Ntuthuko Powerlines

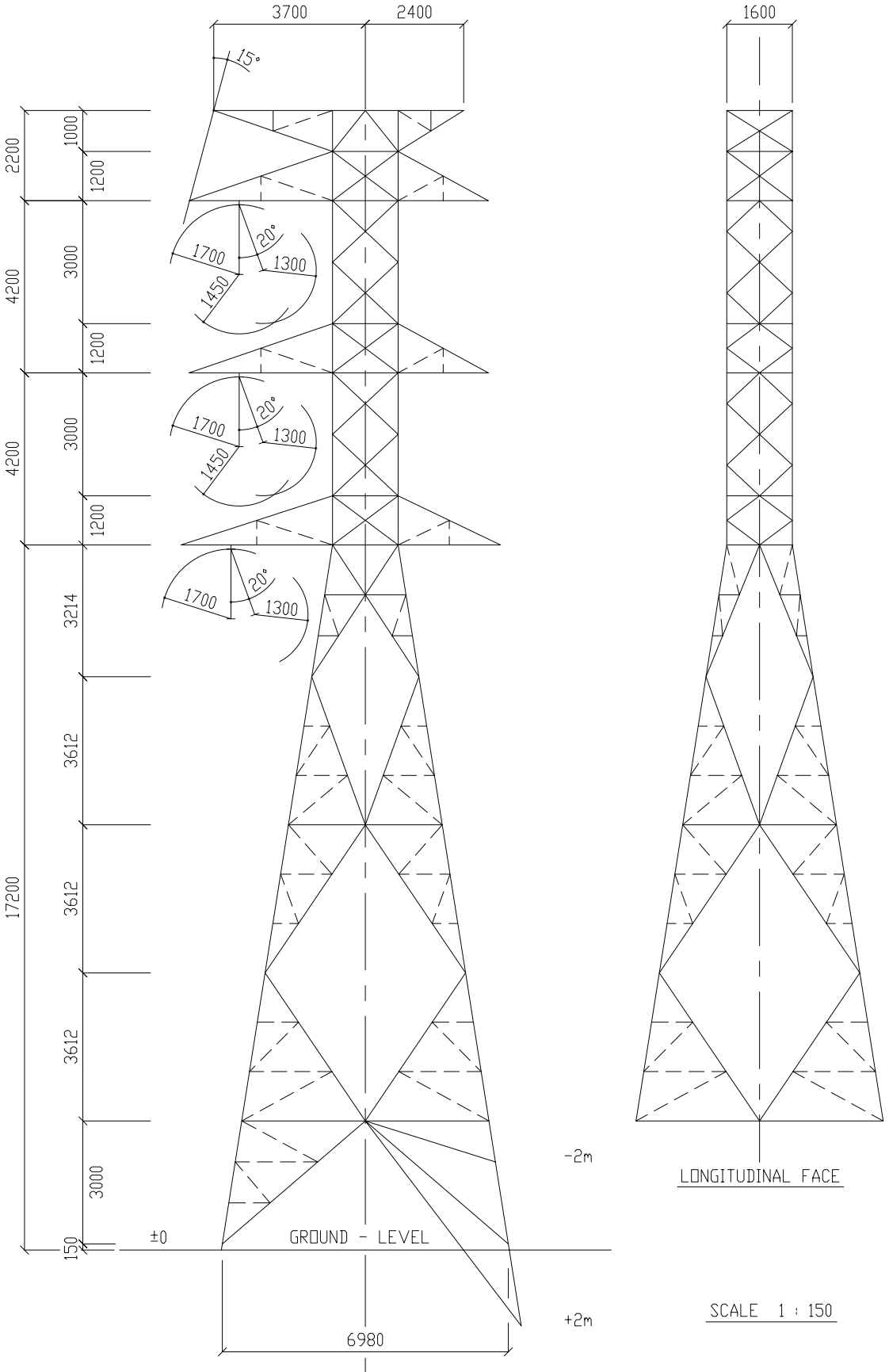
babcock



LONG & SHORT PEAK

SECOND & THIRD LONG/SHORT ARM

FIRST LONG & SHORT ARM



TRANSVERSAL FACE

LONGITUDINAL FACE

SCALE 1 : 150

DATE:

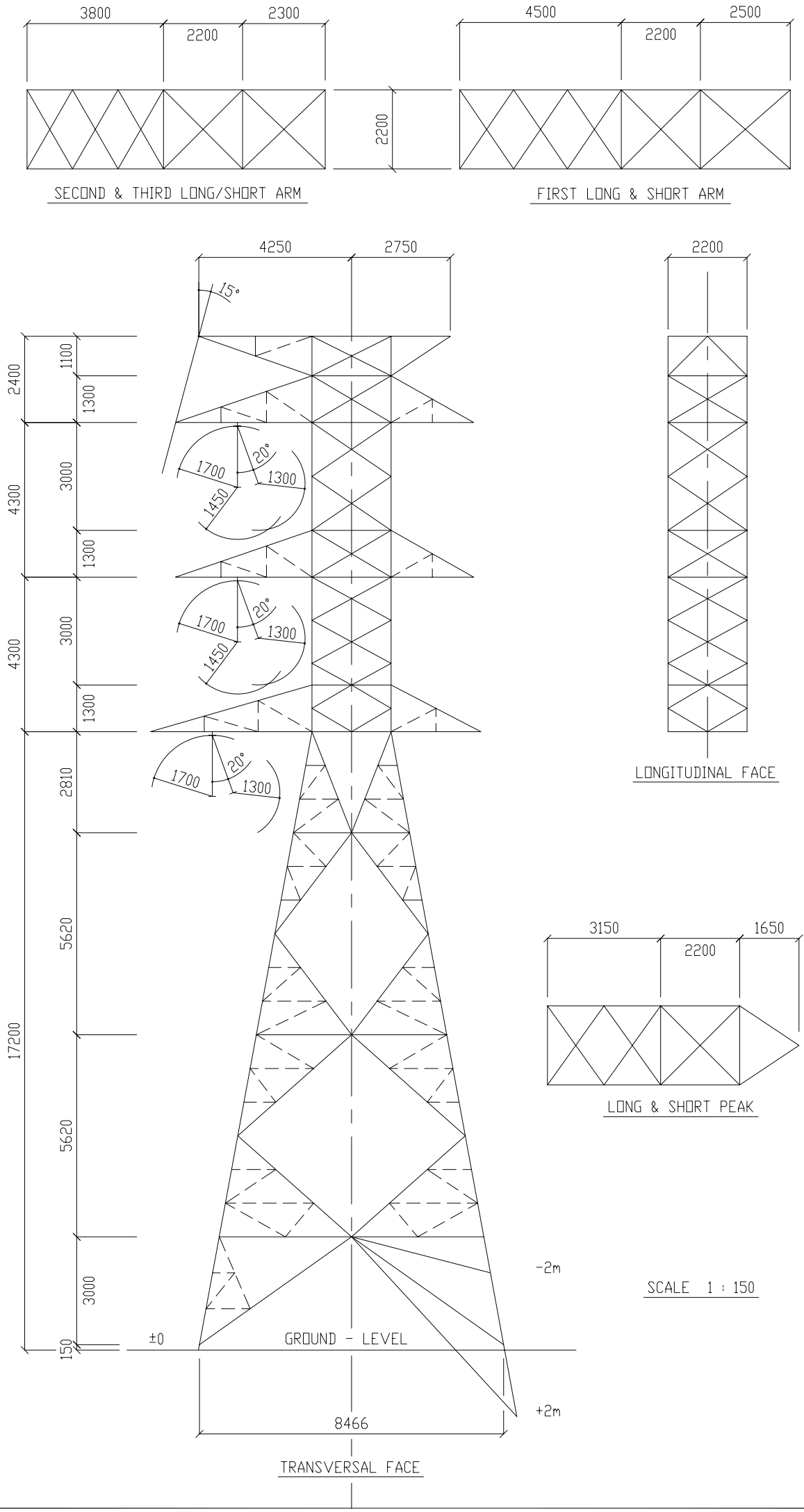
DWG. No 2039

PROJECT: 132 KV. TRANSMISSION LINE

TITLE: 35°-60° A/S & 0° TERM. TOWER TYPE "245D"

Babcock Ntuthuko Powerlines

babcock



DATE:

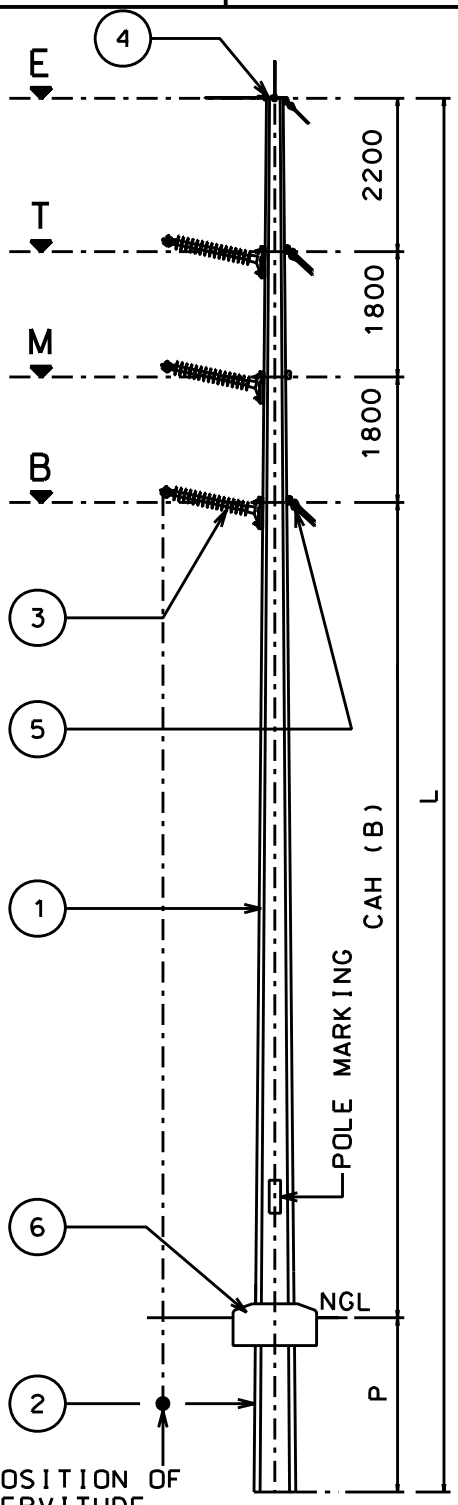
DWG. No 2040

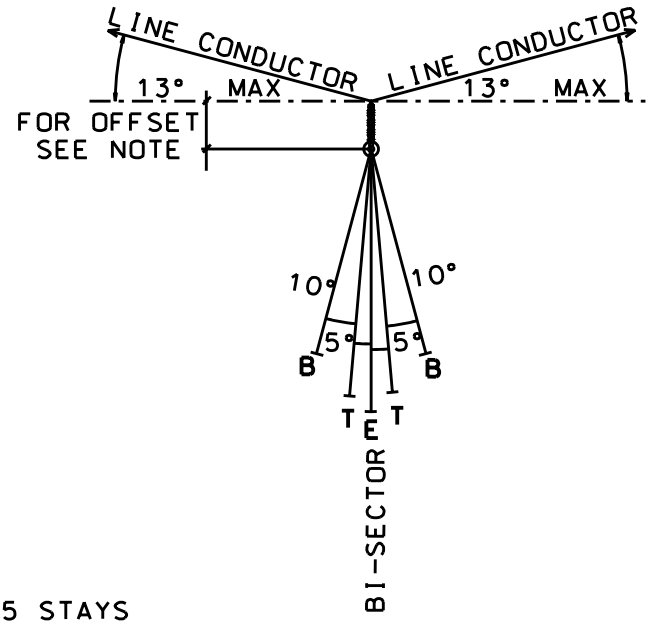
PROJECT: 132 KV. TRANSMISSION LINE

TITLE: 60°-90° A/S & 0°-35° TERM. TOWER TYPE "245E"

Babcock Ntuthuko Powerlines

babcock





5 STAYS
E) EARTH WIRE : 1 OFF
T) TOP PHASE : 2 OFF
B) BOTTOM PHASE: 2 OFF

TOP VIEW

STAY ARRANGEMENT FOR STAYED STRUCTURES

TIP LOAD = 23 kN

DESIGN REQUIREMENTS						
POLE LENGTH L	TIP LOAD (kN)	PLANTING DEPTH P	C A H (m AGL)			
			E	T	M	B
20	23	2.6	17.4	15.2	13.4	11.6
21	23	2.7	18.3	16.1	14.3	12.5
22	23	2.8	19.2	17.0	15.2	13.4
23	23	2.9	20.1	17.9	16.1	14.3
24	23	3.0	21.0	18.8	17.0	15.2

NOTE: POLE TO BE OFFSET 1500mm OUT OF LINE TOWARDS OUTSIDE OF BISECTOR AS SHOWN

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REV'D. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED INTERMEDIATE ANGLE STRUCTURE
GENERAL ARRANGEMENT (0-26°)

D-DT 7613	SET	SHEET	REVISION
	2	1	2

A4L

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ITEM NØ.	DESCRIPTION	D-DT NØ.
	STRUCTURE	
	TYPE 259B	D-DT 7613
	MANUFACTURER: STRUCTATECH	
	TYPE 261B	D-DT 7613
	MANUFACTURER: CIS	
1	POLE LENGTH (BODY)	
	20m STEEL	D-DT 7102
	21m STEEL	D-DT 7102
	22m STEEL	D-DT 7102
	23m STEEL	D-DT 7102
	24m STEEL	D-DT 7102
2	FOUNDATION	
	TYPE 1 (300kPa)	D-DT 7852 SHT 2
	TYPE 2 (150kPa)	D-DT 7852 SHT 3
	TYPE 3 (100kPa)	D-DT 7852 SHT 4
	TYPE 4 (50kPa)	D-DT 7852 SHT 5
	ROCK & SOFT ROCK	D-DT 7852 SHT 1
3	INSULATOR ASSEMBLY	
	INTERMEDIATE ASSEMBLY	D-DT 7321
4	EARTH WIRE ASSEMBLIES	
	NON INSULATED	D-DT 7323
	INSULATED	D-DT 7324
5	CONCRETE CAP AND	D-DT 7857
	EARTHING DETAILS	

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REV'D. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES STAYED INTERMEDIATE ANGLE STRUCTURE REFERENCE TABLE (0-26°)

	SET	SHEET	REVISION
D-DT 7613	2	2	2

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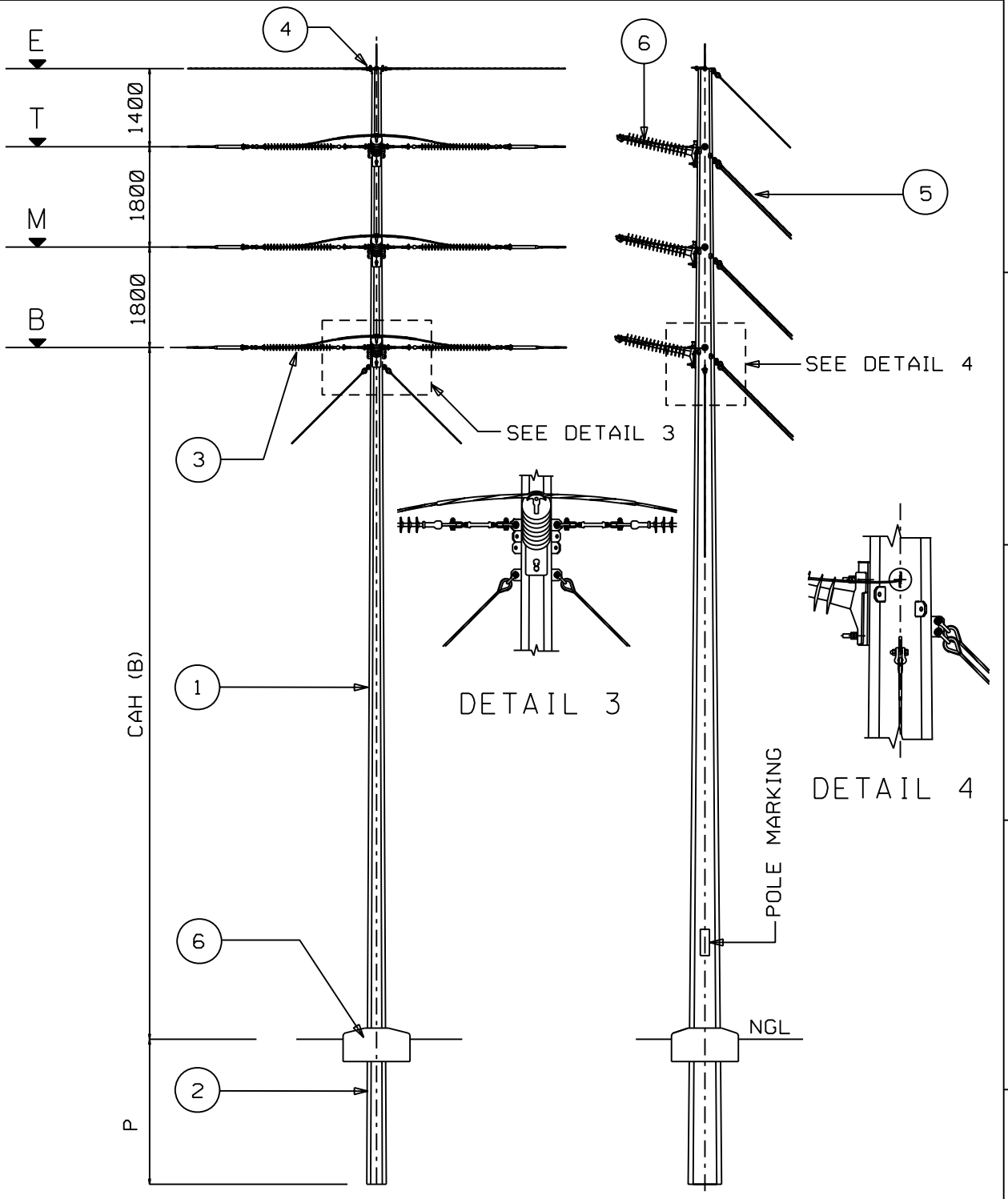

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
GENERAL ARRANGEMENT (0-90°)

	SET	SHEET	REVISION
D-DT 7615	3	1	2

A4L

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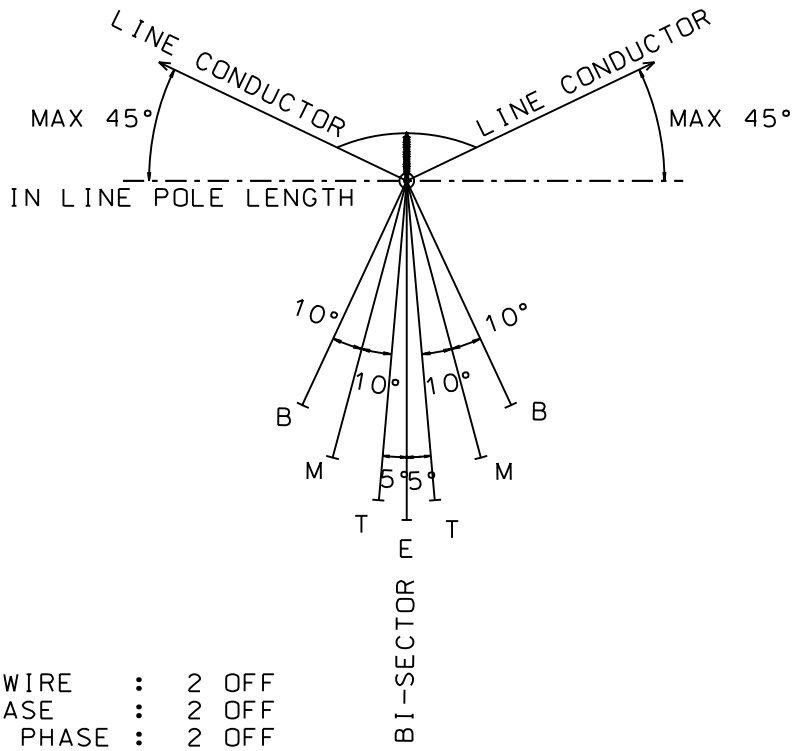

8 STAYS
E) EARTH WIRE : 2 OFF
T) TOP PHASE : 2 OFF
M) MIDDLE PHASE : 2 OFF
B) BOTTOM PHASE : 2 OFF

TOP VIEW

STAY ARRANGEMENT FOR STAYED STRUCTURES

SCHEDULE FOR CONDUCTOR ATTACHMENT HEIGHTS

DESIGN REQUIREMENTS			C A H (m AGL)			
POLE LENGTH L	TIP LOAD (kN)	PLANTING DEPTH P	E	T	M	B
18	23	2,0	16,0	14,6	12,8	11,0
19	23	2,0	17,0	15,6	13,8	12,0
20	23	2,0	18,0	16,6	14,8	13,0
21	23	2,0	19,0	17,6	15,8	14,0
22	23	2,0	20,0	18,6	16,8	15,0
23	23	2,0	21,0	19,6	17,8	16,0
24	23	2,0	22,0	20,6	18,8	17,0

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
DESIGN CRITERIA & STAYS (Ø-90°)

	SET	SHEET	REVISION
D-DT 7615	3	2	2

A4L

...\dgn\dms01836\ddt7615r1a.dgn 2006/03/17 11:13:35 AM

ITEM NØ.	DESCRIPTION	D-DT NØ.
	STRUCTURE	
	TYPE 259D	D-DT 7615
	MANUFACTURER: STRUCTATECH	
	TYPE 261D	D-DT 7615
	MANUFACTURER: CIS	
1	POLE LENGTH (BODY)	
	18m STEEL	D-DT 7104
	19m STEEL	D-DT 7104
	20m STEEL	D-DT 7104
	21m STEEL	D-DT 7104
	22m STEEL	D-DT 7104
	23m STEEL	D-DT 7104
	24m STEEL	D-DT 7104
2	FOUNDATION	
	TYPE 1 (300kPa)	D-DT 7852 SHT 2
	TYPE 2 (150kPa)	D-DT 7852 SHT 3
	TYPE 3 (100kPa)	D-DT 7852 SHT 4
	TYPE 4 (50kPa)	D-DT 7852 SHT 5
	ROCK & SOFT ROCK	D-DT 7852 SHT 1
3	INSULATOR ASSEMBLY	
	STRAIN ASSEMBLY	D-DT 7311
4	EARTH WIRE ASSEMBLIES	
	STRAIN NON INSULATED	D-DT 7323
	STRAIN INSULATED	D-DT 7324
5	STAY ASSEMBLY/LOCATION	D-DT 7325/7346
6	JUMPER ASSEMBLY	D-DT 7321
7	CONCRETE CAP AND EARTHING	D-DT 7857

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
REFERENCE TABLE (Ø-90°)

	SET	SHEET	REVISION
D-DT 7615	3	3	2

A4L

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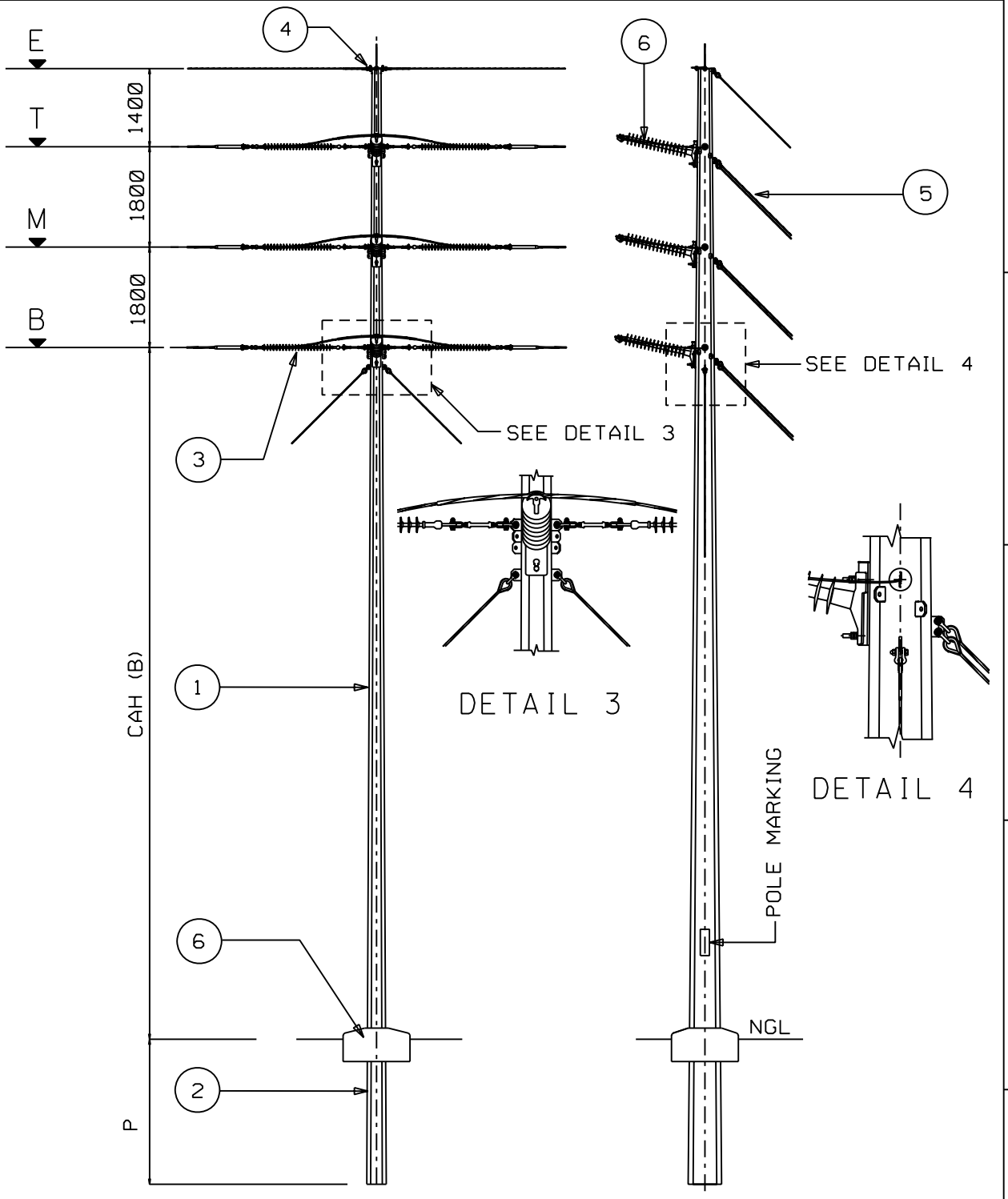

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
GENERAL ARRANGEMENT (0-90°)

	SET	SHEET	REVISION
D-DT 7615	3	1	2

A4L

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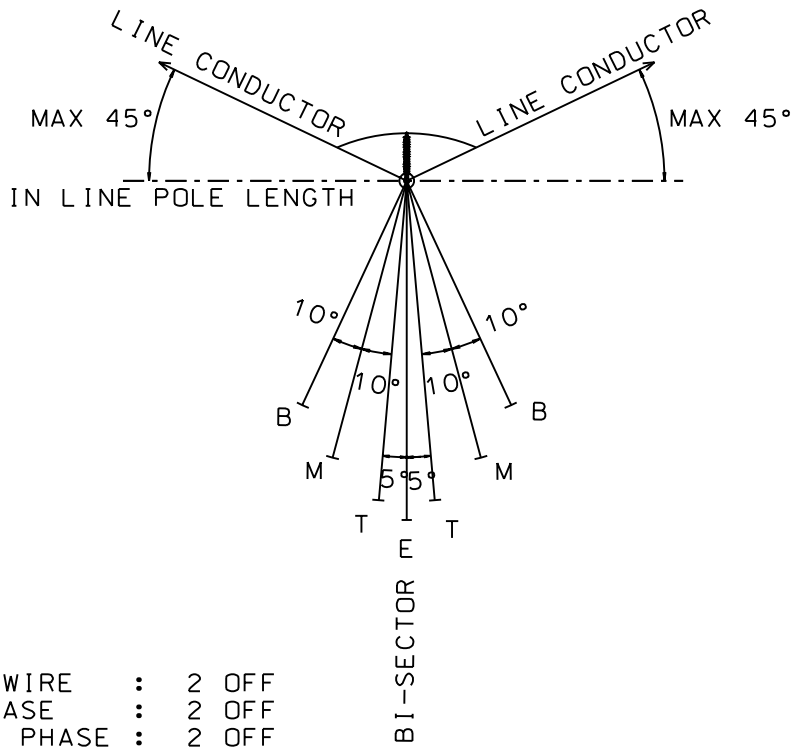

8 STAYS
E) EARTH WIRE : 2 OFF
T) TOP PHASE : 2 OFF
M) MIDDLE PHASE : 2 OFF
B) BOTTOM PHASE : 2 OFF

TOP VIEW

STAY ARRANGEMENT FOR STAYED STRUCTURES

SCHEDULE FOR CONDUCTOR ATTACHMENT HEIGHTS

DESIGN REQUIREMENTS			C A H (m AGL)			
POLE LENGTH L	TIP LOAD (kN)	PLANTING DEPTH P	E	T	M	B
18	23	2,0	16,0	14,6	12,8	11,0
19	23	2,0	17,0	15,6	13,8	12,0
20	23	2,0	18,0	16,6	14,8	13,0
21	23	2,0	19,0	17,6	15,8	14,0
22	23	2,0	20,0	18,6	16,8	15,0
23	23	2,0	21,0	19,6	17,8	16,0
24	23	2,0	22,0	20,6	18,8	17,0

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
DESIGN CRITERIA & STAYS (Ø-90°)

	SET	SHEET	REVISION
D-DT 7615	3	2	2

A4L

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ITEM NØ.	DESCRIPTION	D-DT NØ.
	STRUCTURE	
	TYPE 259D	D-DT 7615
	MANUFACTURER: STRUCTATECH	
	TYPE 261D	D-DT 7615
	MANUFACTURER: CIS	
1	POLE LENGTH (BODY)	
	18m STEEL	D-DT 7104
	19m STEEL	D-DT 7104
	20m STEEL	D-DT 7104
	21m STEEL	D-DT 7104
	22m STEEL	D-DT 7104
	23m STEEL	D-DT 7104
	24m STEEL	D-DT 7104
2	FOUNDATION	
	TYPE 1 (300kPa)	D-DT 7852 SHT 2
	TYPE 2 (150kPa)	D-DT 7852 SHT 3
	TYPE 3 (100kPa)	D-DT 7852 SHT 4
	TYPE 4 (50kPa)	D-DT 7852 SHT 5
	ROCK & SOFT ROCK	D-DT 7852 SHT 1
3	INSULATOR ASSEMBLY	
	STRAIN ASSEMBLY	D-DT 7311
4	EARTH WIRE ASSEMBLIES	
	STRAIN NON INSULATED	D-DT 7323
	STRAIN INSULATED	D-DT 7324
5	STAY ASSEMBLY/LOCATION	D-DT 7325/7346
6	JUMPER ASSEMBLY	D-DT 7321
7	CONCRETE CAP AND EARTHING	D-DT 7857

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
2	DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION	SLR	RAB	AB	MARCH 2004	

Eskom Distribution

AUTH: A BEKKER
DATE: JAN 2004
CHKD: RAB
DATE: JAN 2004
DRAWN: LMP
DATE: NOV 1998

DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
STAYED ANGLE STRAIN STRUCTURE
REFERENCE TABLE (Ø-90°)

	SET	SHEET	REVISION
D-DT 7615	3	3	2

A4L

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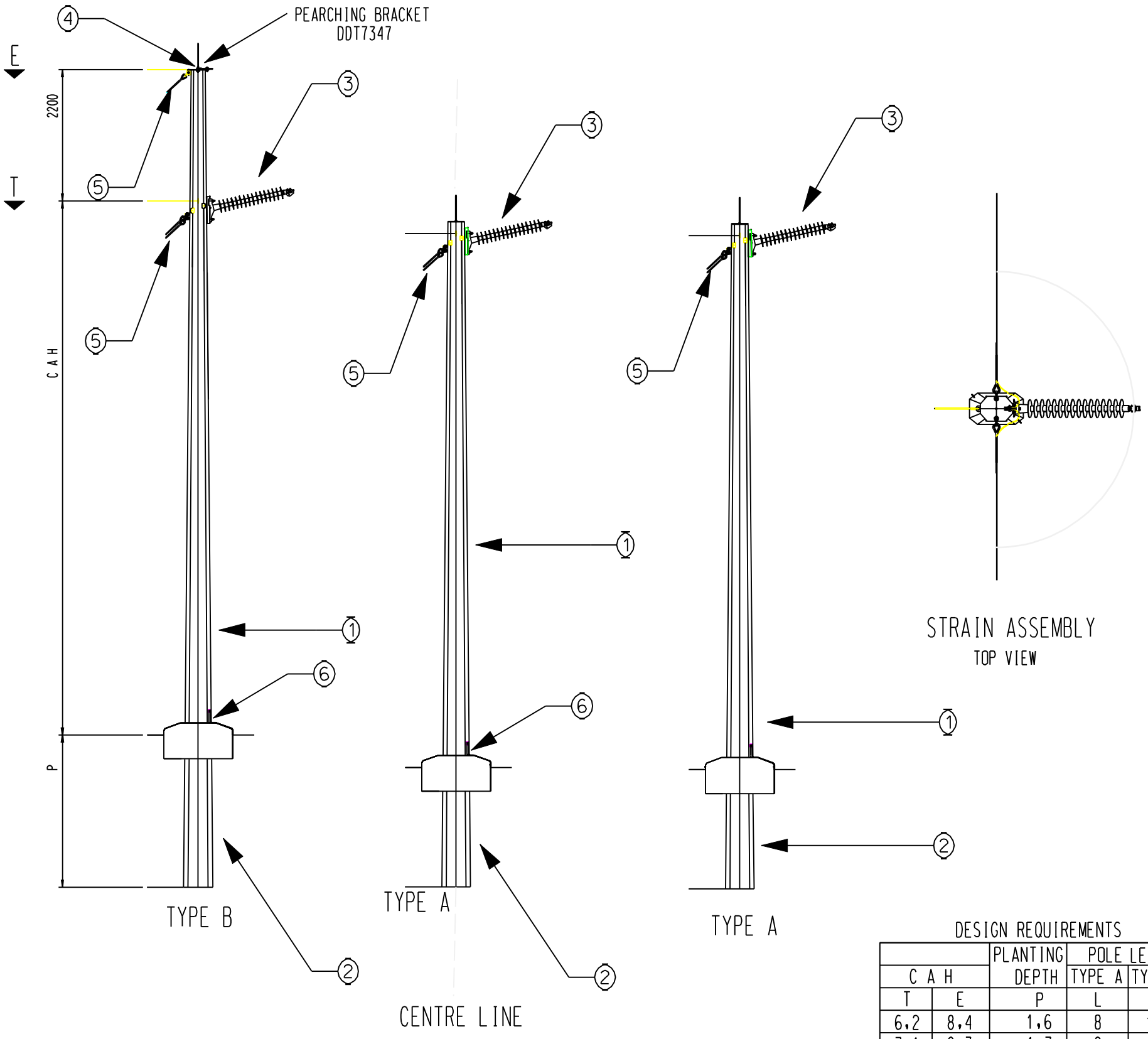


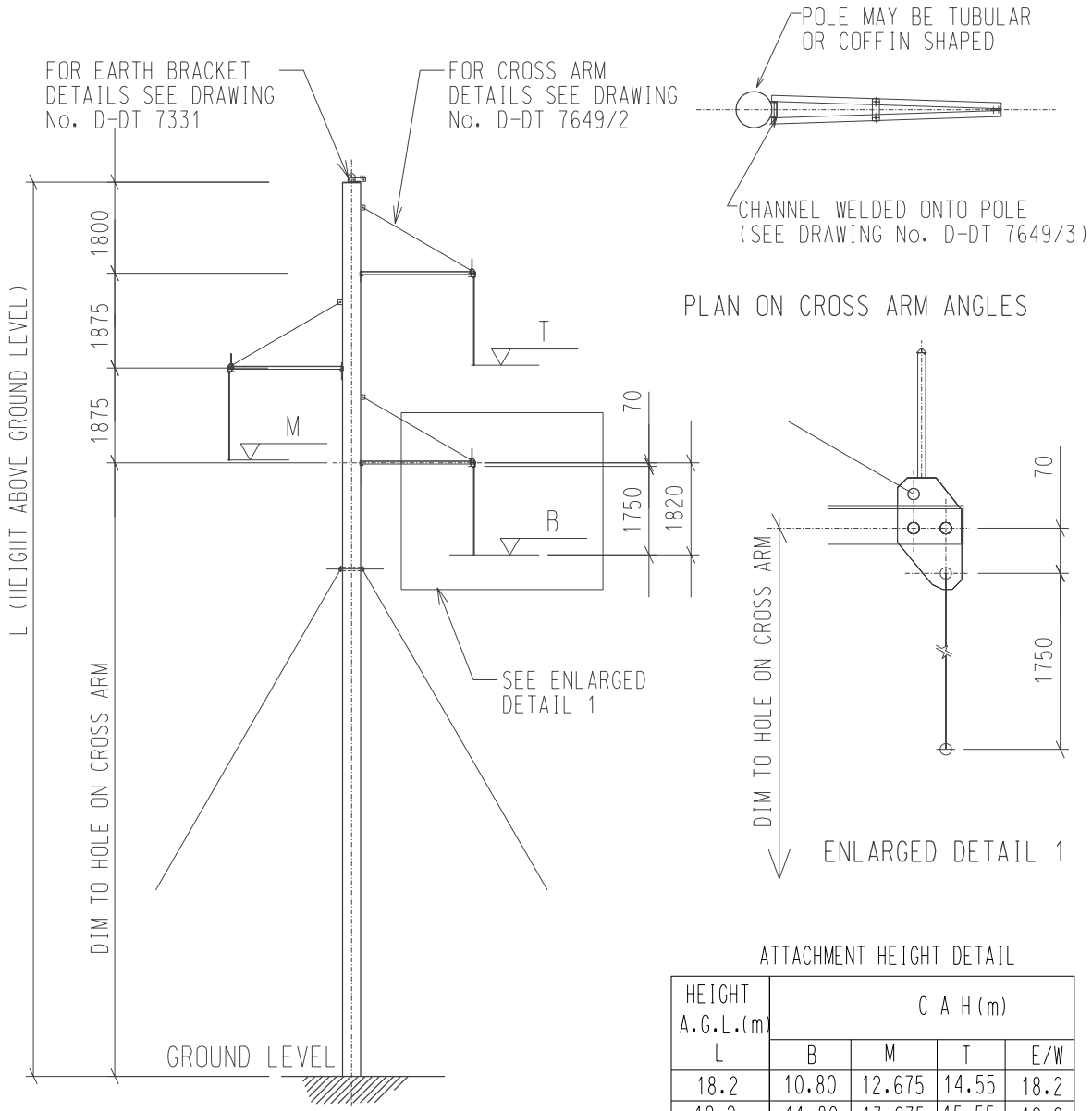
DESIGN REQUIREMENTS

C A H		PLANTING DEPTH	POLE LENGTH	
			TYPE A	TYPE B
T	E	P	L	L
6,2	8,4	1,6	8	10
7,1	9,3	1,7	9	11
8,0	10,2	1,8	10	12
8,9	11,1	1,9	11	13
9,8	12,0	2,0	12	14
10,7	12,9	2,1	13	15
11,6	13,8	2,2	14	16
12,5	14,7	2,3	15	17
13,4	15,6	2,4	16	18
14,3	16,5	2,5	17	19
15,2	17,4	2,6	18	20
16,1	18,3	2,7	19	21

NOTE:
1 THESE 3 POLES CAN BE USED AS AN UNSTAYED INTERMEDIATE STRUCTURE (0°) OR A STAYED INTERMEDIATE ANGLE STRUCTURE ($1\text{-}20^{\circ}$) OR A STAYED ANGLE STRAIN STRUCTURE ($0\text{-}90^{\circ}$).

REV	AUTH MAG	DATE DATUM	REVISION/REVISIES INDEX REF/INDEKSVERW	BY DEUR	CHKD NAGES	D-DT- REFERENCE DRAWINGS

DRG.TEK REGISTR			ESKOM	DISTRIBUTION TECHNOLOGY 88/132kV STEEL POLE 3-POLE STRAIN STRUCTURE ($0\text{-}90^{\circ}$) GENERAL ARRANGEMENT	
CHKD NAGES					
DRAWN GETEKEN	LMP	22.11.1998	APPROVED	CAD.REF:	REV
SCALE SKAAL	NTS			FILE No.:	D-DT 7618 / 1



THIS DRAWING IS RELEVANT FOR
GUYED AND FREESTANDING STRUCTURES

ATTACHMENT HEIGHT DETAIL

HEIGHT A.G.L.(m) L	C A H (m)			
	B	M	T	E/W
18.2	10.80	12.675	14.55	18.2
19.2	11.80	13.675	15.55	19.2
20.1	12.70	14.575	16.45	20.1
21.2	13.80	15.675	17.55	21.2
22.7	15.30	17.175	19.05	22.7
24.2	16.80	18.675	20.55	24.2

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
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Eskom Distribution

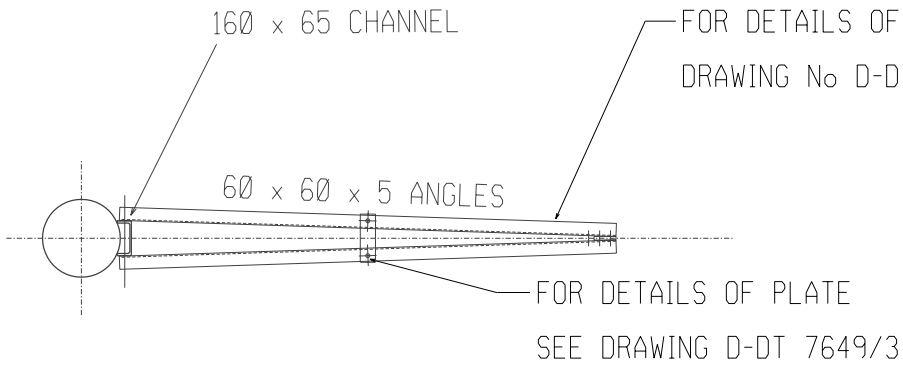
AUTH: A. BEKKER
DATE: JULY 2002
CHKD: B. BRANFIELD
DATE: JUNE 2002
DRAWN: S. LE ROUX
DATE: JUNE 2002

DISTRIBUTION TECHNOLOGY

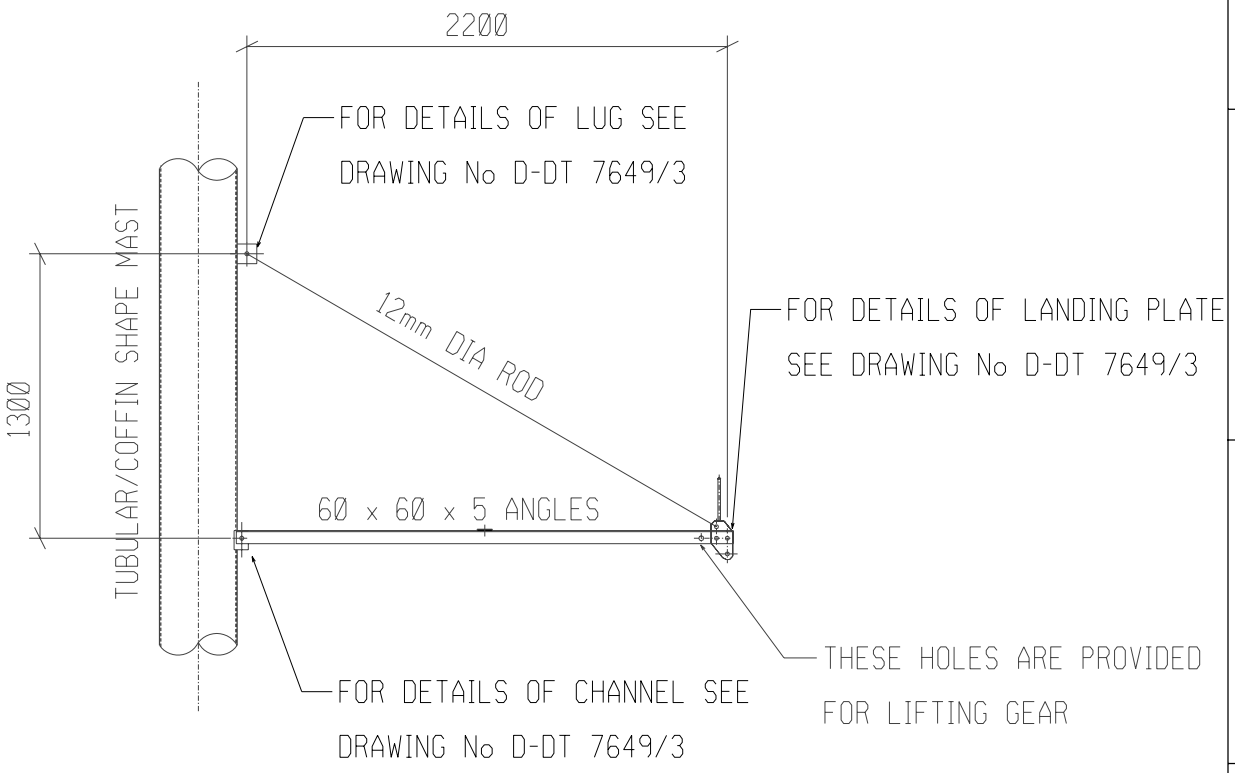
RETICULATION/SUB-TRANSMISSION LINES
SINGLE CIRCUIT GUYED INTERMEDIATE
STEEL POLE - GENERAL ARRANGEMENT

	SET	SHEET	REVISION
D-DT 7641	4	1	A

A4L



PLAN ON CROSS ARM ANGLES



ELEVATION ON CROSS ARM

NOTE:
ALL BOLTS USED TO BE
M16 GRADE 8.8 BOLTS

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
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Eskom Distribution

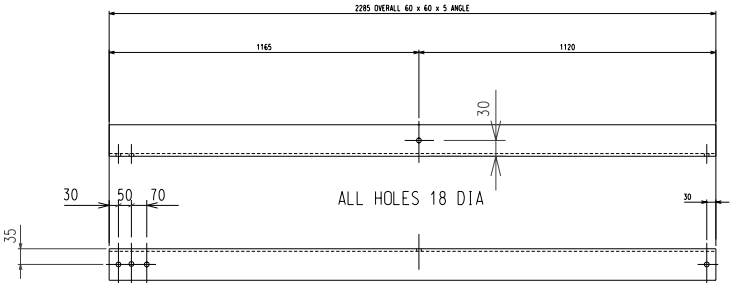
DISTRIBUTION TECHNOLOGY

RETICULATION/SUB-TRANSMISSION LINES
SINGLE CIRCUIT GUYED INTERMEDIATE
STEEL POLE - LAYOUT OF CROSS ARM

AUTH:	A. BEKKER
DATE:	JULY 2002
CHKD:	B. BRANFIELD
DATE:	JUNE 2002
DRAWN:	S. LE ROUX
DATE:	JUNE 2002

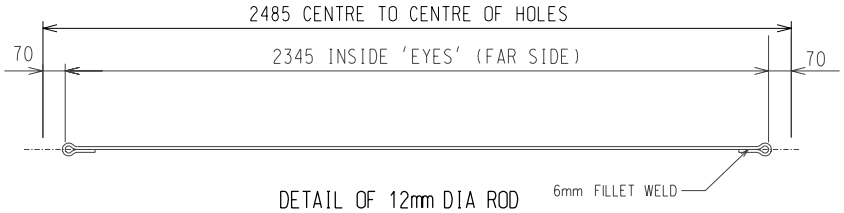
	SET	SHEET	REVISION
D-DT 7641	4	2	A

A4L

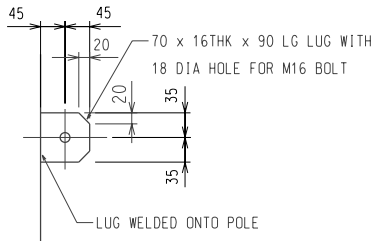


ONE ANGLE REQUIRED AS DRAWN
ONE ANGLE REQUIRED TO OPP HAND

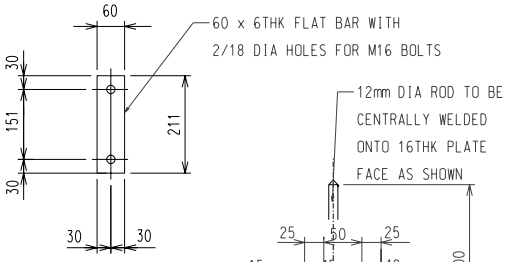
NOTE:
ALL BOLTS USED
TO BE M16 GRADE
8.8 BOLTS



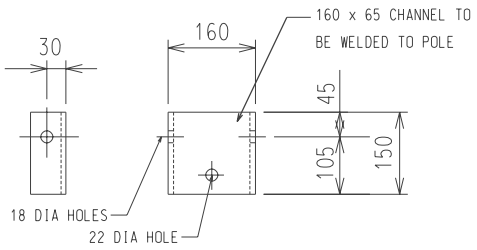
DETAIL OF 12mm DIA ROD



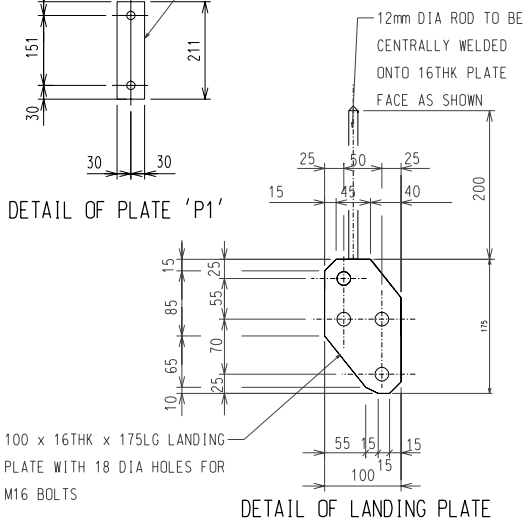
DETAIL OF LUG 'L1'



DETAIL OF PLATE 'P1'



DETAIL OF CHANNEL CONNECTION



DETAIL OF LANDING PLATE

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
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Eskom Distribution

DISTRIBUTION TECHNOLOGY

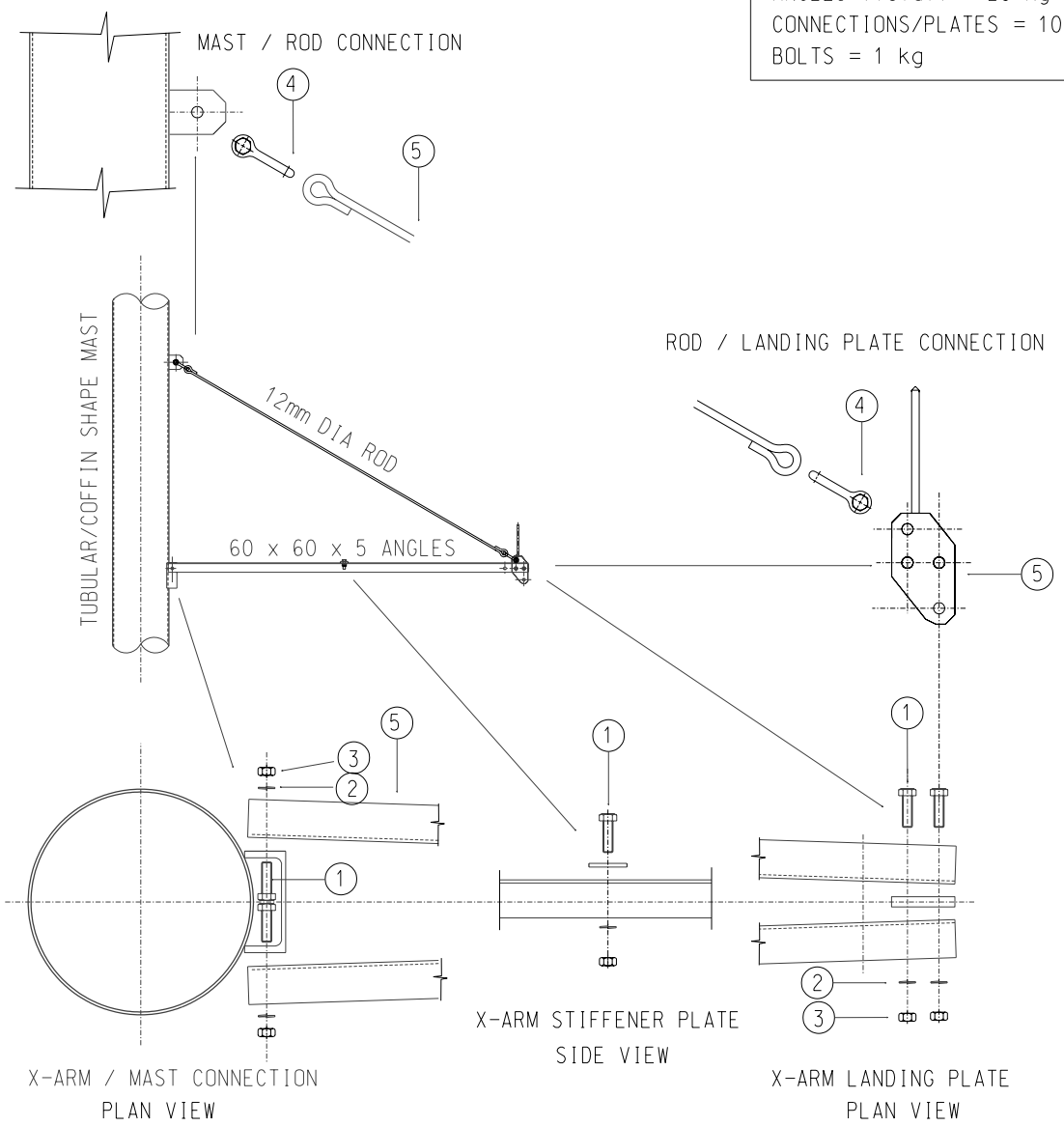
RETICULATION/SUB-TRANSMISSION LINES
SINGLE CIRCUIT GUYED INTERMEDIATE
STEEL POLE - X-ARM FABRICATION DRAWING

AUTH:	A. BEKKER
DATE:	JULY 2002
CHKD:	B. BRANFIELD
DATE:	JUNE 2002
DRAWN:	S. LE ROUX
DATE:	JUNE 2002

	SET	SHEET	REVISION
D-DT 7641	4	3	A

A4L

MASS OF CROSS ARM:
ANGLES (Total) = 20 kg
CONNECTIONS/PLATES = 10 kg
BOLTS = 1 kg



REF	DESCRIPTION	DRAWING NO.
1	SET SCREW, M16 x 50 LG GRADE 8.8	
2	WASHER, SPRING, M16	
3	NUT, M16	
4	SHACKLE, D 120KN	D-DT 7017
5	SUSP. ARM ASSEMB, 132KV	

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
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---	---	---	---	---	--/--/----	---

Eskom Distribution

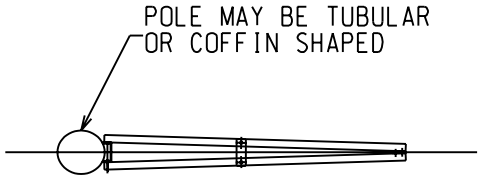
AUTH: A. BEKKER
DATE: JULY 2002
CHKD: B. BRANFIELD
DATE: JUNE 2002
DRAWN: S. LE ROUX
DATE: JUNE 2002

DISTRIBUTION TECHNOLOGY

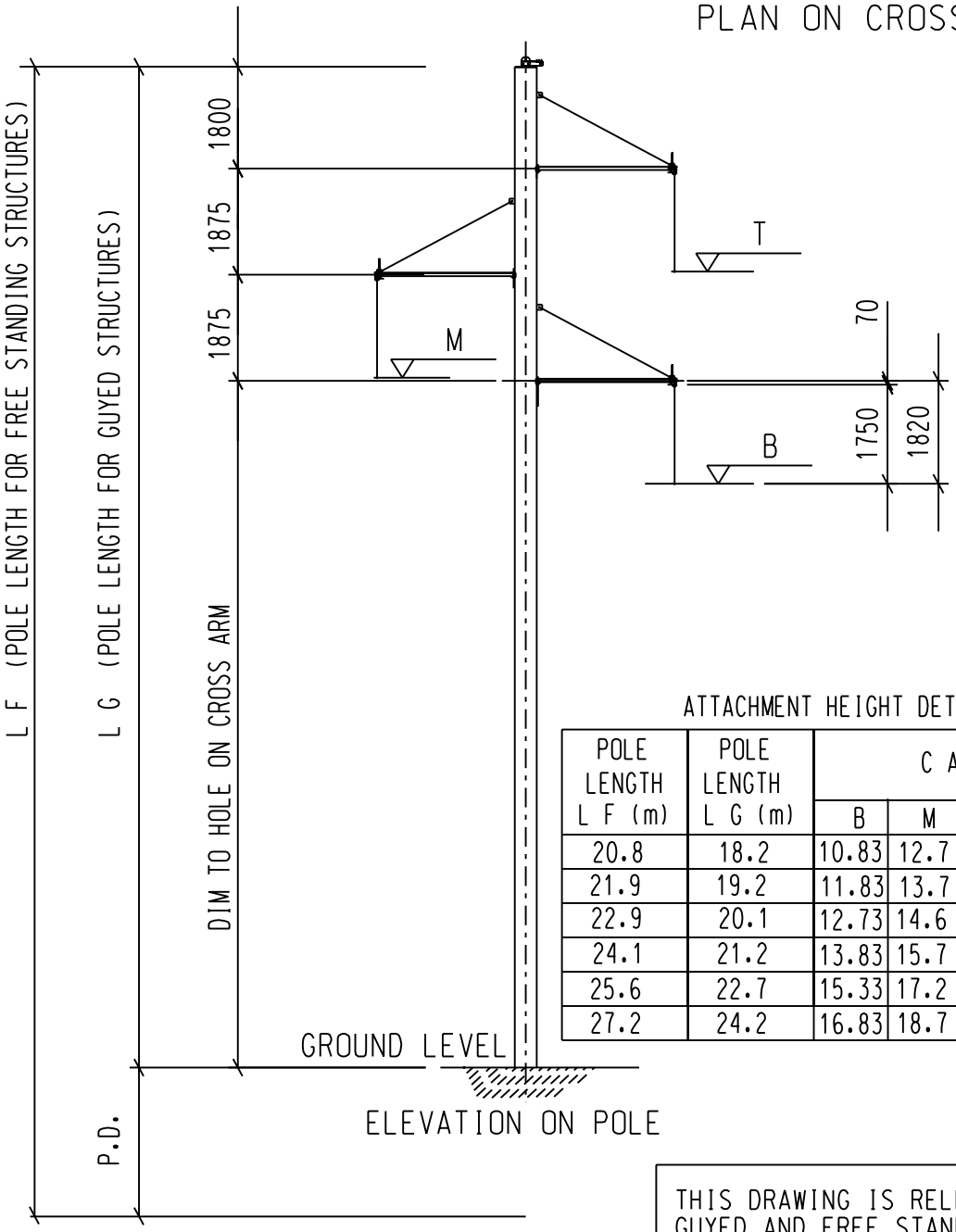
RETICULATION/SUB-TRANSMISSION LINES
SINGLE CIRCUIT GUYED INTERMEDIATE
STEEL POLE - X-ARM FABRICATION DRAWING

	SET	SHEET	REVISION
D-DT 7641	4	4	A

A4L



PLAN ON CROSS ARM ANGLES



ELEVATION ON POLE

ATTACHMENT HEIGHT DETAIL

POLE LENGTH L F (m)	POLE LENGTH L G (m)	C A H (m)				P.D. (m)
		B	M	T	E/W	
20.8	18.2	10.83	12.7	14.58	18.2	2.6
21.9	19.2	11.83	13.7	15.58	19.2	2.7
22.9	20.1	12.73	14.6	16.48	20.1	2.8
24.1	21.2	13.83	15.7	17.58	21.2	2.9
25.6	22.7	15.33	17.2	19.08	22.7	2.9
27.2	24.2	16.83	18.7	20.58	24.2	3.0

THIS DRAWING IS RELEVANT FOR GUYED AND FREE STANDING STRUCTURES

REV	AUTH MAG	DATE DATUM	REVISION/REVISIES / INDEX REF/INDEKSVERW	BY DEUR	CHKD NAGES	D-DT- REFERENCE DRAWINGS
0	AB	15.03 2002	FIRST ISSUE/EERSTE UITREIKING	SLR	RAB	

DISTRIBUTION TECHNOLOGY

132KV SUSPENSION X-ARM GENERAL ARRANGEMENT FOR SINGLE STEEL POLE STRUCTURE

DRG.TEK REGISTR				
CHKD NAGES	RAB	16.03 2002		
DRAWN GETEKEN	SLR	15.03 2002	APPROVED AB	CAD.REF:
SCALE SKAAL	NTS		26/04/2002	FILE No.:

REV 0