Appendix C16.04

ESB Polesets

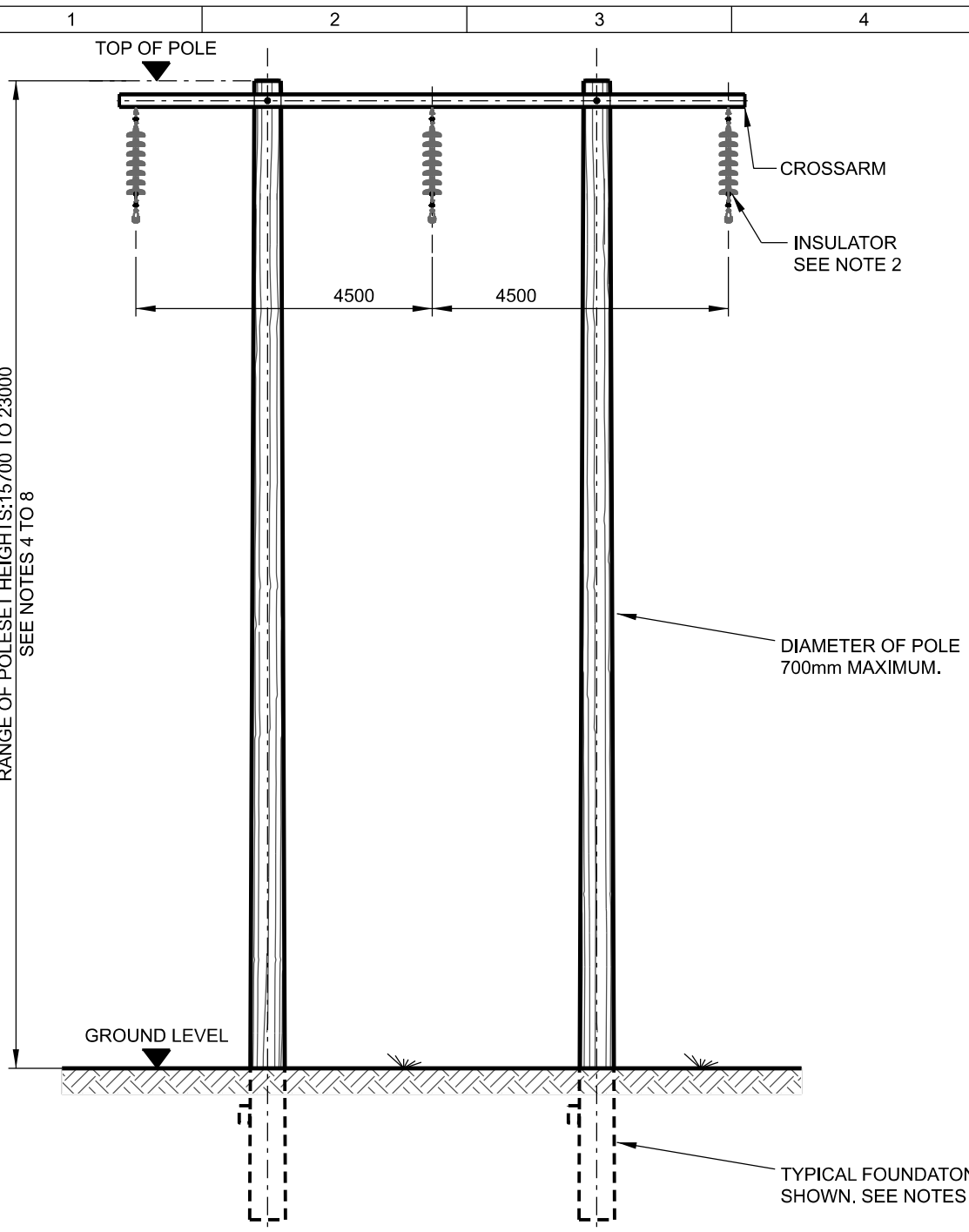
Appendix C16.04
ESB Polesets

TEN-T Priority Route Improvement Project, Donegal

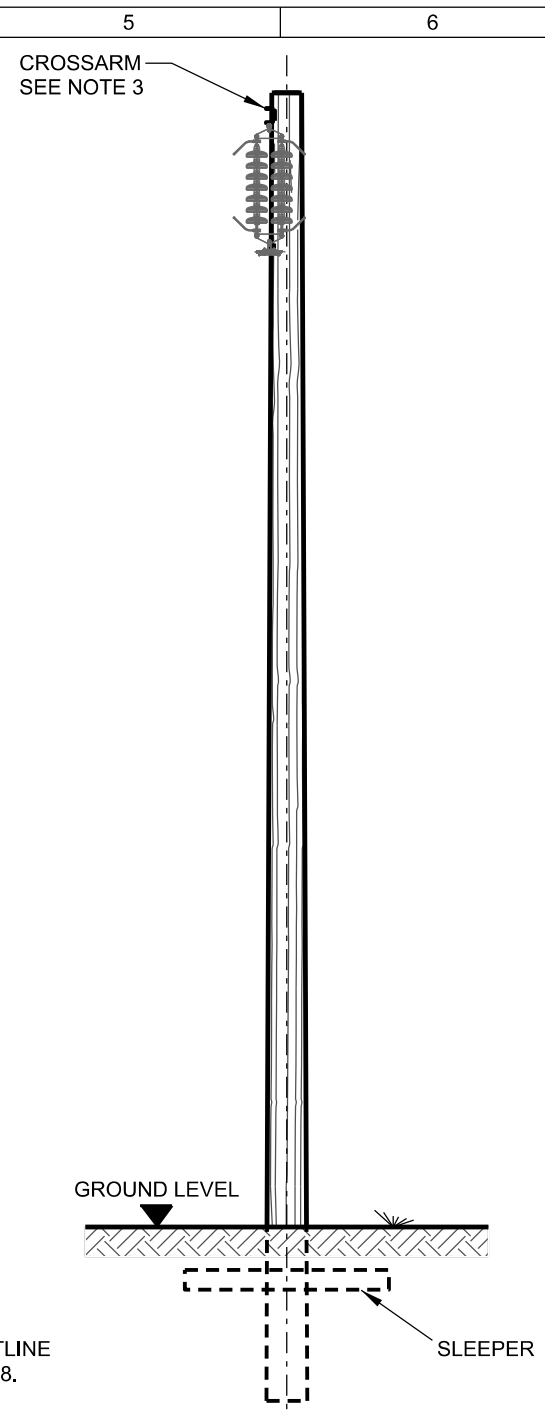
TT_MGT0337-RPS-P3-ZZ-RP-E-EN0001

EIAR

March 2026



FRONT ELEVATION



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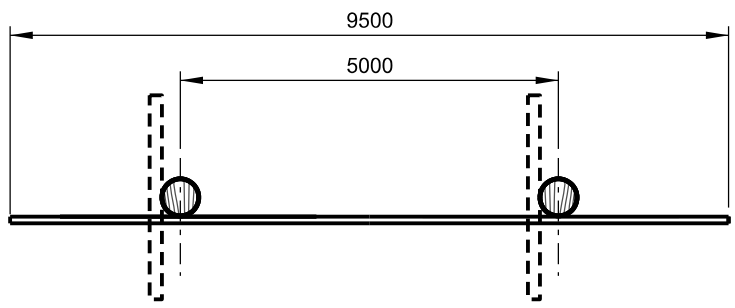

PLAN

NOTES:

1. ACTUAL OUTLINE DIMENSIONS MAY BE LESS THAN SHOWN ON THIS DRAWING.
2. INSULATORS SHOWN ARE INDICATIVE AND ARE SUBJECT TO CHANGE DEPENDING ON THE PROJECT.
3. FOR VERY LONG SPANS, 2 CROSSARMS MAY BE USED – ONE ON EACH SIDE OF POLES.
4. POLESET HEIGHT IS MEASURED FROM GROUNDLINE AT THE CENTRE OF THE STRUCTURE.
5. THE NOMINAL POLE LENGTH OF ESB 110 kV POLES RANGE FROM 16 m TO 24 m (CORRESPONDING ACTUAL POLE LENGTHS ARE 16.31 m AND 24.31 m) THE HEIGHT OF ESB POLESETS ABOVE GROUND (AS DEFINED IN NOTE 4) USING THESE POLES RANGE FROM 15.7 m TO 23 m. DEPENDING ON THE POLE LENGTH USED AND POLE EMBEDMENT DEPTH. IN SOME CASES (FOR EXAMPLE, WHERE THE LINE CROSSES BELOW ANOTHER LINE) POLES SHORTER THAN 16 m MAY BE USED.
6. FOUNDATION DETAILS WILL VARY DEPENDING ON THE GROUND CONDITIONS ENCOUNTERED. FOUNDATIONS WILL TYPICALLY BE DIRECTLY EMBEDDED TO DEPTHS RANGING FROM 2.3 m TO 3.3 m WITH 3 m LONG SLEEPERS USED BELOW GROUND. HOWEVER, IN POOR GROUND, PILES, IMPORTED BACKFILL, GROUND REINFORCEMENT AND/OR LARGER/DEEPER FOUNDATIONS MAY BE REQUIRED. WHERE STAYS ARE REQUIRED DUE TO POOR GROUND CONDITIONS, THE POLES MAY ONLY BE EMBEDDED 1.5 m AND SUPPORTED BY RAFTS.
7. THE LOWER VALUE IN THE RANGE OF POLESET HEIGHTS SHOWN ON THE DRAWING INDICATES THE MAXIMUM POSSIBLE HEIGHT ABOVE GROUND FOR THE SHORTEST ESB TRANSMISSION POLE. SIMILARLY, THE HIGHER VALUE IN THE SAME RANGE INDICATES THE MAXIMUM POSSIBLE HEIGHT ABOVE GROUND FOR THE LONGEST ESB TRANSMISSION POLE. THESE VALUES CONSIDER MAXIMUM TOLERANCES ON POLE LENGTH, MAXIMUM TOLERANCES ON POLE INSTALLATION, MINIMUM POSSIBLE POLE EMBEDMENT DEPTHS AND THE IMPACT OF SLOPING GROUND. WHERE MINIMUM TOLERANCES OF POLE LENGTH AND/OR INSTALLATION ARE CONSIDERED AND/OR WHERE POLES ARE INSTALLED WITH DEEPER EMBEDMENT DEPTHS ON FLAT GROUND, THE HEIGHT OF THE SHORTEST ESB POLE WILL BE LOWER THAN THE LOWER VALUE IN THE RANGE SHOWN ON THE DRAWING.
8. ON SLOPING GROUND, IN ORDER TO KEEP THE CROSSARM LEVEL, THE TWO POLES WILL BE EMBEDDED AT DIFFERENT DEPTHS AND/OR DIFFERENT POLE LENGTHS WILL BE USED FOR EACH POLE. IN SUCH CASES, THE HEIGHT ABOVE GROUND OF THE DOWNHILL POLE WILL BE HIGHER THAN THE POLESET HEIGHT DEFINED IN NOTE 4 AND THE HEIGHT ABOVE GROUND OF THE UPHILL POLE WILL BE LOWER THAN THE POLESET HEIGHT.
9. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

Engineering and Major Projects,
One Dublin Airport Central,
Dublin Airport, Cloghran,
Co. Dublin, K67 XF72, Ireland.
Tel: +353 (0)1 703 8000 Web: www.esb.ie
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Rev.	Date	Revision Description	Drn.	Prod.	Ver.	App.
2	–	HEIGHT DIMENSIONS AND NOTES UPDATED, FOUNDATION ADDED.	–	–	–	–
1	–	UPDATED CROSSARM CHANEL & POLE DIMENSIONS	AS	DC	DT	PE
0	09/12/12	INITIAL ISSUE	AK	PE	FA	PE

Purpose of issue - Preliminary unless indicated

Client Approval ☐ Planning ☒ Tender ☐ Construction ☐ As-built ☐

DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
A.Scally	A.Brandini	D.King	P.Ennis	03/12/2024

CLIENT REF	No. OF SHTS	SIZE	SCALE
TC206667	-	A3	1/100

Drawing Title
110 kV LINES
OUTLINE DRAWING FOR PLANNING
RL1, RL2 & RL3 SUSPENSION WOOD POLESET
WITHOUT EARTHWIRE

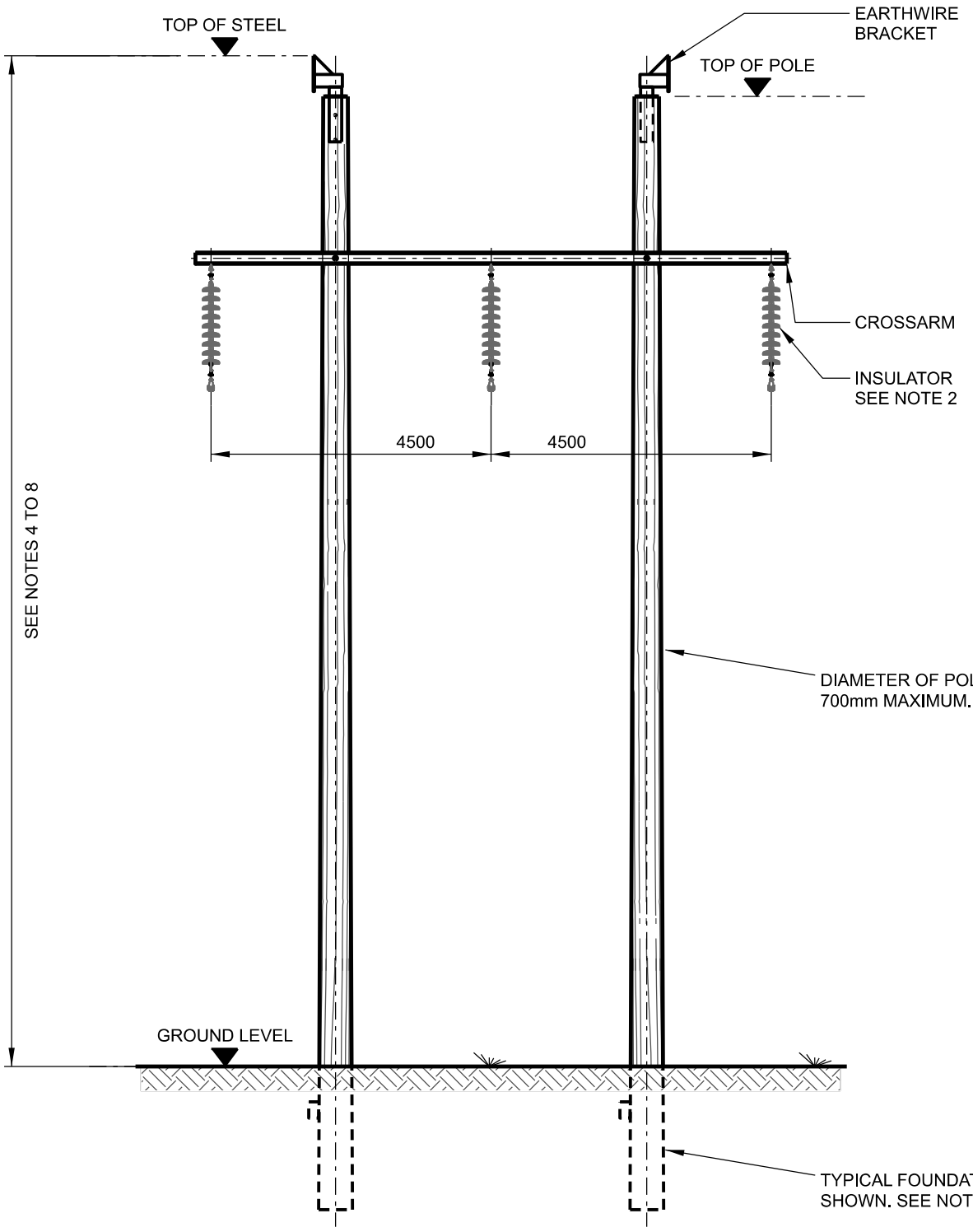
Client: ESB NETWORKS

Project: Materials

Contract:

Production Unit: Networks Engineering

Drawing Number: PG567-D004-483-001-002 (SHEET REV)



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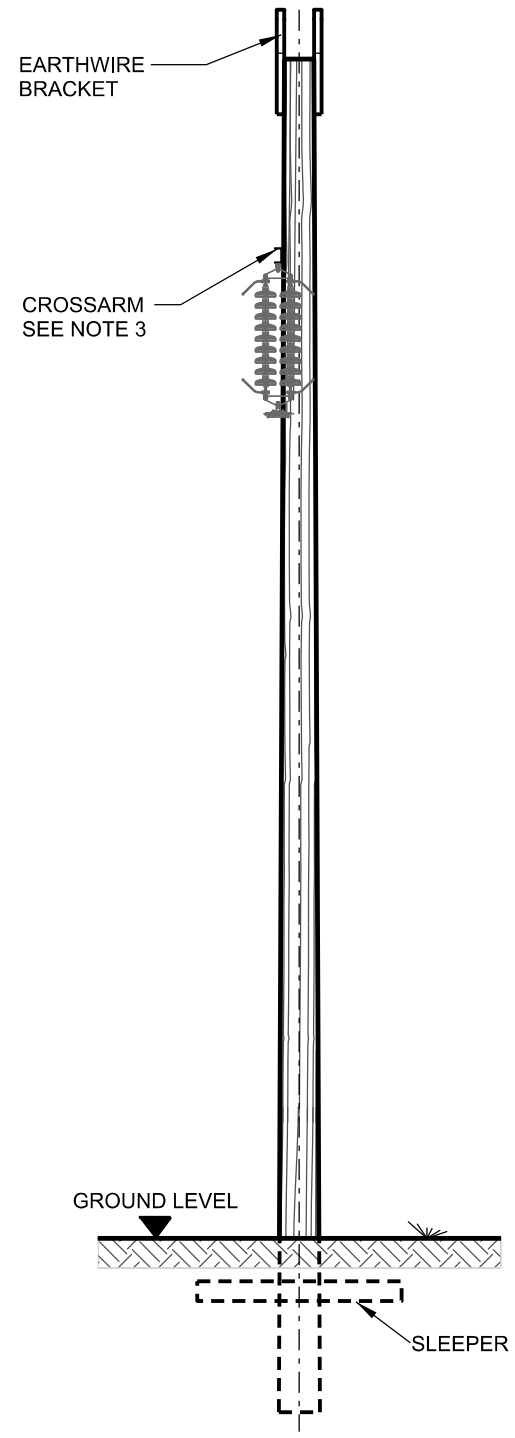
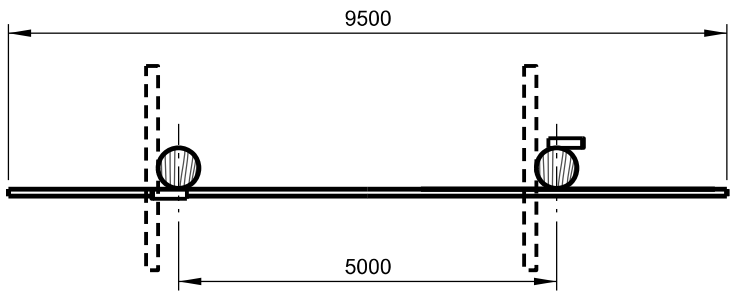


SIDE ELEVATION



PLAN

NOTES:

1. ACTUAL OUTLINE DIMENSIONS MAY BE LESS THAN SHOWN ON THIS DRAWING.
2. INSULATORS SHOWN ARE INDICATIVE AND ARE SUBJECT TO CHANGE DEPENDING ON THE PROJECT.
3. FOR VERY LONG SPANS, 2 CROSSARMS MAY BE USED – ONE ON EACH SIDE OF THE POLES.
4. POLESET HEIGHT IS MEASURED FROM GROUNDLINE AT THE CENTRE OF THE STRUCTURE.
5. THE NOMINAL POLE LENGTH OF ESB 110 kV POLES RANGE FROM 16 m TO 24 m (CORRESPONDING ACTUAL POLE LENGTHS ARE 16.31 m AND 24.31 m) THE HEIGHT OF ESB POLESETS ABOVE GROUND (AS DEFINED IN NOTE 4) USING THESE POLES RANGE FROM 15.7 m TO 23 m. DEPENDING ON THE POLE LENGTH USED AND POLE EMBEDMENT DEPTH. IN SOME CASES (FOR EXAMPLE, WHERE THE LINE CROSSES BELOW ANOTHER LINE) POLES SHORTER THAN 16 m MAY BE USED.

NOTES CONTINUED:

6. FOUNDATION DETAILS WILL VARY DEPENDING ON THE GROUND CONDITIONS ENCOUNTERED. FOUNDATIONS WILL TYPICALLY BE DIRECTLY EMBEDDED TO DEPTHS RANGING FROM 2.3 m TO 3.3 m WITH 3 m LONG SLEEPERS USED BELOW GROUND. HOWEVER, IN POOR GROUND, PILES, IMPORTED BACKGILL, GROUND REINFORCEMENT AND/OR LARGER/DEEPER FOUNDATION MAY BE REQUIRED. WHERE STAYS ARE REQUIRED DUE TO POOR GROUND CONDITIONS, THE POLES MAY ONLY BE EMBEDDED 1.5 m AND SUPPORTED BY RAFTS. SEE DRAWING PG567-D004-674-002 FOR STAYED SUSPENSION WOOD POLESET PLANNING DRAWING.
7. THE LOWER VALUE IN THE RANGE OF POLESET HEIGHTS SHOWN ON THE DRAWING INDICATES THE MAXIMUM POSSIBLE HEIGHT ABOVE GROUND FOR THE SHORTEST ESB TRANSMISSION POLE. SIMILARLY, THE HIGHER VALUE IN THE SAME RANGE INDICATES THE MAXIMUM POSSIBLE HEIGHT ABOVE GROUND FOR THE LONGEST ESB TRANSMISSION POLE. THESE VALUES CONSIDER MAXIMUM TOLERANCES ON POLE LENGTH, MAXIMUM TOLERANCES ON POLE INSTALLATION, MINIMUM POSSIBLE POLE EMBEDMENT DEPTHS AND THE IMPACT OF SLOPING GROUND. WHERE MINIMUM TOLERANCES OF POLE LENGTH AND/OR INSTALLATION ARE CONSIDERED AND/OR WHERE POLES ARE INSTALLED WITH DEEPER EMBEDMENT DEPTHS ON FLAT GROUND, THE HEIGHT OF THE SHORTEST ESB POLE WILL BE LOWER THAN THE LOWER VALUE IN THE RANGE SHOWN ON THE DRAWING.
8. ON SLOPING GROUND, IN ORDER TO KEEP THE CROSSARM LEVEL, THE TWO POLES WILL BE EMBEDDED AT DIFFERENT DEPTHS AND/OR DIFFERENT POLE LENGTHS WILL BE USED FOR EACH POLE. IN SUCH CASES, THE HEIGHT ABOVE GROUND OF THE DOWNHILL POLE WILL BE HIGHER THAN THE POLESET HEIGHT DEFINED IN NOTE 4 AND THE HEIGHT ABOVE GROUND OF THE UPHILL POLE WILL BE LOWER THAN THE POLESET HEIGHT.
9. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.

Rev.	Date	Revision Description	Drn.	Prod.	Ver.	App.
003	–	HEIGHT DIMENSIONS AND NOTES UPDATED, FOUNDATION ADDED.	–	–	–	–
002	03/04/22	UPDATED CROSSARM WIDTH DIMENSIONS	AS	DC	DT	PE
001	22/06/18	FORMAT , DRAWING & TITLEBLOCK UPDATED	SD	JG	DT	PE
000	09/02/12	INITIAL ISSUE	AK	PE	FA	PE

Purpose of issue - Preliminary unless indicated

Client Approval ☐ Planning ☒ Tender ☐ Construction ☐ As-built ☐

Energy for generations

Engineering and Major Projects,
One Dublin Airport Central,
Dublin Airport, Cloghran,
Co. Dublin, K67 XF72, Ireland.

Tel: +353 (0)1 703 8000 Web: www.esb.ie

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DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
A.Scally	A.Brandini	D.King	P.Ennis	04/12/2024

CLIENT REF	No. OF SHTS	SIZE	SCALE
TC206668	-	A3	1/100

Client: ESB NETWORKS

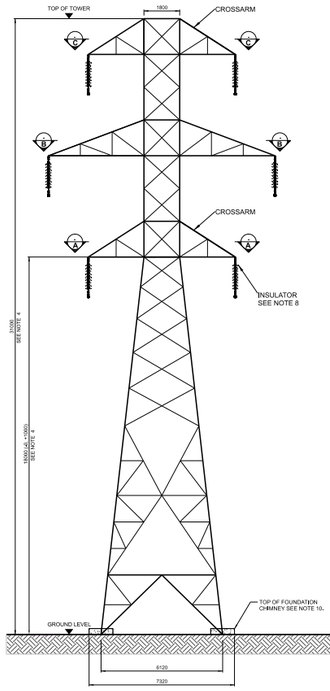
Project: Materials

Contract:

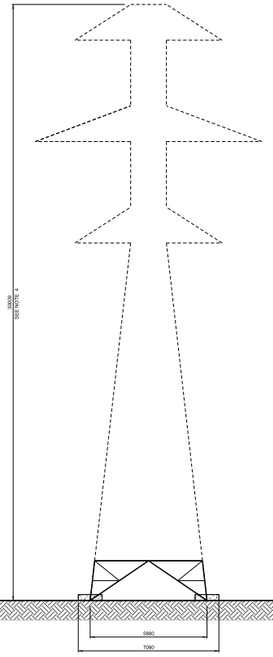
Production Unit: Networks Engineering

Drawing Title: 110 kV LINES
OUTLINE DRAWING FOR PLANNING
RL1, RL2 & RL3 SUSPENSION WOOD POLESET
WITH EARTHWIRE

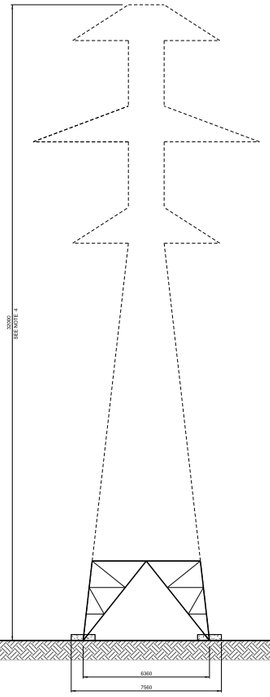
Drawing Number: PG567-D004-484-001-003 (SHEET REV)



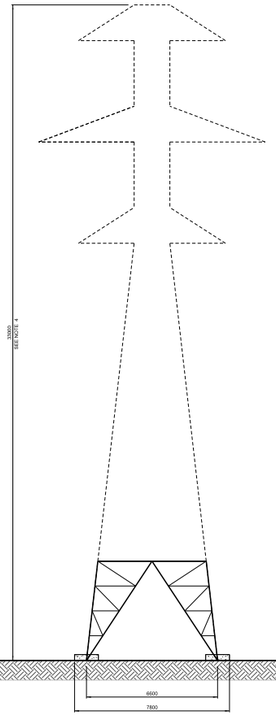
FRONT ELEVATION
STANDARD HEIGHT
TOWER A



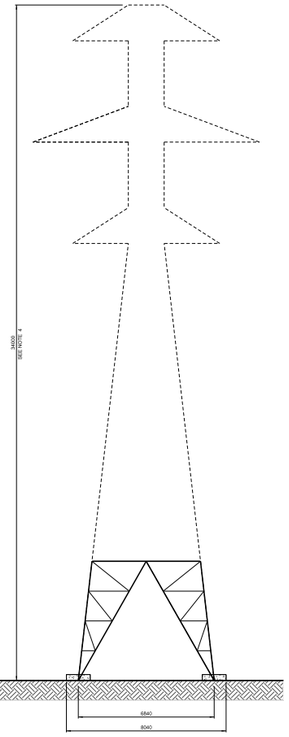
FRONT ELEVATION
-1m LEG
TOWER B



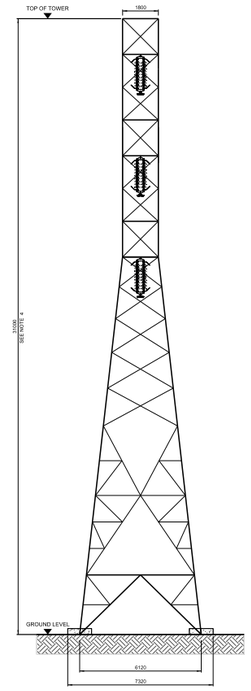
FRONT ELEVATION
+1m LEG
TOWER C



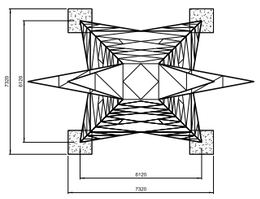
FRONT ELEVATION
+2m LEG
TOWER D



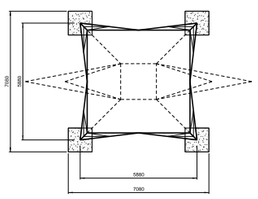
FRONT ELEVATION
+3m LEG
TOWER E



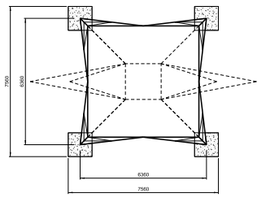
SIDE ELEVATION
STANDARD HEIGHT



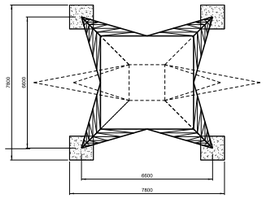
PLAN VIEW
STANDARD HEIGHT



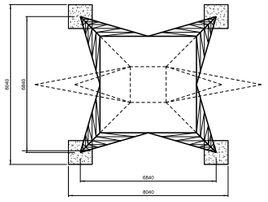
PLAN VIEW
-1m LEG



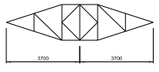
PLAN VIEW
+1m LEG



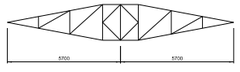
PLAN VIEW
+2m LEG



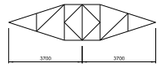
PLAN VIEW
+3m LEG



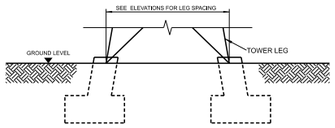
SECTION A - A



SECTION B - B



SECTION C - C



TYPICAL TOWER FOUNDATION DETAIL

APPLICABLE TO ANY TOWER HEIGHT. SEE NOTES 9 & 10.

NOTES:

1. TOWER HEIGHT IS ALWAYS MEASURED FROM THE GROUND LINE AT THE CENTRE OF THE STRUCTURE.
2. THE STANDARD TOWER HEIGHT MAY BE VARIED USING LEG EXTENSIONS AS INDICATED.
3. COMBINATIONS OF DIFFERENT LEG EXTENSIONS MAY BE USED ON THE SAME TOWER IF INSTALLED ON SLOPING GROUND. IN SUCH CASES THE TOWER WILL BE TALLER AT THE DOWNHILL SIDE AND SHORTER AT THE UPHILL SIDE
4. THE TOWER HEIGHT (AS DEFINED IN NOTE 1) INCLUDES AN ALLOWANCE OF UP TO 1m TO ACCOUNT FOR SLOPING GROUND. SLOPING GROUND WILL ALSO IMPACT THE HEIGHT OF THE CROSSARM BUT THE ALLOWANCE IS NOT INCLUDED IN THE CROSSARM HEIGHT DIMENSION SHOWN ON THE DRAWING. INSTEAD, THIS IS CATERED FOR BY THE TOLERANCE SHOWN ON THE CROSSARM DIMENSION: (-0,+1000).
5. SECTIONS A-A, B-B & C-C ARE COMMON TO ALL TOWER HEIGHTS..
6. INTERNAL BRACING MAY CHANGE DEPENDING ON TOWER SUPPLIER.
7. ACTUAL DIMENSIONS MAY BE LESS THAN SHOWN ON DRAWING, DEPENDING ON TOWER SUPPLIER.
8. THE INSULATOR ARRANGEMENT SHOWN IS TYPICAL AND BESPOKE ARRANGEMENTS MAY BE REQUIRED AT SOME SPECIFIC LOCATIONS.

NOTES CONTINUED:

9. FOUNDATIONS TYPICALLY CONSIST OF A PAD AND CHIMNEY MASS CONCRETE FOUNDATION AT EACH TOWER LEG, FOUNDED TYPICALLY 3.0m TO 3.5m BELOW GROUND. PLAN DIMENSIONS OF THE PAD TYPICALLY VARY FROM 2.5m X 2.5m TO 5.0m X 5.0m. SEE TYPICAL TOWER FOUNDATION DETAIL FOR REFERENCE. DURING CONSTRUCTION, THE SIDES OF THE FOUNDATION EXCAVATION MAY BE EITHER STEPPED BACK OR SUPPORTED BY SHEET PILING DEPENDING ON SOIL CONDITION.
10. FOUNDATION CHIMNEY HEIGHT ABOVE GROUND IS TYPICALLY 0.3m. WHERE TOWER IS INSTALLED ON SLOPING GROUND, A PORTION OF ONE OR MORE LEGS MAY BE BURIED UNDER GROUND BY UP TO 1.0m. IN SUCH CASES, THE CONCRETE FOUNDATION CHIMNEY WILL BE EXTENDED UPWARDS TO COVER THE PORTION OF ANY LEG UNDERGROUND, WHILE STILL EXTENDING 0.3m ABOVE GROUND LEVEL. THE CHIMNEY WILL ALSO EXTEND HORIZONTALLY TO COVER ANY BRACES CONNECTED TO THE BURIED LEG.
11. WHERE POOR GROUND IS ENCOUNTERED, PILED FOUNDATIONS ARE TYPICALLY USED IN CONJUNCTION WITH FOUR PILE CAPS CONNECTED TO EACH OTHER USING CONCRETE GROUND BEAMS. HOWEVER ALTERNATIVE SOLUTIONS MAY ALSO BE USED SUCH AS IMPORTED BACKFILL, GROUND REINFORCEMENT AND/OR LARGER/DEEPER FOUNDATIONS. IN SUCH CASES THE EXTENT OF THE FOUNDATIONS ABOVE GROUND MAY EXCEED THAT SHOWN ON THE DRAWING.
12. WHERE A TOWER IS LOCATED IN AN AREA OFTEN FREQUENTED BY THE PUBLIC, ANTI-CLIMBING GUARDS WILL BE ATTACHED TO THE TOWER. THESE ARE TYPICALLY LOCATED 3 TO 4 METRES ABOVE GROUND LEVEL AND CONSIST OF STRANDS OF BARBED WIRE SUPPORTED BY A STEEL FRAME EXTENDING OUT FROM THE TOWER FRAME.
13. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.

REV.	DATE	REVISION DESCRIPTION	ORIG	PROC	VER	APP
02		FOUND. CHIMNEYS ADDED. NOTES UPDATED, AND TOLERANCES ADDED	AK	-	-	-
01	18/05/22	FOUNDATIONS AMENDED.	AS	OC	DT	PE
00	03/04/22	INITIAL ISSUE	AS	OC	DT	PE

PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED

CLIENT APPROVAL ☐ PLANNING ☒ TENDER ☐ CONSTRUCTION ☐ AS-BUILT ☐

Client: ESB NETWORKS

Project: Materials

Contract:

Drawing Title: 110 kV LINES - OUTLINE DRAWING FOR PLANNING RL2 & RL3 DOUBLE CIRCUIT SUSPENSION TOWERS WITHOUT EARTHWIRE (±0 BODY) T18 - MAX HEIGHT 34m

Production Unit: Networks Engineering

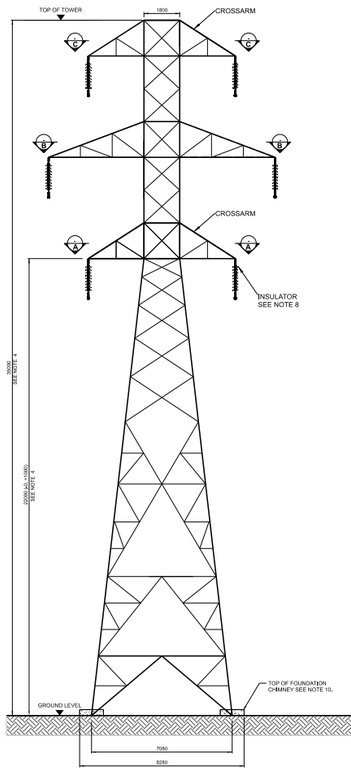
Engineering and Major Projects,
One Dublin Airport Central, Dublin Airport,
Cloghran, Co. Dublin, K67 X772, Ireland.
Tel: +353 (0)1 703 8000 Web: www.esb.ie
Engineering and Major Projects is a Division of ESB

Energy for generations

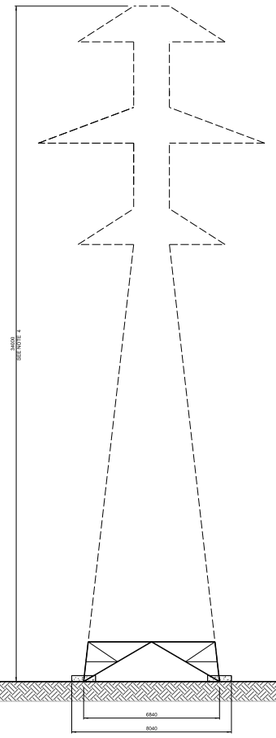
DRAWN	PROCESS	VERIFIED	APPROVED	APPROVAL DATE

CLIENT REF	VALUE DATE	SIZE	SCALE
TC225287	-	A0	1:100

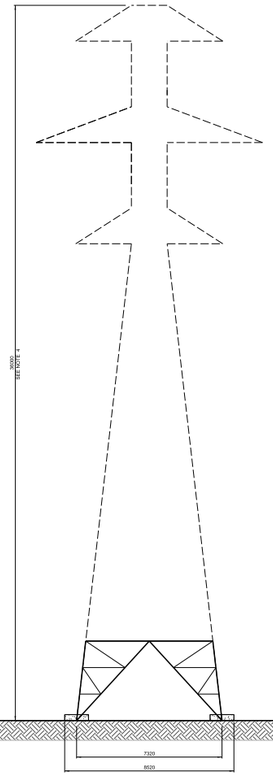
DRAWING NUMBER: PG567-D004-753-002-002



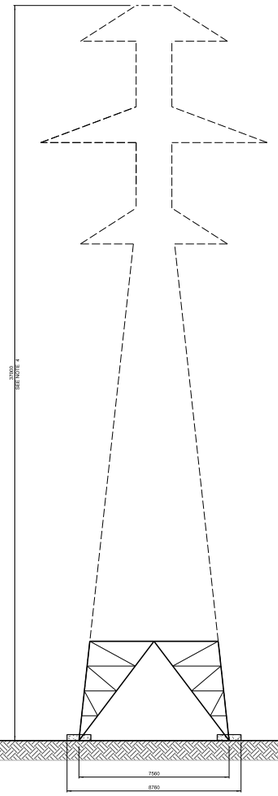
FRONT ELEVATION
STANDARD HEIGHT
TOWER A



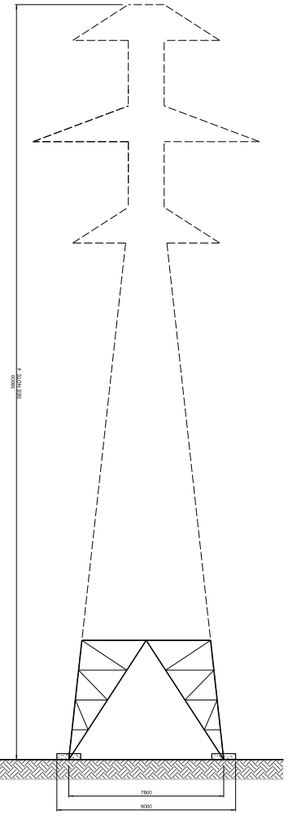
FRONT ELEVATION
-1m LEG
TOWER B



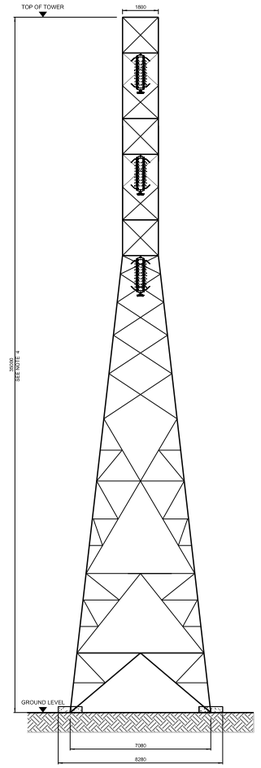
FRONT ELEVATION
+1m LEG
TOWER C



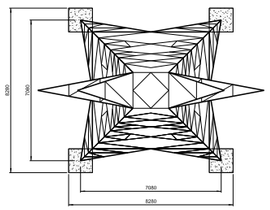
FRONT ELEVATION
+2m LEG
TOWER D



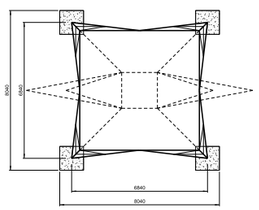
FRONT ELEVATION
+3m LEG
TOWER E



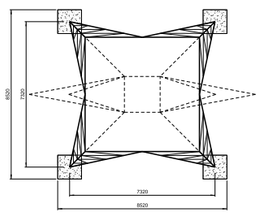
SIDE ELEVATION
STANDARD HEIGHT



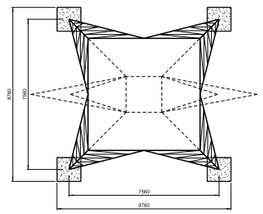
PLAN VIEW
STANDARD HEIGHT



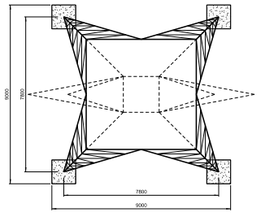
PLAN VIEW
-1m LEG



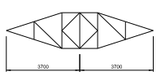
PLAN VIEW
+1m LEG



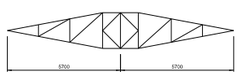
PLAN VIEW
+2m LEG



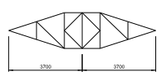
PLAN VIEW
+3m LEG



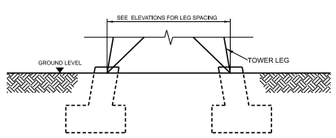
SECTION A - A



SECTION B - B



SECTION C - C



TYPICAL TOWER FOUNDATION DETAIL

APPLICABLE TO ANY TOWER HEIGHT, SEE NOTES 9 & 10.

NOTES:

1. TOWER HEIGHT IS ALWAYS MEASURED FROM THE GROUND LINE AT THE CENTRE OF THE STRUCTURE.
2. THE STANDARD TOWER HEIGHT MAY BE VARIED USING LEG EXTENSIONS AS INDICATED.
3. COMBINATIONS OF DIFFERENT LEG EXTENSIONS MAY BE USED ON THE SAME TOWER IF INSTALLED ON SLOPING GROUND. IN SUCH CASES THE TOWER WILL BE TALLER AT THE DOWNHILL SIDE AND SHORTER AT THE UPHILL SIDE
4. THE TOWER HEIGHT (AS DEFINED IN NOTE 1) INCLUDES AN ALLOWANCE OF UP TO 1m TO ACCOUNT FOR SLOPING GROUND. SLOPING GROUND WILL ALSO IMPACT THE HEIGHT OF THE CROSSARM BUT THE ALLOWANCE IS NOT INCLUDED IN THE CROSSARM HEIGHT DIMENSION SHOWN ON THE DRAWING. INSTEAD, THIS IS CATERED FOR BY THE TOLERANCE SHOWN ON THE CROSSARM DIMENSION: (-0,+1000).
5. SECTIONS A-A, B-B & C-C ARE COMMON TO ALL TOWER HEIGHTS.
6. INTERNAL BRACING MAY CHANGE DEPENDING ON TOWER SUPPLIER.
7. ACTUAL DIMENSIONS MAY BE LESS THAN SHOWN ON DRAWING, DEPENDING ON TOWER SUPPLIER.
8. THE INSULATOR ARRANGEMENT SHOWN IS TYPICAL AND BESPOKE ARRANGEMENTS MAY BE REQUIRED AT SOME SPECIFIC LOCATIONS.

NOTES CONTINUED:

9. FOUNDATIONS TYPICALLY CONSIST OF A PAD AND CHIMNEY MASS CONCRETE FOUNDATION AT EACH TOWER LEG, FOUNDED TYPICALLY 3.0m TO 3.5m BELOW GROUND. PLAN DIMENSIONS OF THE PAD TYPICALLY VARY FROM 2.5m X 2.5m TO 5.0m X 5.0m. SEE TYPICAL TOWER FOUNDATION DETAIL FOR REFERENCE. DURING CONSTRUCTION, THE SIDES OF THE FOUNDATION EXCAVATION MAY BE EITHER STEPPED BACK OR SUPPORTED BY SHEET PILING DEPENDING ON SOIL CONDITION.
10. FOUNDATION CHIMNEY HEIGHT ABOVE GROUND IS TYPICALLY 0.3m. WHERE TOWER IS INSTALLED ON SLOPING GROUND, A PORTION OF ONE OR MORE LEGS MAY BE BURIED UNDER GROUND BY UP TO 1.0m, IN SUCH CASES, THE CONCRETE FOUNDATION CHIMNEY WILL BE EXTENDED UPWARDS TO COVER THE PORTION OF ANY LEG UNDERGROUND. WHILE STILL EXTENDING 0.3m ABOVE GROUND LEVEL, THE CHIMNEY WILL ALSO EXTEND HORIZONTALLY TO COVER ANY BRACES CONNECTED TO THE BURIED LEG.
11. WHERE POOR GROUND IS ENCOUNTERED, PILED FOUNDATIONS ARE TYPICALLY USED IN CONJUNCTION WITH FOUR PILE CAPS CONNECTED TO EACH OTHER USING CONCRETE GROUND BEAMS. HOWEVER ALTERNATIVE SOLUTIONS MAY ALSO BE USED SUCH AS IMPORTED BACKFILL, GROUND REINFORCEMENT AND/OR LARGER/DEEPER FOUNDATIONS. IN SUCH CASES THE EXTENT OF THE FOUNDATIONS ABOVE GROUND MAY EXCEED THAT SHOWN ON THE DRAWING.
12. WHERE A TOWER IS LOCATED IN AN AREA OFTEN FREQUENTED BY THE PUBLIC, ANTI-CLIMBING GUARDS WILL BE ATTACHED TO THE TOWER. THESE ARE TYPICALLY LOCATED 3 TO 4 METRES ABOVE GROUND LEVEL AND CONSIST OF STRANDS OF BARBED WIRE SUPPORTED BY A STEEL FRAME EXTENDING OUT FROM THE TOWER FRAME.
13. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.

REV.	DATE	REVISION DESCRIPTION	DRN	PROD	VER	APP
02	–	FOUND. CHIMNEYS ADDED, NOTES UPDATED AND TOLERANCES ADDED.	AK	–	–	–
01	18/05/22	FOUNDATIONS AMENDED.	AS	OC	DT	PE
00	03/04/22	INITIAL ISSUE	AS	OC	DT	PE

PURPOSE OF ISSUE – PRELIMINARY UNLESS INDICATED

CLIENT APPROVAL ☐ PLANNING ☒ TENDER ☐ CONSTRUCTION ☐ AS BUILT ☐

Client: ESB NETWORKS

Project: Materials

Contract:

Drawing Title: 110 kV LINES - OUTLINE DRAWING FOR PLANNING
RL2 & RL3 DOUBLE CIRCUIT SUSPENSION TOWERS
WITHOUT EARTHWIRE (+4 BODY)
T22 - MAX HEIGHT 38m

Production Unit: Networks Engineering

Engineering and Major Projects,
One Dublin Airport Central, Dublin Airport,
Cloghran, Co. Dublin, K67 XF72, Ireland.
Tel: +353 (0)1 703 8000 Web: www.esb.ie
Engineering and Major Projects is a Division of ESB

Energy for generations

DESIGN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
A.Scally	A.Brandini	P.Ennis	A.Woods	26/11/2024

CAD REF	TALLY SHEET	SIZE	SCALE
TC225287	-	A0	1:100

DRAWING NUMBER: PG567-D004-753-003-002
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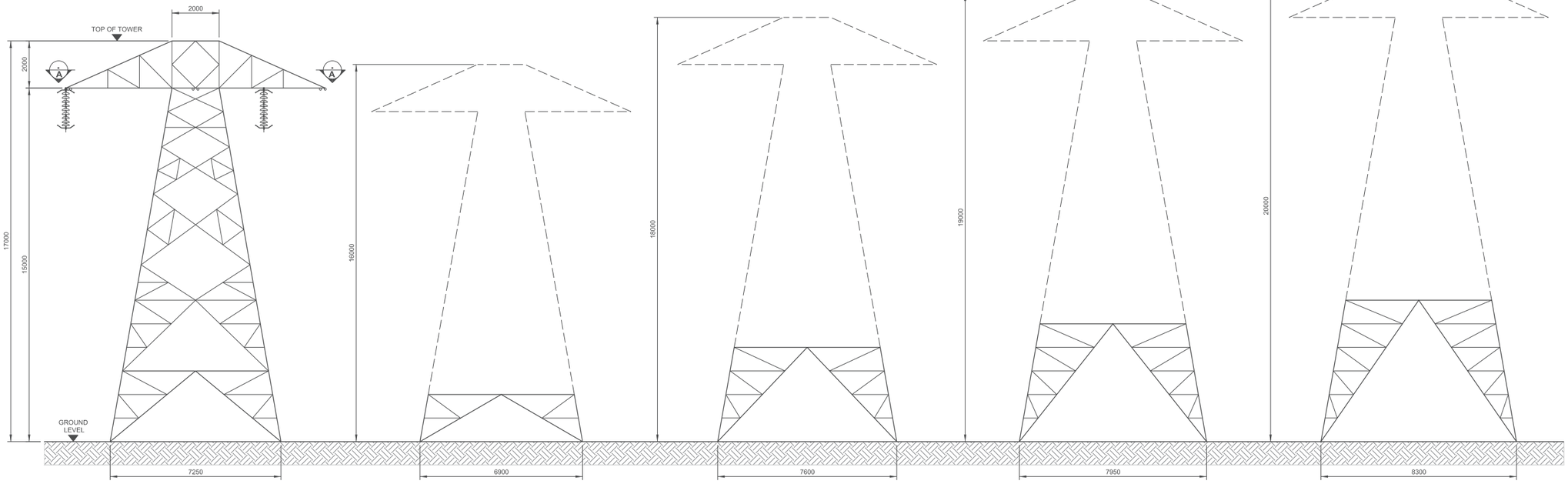


FRONT ELEVATION
STANDARD HEIGHT
TOWER A

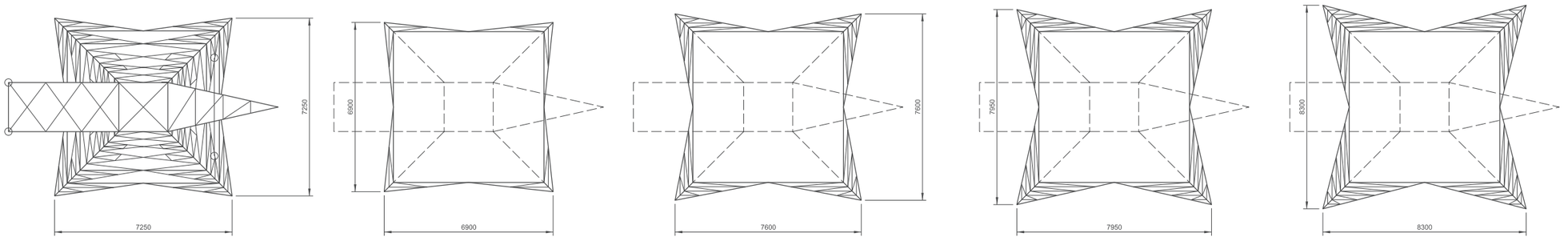
FRONT ELEVATION
-1m LEG
TOWER B

FRONT ELEVATION
+1m LEG
TOWER C

FRONT ELEVATION
+2m LEG
TOWER D

FRONT ELEVATION
+3m LEG
TOWER E

SIDE ELEVATION
STANDARD HEIGHT



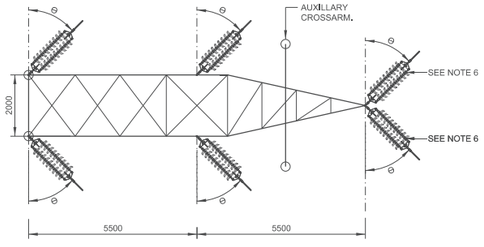
PLAN VIEW
STANDARD HEIGHT

PLAN VIEW
-1m LEG

PLAN VIEW
+1m LEG

PLAN VIEW
+2m LEG

PLAN VIEW
+3m LEG



SECTION A - A

NOTES:

1. STANDARD TOWER HEIGHT MAY BE VARIED USING LEG EXTENSIONS AS INDICATED.
2. COMBINATIONS OF DIFFERENT LEG EXTENSIONS MAY BE USED ON THE SAME TOWER TO CATER FOR SLOPING GROUND.
3. SECTION A-A IS COMMON TO ALL TOWER HEIGHTS.
4. INTERNAL BRACING MAY CHANGE DEPENDING ON TOWER SUPPLIER.
5. ACTUAL DIMENSIONS MAY BE LESS THAN SHOWN ON DRAWING, DEPENDING ON TOWER SUPPLIER.
6. ORIENTATION OF INSULATORS IN PLAN 'Θ' WILL VARY BETWEEN 0° - 45° AT ANY TOWER LOCATION.
7. FOUNDATIONS TYPICALLY CONSIST OF A PAD AND CHIMNEY MASS CONCRETE FOUNDATION AT EACH TOWER LEG, FOUNDED TYPICALLY 3.0m TO 3.5m BELOW GROUND. PLAN DIMENSIONS OF THE PAD TYPICALLY VARY FROM 2.5m X 2.5m TO 5.0m X 5.0m. THE SIDES OF THE FOUNDATION EXCAVATION THAT MAY BE EITHER STEPPED BACK OR SUPPORTED BY SHEET PILING DEPENDING ON SOIL CONDITION. HOWEVER, OTHER SITE SPECIFIC SOLUTIONS MAY BE USED IN SOME LOCATIONS.
8. WHERE POOR GROUND IS ENCOUNTERED, PILED FOUNDATIONS ARE TYPICALLY USED IN CONJUNCTION WITH FOUR PILE CAPS CONNECTED TO EACH OTHER USING CONCRETE GROUND BEAMS.
9. ALL DIMENSIONS IN MILLIMETRES UNLESS STATED OTHERWISE.

REV.	DATE	REVISION DESCRIPTION	DRN	PROD	VER	APP
003	–	NOTES AND TITLEBLOCK UPDATED	–	–	–	–
002	09/11/18	TITLEBLOCK UPDATED, NOTES & FONTS REVISED	SD	JG	PE	CH
001	09/07/14	DRAWING TITLE AND NOTES AMENDED	AK	DT	PE	CH
000	23/01/12	DRAWING APPROVED	AK	DT	PE	PE

PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED

CLIENT APPROVAL ☐ PLANNING ☒ TENDER ☐ CONSTRUCTION ☐ AS-BUILT ☐

Client: ESB NETWORKS

Project: Materials

Contract:

Drawing Title: 110 kV LINES - OUTLINE DRAWING FOR PLANNING
RL1, RL2 & RL3 SINGLE CIRCUIT STRAIN TOWERS
WITHOUT EARTHWIRE (±0 BODY)
FOR ALL CHANGES IN LINE DIRECTION UP TO 90°
T15-MAX HEIGHT 17m

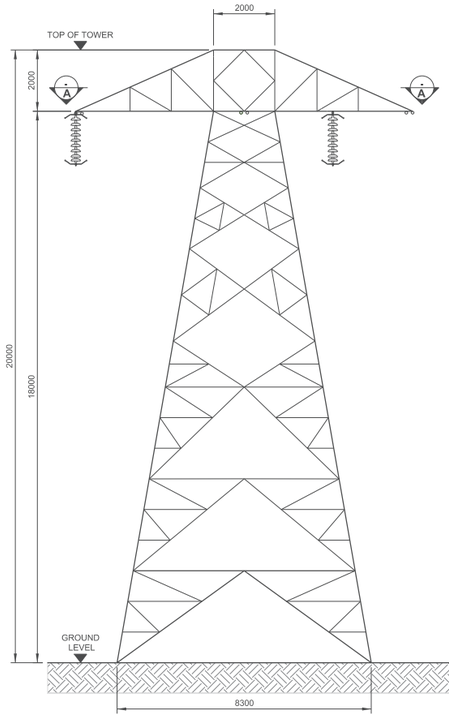
Production Unit: High Voltage Engineering

Energy for generations
Engineering and Major Projects,
One Dublin Airport Central, Dublin Airport,
Cloghran, Co. Dublin K67 XF72, Ireland.
Tel: +353 (0)1 703 8000 Web: www.esb.ie
Engineering and Major Projects is a division of ESB

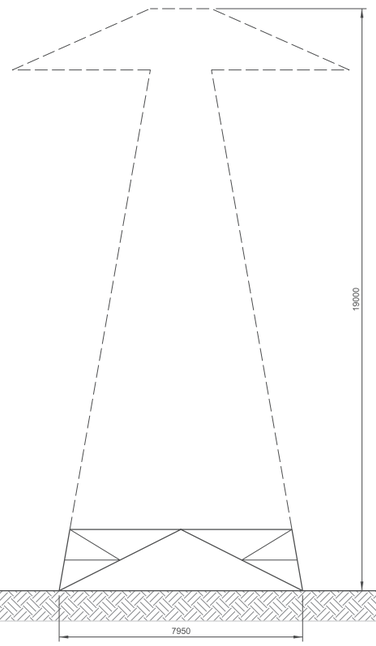
DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
A.Scally	D.Chen	D.Tuohy	P.Ennis	18/05/2022

CLIENT REF	No. OF SHTS	SIZE	SCALE
TC206581	-	A1	1/100

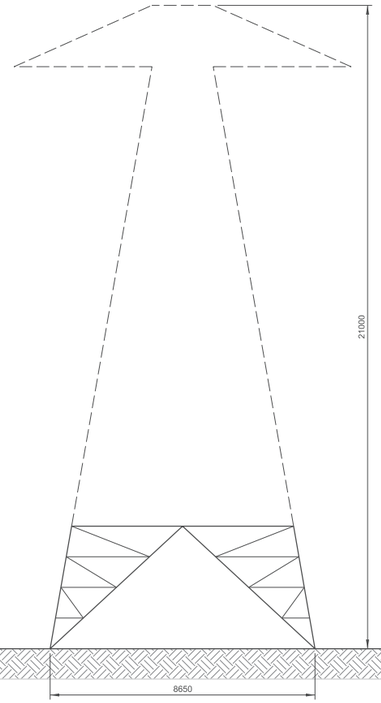
DRAWING NUMBER: PG567-D004-477-002-003 SHEET REV



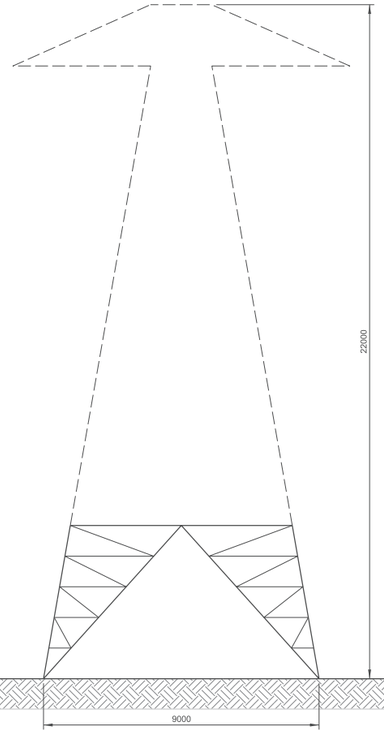
FRONT ELEVATION
STANDARD HEIGHT
TOWER A



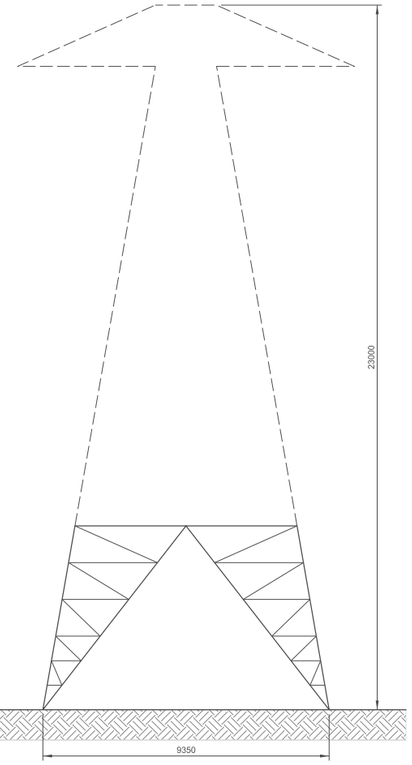
FRONT ELEVATION
-1m LEG
TOWER B



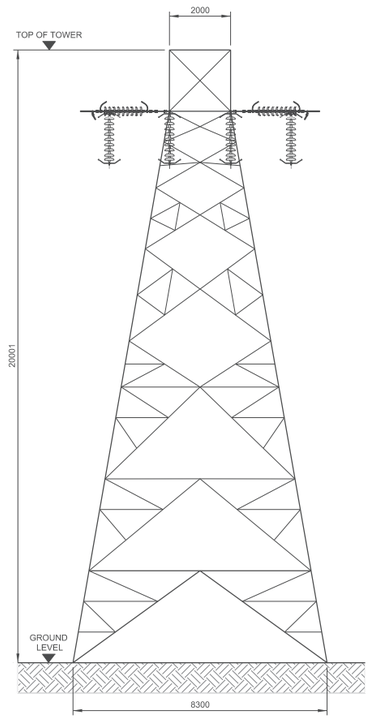
FRONT ELEVATION
+1m LEG
TOWER C



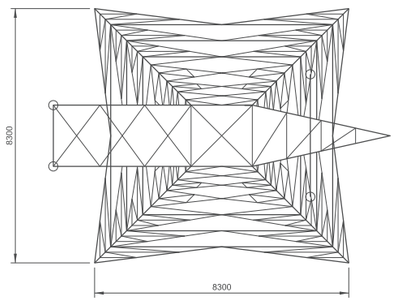
FRONT ELEVATION
+2m LEG
TOWER D



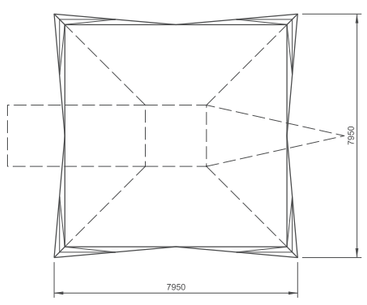
FRONT ELEVATION
+3m LEG
TOWER E



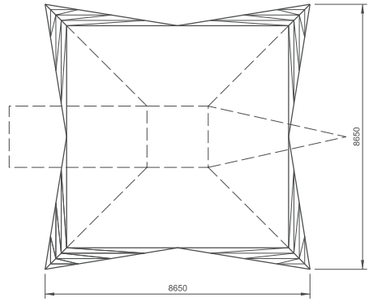
SIDE ELEVATION
STANDARD HEIGHT



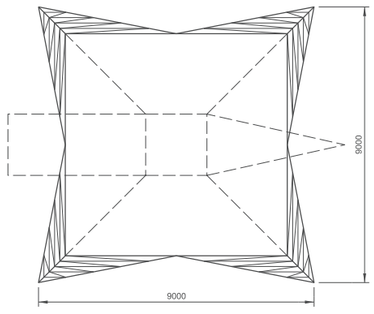
PLAN VIEW
STANDARD HEIGHT



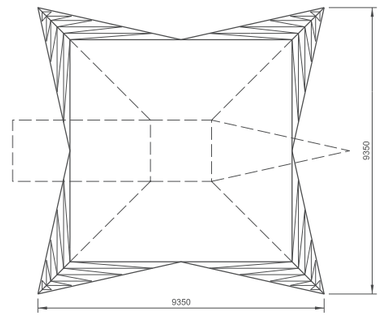
PLAN VIEW
-1m LEG



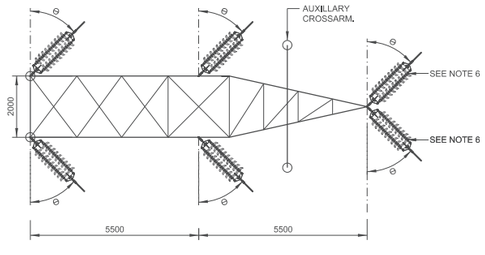
PLAN VIEW
+1m LEG



PLAN VIEW
+2m LEG



PLAN VIEW
+3m LEG



SECTION A - A

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REV.	DATE	REVISION DESCRIPTION	DRN	PROD	VER	APP
003	–	NOTES AND TITLEBLOCK UPDATED	–	–	–	–
002	09/07/14	TITLEBLOCK UPDATED, NOTES & FONTS REVISED	SD	JG	DT	PE
001	09/07/14	DRAWING TITLE AND NOTES AMENDED	AK	DT	PE	CH
000	23/01/12	DRAWING APPROVED.	AK	DT	PE	PE

PURPOSE OF ISSUE - PRELIMINARY UNLESS INDICATED

CLIENT APPROVAL ☐ PLANNING ☒ TENDER ☐ CONSTRUCTION ☐ AS-BUILT ☐

Client: ESB NETWORKS

Project: Materials

Contract:

Drawing Title: 110 kV LINES - OUTLINE DRAWING FOR PLANNING RL1, RL2 & RL3 SINGLE CIRCUIT STRAIN TOWERS WITHOUT EARTHWIRE (+3 BODY) FOR ALL CHANGES IN LINE DIRECTION UP TO 90° T18-MAX HEIGHT 20m

Production Unit: High Voltage Engineering

Energy for generations
Engineering and Major Projects, One Dublin Airport Central, Dublin Airport, Cloghran, Co. Dublin K67 XF72, Ireland.
Tel: +353 (0)1 703 8000 Web: www.esb.ie
Engineering and Major Projects is a division of ESB

DRAWN	PRODUCED	VERIFIED	APPROVED	APPROVAL DATE
A.Scally	D.Chen	D.Tuohy	P.Ennis	18/05/2022

CLIENT REF	No. OF SHTS	SIZE	SCALE
TC206581	-	A1	1/100

DRAWING NUMBER: PG567-D004-477-003-003 SHEET REV