



NOTES:

- THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS:
 - POLE LENGTH AND STRENGTH.
 - SPECIAL FOUNDATION REQUIREMENTS.
 - POLE EMBEDMENT DEPTH.
 - CONDUCTOR SIZE.
 - CROSSARM SIZE AND BRACE REQUIREMENTS.
 - STAY REQUIREMENTS.
 - DEVIATION ANGLE.
- THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
- POLE STEPS ARE TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF NS128.
- IN AREAS WHERE THE 11KV NETWORK CANNOT BE WORKED ON USING LIVE LINE TECHNIQUES, UNDERBUILT CIRCUITS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 1200mm. IN AREAS WHERE THE 11KV NETWORK CAN BE WORKED ON USING LIVE LINE TECHNIQUES, UNDERBUILT CIRCUITS SHALL BE INSTALLED WITH A MINIMUM CLEARANCE OF 2500mm.
- ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
- THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT IS TO BE DETERMINED FROM DRG: 520324.
- LONGROD INSULATORS ARE TO BE USED UNDER NORMAL CONDITIONS.
- POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
- IF THE CONDUCTOR DEVIATES AT THE INSULATOR, USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT. OTHERWISE, USE THE INTERMEDIATE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514038.
- COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
- A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT INTERMEDIATE CROSSARM. A LONGER INTERMEDIATE CROSSARM IS TO BE USED WHERE ADDITIONAL MID SPAN SEPARATION IS REQUIRED.
- ONLY THE 2706mm COMPOSITE FIBRE INTERMEDIATE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732 & 514373 FOR DRILLING PATTERN OF ALTERNATE INTERMEDIATE CROSSARMS.
- A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT TERMINATION CROSSARM. FOR NARROW FEEDER ALIGNMENTS, A SHORTER TERMINATION CROSSARM MAY BE CONSIDERED TO OVERCOME DESIGN AND SITE CONSTRAINTS. A LONGER TERMINATION CROSSARM IS TO BE USED WHERE ADDITIONAL MID SPAN SEPARATION IS REQUIRED. A STEEL CROSSARM IS TO BE USED WHEN THE MAXIMUM LOAD OF THE ALTERNATE TERMINATION CROSSARMS IS EXCEEDED.
- ONLY THE 2706mm COMPOSITE FIBRE TERMINATION CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732, 514373, 15232 & 514377 FOR DRILLING PATTERN OF ALTERNATE TERMINATION CROSSARMS.
- THE 690mm CROSSARM BRACES ARE TO BE USED ON A 2706mm, 2700mm, 3006mm & 3000mm CROSSARM. THE 740mm CROSSARM BRACE IS TO BE USED ON A 2406mm & 2400mm CROSSARM.
- FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
- WHEN SPECIFYING WAGNER COMPOSITE FIBRE CROSSARMS, A REVIEW OF ALL THE HARDWARE ATTACHED TO THE CROSSARM WILL BE REQUIRED.
- REFER TO DESIGNER SAFETY REPORT D23/217293 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	STOCK CODE	QTY
30	STEP - POLE, SCREW-IN (SEE NOTE 3)	250144	185198	A/R
29	CLAMP - PARALLEL GROOVE, 3-BOLT (TO SUIT CONDUCTOR)	514099		3
28	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 9)	514038		5m
27	INSULATOR - 11/22kV AERODYNAMIC, (22/450) & PIN ARRANGEMENT	513997		4
26	INSULATOR - 11/22kV LONGROD, STRING ARRANGEMENT AR-2 (SEE NOTE 7)	565715		3
25	BRACKET - POLE TOP, GALVANISED	514380	H17314	1
24	BLOCK - GAIN, ALUMINIUM, 100mm		146274	2
23	WASHER - FLAT, M20, GALVANISED (USE WITH 2700mm & 2400mm TERMINATION CROSSARMS)	518081	177986	2
22	WASHER - FLAT, M20, GALVANISED	518081	177986	4
21	EYEBOLT - M20, GALVANISED (LENGTH TO SUIT POLE) (SEE NOTE 6)	513653		1
20	BOLT & NUT - M12, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466		1
19	WASHER - LIP, M24, GALVANISED	518081	176912	2
18	WASHER - CONICAL, M20, GALVANISED (USE WITH HARDWOOD TERMINATION CROSSARMS)	518082	H39655	2
17	WASHER - SPRING, M20, GALVANISED (USE WITH COMPOSITE FIBRE & STEEL TERMINATION CROSSARMS)	518082	175569	2
16	WASHER - CONICAL, M12, GALVANISED (USE WITH 2400mm TERMINATION CROSSARM)	518082	H39639	1
16	WASHER - CONICAL, M12, GALVANISED (USE WITH 2700mm TERMINATION CROSSARM)	518082	H39639	2
16	WASHER - SPRING, M12, GALVANISED (USE WITH 2406mm TERMINATION CROSSARM)	51082	H12047	1
16	WASHER - SPRING, M12, GALVANISED (USE WITH 2706mm, 3006mm & 3000mm TERMINATION CROSSARMS)	518082	H12047	2
15	WASHER - FLAT, M12, GALVANISED (USE WITH 2406mm & 2400mm TERMINATION CROSSARMS)	518081	177982	2
15	WASHER - FLAT, M12, GALVANISED (USE WITH 2706mm, 2700mm, 3006mm & 3000mm TERMINATION CROSSARMS)	518081	177982	4
14	BOLT & NUT - M12x150mm, HEX., GALVANISED (USE WITH 2400mm TERMINATION CROSSARM)	515466	46847	1
14	BOLT & NUT - M12x180mm, HEX., GALVANISED (USE WITH 2700mm & 3000mm TERMINATION CROSSARMS)	515466	46888	2
14	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2406mm TERMINATION CROSSARM)	515466	46805	1
14	BOLT & NUT - M12x130mm, HEX., GALVANISED (USE WITH 2706mm & 3006mm TERMINATION CROSSARMS)	515466	46805	2
13	BRACE - CROSSARM, ANGLE, TYPE H, 740mm, GALVANISED (SEE NOTE 15)	46	99119	1
13	BRACE - CROSSARM, FLAT, 690mm, GALVANISED (SEE NOTE 15)	514385	H17738	2
12	CROSSARM - 3000x150x100x5mm, RHS, GALVANISED (SEE NOTES 10, 13, 14, 16 & 17)	514377	H23787	1
12	CROSSARM - 2400x125x100mm, TYPE H2, HARDWOOD (SEE NOTES 10, 13, 14, 16 & 17)	15232	71910	1
12	CROSSARM - 2700x150x100mm, TYPE C, HARDWOOD (SEE NOTES 10, 13, 14, 16 & 17)	514373	H23907	1
12	CROSSARM - 3006x102x102mm, TYPE 13, COMPOSITE FIBRE (SEE NOTES 10, 13, 14, 16 & 17)	262732	186783	1
12	CROSSARM - 2406x102x102mm, TYPE 11, COMPOSITE FIBRE (SEE NOTES 10, 13, 14, 16 & 17)	262732	186781	1
12	CROSSARM - 2706x102x102mm, TYPE 12, COMPOSITE FIBRE (SEE NOTES 10, 13, 14, 16 & 17)	262732	186782	1
11	WASHER - CONICAL, M20, GALVANISED	518082	H39655	4
10	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	H39231	9
9	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466		3
8	WASHER - CONICAL, M12, GALVANISED	518082	H39639	1
7	WASHER - CONICAL, M12, GALVANISED (USE WITH HARDWOOD INTERMEDIATE CROSSARM)	518082	H39639	2
7	WASHER - SPRING, M12, GALVANISED (USE WITH COMPOSITE FIBRE INTERMEDIATE CROSSARMS)	518082	H12047	2
6	WASHER - FLAT, M12, GALVANISED	518081	177982	6
5	BOLT & NUT - M12x130mm, HEX., GALVANISED	515466	46805	2
4	CROSSARM - 2700x100x100mm, TYPE B, HARDWOOD (SEE NOTES 10, 11, 12 & 16)	514373	H23884	1
4	CROSSARM - 3006x102x102mm, TYPE 10, COMPOSITE FIBRE (SEE NOTES 10, 11, 12 & 16)	262732	186780	1
4	CROSSARM - 2706x102x102mm, TYPE 9, COMPOSITE FIBRE (SEE NOTES 10, 11, 12 & 16)	262732	186779	1
3	SCREW - COACH, M12 x 100mm, GALVANISED		H40484	2
2	BRACE - CROSSARM, FLAT, 690mm, GALVANISED (SEE NOTE 15)	514385	H17738	2
1	POLE - TIMBER (AS REQUIRED)	513988		1

ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE. DO NOT SCALE.

CAD DRAWING DO NOT MANUALLY AMEND A M E N D M E N T S DWN: P.R. CHKD: P.J. APPD: G.F. DATE: 08/12/2023 NOTES & MATERIAL LIST AMENDED, ASSOCIATED DRAWING ADDED. 5	DWN: P.R. CHKD: P.J. APPD: G.F. DATE: 25/09/2024 WAGNER CROSSARM OPTION REMOVED FROM MATERIAL LIST, NOTES ADDED. 6	COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964	NETWORK STANDARD 145 NEWCASTLE RD WALLSEND, NSW 2287	SCALE	1:20	STANDARD CONSTRUCTION 11kV LARGE DELTA WITH TEE-OFF CONSTRUCTION 2-38	SIZE A2	DRAWING No 520410	SHEET 1	AMD 6
		2700mm CROSSARMS FOR LV, 11kV, 22kV AND 33kV CONSTRUCTION DETAILS	514373		DESIGNED	-					
		COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732			CHECKED	P.S				
		HV TERMINATION STEEL CROSSARM CONSTRUCTION DETAILS	514377			APPROVED	G SKINNER				
		WOODEN CROSSARMS FOR 11kV LINES	15232			DATE	02/10/97				
		HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038			PROJECT NUMBER	STD				
		20mm EYEBOLT LOADING & DEVIATION GRAPH	520324			PROJ/TRAK NUMBER	-				
		ASSOCIATED DRAWINGS									