

Technical Bulletin

TB 0332 – LV Battery and LV STATCOM features added to GIS and GISCAD

Date: 20/03/2024

Content Owner: Jon Burford (jon.burford@endeavourenergy.com.au) – Asset Data & GIS Analyst

Approved By: Daryl Skene (daryl.skene@endeavourenergy.com.au) – Capture Services Manager

Approved By: Matthew Parker (matthew.parker@endeavourenergy.com.au) – Manager Reporting & Data Governance

Purpose

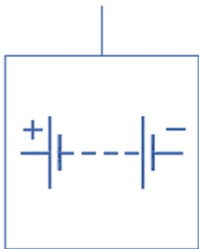
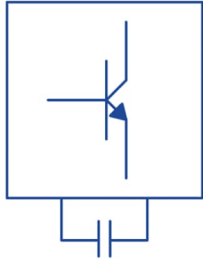
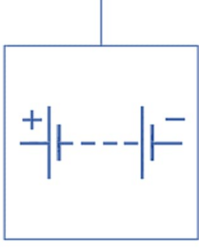
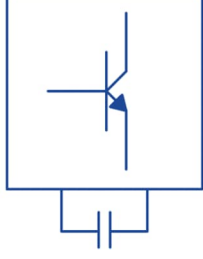
New components and symbology are added to GIS and GISCAD to enable the data capture of LV Battery and LV STATCOM features.

Background

Endeavour Energy is rolling out LV Battery and LV STATCOM assets throughout our franchise area. This TB serves to inform staff regarding the design and GIS related symbology and technical details with regards to these assets.

Actions

New Features will be added in GIS to enable data capture of LV Battery and LV STATCOM features. New symbols have been added to SAD0001 Drawing Symbols. The GISCAD tool palette will be updated to allow designers to add these features to design drawings. New notations have been added to SAD0001 Drawing Notes to detail the SAP data requirements of these features.

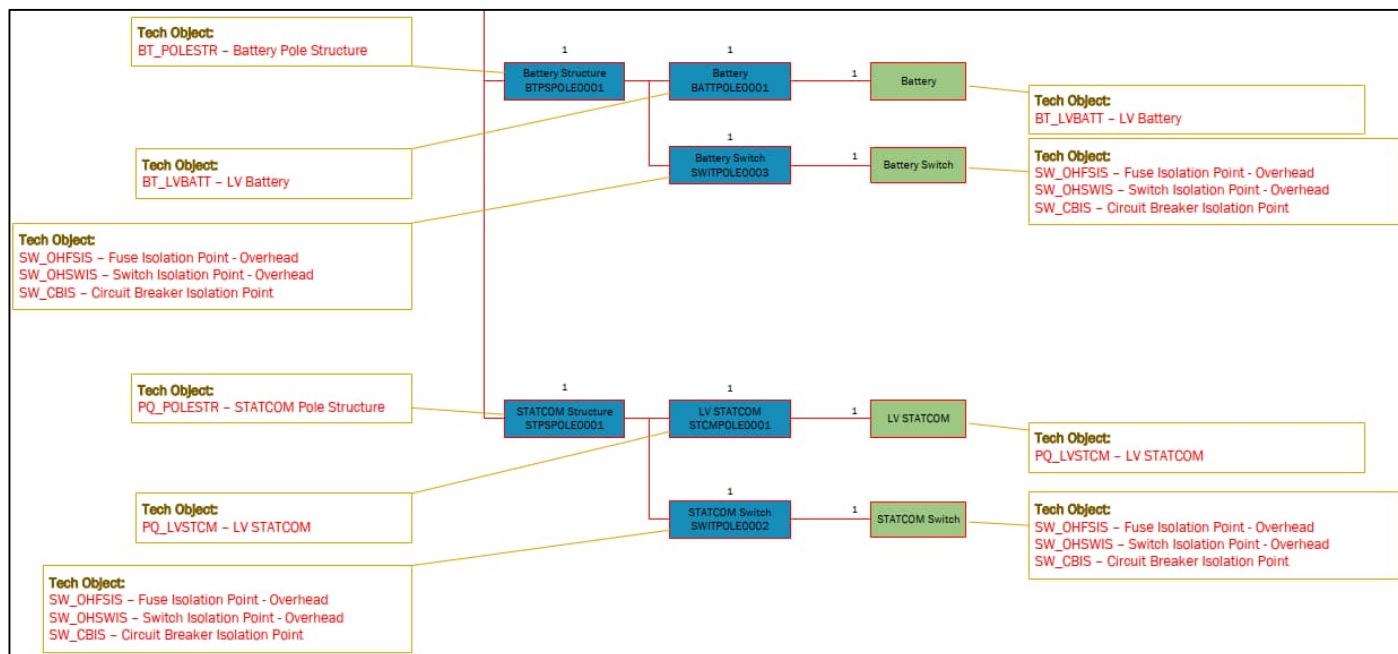
	Battery	LV STATCOM
GIS - Geographi c Window	OH  UG 	
GIS Detail Window		
AutoCAD Site Plan	OH  UG 	
AutoCAD Circuit Diagram		
SAP Data label for Circuit Diagram	SAP DATA OH LV BATTERY BTPSXXXXXXXX LV BATTERY BATTXXXXXXXX FUSE ISOLATION POINT SWITXXXXXXXX	SAP DATA LV STATCOM STPSXXXXXXXX LV STATCOM STCMXXXXXXXX FUSE ISOLATION POINT SWITXXXXXXXX

	SAP DATA UG LV BATTERY BTGSXXXXXXXX LV BATTERY BATTXXXXXXXX CB ISOLATION POINT SWITXXXXXXXX	
New Asset label for Site Plan	ESTABLISH NEW BESS FLOC: _____ MANUFACTURER: _____ TYPE: _____ SIZE: _____ CAPACITY: _____ ESTABLISH NEW OH LV BATTERY FLOC: _____ MANUFACTURER: _____ TYPE: _____ SIZE: _____ CAPACITY: _____ METERED (YES/NO): _____ NMI: _____ ESTABLISH NEW UG LV BATTERY FLOC: _____ MANUFACTURER: _____ TYPE: _____ SIZE: _____ CAPACITY: _____ METERED (YES/NO): _____ NMI: _____	ESTABLISH NEW LV STATCOM FLOC: _____ MANUFACTURER: _____ TYPE: _____

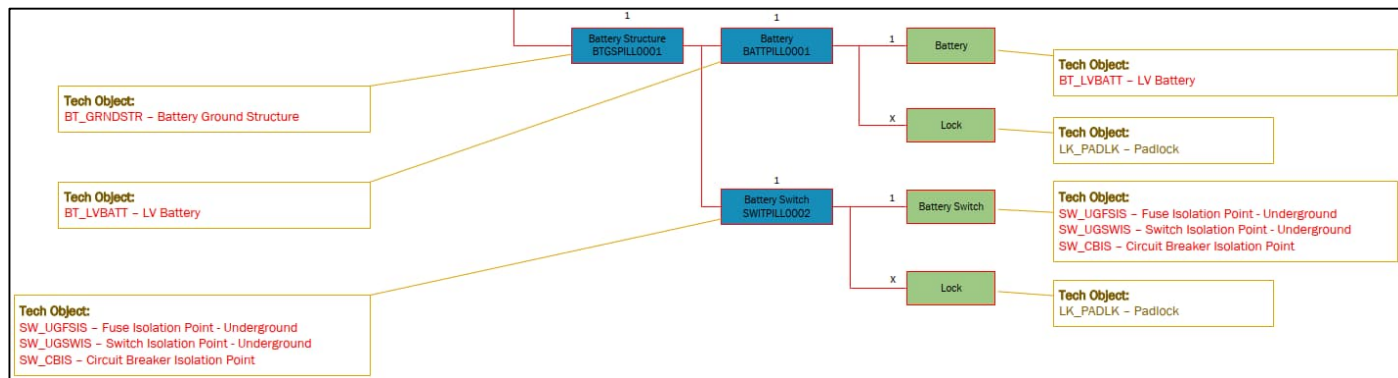
SAP Structure Diagram

With these new features comes updates to SAP structure diagrams as follows.

Pole structure hierarchy:



Ground structure hierarchy:



Implementation

The contents of this Technical Bulletin shall be implemented over the coming weeks.

SAD001 is being updated to reflect these changes including additional symbology to Drawing Symbols, additional notes to Drawing Notes as well as updated references to the Standard.

GISCAD will be updated to reflect new symbology including new tool palettes.

Impacted Standards

This change impacts the following standards:

- SAD001
- SAD002
- SAD005

Contacts

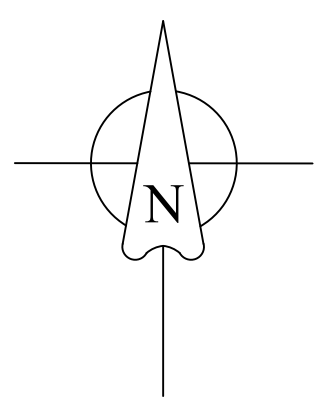
For further information contact:

Matthew Morgan (0439175650) – Quality Assurance Capture Manager

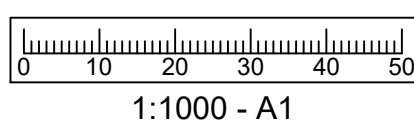
Tajana Buric (0404771493) – Capture Support Manager

Note: Design examples attached for Battery and Statcom.

A



ENDEAVOUR ENERGY CONTACT	
NAME	CONTACT No.
DESIGN: M. JANIF	0472 723 705
CONSTRUCTION: Edmond Roberts	0481001782



SITE PLAN (1:1000)

- EXISTING OVERHEAD MAINS
- NEW OVERHEAD MAINS
- EXISTING POLE
- NEW POLE
- EXISTING STREETLIGHT LANTERN
- NEW POLE ECOJOULE BATTERY (GEN 2)
- TREES
- LV GENERATOR
- LIFE SUPPORT CUSTOMER
- AIR BREAK SWITCH (N/O, N/C)

ESTABLISH 95 mm² 4C LVABC BETWEEN EXISTING POLE 1 AND NEW POLE 2.

1050kPa HIGH PRESSURE JEMENA GAS MAINS EXISTS IN THE VICINITY OF THE POLE. INSTALLATION USE NDD METHOD OF EXCAVATION

SAP DATA
OH LV BATTERY BTPS00000028
LV BATTERY BATT00000023
FUSE ISOLATION POINT SWIT00242742

ESTABLISH NEW OH LV BATTERY
FLOC: BTPS00000028
MANUFACTURER: ECOJOULE
TYPE: (GEN 2)
SIZE: 40kVA
CAPACITY: 80kWh
METERED (YES/NO): YES
NMI:

ATTENTION:

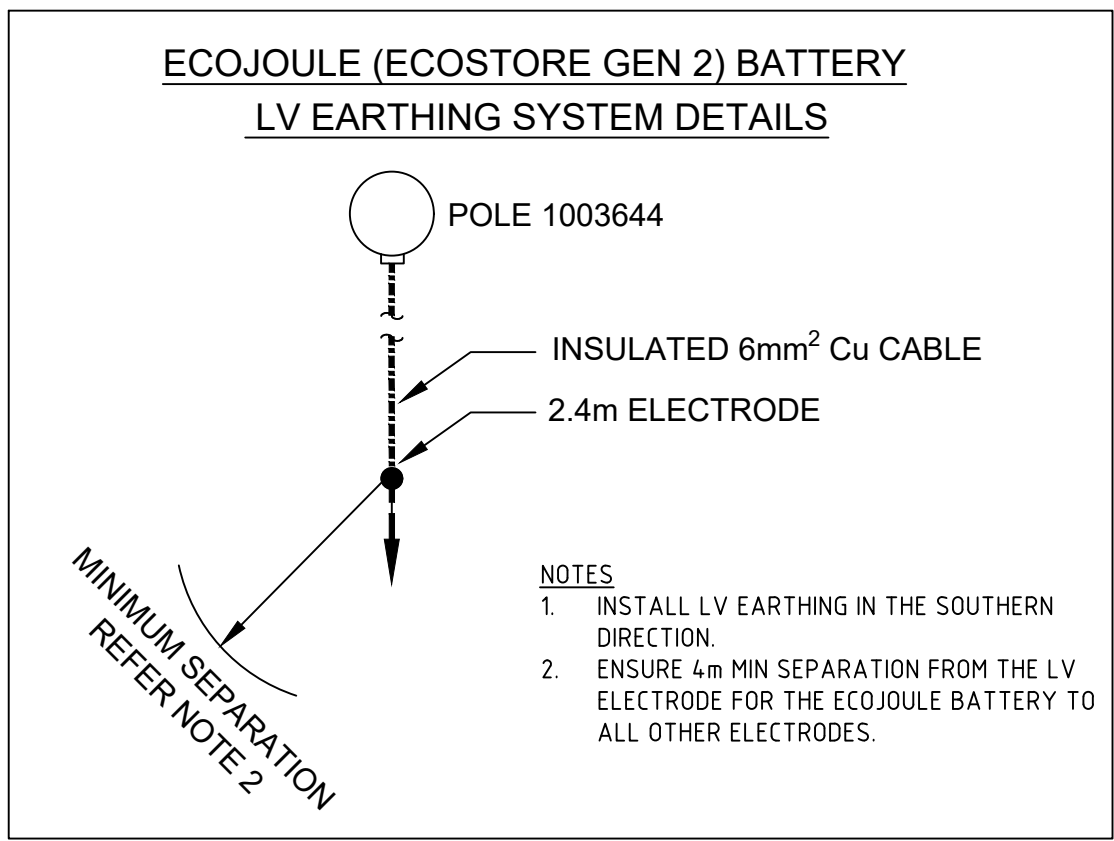
- PRELIM DBYD SEARCHES INDICATE THERE ARE OF PRESENCE OF COMMUNICATIONS AND WATER MAINS UNDERGROUND ASSETS IN THE VICINITY OF WORKS.
- CURRENT DBYD SEARCHES MUST BE ACQUIRED AND CHECKED PRIOR TO CONSTRUCTION WORKS.
- DAMAGE TO UNDERGROUND ASSETS MUST BE REPORTED TO THE RELEVANT ASSET OWNER IMMEDIATELY.
- ASSET OWNER CONTACT DETAILS TO BE OBTAINED FROM CURRENT DBYD DOCUMENTATION.

NOTES:

- DISTRIBUTION PANEL IS TO BE MOUNTED BELOW THE BATTERY UNITS ON THE FACE OF THE POLE AWAY FROM TRAFFIC FLOW. ALL CABLES ARE TO BE INSTALLED WITH CABLE GLANDS ENTERING VIA THE BOTTOM OF THE ENCLOSURE.
- EARTH CABLE IS TO BE INSTALLED ON THE OPPOSITE SIDE OF POLE TO THE DIRECTION OF TRAFFIC.

SERVICES LOCATION

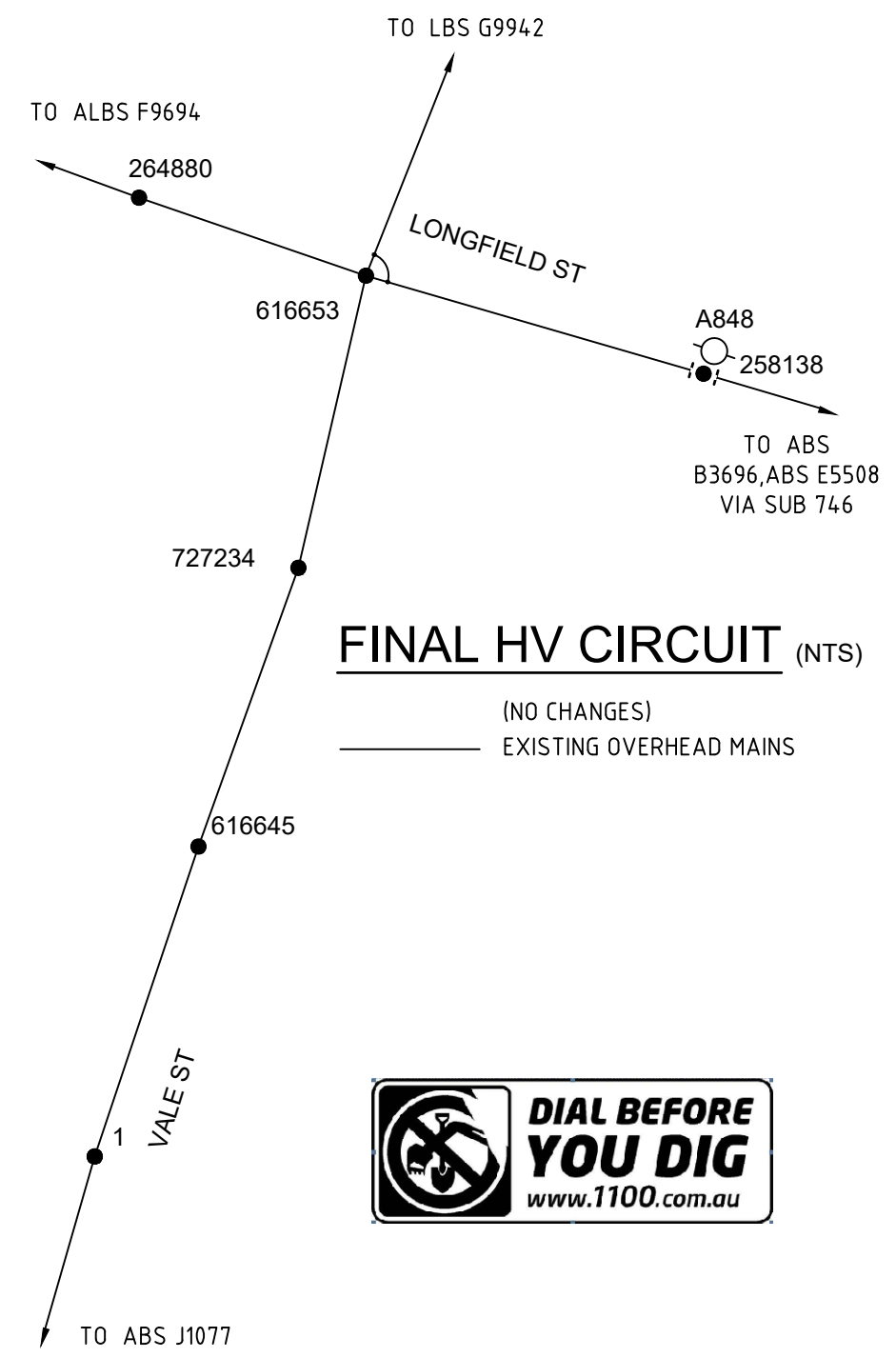
UNDERGROUND SERVICES LOCATION CONTRACTOR SHOULD BE ENGAGED TO ACCURATELY LOCATE EXISTING SERVICES (TELSTRA, WATER/SEWER & JEMENA) PRIOR TO PROGRAMMING CONSTRUCTION.



INDICATIVE POLE 2 CO-ORDINATES:
EASTING - 310314.4284
NORTHING - 6247495.0260
NDD TO BE CONDUCTED TO DETERMINE THE EXACT POLE LOCATION

NOTE:
THE INSTALLATION OF THE COMMUNITY BATTERY IS ASSOCIATED WITH DISTRIBUTION POLE MOUNTED SUB No- 12988 (REMOVED) NOW PM SUB 95943

NOTE
ENSURE ALL CUSTOMERS IMPACTED BY SUPPLY OUTAGES FOR THESE WORKS ARE NOTIFIED IN ACCORDANCE WITH NECF REQUIREMENTS & TIME FRAMES.



FINAL HV CIRCUIT (NTS)
(NO CHANGES)
EXISTING OVERHEAD MAINS



EXCAVATION
WORKS ARE TO CEASE IN THE EVENT OF ANY UNIDENTIFIED FINDS AND THE ENVIRONMENTAL BUSINESS PARTNER IS TO BE NOTIFIED

REFER TO ENDEAVOUR ENERGY STANDARD REQUIREMENT WNV1001 - WORK ON OVERHEAD MAINS AND APPARATUS UNDER OR ADJACENT TO ENERGISED CIRCUITS

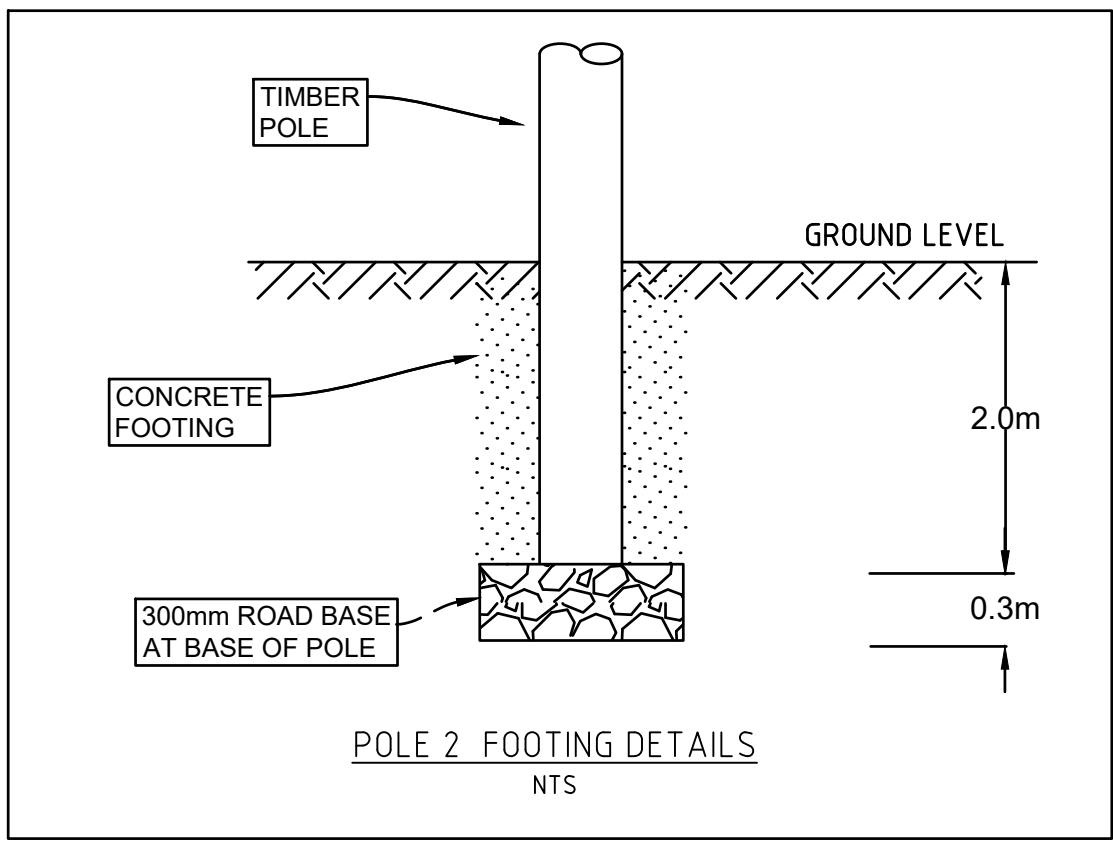
ENVIRONMENTAL AWARENESS

APPROPRIATE ENVIRONMENTAL MANAGEMENT CONTROLS IN ACCORDANCE WITH THE ENDEAVOUR ENERGY ENVIRONMENTAL GUIDELINES HANDBOOK & SER ARE TO BE IMPLEMENTED PRIOR TO WORKS COMMENCING AND MAINTAINED FOR THE DURATION OF WORKS. APPROPRIATE EROSION AND SEDIMENT POLLUTION CONTROLS ARE REQUIRED. VEHICLE AND OR PEDESTRIAN TRAFFIC IMPACTS SHALL BE MANAGED ACCORDINGLY.

REFER TO TECHNICAL BULLETIN TB 0336 FOR ADDITIONAL INFORMATION. ADDITIONAL DETAILS & INFORMATION REQUESTS SHOULD BE FORWARDED TO GRID INTEGRATION/ENGINEERING DELIVERY.

CONDUCTOR STRINGING TABLE 1									
STRAIN SECTIONS	PL751779(1) TO PL1003644(2)				TENSION (%CBL) @ 5°C				2%
DESIGN SPANS	PL751779(1) TO PL1003644(2)				RULING SPAN (m)				13
CONDUCTOR	95mm ² LV ABC CONDUCTOR (NO CREEP OFFSET ADDED)								
TEMPERATURE (°C)	0	5	10	15	20	25	30	35	40
TENSION (kN)	1.130	1.060	1.010	0.960	0.920	0.890	0.860	0.830	0.800
MID SPAN SAG (m)	0.24	0.25	0.26	0.28	0.29	0.30	0.31	0.32	0.33

WHEN REMOVING, INSTALLING OR AUGMENTING L.V. O/H, REFER TO WORK PLACE INSTRUCTION WNV1001 TO ENSURE COMPLETE PROCEDURES ARE MAINTAINED



FINAL LV CIRCUIT (NTS)

- EXISTING OVERHEAD MAINS
- STRING NEW LV 95mm² 4C LVABC @ 2% CBL STRING TO 'LV STRINGING TABLE 1' ON THIS DRAWING RL = 13m, CL = 20m
- NEW POLE ECOJOULE BATTERY (GEN 2)
- COMMUNITY BATTERY EARTHING
- NEW LV LINKS (N/O, N/C)

LV CONDUCTOR REFERENCE
E24 - 7/2.00 HDCU

INSTALL N/C LV ABC LINKS # 242741 ON POLE 1 TO ALLOW FOR ISOLATION OF SUPPLY TO BATTERY FROM THE EXISTING LV NETWORK.

TO N/O LINKS ON POLE 751773, COLUMN 26721 (END OF CCT),
N/O LINKS ON POLE 271263, SUB 95943,
N/O LINKS ON POLE 616565

INSTALL DSUB MONITOR IN PAD SUB 95943 (FORMERLY POLE SUB 12988) (LASA STREET)

DESIGN COMPLIANCE AND INDEMNITY

This design complies with Endeavour Energy's relevant standards as current at this time and as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:

- CP: Connection Policy
 - EMS: Environmental Management Standard
 - MCJ: Mains Construction Instruction
 - MDI: Mains Design Instruction
 - PDI: Protection Design Instruction
 - SDI: Substation Design Instruction
 - SAD 0001: Design Drawing Standard
 - MMI: Mains Maintenance Instruction
 - SMI: Substation Maintenance Instruction
 - LDI 0001: Public lighting Electrical Design Element
- Additionally, where relevant, the design complies with AS/NZS 7000 'Overhead Line Design - Detailed Procedures' published by The Australian Standards.

ENDEAVOUR ENERGY indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.
Signed: MOHAMMED JANIF
Name: MOHAMMED JANIF
Service Provider Number: 1149
Date: 19/01/24

THIS DESIGN DRAWING HAS BEEN PREPARED IN GDA2020-MGA56 COORDINATE SYSTEM.

WORKS COMPLETED/FIELD BOOK

CONSTRUCTED BY: _____
WORKS COMPLETED: _____
SIGNATURE: _____ DATE: _____
INSPECTED BY: _____
SIGNATURE: _____ DATE: _____

ASSET RECORDING

I: _____
OF: _____
CONTACT No.: _____
HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.
SIGNATURE: _____
DATE: _____

Cadastre: © Land and Property Information 2016

FOR CONSTRUCTION

TEMPLATE VERSION No.5.20

THIS DRAWING AND THE COPYRIGHT THEREIN IS THE PROPERTY OF ENDEAVOUR ENERGY AND MAY NOT BE COPIED, REPRODUCED, DISTRIBUTED, LOANED OR USED WITHOUT THE WRITTEN CONSENT OF ENDEAVOUR ENERGY

REFERENCE DRAWING'S

WORK ORDERS

CAMS File No.	
AM PROJ. No.	NDE-000907-003-26
HV SWITCHING	
EE DEPOT	HOXTON PARK
EE REGION	CENTRAL
HV OP DIAG	CABRAMATTA/Q3
LOCAL GOV AREA	FAIRFIELD

ORIGINAL SCALE	1:1000
DRAWN	MJ
DATE	19/01/24
CH'D	RV(22/02/24)

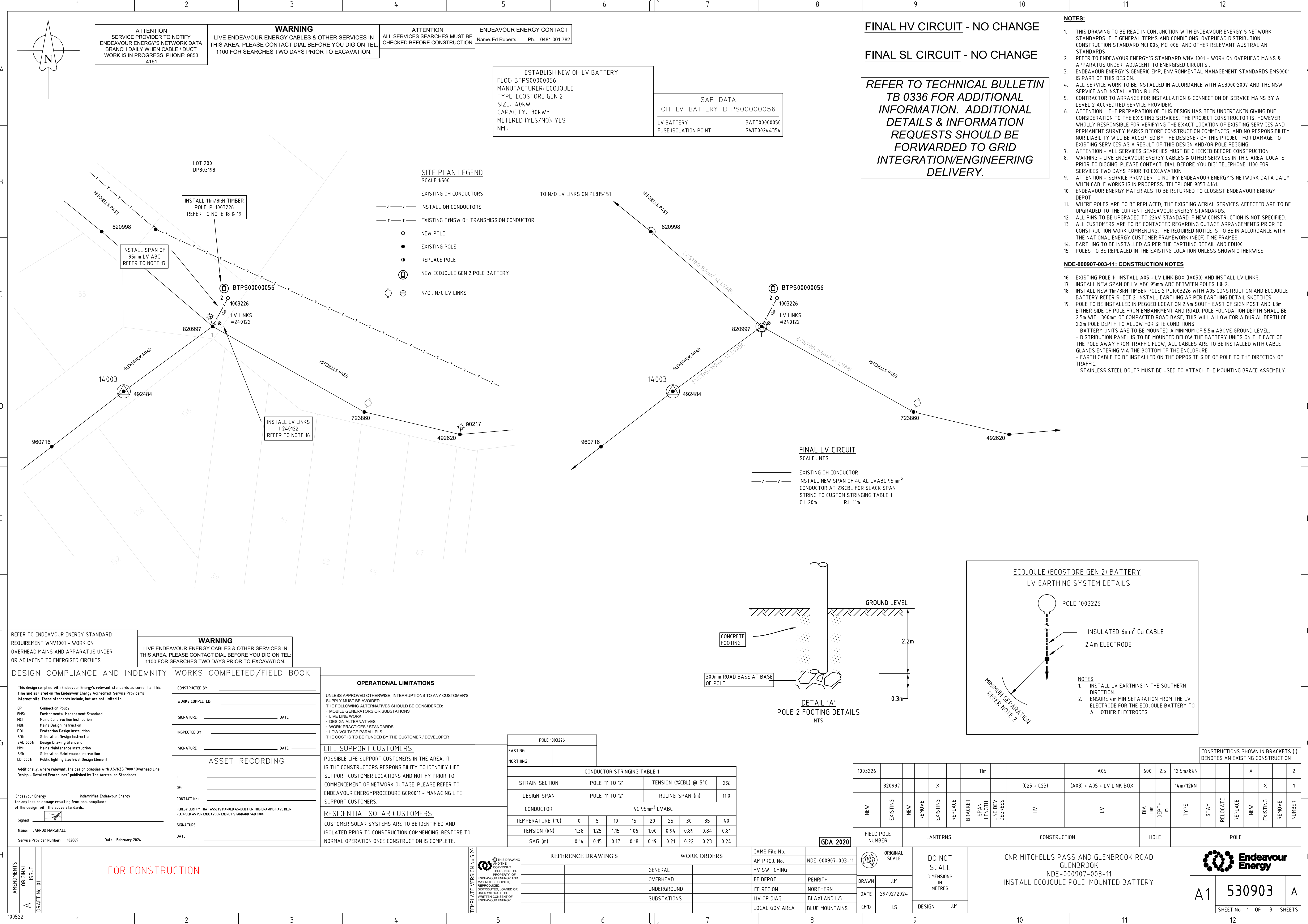
DO NOT SCALE DIMENSIONS IN METRES	
DESIGN	MJ

LASA STREET
CABRAMATTA
NDE-000907-003-26

INSTALL POLE MOUNTED COMMUNITY BATTERY



A1	532047	A
SHEET No 1 OF 3 SHEETS		



ATTENTION
SERVICE PROVIDER TO NOTIFY
ENDEAVOUR ENERGY'S NETWORK DATA
BRANCH DAILY WHEN CABLE / DUCT
WORK IS IN PROGRESS. PHONE: 9853
4161

WARNING
LIVE ENDEAVOUR ENERGY CABLES & OTHER SERVICES IN
THIS AREA. PLEASE CONTACT DIAL BEFORE YOU DIG ON TEL:
1100 FOR SEARCHES TWO DAYS PRIOR TO EXCAVATION.

ATTENTION
ALL SERVICES SEARCHES MUST BE
CHECKED BEFORE CONSTRUCTION

ENDEAVOUR ENERGY CONTACT
Name: Ed Roberts Ph: 0481 001 782

ESTABLISH NEW OH LV BATTERY
FLOC: BTPS00000056
MANUFACTURER: ECOJOULE
TYPE: ECOSTORE GEN 2
SIZE: 40kW
CAPACITY: 80kWh
METERED (YES/NO): YES
NMI:

SAP DATA
OH LV BATTERY BTPS00000056
LV BATTERY BATT00000050
FUSE ISOLATION POINT SWIT00244354

FINAL HV CIRCUIT - NO CHANGE

FINAL SL CIRCUIT - NO CHANGE

REFER TO TECHNICAL BULLETIN
TB 0336 FOR ADDITIONAL
INFORMATION. ADDITIONAL
DETAILS & INFORMATION
REQUESTS SHOULD BE
FORWARDED TO GRID
INTEGRATION/ENGINEERING
DELIVERY.

- NOTES:
- THIS DRAWING TO BE READ IN CONJUNCTION WITH ENDEAVOUR ENERGY'S NETWORK STANDARDS, THE GENERAL TERMS AND CONDITIONS, OVERHEAD DISTRIBUTION CONSTRUCTION STANDARD MCI 005, MCI 006 AND OTHER RELEVANT AUSTRALIAN STANDARDS.
 - REFER TO ENDEAVOUR ENERGY'S STANDARD WNV 1001 - WORK ON OVERHEAD MAINS & APPARATUS UNDER ADJACENT TO ENERGISED CIRCUITS.
 - ENDEAVOUR ENERGY'S GENERIC EMP, ENVIRONMENTAL MANAGEMENT STANDARDS EMS0001 IS PART OF THIS DESIGN.
 - ALL SERVICE WORK TO BE INSTALLED IN ACCORDANCE WITH AS3000:2007 AND THE NSW SERVICE AND INSTALLATION RULES.
 - CONTRACTOR TO ARRANGE FOR INSTALLATION & CONNECTION OF SERVICE MAINS BY A LEVEL 2 ACCREDITED SERVICE PROVIDER.
 - ATTENTION - THE PREPARATION OF THIS DESIGN HAS BEEN UNDERTAKEN GIVING DUE CONSIDERATION TO THE EXISTING SERVICES. THE PROJECT CONSTRUCTOR IS, HOWEVER, WHOLLY RESPONSIBLE FOR VERIFYING THE EXACT LOCATION OF EXISTING SERVICES AND PERMANENT SURVEY MARKS BEFORE CONSTRUCTION COMMENCES, AND NO RESPONSIBILITY NOR LIABILITY WILL BE ACCEPTED BY THE DESIGNER OF THIS PROJECT FOR DAMAGE TO EXISTING SERVICES AS A RESULT OF THIS DESIGN AND/OR POLE PEGGING.
 - ATTENTION - ALL SERVICES SEARCHES MUST BE CHECKED BEFORE CONSTRUCTION.
 - WARNING - LIVE ENDEAVOUR ENERGY CABLES & OTHER SERVICES IN THIS AREA. LOCATE PRIOR TO DIGGING. PLEASE CONTACT 'DIAL BEFORE YOU DIG' TELEPHONE: 1100 FOR SERVICES TWO DAYS PRIOR TO EXCAVATION.
 - ATTENTION - SERVICE PROVIDER TO NOTIFY ENDEAVOUR ENERGY'S NETWORK DATA DAILY WHEN CABLE WORKS IS IN PROGRESS. TELEPHONE 9853 4161.
 - ENDEAVOUR ENERGY MATERIALS TO BE RETURNED TO CLOSEST ENDEAVOUR ENERGY DEPOT.
 - WHERE POLES ARE TO BE REPLACED, THE EXISTING AERIAL SERVICES AFFECTED ARE TO BE UPGRADED TO THE CURRENT ENDEAVOUR ENERGY STANDARDS.
 - ALL PINS TO BE UPGRADED TO 22kV STANDARD IF NEW CONSTRUCTION IS NOT SPECIFIED.
 - ALL CUSTOMERS ARE TO BE CONTACTED REGARDING OUTAGE ARRANGEMENTS PRIOR TO CONSTRUCTION WORK COMMENCING. THE REQUIRED NOTICE IS TO BE IN ACCORDANCE WITH THE NATIONAL ENERGY CUSTOMER FRAMEWORK (NECF) TIME FRAMES
 - EARTHING TO BE INSTALLED AS PER THE EARTHING DETAIL AND ED100
 - POLES TO BE REPLACED IN THE EXISTING LOCATION UNLESS SHOWN OTHERWISE

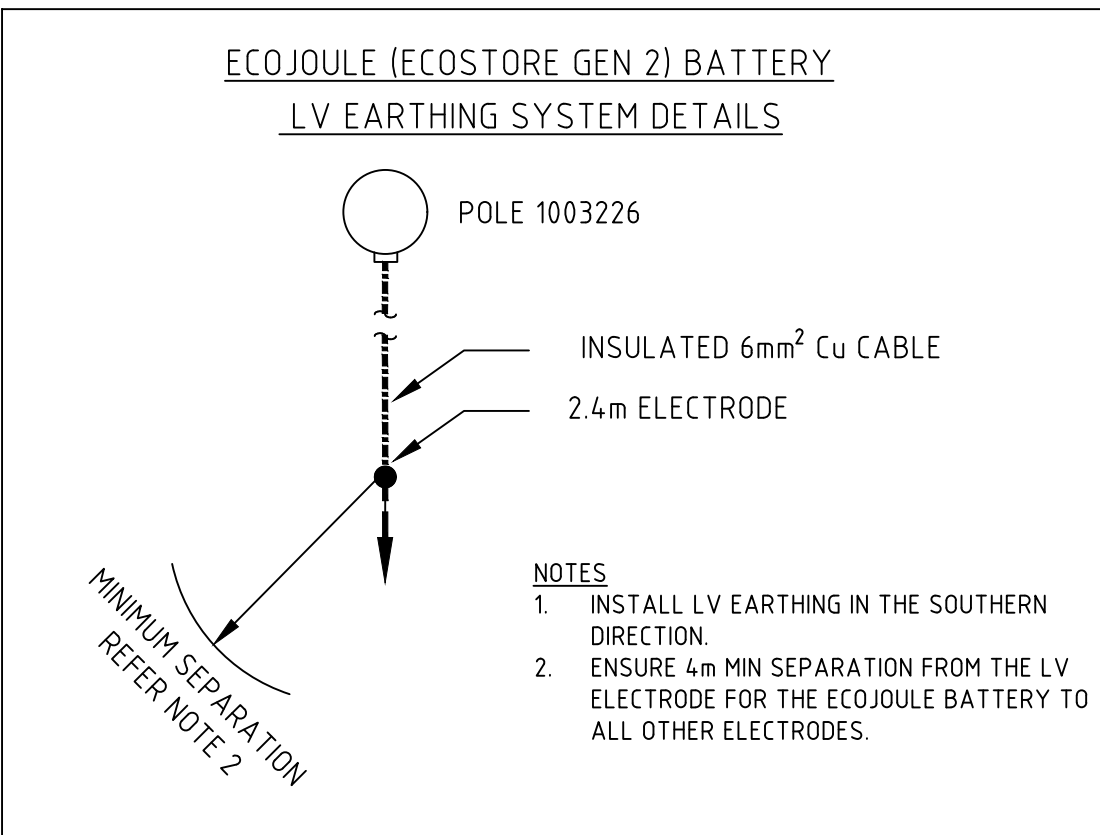
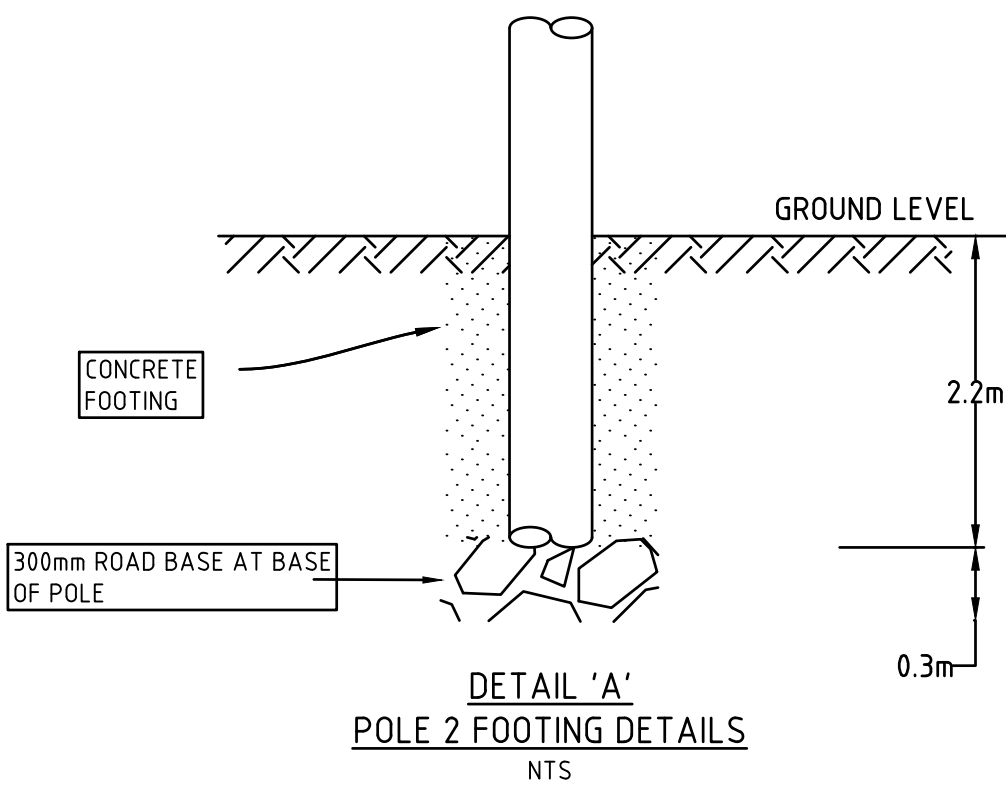
NDE-000907-003-11: CONSTRUCTION NOTES

- EXISTING POLE 1: INSTALL A05 + LV LINK BOX (IA050) AND INSTALL LV LINKS.
- INSTALL NEW SPAN OF LV ABC 95mm ABC BETWEEN POLES 1 & 2.
- INSTALL NEW 11m/8kN TIMBER POLE 2 PL1003226 WITH A05 CONSTRUCTION AND ECOJOULE BATTERY REFER SHEET 2. INSTALL EARTHING AS PER EARTHING DETAIL SKETCHES.
- POLE TO BE INSTALLED IN PEGGED LOCATION 2.4m SOUTH EAST OF SIGN POST AND 1.3m EITHER SIDE OF POLE FROM EMBANKMENT AND ROAD. POLE FOUNDATION DEPTH SHALL BE 2.5m WITH 300mm OF COMPACTED ROAD BASE, THIS WILL ALLOW FOR A BURIAL DEPTH OF 2.2m POLE DEPTH TO ALLOW FOR SITE CONDITIONS.
 - BATTERY UNITS ARE TO BE MOUNTED A MINIMUM OF 5.5m ABOVE GROUND LEVEL.
 - DISTRIBUTION PANEL IS TO BE MOUNTED BELOW THE BATTERY UNITS ON THE FACE OF THE POLE AWAY FROM TRAFFIC FLOW, ALL CABLES ARE TO BE INSTALLED WITH CABLE GLANDS ENTERING VIA THE BOTTOM OF THE ENCLOSURE.
 - EARTH CABLE TO BE INSTALLED ON THE OPPOSITE SIDE OF POLE TO THE DIRECTION OF TRAFFIC.
 - STAINLESS STEEL BOLTS MUST BE USED TO ATTACH THE MOUNTING BRACE ASSEMBLY.

FINAL LV CIRCUIT

SCALE: NTS

- EXISTING OH CONDUCTOR
- INSTALL NEW SPAN OF 4C AL LVABC 95mm² CONDUCTOR AT 2% CBL FOR SLACK SPAN STRING TO CUSTOM STRINGING TABLE 1 C.L. 20m R.L. 11m



REFER TO ENDEAVOUR ENERGY STANDARD REQUIREMENT WNV1001 - WORK ON OVERHEAD MAINS AND APPARATUS UNDER OR ADJACENT TO ENERGISED CIRCUITS

WARNING
LIVE ENDEAVOUR ENERGY CABLES & OTHER SERVICES IN THIS AREA. PLEASE CONTACT DIAL BEFORE YOU DIG ON TEL: 1100 FOR SEARCHES TWO DAYS PRIOR TO EXCAVATION.

DESIGN COMPLIANCE AND INDEMNITY

WORKS COMPLETED/FIELD BOOK

ASSET RECORDING

OPERATIONAL LIMITATIONS

LIFE SUPPORT CUSTOMERS:

RESIDENTIAL SOLAR CUSTOMERS:

CONNECTION POLICY

ENVIRONMENTAL MANAGEMENT STANDARD

MAINS CONSTRUCTION INSTRUCTION

MAINS DESIGN INSTRUCTION

PROTECTION DESIGN INSTRUCTION

SUBSTATION DESIGN INSTRUCTION

DESIGN DRAWING STANDARD

MAINS MAINTENANCE INSTRUCTION

SUBSTATION MAINTENANCE INSTRUCTION

PUBLIC LIGHTING ELECTRICAL DESIGN ELEMENT

ADDITIONALLY, WHERE RELEVANT, THE DESIGN COMPLIES WITH AS/NZS 7000 "OVERHEAD LINE DESIGN - DETAILED PROCEDURES" PUBLISHED BY THE AUSTRALIAN STANDARDS.

ENDEAVOUR ENERGY

INDENNIFIES ENDEAVOUR ENERGY

FOR ANY LOSS OR DAMAGE RESULTING FROM NON-COMPLIANCE OF THE DESIGN WITH THE ABOVE STANDARDS.

Signed: JARROD MARSHALL

Name: JARROD MARSHALL

Service Provider Number: 102869

Date: February 2024

CONSTRUCTED BY:

WORKS COMPLETED:

SIGNATURE:

DATE:

INSPECTED BY:

SIGNATURE:

DATE:

IF:

CONTACT No:

HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.

SIGNATURE:

DATE:

POSSIBLE LIFE SUPPORT CUSTOMERS IN THE AREA. IT IS THE CONSTRUCTORS RESPONSIBILITY TO IDENTIFY LIFE SUPPORT CUSTOMER LOCATIONS AND NOTIFY PRIOR TO COMMENCEMENT OF NETWORK OUTAGE. PLEASE REFER TO ENDEAVOUR ENERGY PROCEDURE GCR0011 - MANAGING LIFE SUPPORT CUSTOMERS.

CUSTOMER SOLAR SYSTEMS ARE TO BE IDENTIFIED AND ISOLATED PRIOR TO CONSTRUCTION COMMENCING. RESTORE TO NORMAL OPERATION ONCE CONSTRUCTION IS COMPLETE.

POLE 1003226									
EASTING									
NORTHING									
CONDUCTOR STRINGING TABLE 1									
STRAIN SECTION	POLE '1' TO '2'			TENSION (%CBL) @ 5°C				2%	
DESIGN SPAN	POLE '1' TO '2'			RULING SPAN (m)				11.0	
CONDUCTOR	4C 95mm ² LVABC								
TEMPERATURE (°C)	0	5	10	15	20	25	30	35	40
TENSION (kN)	1.38	1.25	1.15	1.06	1.00	0.94	0.89	0.84	0.81
SAG (m)	0.14	0.15	0.17	0.18	0.19	0.21	0.22	0.23	0.24

GDA 2020

1003226						11m			A05	600	2.5	12.5m/8kN				X			2	
	820997			X				(C25 + C23)	(A03) + A05 + LV LINK BOX				14m/12kN				X		1	
NEW	EXISTING	NEW	REMOVE	EXISTING	REPLACE	BRACKET	SPAN LENGTH	LINE DEV DEGREES	HV	LV	DIA mm	DEPTH m	TYPE	STAY	RELOCATE	REPLACE	NEW	EXISTING	REMOVE	NUMBER
FIELD POLE NUMBER		LANTERNS			CONSTRUCTION						HOLE		POLE							

AMENDMENTS

ORIGINAL

DRAFT No. 01

FOR CONSTRUCTION

REFERENCE DRAWING'S

WORK ORDERS

CAMS File No.

AM PROJ. No.

HV SWITCHING

EE DEPOT

EE REGION

HV OP DIAG

LOCAL GOV AREA

NDE-000907-003-11

PENRITH

BLAXLAND L.S

BLUE MOUNTAINS

ORIGINAL SCALE

DRAWN

J.M

DATE

29/02/2024

CHD

J.S

DESIGN

J.M

DO NOT SCALE DIMENSIONS IN METRES

CNR MITCHELLS PASS AND GLENBROOK ROAD

GLENBROOK

NDE-000907-003-11

INSTALL ECOJOULE POLE-MOUNTED BATTERY

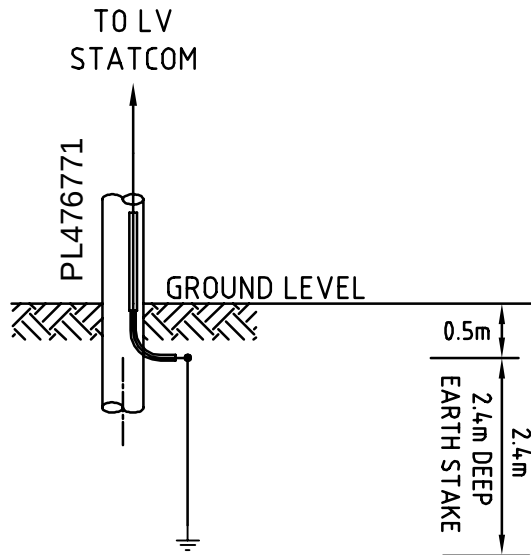
Endeavour Energy

A1

530903

A

SHEET No 1 OF 3 SHEETS



8

1

SHEET No 1 OF 2 SHEETS