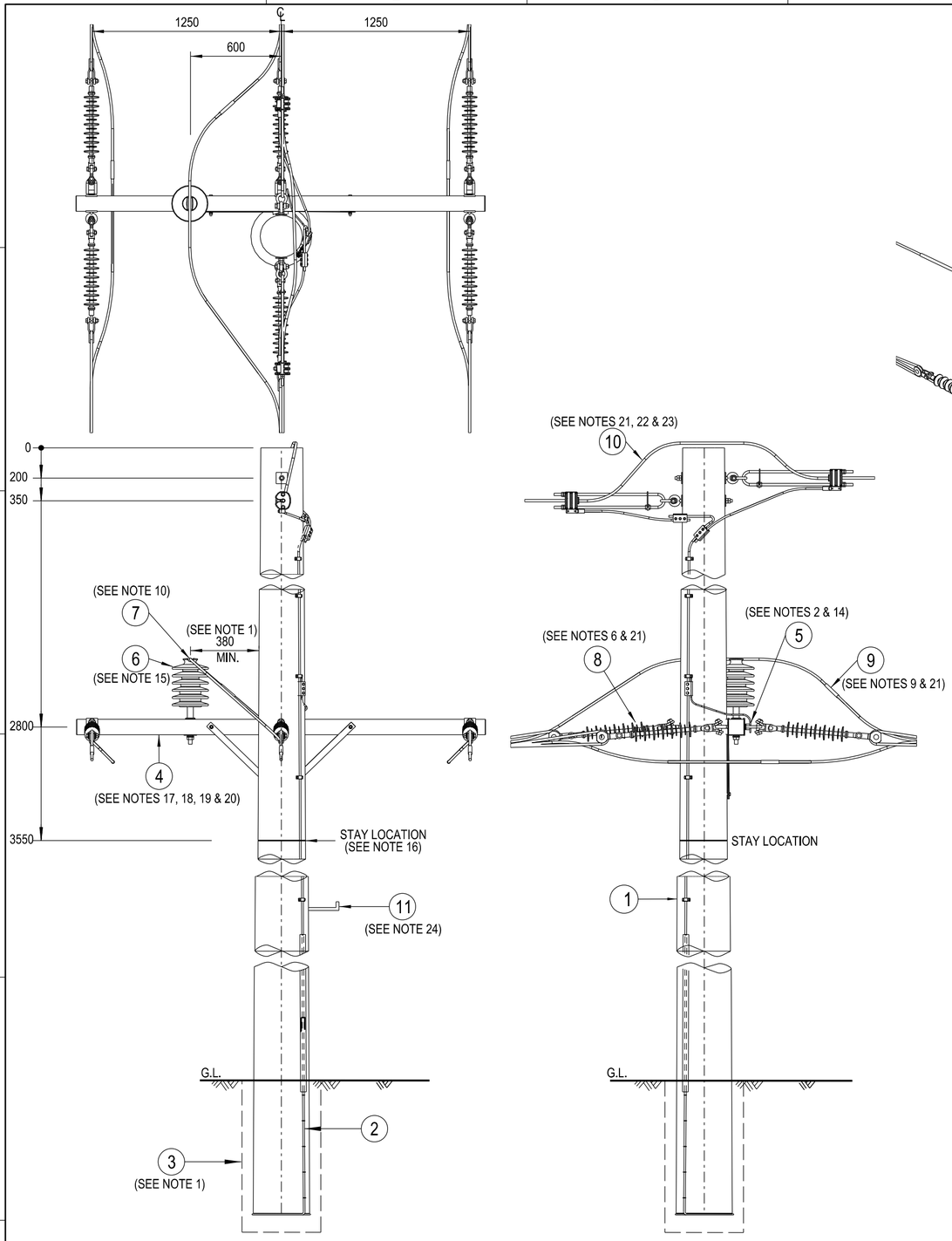

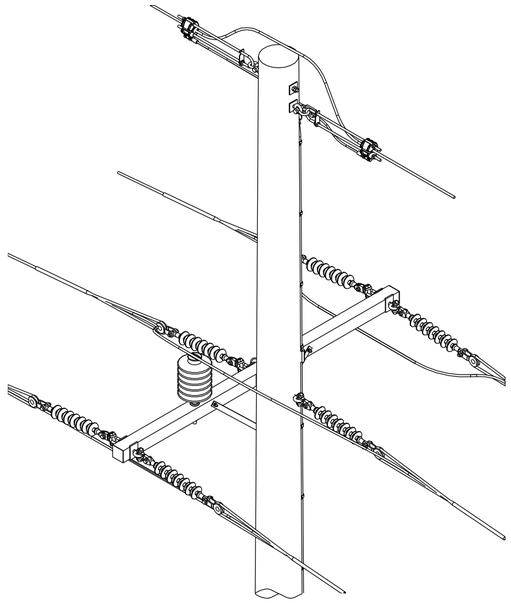

NOTES :

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 AND OVERHEAD EARTHWIRE SIZE.
   e. VARIATIONS TO STANDARD CROSSARM REQUIREMENTS.
   f. STAY REQUIREMENTS.
   g. DEVIATION ANGLE.
   h. ASSESSED EARTHING REQUIREMENTS.
2. THE OVERHEAD EARTHWIRE DOWN LEAD IS TO BE FIXED TO THE POLE SO AS TO GIVE THE MAXIMUM CLEARANCE TO THE NEAREST PHASE CONDUCTOR.
3. THE MAXIMUM LINE DEVIATION ANGLE TO BE CONSTRUCTED ON THIS ARRANGEMENT IS TO BE DETERMINED BY THE LINE DESIGNER.
4. 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.
5. THE LOAD AND DEVIATION ALLOWABLE ON THE EYEBOLT AND EYENUT ASSEMBLY IS TO BE DETERMINED FROM DRG: 520331.
6. LONGROD INSULATORS TO BE USED UNDER NORMAL CONDITIONS.
7. POLES SHALL BE DRILLED, SCARFED AND DRESSED ON SITE. DRILLING AND SCARFING TO BE TREATED WITH APPROVED PRESERVATIVES.
8. EYEBOLTS ARE TO BE INSTALLED TO BISECT THE ANGLE OF DEVIATION.
9. NON-TENSION COMPRESSION SLEEVES TO BE USED WHEN REQUIRED TO JOIN CONDUCTORS.
10. USE THE ANGLE TYPE CONDUCTOR TIE ARRANGEMENT AS SHOWN ON DRG: 514038.
11. CONDUCTOR TO POLE CLEARANCE IS TO BE A MINIMUM OF 380mm.
12. '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 ARRANGEMENTIS TO BE INSTALLED FOR THE 'A' AND 'C' PHASE CONDUCTORS.
13. ALL BOLTS AND EYEBOLTS PASSING THROUGH TIMBER ARE TO BE COATED WITH GRAPHITE GREASE.
14. THE EARTHING DOWN LEAD IS TO BE FIXED TO THE POLE USING DOUBLE SIDED GALVANISED STEEL SADDLES AT INTERVALS OF NOT GREATER THAN 450mm.
15. INSTALL A 33/920 PIN INSULATOR ARRANGEMENT TO HOLD THE CONDUCTOR TAPPING TO INCREASE THE CONDUCTOR CLEARANCE TO THE CROSSARM AND REDUCE THE RISK OF A FLASHOVER DUE TO PERCHED BIRDS.
16. STAYS TO BE INSTALLED SO THAT THE STAY WIRE CLEARANCE FROM THE PHASE CONDUCTORS COMPLIES WITH THE STATUTORY REQUIREMENTS.
17. COMPOSITE FIBRE CROSSARMS ARE TO BE USED AS THE PREFERED OPTION UNDER NORMAL CIRCUMSTANCES.
18. 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.
19. ONLY THE 2706mm COMPOSITE FIBRE CROSSARM OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING. REFER TO DRGS: 262732 & 514377 FOR DRILLING PATTERN OF ALTERNATE CROSSARMS.
20. FOR DETAILS OF APPROVED ALTERNATE WAGNER COMPOSITE FIBRE CROSSARMS, REFER TO DRG: 265964.
21. ONLY THE SINGLE PHASE CONDUCTOR WITH OPGW THROUGH TERMINATION OVERHEAD EARTHWIRE OPTION IS SHOWN ON THIS CONSTRUCTION DRAWING.
22. USE THE OPGW THROUGH TERMINATION ARRANGEMENT WHEN ERECTING AN UNBROKEN OPGW OVERHEAD EARTHWIRE.
    USE THE OPGW THROUGH SPLICE BOX TERMINATION ARRANGEMENT WHEN BREAKING AN OPGW OVERHEAD EARTHWIRE.
    USE THE STANDARD EARTHWIRE TERMINATION ARRANGEMENT WHEN ERECTING A NON OPGW OVERHEAD EARTHWIRE.
23. WHEN USING THE OPGW THROUGH SPLICE BOX TERMINATION ARRANGEMENT, REFER TO DRG: 565743 FOR SPLICE BOX AND COILED CABLE BRACKET MOUNTING DETAILS.
24. 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.
24. REFER TO DESIGNER SAFETY REPORT D20/256233 FOR ATYPICAL HAZARDS ASSOCIATED WITH THIS STANDARD CONSTRUCTION.

ITEM	DESCRIPTION	DRG. No	QTY
11	STEP - POLE, SCREW-IN (SEE NOTE 24)	250144	A/R
10	EARTHWIRE - TERMINATION, OVERHEAD, MOUNTING, ARRANGEMENT -1A (SEE NOTES 21 & 22)	519450	1
	OPGW - TERMINATION, CONDUCTOR, MOUNTING, ARRANGEMENT -1C (SEE NOTES 21, 22 & 23)	565747	
	OPGW - TERMINATION, CONDUCTOR, MOUNTING, ARRANGEMENT -1A (SEE NOTES 21 & 22)	565747	
9	JOINT - COMPRESSION, NON TENSION (TO SUIT DUAL CONDUCTORS) (SEE NOTES 9 & 21)	514053	6
	JOINT - COMPRESSION, NON TENSION (TO SUIT CONDUCTOR) (SEE NOTES 9 & 21)	514053	3
8	INSULATOR - LONGROD, 33kV, DUAL CONDUCTOR, POLYMERIC STRING, ARRANGEMENT -2 (SEE NOTES 6 & 21)	250120	6
	INSULATOR - LONGROD, 33kV, POLYMERIC STRING, ARRANGEMENT -2 (SEE NOTES 6 & 21)	158754	
7	TIE - CONDUCTOR, HIGH VOLTAGE, SUPPORT ARRANGEMENT (SEE NOTE 10)	514038	1m
6	INSULATOR - 33kV, AERODYNAMIC, (33/920) AND PIN ARRANGEMENT (SEE NOTE 15)	514006	1
5	EARTHWIRE - OVERHEAD, DOWN LEAD, POLE HARDWARE, MOUNTING & BONDING, ARRANGEMENT -3 (SEE NOTES 2 & 14)	514145	1
4	CROSSARM - MOUNTING ARRANGEMENT -3 (COMPOSITE FIBRE OR GALVANISED STEEL CROSSARM) (SEE NOTE 17, 18, 19 & 20)	514176	1
3	FOOTING - TIMBER POLE, ARRANGEMENT (SEE NOTE 1)	508726	1
2	EARTHING - ARRANGEMENT, TIMBER POLE STRUCTURE, TYPE SE-M5	508786	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

6 — DWN: PATRICIA RIOS; CHKD: PHILLIP JONES; APP'D by: GLENN FORD
DATE: 01/07/2020
NOTES & MATERIAL LIST AMENDED. POLE FOOTING DETAILS ADDED. SHEET SIZE CHANGED.

7 — DWN: P.R. CHKD: P.J. APP'D: G.F.
DATE: 08/11/2022
MATERIAL LIST AMENDED.

8 — DWN: P.R. CHKD: P.J. APP'D: G.F.
DATE: 22/08/2024.
COMPOSITE CROSSARMS ADDED TO MATERIAL LIST. NOTES & DIMENSIONS AMENDED.

ASSOCIATED DRAWINGS	
COMPOSITE FIBRE CROSSARMS WAGNER SPECIFICATION	265964
HV TERMINATION STEEL CROSSARM CONSTRUCTION DETAILS	514377
OPGW CONDUCTOR SPLICE BOX & COILED CABLE BRACKET MOUNTING ARRANGEMENT	565743
COMPOSITE FIBRE CROSSARMS SPECIFICATION	262732
HV CONDUCTOR TIE SUPPORT ARRANGEMENTS	514038
20mm EYEBOLT AND EYENUT ASSEMBLY LOADING AND DEVIATION GRAPH	520331

NETWORK STANDARD

Ausgrid

145 NEWCASTLE RD WALLSEND, NSW 2287

SCALE	1:25
DESIGNED	-
DRAWN	PETER SAUNDERS
CHECKED	P.A.S
APPROVED	G SKINNER
DATE	29/05/1996
PROJECT NUMBER	STD
PROJTRAK NUMBER	-

STANDARD CONSTRUCTION
33kV THROUGH TERMINATION CONSTRUCTION
WITH OVERHEAD EARTHWIRE
4-11E

SIZE	DRAWING No	SHEET	AMD
A2	514169	01	8

20110901

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