



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. PHASE CONDUCTOR SIZE.
 - e. VARIATIONS TO STANDARD CROSSARM REQUIREMENTS.
 - f. STAY REQUIREMENTS.
 - g. DEVIATION ANGLE.
2. THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
3. 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.
4. THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT AND EYENUT ASSEMBLY IS TO BE DETERMINED FROM DRG: 520331.
5. LONGROD INSULATORS TO BE USED UNDER NORMAL CONDITIONS.
6. POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
7. NON TENSION COMPRESSION JOINTS TO BE USED WHEN REQUIRED TO JOIN CONDUCTORS.
8. USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514038.
9. CONDUCTOR TO POLE CLEARANCE IS TO BE A MINIMUM OF 380mm.
10. 'A' AND 'C' PHASE CONDUCTORS MAY BE BRIDGED UNDER THE CROSSARM PROVIDED THAT:
 - a. THE LINE IS SINGLE CIRCUIT OR STATUTORY CLEARANCES CAN BE MAINTAINED UNDER ALL OPERATING CONDITIONS.
 - b. MINIMUM CLEARANCES TO EARTH (POLE/HARDWARE) OF 380mm CAN BE MET.
 - c. WHEN THE CONDITIONS IN a AND b ARE NOT MET, A 33kV 33/920 AERODYNAMIC INSULATOR AND PIN ARRANGEMENT IS TO BE INSTALLED FOR THE 'A' AND 'C' PHASE CONDUCTORS.
11. ALL BOLTS AND EYEBOLTS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
12. STAYS TO BE INSTALLED SO THAT THE STAY WIRE CLEARANCE FROM THE PHASE CONDUCTORS COMPLIES WITH THE STATUTORY REQUIREMENTS.
13. EYEBOLTS ARE TO BE INSTALLED TO BISECT THE ANGLE OF DEVIATION.
14. COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERRED OPTION UNDER NORMAL CIRCUMSTANCES.
15. A 2706mm COMPOSITE FIBRE CROSSARM IS TO BE USED AS THE DEFAULT CROSSARM. A LONGER COMPOSITE FIBRE 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 CROSSARMS IS EXCEEDED.
16. ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732 & 514377 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
17. FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
18. ONLY THE SINGLE PHASE CONDUCTOR OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING.
19. 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.
20. REFER TO DESIGNER SAFETY REPORT D21/206601 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	QTY
18	STEP - POLE, SCREW-IN (SEE NOTE 19)	250144	A/R
17	JOINT - COMPRESSION, NON TENSION (TO SUIT DUAL CONDUCTORS) (SEE NOTES 7 & 18)	514053	6
	JOINT - COMPRESSION, NON TENSION (TO SUIT CONDUCTOR) (SEE NOTES 7 & 18)	514053	3
16	INSULATOR - LONGROD, 33kV, DUAL CONDUCTOR, POLYMERIC STRING, ARRANGEMENT -2 (SEE NOTES 5 & 18)	250120	6
	INSULATOR - LONGROD, 33kV, POLYMERIC STRING, ARRANGEMENT -2 (SEE NOTES 5 & 18)	158754	
15	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 8)	514038	1m
14	INSULATOR - 33kV, AERODYNAMIC, (33/920) AND PIN ARRANGEMENT	514006	1
13	WASHER - CONICAL, M12, GALVANISED	518082	1
12	WASHER - FLAT, M12, GALVANISED	518081	2
11	WASHER - SQUARE, 50x50x6mm, GALVANISED (Ø14mm HOLE)	518081	1
10	BOLT & NUT - M12, HEX., GALVANISED (LENGTH TO SUIT POLE)	515466	1
9	BRACKET - POLE TOP, GALVANISED	514380	1
8	WASHER - SQUARE, 75x75x6mm, GALVANISED (Ø22mm HOLE)	518081	2
7	EYEBOLT - M20, GALVANISED (LENGTH TO SUIT POLE) (SEE NOTE 4)	513653	1
6	EYENUT - M20, GALVANISED (SEE NOTE 4)	513951	1
5	WASHER - FLAT, M20, GALVANISED	518081	1
4	WASHER - CONICAL, M20, GALVANISED	518082	1
3	CROSSARM - MOUNTING ARRANGEMENT -3 (COMPOSITE FIBRE OR GALVANISED STEEL CROSSARM) (SEE NOTES 14, 15, 16 & 17)	514176	1
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: PRIOS
	CHKD: P.JONES
DATE: 07/07/2021	APPD by: GLENN FORD
LONGROD ARRANGEMENT UPDATED. FOOTING DETAILS ADDED. NOTES & MATERIAL LIST AMENDED.	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.	

DESCRIPTION	DRG. No	QTY
COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964	
HV TERMINATION STEEL CROSSARM CONSTRUCTION DETAILS	514377	
COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732	
HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038	
20mm EYEBOLT & EYENUT ASSEMBLY LOADING & DEVIATION GRAPH	520331	

NETWORK STANDARD

 145 NEWCASTLE RD WALLSEND,
 NSW 2287

SCALE	1:25	STANDARD CONSTRUCTION 33kV LARGE DELTA THROUGH TERMINATION CONSTRUCTION 4-30	SIZE A2	DRAWING No 513936	SHEET 1	AMD 8
DESIGNED	-					
DRAWN	PETER SAUNDERS					
CHECKED	P.A.S.					
APPROVED	G.SKINNER					
DATE	29/05/1996					
PROJECT NUMBER	STD					
PROJTRAK NUMBER	-					