



**NOTES :**

1. THE FOLLOWING INFORMATION IS OBTAINED FROM THE PROJECT DESIGN DRAWINGS:
  - a. POLE LENGTH AND STRENGTH.
  - b. SPECIAL FOUNDATION REQUIREMENTS.
  - c. POLE EMBEDMENT DEPTH.
  - d. CONDUCTOR SIZE.
  - e. CROSSARM SIZE AND BRACE REQUIREMENTS.
  - f. STAY REQUIREMENTS.
  - g. DEVIATION ANGLE.
2. ALL BOLTS AND INSULATOR PINS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
3. THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
4. POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
5. 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.
6. USE THE 33/920 AERODYNAMIC PIN INSULATOR ARRANGEMENT WHERE THE CONSTRUCTION IS LOCATED WITHIN 1km OF THE COAST OR IN A VERY HIGH POLLUTION AREA.
7. WHEN DESIGNING UNDERBUILT CIRCUITS ON A 33kV STRUCTURE, THE POSSIBLE USE OF LIVE LINE WORKING PROCEDURES MUST BE CONSIDERED WHEN NOMINATING THE CIRCUIT SEPARATION TO ALLOW A MINIMUM CLEARANCE OF 2500mm IF REQUIRED.
8. COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
9. A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT CROSSARM. A LONGER CROSSARM IS TO BE USED WHERE ADDITIONAL MID SPAN SEPARATION IS REQUIRED.
10. ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732 & 514373 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
11. FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
12. POLE STEPS SHOULD ONLY BE INSTALLED ON POLES WHERE ACCESS FOR NORMAL MAINTENANCE VEHICLES CANNOT BE MAINTAINED FOR THE LIFE OF THE POLE. IF POLE STEPS ARE INSTALLED, THEY ARE TO COMPLY WITH THE REQUIREMENTS OF NETWORK STANDARD NS128.
13. REFER TO DESIGNER SAFETY REPORT D23/229220 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	QTY
19	STEP - POLE, SCREW-IN (SEE NOTE 12)	250144	A/R
18	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 5)	514038	4m
17	INSULATOR - 33kV, AERODYNAMIC, (33/920) AND PIN ARRANGEMENT (SEE NOTE 6)	514006	3
	INSULATOR - 33kV, AERODYNAMIC, (33/710) AND PIN ARRANGEMENT (SEE NOTE 6)	513998	
16	BOLT & NUT - M12, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466	1
15	BRACKET - POLE TOP, GALVANISED	514380	1
14	BLOCK - GAIN, ALUMINIUM, 100mm (S/C: 146274)		1
13	WASHER - FLAT, M20, GALVANISED	518081	2
12	WASHER - CONICAL, M20, GALVANISED	518082	2
11	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	3
10	BOLT & NUT - M20, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466	2
9	WASHER - CONICAL, M12, GALVANISED	518082	1
8	WASHER - CONICAL, M12, GALVANISED (USE WITH HARDWOOD CROSSARM)	518082	2
	WASHER - SPRING, M12, GALVANISED (USE WITH COMPOSITE FIBRE CROSSARMS)	518082	
7	WASHER - FLAT, M12 GALVANISED	518081	3
6	BOLT & NUT - M12x130mm, HEX., GALVANISED	515466	2
5	CROSSARM - 2700x100x100mm, TYPE B, HARDWOOD (SEE NOTES 8, 9, 10 & 11)	514373	1
	CROSSARM - 3006x102x102mm, TYPE 10, COMPOSITE FIBRE (SEE NOTES 8, 9, 10 & 11)	262732	
	CROSSARM - 2706x102x102mm, TYPE 9, COMPOSITE FIBRE (SEE NOTES 8, 9, 10 & 11)	262732	
4	SCREW - COACH, M12x100mm, GALVANISED (S/C: H40484)		1
3	BRACE - CROSSARM, FLAT, 690mm, GALVANISED	514385	2
2	FOOTING - TIMBER POLE, ARRANGEMENT (SEE NOTE 1)	508726	1
1	POLE - TIMBER (AS REQUIRED)	513988	1

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

CAD DRAWING  
DO NOT MANUALLY AMEND  
AMENDMENTS  
DWN: P.R.  
CHKD: P.J.  
APPD: G.F.  
DATE: 23/07/2024  
COMPOSITE CROSSARMS  
ADDED TO MATERIAL LIST.  
NOTES & DIMENSIONS  
AMENDED. SHEET SIZE  
CHANGED.

ITEM	DESCRIPTION	DRG. No	QTY
6	COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964	
	2700mm CROSSARMS FOR LV, 11kV, 22kV AND 33kV CONSTRUCTION DETAILS	514373	
	COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732	
	HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038	

NETWORK STANDARD  
**Ausgrid**  
145 NEWCASTLE RD WALLSEND,  
NSW 2287

SCALE	1:20
DESIGNED	-
DRAWN	PETER SAUNDERS
CHECKED	-
APPROVED	R.BREMELL
DATE	26/03/96
PROJECT NUMBER	STD
PROJTRAK NUMBER	-

STANDARD CONSTRUCTION			
33kV LARGE DELTA CONSTRUCTION			
4-7			
SIZE	DRAWING No	SHEET	AMD
A2	513927	01	6