

# Site Plan - Overview

Scale 1:2000  
Refer to Sheet 2 for Details.



**DIAL BEFORE YOU DIG**  
Ref: 20795600 Date: 16 December, 2020  
DBYD searches indicates the presence of services within the proposed work-site. The Level 1 ASP /Constructor is to confirm the location of "all" services prior to the commencement of works.

**Caution**  
A current services search of all utilities must be carried out prior to the commencement of works.

**Caution**  
Existing live electrical assets located in this vicinity, appropriate safety precautions must be utilized.

**Caution**  
Telstra assets in this area. Constructor to contact Telstra on ph 1800 653 935 prior to the commencement of works.

**Caution**  
High Pressure Gas Assets in this area. constructor to contact Jemena on ph 1300 665 380 prior to the commencement of works.

**Final Ground Level**  
The constructor is to confirm finished ground level with the developer prior to the commencement of construction

**Route Lengths**  
All route lengths are to be confirmed on site by the constructor prior to ordering materials.

**Pollution**  
Requirements of the environmental protection authority pollution control legislation is to be strictly adhered to.

**Service Ducts**  
The end of service ducts must not be placed under proposed driveways. (Refer to Developers Representative for details for details)

**Service Work**  
All service works to be carried out by an authorized level 2 ASP in accordance with the New South Wales Service & Installation Rules, Australian Standards and all other relevant standards.

**Construction of this Project**  
This Project will be constructed at the same time as PLT1389 under drawings 522421A. All property modifications including easements will be captured under that project.

**Cable Lengths**  
Cable Lengths specified on this design have been calculated utilizing 2 dimensional data to align with Endeavour Energy's AVS. The Constructor will need to allow for additional cable to cater for topographic influences as well as cable terminations, cable setting, and vertical indifference.

**Existing Conduits**  
All conduits are to be mandrelled, proven clear, free of foreign material, and deformation prior to the installation of cables.

**Proposed Ducts/Conduits**  
All Proposed 125mm ducts / conduits are to have a minimum 750mm cover. (in accordance with MDI0028)

**Painting of Columns**  
Local council requires a certificate from the manufacturer supplied confirming the power coated columns are in accordance with the requirements of AS/NZ 4506-2005.

**Streetlight LV Supply**  
All active conductors extending from LV pillars to service streetlight columns to be fitted with a 16A in line fuse.

**Streetlight Columns**  
All streetlight columns are to be installed 350mm from the property boundaries unless otherwise indicated.

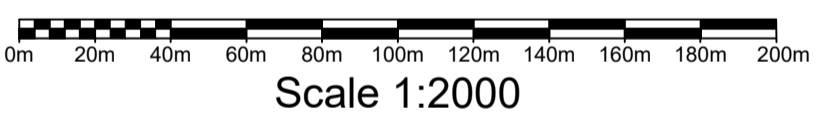
**Design Compliance and Indemnity**  
This design complies with Endeavour Energy's relevant standards as current at this time & as listed on the Endeavour Energy Accredited Service Provider's Internet site. These standards include, but are not limited to:  
• CP: Connection Policy,  
• EMS: Environmental Management Standard,  
• MCI: Mains Construction Instruction,  
• MDI: Mains Design Instruction,  
• PDI: Protection Design Instruction,  
• SDI: Substation Design Instruction,  
• SAD: Design Drawing Standard,  
• MMI: Mains Maintenance Instruction,  
• SMI: Substation Maintenance Instruction,  
• LDI: Public Lighting Electrical Design Element.  
Additionally, where relevant, the design complies with AS/NZS7000 "Overhead Line Design - Detailed Procedures" published by The Australian Standards.  
Power Line Design Pty Ltd indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.  
Signed: Mike Baranowski  
Name: Michael | Baranowski  
Service Provider Number: 2486 Date: 11-11-2021

**WORK COMPLETED / FIELD BOOK**  
CONSTRUCTED BY: C.J. DOYLE CONTRACTING  
WORKS COMPLETED: CHRIS JOWETT  
SIGNATURE: C. JOWETT DATE: 08/09/22  
INSPECTED BY: MICHAEL WEIR  
SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_  
**ASSET RECORDING**  
STEVE FRIDAY  
OF C.J. DOYLE CONTRACTING  
CONTACT NO: 8784-1922  
HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.  
SIGNATURE: STEVE FRIDAY DATE: 08/09/22

**Certified by Endeavour Energy**  
Amendment: \_\_\_\_\_  
Date Approved: \_\_\_\_\_  
Examiner's Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
This Certification is issued subject to Endeavour Energy's Standard Certification Terms.

Notes	
1.	This drawing is to be read in conjunction with the relevant Endeavour Energy Network Standards and Connection Policy.
2.	Endeavour Energy Contact Phone: 131081.
3.	Design certification shall lapse where: (i) notice of intent has not been received within six (6) months of this certification, or (ii) construction has been interrupted for more than six (6) months. where design certification has lapsed the design must be resubmitted for certification by the accredited designer.
4.	Accredited Service Provider to notify Endeavour Energy asset data customer department daily when cable works is in progress. (ph. 131 081).
5.	<b>ATTENTION:</b> Permanent survey marks may exist in this area, these are to be located by a surveyor prior to commencement of work.
6.	<b>ATTENTION:</b> All services searches must be checked before construction.
7.	<b>ATTENTION:</b> The preparation of this design has been undertaken giving due consideration to the location of existing services. The Constructor is however responsible for the verification of services and permanent survey marks prior to the commencement of construction. No responsibility nor liability will be accepted by the designer for damage to existing services as a result of this design.
8.	<b>WARNING:</b> Live Endeavour Energy cables & other services in this area. Please contact "Dial Before You Dig" on telephone: 1100 for searches two days prior to excavation.
9.	<b>Material Quantities Specified on this Design:</b> The quantities or dimensions specified on this design are based on design information supplied and site conditions at the time of the design. As quantities and dimensions are subject to change, the Constructor must check all quantities and dimensions on site prior to tendering and prior to construction.
10.	<b>Reimbursements:</b> Reimbursements will be paid to the nominated party on the letter of intent after the works have been completed and the letter of acceptance has been issued. The reimbursed amount is shown in the "Funding Arrangements for Scope of Work table". Any disagreement with the amount should be resolved with Endeavour energy prior to the commencement of works.
11.	<b>Operational Limitations:</b> Unless approved otherwise, interruption to any customer's supply must be avoided. The following alternatives should be considered: • mobile generators and substations, • live line work, • design alternatives, • low voltage parallels, • work practices/standards. The cost is to be funded by the customer/developer.
12.	<b>Environmental Management plan:</b> EMP EMS001 is part of this design (refer to EIA for details).
13.	<b>Pollution Controls:</b> All the requirements of the Environmental Protection Authority pollution control legislation is to be strictly adhered to.
14.	<b>Aboriginal Heritage:</b> If during construction of this project the constructor or developer becomes aware of any previously unidentified Aboriginal Object(s), all work likely to affect the object(s) shall cease immediately, and the Office of Environment & Heritage shall be notified immediately in accordance with section 89a of the National Parks & Wildlife ACT 1974. Works shall not recommence until written authorization from the NSW Office of Environment and Heritage has been issued, in addition to written consent from the local aboriginal land council.
15.	<b>Heritage:</b> If during construction of this project the constructor or developer becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately, and the Heritage Council of NSW shall be notified immediately in accordance with Section 146 of the Heritage ACT1977. Works shall not recommence until written authorization from the heritage council has been issued.
16.	<b>Telecommunications:</b> Telecommunications assets are <b>NOT</b> affected by the proposed works.
17.	<b>Existing Assets:</b> Have all the existing assets been field checked and are accurate at the time of design? <b>YES</b>

LAIN IN CONJUNCTION WITH URS 25542, AND PLT1389



Scale 1:2000

### KEY DOCUMENTS TABLE

Document Name	Notation Date
Summary Environmental Report - FAT0038 (EMS0001)	16 June, 2021
Safe Design Report	10 June, 2021
Materials Return Form (FPJ4252)	21 June, 2021

### Funding Arrangements for Scope of Works

ASP Level 1 Electrical Works		Customer
<b>Endeavour Energy Supplied Materials</b>	<b>Customer Funded Non-Contestable Works</b>	<b>Customer Funded</b>
NIL	All works associated with the inspection, testing, switching and the commissioning associated with this project.	Including but not limited to: • Piling of easements, property boundaries and infrastructure locations, • Registering of Easements, • Provide Site Access, • Own Service and Service connections, • Confirm ground levels.
<b>Endeavour Energy Funded &amp; Constructed</b>	<b>Customer Funded Contestable Works</b>	<b>Existing Duct Usage Charges (excl GST)</b>
Works Required Prior to Completion of Customer Contestable Project	Works Required in Association of Customer Contestable Project	Total Usage \$0.00
NIL	All other works and materials including but not limited to: • Substation establishment & installation, • Excavation & Trenching, • Duct Installation, • Cable Installation (Pulling & Laying), • Cable Joining, • Installation of Earthing, • Removal of Redundant Assets.	<b>Co-ordination Supply Required Date</b> 01/03/2022
<b>Endeavour Energy Funded &amp; Level 1 ASP Constructed - Reimbursement (excl GST)</b>		<b>Assets to be Returned to the nearest Endeavour Energy Depot.</b> 1x RTR HV Switchgear
Item	Amount	
4x 500kVA (11000.433V) PMS Trfs	\$50 304.00	
<b>Total EE Capital Contribution (excl. PH &amp; Design)</b>	<b>\$50 304.00</b>	
<b>Total EE Capital Contribution (HV reimbursement)</b>	<b>\$55 183.00</b>	

Pioneer Cost Share Reimbursement SCHEME - Expiry Date : N/A  
Pro-Rate Reimbursement for Customer's Load Over 50kVA

Asset	Asset Cost Estimate (\$)	Unit Quantity	Net Asset Capacity (kVA)	Original Customer Utilization (kVA)	Maximum Reimbursement Amount (\$)
HV Mains	N/A	(km)			N/A
LV Mains	N/A	(km)			N/A
Substation	N/A				N/A

### WAE NOTES

- ONLY CHANGES MARKED UP IN RED FORM ARE PART OF THIS ASSET RECORDING.
- ALL SURFACE ASSETS WERE RECORDED AT LEVEL QUALITY 'C'.
- DUCT TABLE HAS BEEN AMENDED AS PER INSPECTION. REFER TO DUCT SCHEDULE FOR DETAILS.

### WAE LEGEND

- PVC DUCTS (TRENCH)
- PVC DUCTS (UNDERBORE)
- QUALITY LEVEL DATA POINT
- PROPERTY LINE
- DUCT END
- UNDERBORE END

**APPROVAL TO CONNECT TO PUBLIC LIGHTING**  
Reviewers Name: \_\_\_\_\_  
Date Approved: \_\_\_\_\_  
Reviewers Signature: \_\_\_\_\_  
This Approval is issued subject to Endeavour Energy's General Terms & Conditions for Connection of Public Lighting and is specifically for drawing No. \_\_\_\_\_ Amendment \_\_\_\_\_.

This Drawing Supplies 242 Lots (Subdivision of Lot 3, DP1230408)

C.A.P. No.	File No.	Lot Numbers	No. of Lots	Developer	Developers Representative	Contact No.
URS25440	2020/00341/001	Lot 7701 to 7942	242	Woorong Park Pty Limited	Tana Sainsbury (J. Wyndham Prince)	(02) 4720 3319

### Lighting Equipment & Billing Schedule

State	Luminaire Number	Support Number	Luminaire				Column / Pole				Outreach / Bracket				Charge To					
			Description	Part No.	Rate Code	QTY	Description	Part No.	Footing Bolt / Foundation	Rate Code	QTY	Description	Part No.	Rate Code		QTY	Upland Angle	Category	Mounting Height	Column Colour
New	297249 - 297290	981050 - 981091	17W StreetLED (Gerard)	JLC99G05L17	889	42	4.5m Enlarged Base Column	IE/4.5.EB	Type 2 /Type 2 (<9.0m)	995	42	3.0m Curved Pipe Outreach	IE3.0CPS/25	991	42	5°	PR5	6.5m	Black	Blacktown City Council

AMENDMENTS ORIGINAL ISSUE DRAFT No. 01

powerlinedesign POWER LINE DESIGN PTY LTD PO BOX 338 Mittagong NSW 2575 Ph (02) 4872 1920 Fax (02) 4872 1240 Accredited Designer Number 2486 / ABN: 33107 591 846

PLD Ref: 3838

Reference Drawings: 522419A URS25440 - Duct Trench & Easement, 522421A PLT1389 - Electrical Reticulation

Work Orders: General, Overhead, Underground, Substations

CAMS File No.: URS25540

AM Project No.: HV Switching, EE Depot, Kings Park, EE Region, U7369-6, HV OP Diagram, Marsden Park, Local Government Area, Blacktown City

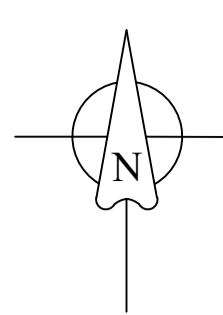
ORIGINAL SCALE 1:1000

DO NOT SCALE Dimensions in Meters

Off Richmond Road MARSDEN PARK URS25540 Stage 7C Electrical Reticulation

Endeavour Energy

A1 522420 A SHEET No 1 OF 11 SHEETS



# Site Plan

Scale 1:1000

**Establish Proposed PMS No. 55587**

- Transformer: 500kVA (11000:433V).
- HV Switchgear: Safelink, Type: "CFCC".
- HV Fuses: 12kV, 50Amp (Full Range).
- LV Switchgear: Weber CAT 1, Config: "FFIFF".
- LV Fuses: LV 250A (DIN, size 2).
- Cubicle: Size 14.
- Earthing: Common (refer Earth Design).

**Establish Proposed PMS No. 55586**

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- Cubicle: Size 14.
- Earthing: Common (refer Earth Design).

**Establish Proposed PMS No. 55585**

- Transformer: 500kVA (11000:433V).
- HV Switchgear: ABB SAFELINK, Type: "RTR".
- HV Fuses: 12kV, 50Amp (Full Range).
- LV Switchgear: Weber CAT 1, Config: "FFIFF".
- LV Fuses: LV 250A (DIN, size 2).
- Cubicle: Size 14.
- Earthing: Common (refer Earth Design).

**Establish Proposed PMS No. 55584**

- Transformer: 500kVA (11000:433V).
- HV Switchgear: Siemens 8DJ.H, Type: "RTR".
- HV Fuses: 12kV, 50Amp (Full Range).
- LV Switchgear: Weber CAT 1, Config: "FFIFF".
- LV Fuses: LV 250A (DIN, size 2).
- Cubicle: Size 14.
- Earthing: Common (refer Earth Design).

LAI IN CONJUNCTION WITH URS 25542, AND PLT1389

### LEGEND

- Existing Underground Cables,
- Existing Conduits (Ducts),
- Proposed New Conduits (Ducts),
- Street Light Trenching
- Low Voltage Trenching
- High Voltage Trenching
- Lay 40mm P.V.C. Service Conduits
- Existing Service Mains
- Pillar Excavation Location,
- Existing Pillar,
- Proposed Column Excavation location  
- 4.5m Enlarged Base Column & 3.0m Curved Pipe Outreach  
- Type 2 Raghole (Type 2 Footing)  
- Colour Powdercoated Black
- Existing Column,
- Proposed New Streetlight Lantern,
- Existing Streetlight Lantern,
- Proposed New Padmount Substation,
- Existing Padmount Substation,
- Point Indicator,
- Lot Less Than 350m2 (ADMD 5.0kVA/Lot).

### Trench Length

High Voltage Trenching	997m
Low Voltage Trenching	1111m
Street Light Trenching	8m
Road Crossing	606m
<b>Total</b>	<b>2722m</b>

**Existing PMS No. 55363**

- Augment HV Switchgear from 2 Fdr Siemens 8DJ10 (RTR), to 3 Fdr ABB Safelink (CFCC)

### WORK COMPLETED / FIELD BOOK

CONSTRUCTED BY **C.J. DOYLE CONTRACTING**

WORKS COMPLETED **CHRIS JOWETT**

SIGNATURE **C. JOWETT** DATE **08/09/22**

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INSPECTED BY **MICHAEL WEIR**

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

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### ASSET RECORDING

BY **STEVE FRIDAY**

OF **C.J. DOYLE CONTRACTING**

CONTACT No **8784-1922**

HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 004.

SIGNATURE **STEVE FRIDAY** DATE **08/09/22**

### Certified by Endeavour Energy

Amendment: \_\_\_\_\_

Date Approved: \_\_\_\_\_

Examiner's Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

This Certification is issued subject to Endeavour Energy's Standard Certification Terms.

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Cable Lengths specified on this design have been calculated utilising 2 dimensional data to align with Endeavour Energy's AVS. The Constructor will need to allow for additional cable to cater for topographic influences as well as cable terminations, cable setting, and vertical indifference.

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All Proposed 125mm ducts / conduits are to have a minimum 750mm cover. (in accordance with MDI0028).

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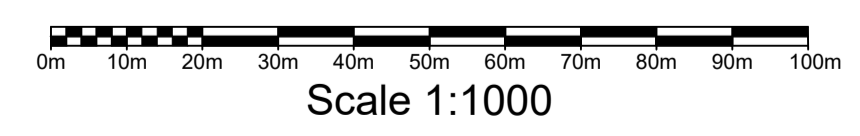
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**Service Work**

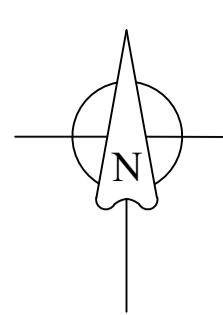
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**Construction of this Project**

This Project will be constructed at the same time as PLT1389 under drawings 522421A. PLT1389 works include the installation of Pillars, Columns, Ducts and Cables along Abell Road.



AMENDMENTS ORIGINAL ISSUE DRAFT No. 01	powerlinedesign POWER LINE DESIGN PTY LTD PO BOX 338 Mittagong NSW 2575 Ph (02) 4872 1920 Fax (02) 4872 1240 Accredited Designer Number 2088 / ABN: 33107 591 846	The preparation of this design has been undertaken giving due consideration to the existing services. The project constructor is a wholly responsible for verify the exact location of existing services and permanent survey marks prior to commencing construction. No responsibility or liability will be accepted by the designer of this project for damage to existing services as a result of this design.	PLD Ref: 3838	Reference Drawings 522419A URS25440 - Duct Trench & Easement 522421A PLT1389 - Electrical Reticulation	Work Orders General Overhead Underground Substations	CAMS File No. URS25540	AM Project No. HV Switching EE Depot EE Region HV OP Diagram Local Government Area	Kings Park U7369-6 Marsden Park Blacktown City	ORIGINAL SCALE 1:1000	DO NOT SCALE Dimensions in Meters	Off Richmond Road MARSDEN PARK URS25540 Stage 7C Electrical Reticulation	Endeavour Energy	A1	522420	A	SHEET No 2 OF 11 SHEETS	12 #4199



**South Marsden Park ZS**  
 Reference: (OJ)  
 Feeder: MS1162 "Northborne Dr"  
 1 Fault level @ SUB 54759: 5.25kA

# Final HV Circuit

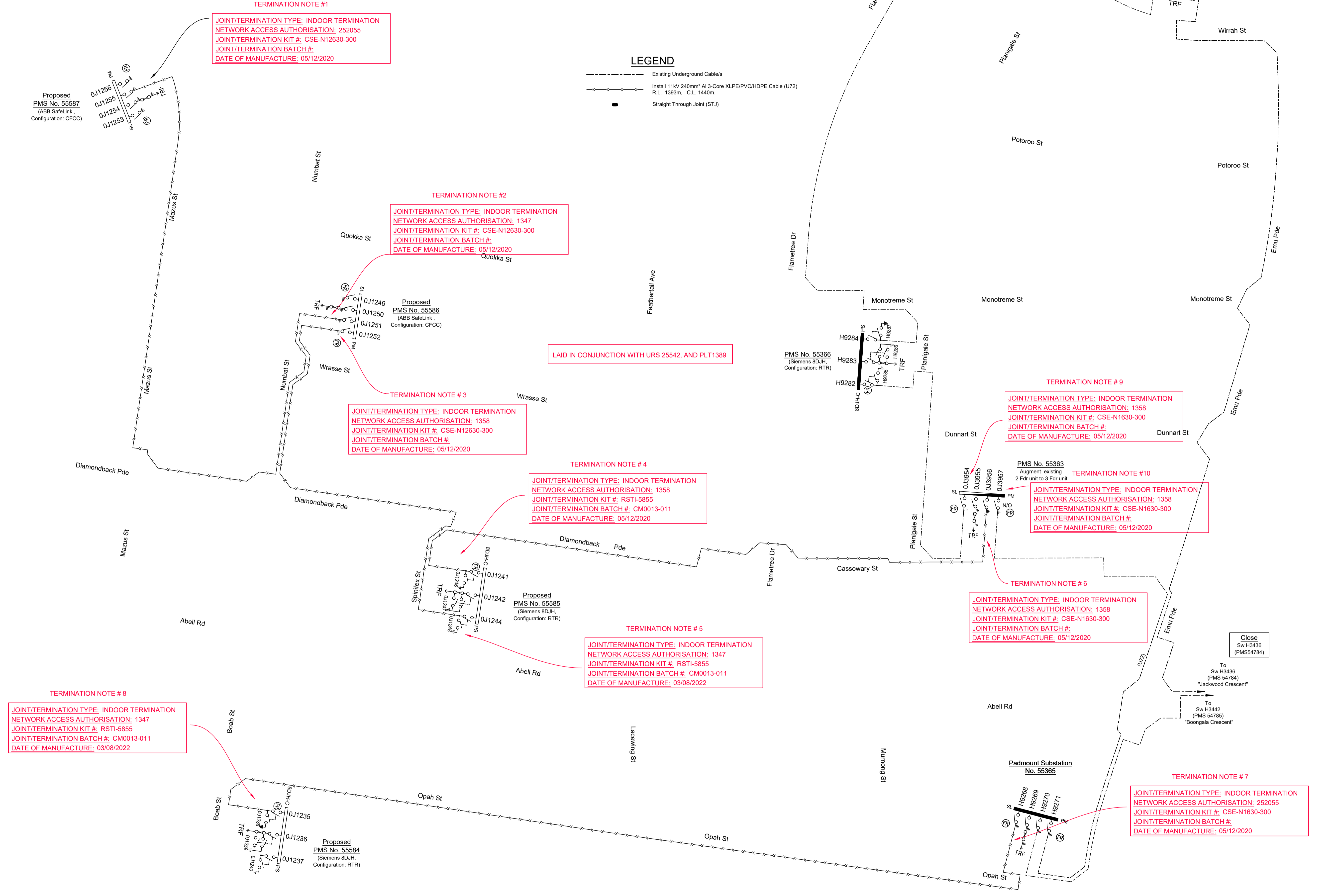
Not to Scale  
**11kV Area**

**LEGEND**  
 - - - Existing Underground Cables  
 x x x x x Install 11kV 240mm<sup>2</sup> Al 3-Core XLPE/PVC/HDPE Cable (U72)  
 R.L. 1393m, C.L. 1440m.  
 • Straight Through Joint (STJ)

**WORK COMPLETED / FIELD BOOK**  
 CONSTRUCTED BY C.J. DOYLE CONTRACTING  
 WORKS COMPLETED CHRIS JOWETT  
 SIGNATURE C.J. JOWETT DATE 08/09/22  
 INSPECTED BY MICHAEL WEIR  
 SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**ASSET RECORDING**  
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 OF C.J. DOYLE CONTRACTING  
 CONTACT No 8784-1922  
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 Examiner's Signature: \_\_\_\_\_  
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 Standard Certification Terms.



**TERMINATION NOTE # 8**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1347  
 JOINT/TERMINATION KIT #: RSTI-5855  
 JOINT/TERMINATION BATCH #: CM0013-011  
 DATE OF MANUFACTURE: 03/08/2022

**TERMINATION NOTE # 1**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 252055  
 JOINT/TERMINATION KIT #: CSE-N12630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 2**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1347  
 JOINT/TERMINATION KIT #: CSE-N12630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 3**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1358  
 JOINT/TERMINATION KIT #: CSE-N12630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 4**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1358  
 JOINT/TERMINATION KIT #: RSTI-5855  
 JOINT/TERMINATION BATCH #: CM0013-011  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 5**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1347  
 JOINT/TERMINATION KIT #: RSTI-5855  
 JOINT/TERMINATION BATCH #: CM0013-011  
 DATE OF MANUFACTURE: 03/08/2022

**TERMINATION NOTE # 6**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1358  
 JOINT/TERMINATION KIT #: CSE-N1630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 9**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1358  
 JOINT/TERMINATION KIT #: CSE-N1630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 10**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 1358  
 JOINT/TERMINATION KIT #: CSE-N1630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

**TERMINATION NOTE # 7**  
 JOINT/TERMINATION TYPE: INDOOR TERMINATION  
 NETWORK ACCESS AUTHORISATION: 252055  
 JOINT/TERMINATION KIT #: CSE-N1630-300  
 JOINT/TERMINATION BATCH #:  
 DATE OF MANUFACTURE: 05/12/2020

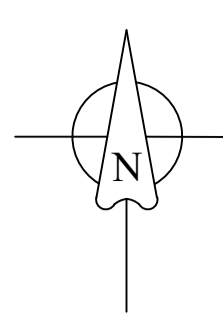
LAIN IN CONJUNCTION WITH URS 25542, AND PL11389

Close  
 Sw H3436  
 (PMS54784)

To  
 Sw H3436  
 (PMS 54784)  
 "Jackwood Crescent"

To  
 Sw H3442  
 (PMS 54785)  
 "Boongalia Crescent"

AMENDMENTS ORIGINAL ISSUE DRAFT No. 01	powerlinedesign POWER LINE DESIGN PTY LTD PO BOX 338 Mittagong NSW 2575 Ph (02) 4872 1920 Fax (02) 4872 1240 Accredited Designer Number 2468 / ABN: 33107 591 946	The preparation of this design has been undertaken giving due consideration to the existing services. The project constructor is wholly responsible for verifying the exact location of existing services and permanent survey marks prior to commencing construction. No responsibility or liability will be accepted by the designer of this project for damage to existing services as a result of this design. PLD Ref: 3838	© 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 Drawings		Work Orders		CAMS File No.	URS25540	ORIGINAL SCALE 1:1000	DO NOT SCALE Dimensions in Meters	Off Richmond Road MARSDEN PARK URS25540 Stage 7C Electrical Reticulation	Endeavour Energy	A1	522420	A	SHEET No 3 OF 11 SHEETS
				522419A	URS25440 - Duct Trench & Easement	General	AM Project No.	EE Depot	Kings Park								
				522421A	PLT1389 - Electrical Reticulation	Overhead	EE Region	U7369-6	Marsden Park	Date	11-11-2021						
						Underground	EE Region	U7369-6	Marsden Park	Ch'd	Michael.j.B	Design	Michael.j.B				
						Substations	Local Government Area	Blacktown City									



# Final LV Circuit

Not to Scale

**WORK COMPLETED / FIELD BOOK**

CONSTRUCTED BY C.J. DOYLE CONTRACTING

WORKS COMPLETED CHRIS JOWETT

SIGNATURE C.J. DOYLE DATE 08/09/22

INSPECTED BY MICHAEL WEIR

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**ASSET RECORDING**

I STEVE FRIDAY

OF C.J. DOYLE CONTRACTING

CONTACT No. 8784-1922

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

SIGNATURE STEVE FRIDAY DATE 08/09/22

**New Labels Sub No. 55587**

'R' - Spare "Future"  
'S' - Spare "Future"  
'T' - Transformer  
'U' - Pillar S169726  
'V' - Pillar S169726

**New Labels Sub No. 55586**

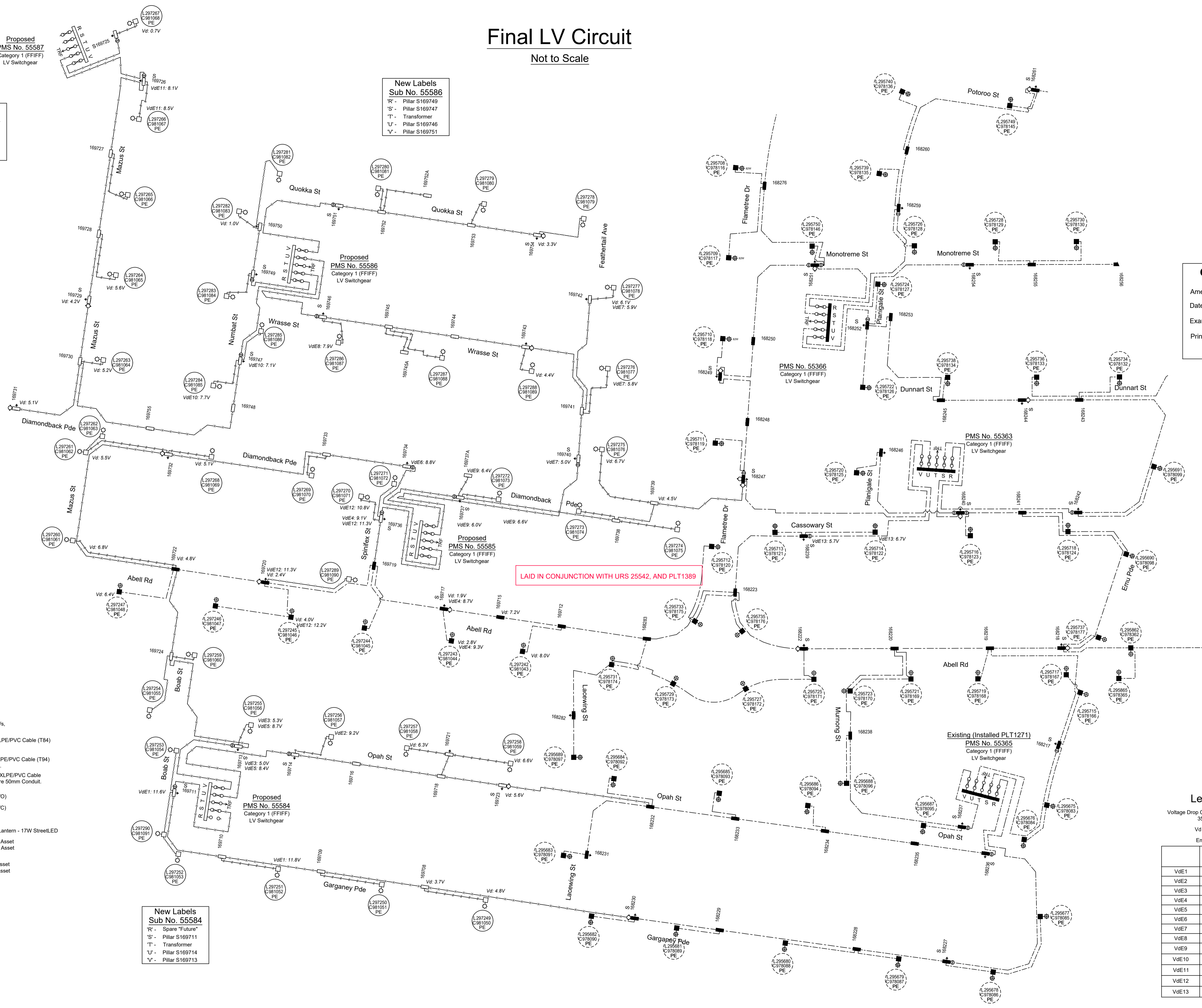
'R' - Pillar S169749  
'S' - Pillar S169747  
'T' - Transformer  
'U' - Pillar S169746  
'V' - Pillar S169751

**New Labels Sub No. 55585**

'R' - Pillar S169734  
'S' - Pillar S169736  
'T' - Transformer  
'U' - Pillar S169740  
'V' - Pillar S169737

**New Labels Sub No. 55584**

'R' - Spare "Future"  
'S' - Pillar S169711  
'T' - Transformer  
'U' - Pillar S169714  
'V' - Pillar S169713



LAI'D IN CONJUNCTION WITH URS 25542, AND PLT1389

**Certified by Endeavour Energy**

Amendment: \_\_\_\_\_

Date Approved: \_\_\_\_\_

Examiner's Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

This Certification is issued subject to Endeavour Energy's Standard Certification Terms.

**LEGEND**

- Existing Underground Cables.
- Install 240mm<sup>2</sup> Al 4-Core XLPE/PVC Cable (T84)  
R.L.: 2546m C.L.: 2800m
- Install 50mm<sup>2</sup> Cu 4-Core XLPE/PVC Cable (T94)  
R.L.: 1005m C.L.: 1100m
- Install 1x 16mm<sup>2</sup> Cu 2-Core XLPE/PVC Cable  
In 50mm Conduit and a Spare 50mm Conduit.  
R.L.: 270m C.L.: 310m
- LV Isolation Switch/Links (N/O)
- LV Isolation Switch/Links (N/C)
- ⊕ Pillar Earth
- ⊕ Proposed New Street Light Lantern - 17W StreetLED
- Lantern Number - Proposed Asset  
Column Number - Proposed Asset  
(PE Controlled)
- Lantern Number - Existing Asset  
Column Number - Existing Asset  
(PE Controlled)

**Legend for LV Voltage Drop**

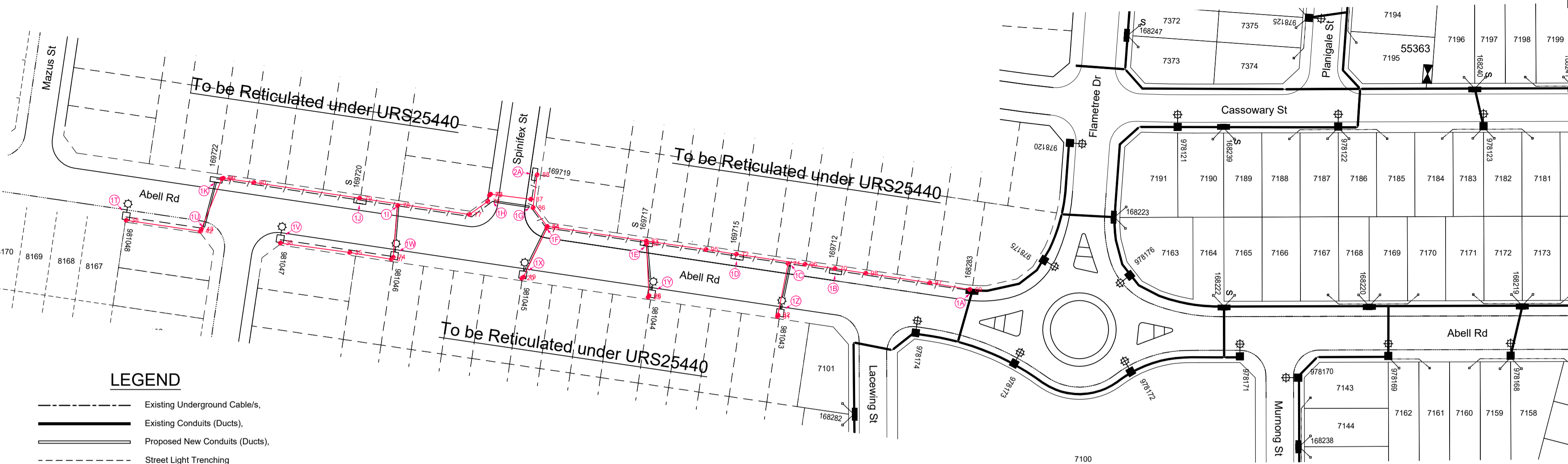
Voltage Drop Calculations Based on an ADMID of 5kVA/lot for lots less than 350m<sup>2</sup>, and 6.5kVA/lot for lots 350m<sup>2</sup> and greater.

Vd = Voltage drop for normal supply @ 100% ADMID  
Emergency / backup voltage drop @ 60% of ADMID

	Source Substation - Fuse Strip	Backed Up Substation - Fuse Strip
VdE1	PMS 55365_S	PMS 55584_S
VdE2	PMS 55365_R	PMS 55584_U
VdE3	PMS 55585_S	PMS 55584_V
VdE4	PMS 55584_V	PMS 55585_S
VdE5	PMS 55585_R	PMS 55584_V
VdE6	PMS 55584_V	PMS 55585_R
VdE7	PMS 55586_U	PMS 55585_U
VdE8	PMS 55585_U	PMS 55586_U
VdE9	PMS 55363_U	PMS 55585_V
VdE10	PMS 55587_U	PMS 55586_S
VdE11	PMS 55586_S	PMS 55587_U
VdE12	PMS 55363_V	PMS 55585_S
VdE13	PMS 55585_S	PMS 55363_V

# Site Plan

Scale 1:1000



## LEGEND

- Existing Underground Cables,
- Existing Conduits (Ducts),
- Proposed New Conduits (Ducts),
- Street Light Trenching
- Low Voltage Trenching
- High Voltage Trenching
- Lay 40mm P.V.C. Service Conduits
- Existing Service Mains
- Pillar Excavation Location,
- Existing Pillar,
- Proposed Column Excavation location  
- 8.5m Enlarged Base Column & 4.5m Curved Pipe Outreach  
- Type 2 Ragbolt (Universal Footing)  
- Colour Powdercoated Black
- Existing Column,
- Proposed New Streetlight Lantern,
- Existing Streetlight Lantern,
- Existing Padmount Substation,
- Duct Indicator.

## Trench Length

High Voltage Trenching	252m
Low Voltage Trenching	25m
Street Light Trenching	38m
Road Crossing	116m
<b>Total</b>	<b>431m</b>

## Construction of this Project

This Project will be constructed at the same time as URS25540 under drawings 522419A and 522420A. All property modifications including easements will be captured under that project.

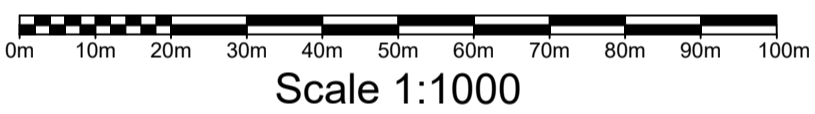
LAI IN CONJUNCTION WITH URS25540 & URS25542

## WAE NOTES

- ONLY CHANGES MARKED UP IN RED FORM ARE PART OF THIS ASSET RECORDING.
- ALL SURFACE ASSETS WERE RECORDED AT LEVEL QUALITY 'C'.
- DUCT TABLE HAS BEEN AMENDED AS PER INSPECTION. REFER TO DUCT SCHEDULE FOR DETAILS.

## WAE LEGEND

- PVC DUCTS (TRENCH)
- PVC DUCTS (UNDERBORE)
- QUALITY LEVEL DATA POINT
- PL PROPERTY LINE
- DE DUCT END
- UB UNDERBORE END



Scale 1:1000

## Authorisation of Estimate Value of Endeavour Energy Funded Assets

Signed: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
Service Number: \_\_\_\_\_  
Funding Amount: \$ \_\_\_\_\_  
Date: \_\_\_\_\_

## KEY DOCUMENTS TABLE

Document Name	Notation Date
Summary Environmental Report - FAT0038 (EMS0001)	15 June, 2021
Safe Design Report	15 June, 2021

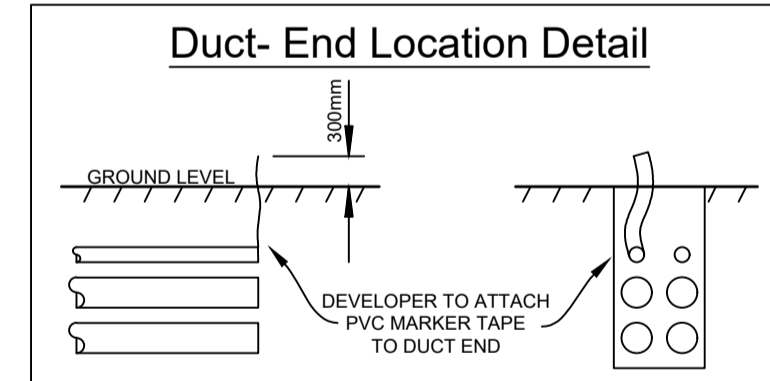
## Funding Arrangements for Scope of Works

ASP Level 1 Electrical Works		Customer
<b>Endeavour Energy Supplied Materials</b>	<b>Customer Funded Non-Contestable Works</b>	<b>Customer Funded</b>
NIL	All works associated with the inspection, testing, switching and the commissioning associated with this project.	Including but not limited to: • Piling of easements, property boundaries and infrastructure locations, • Provide Site Access, • Own Service and Service connections, • Confirm ground levels.
<b>Endeavour Energy Funded &amp; Constructed</b>	<b>Customer Funded Contestable Works</b>	<b>Existing Duct Usage Charges (excl GST)</b>
Works Required Prior to Completion of Customer Contestable Project	Works Required in Association of Customer Contestable Project	Total Usage \$ 0.00
NIL	All other works and materials including but not limited to: • Excavation & Trenching, • Duct Installation, • Cable Installation (Pulling & Laying), • Cable Joining, • Installation of Earthing, • Removal of Redundant Assets.	<b>Co-ordination Supply Required Date</b>
<b>Endeavour Energy Funded &amp; Level 1 ASP Constructed - Reimbursement (excl GST)</b>		01/3/2022
Item	Amount	<b>Assets to be Returned to the nearest Endeavour Energy Depot.</b>
Total EE Capital Contribution (excl. PM & Design)	NIL	NIL
Total EE Capital Contribution (HV reimbursement)	NIL	

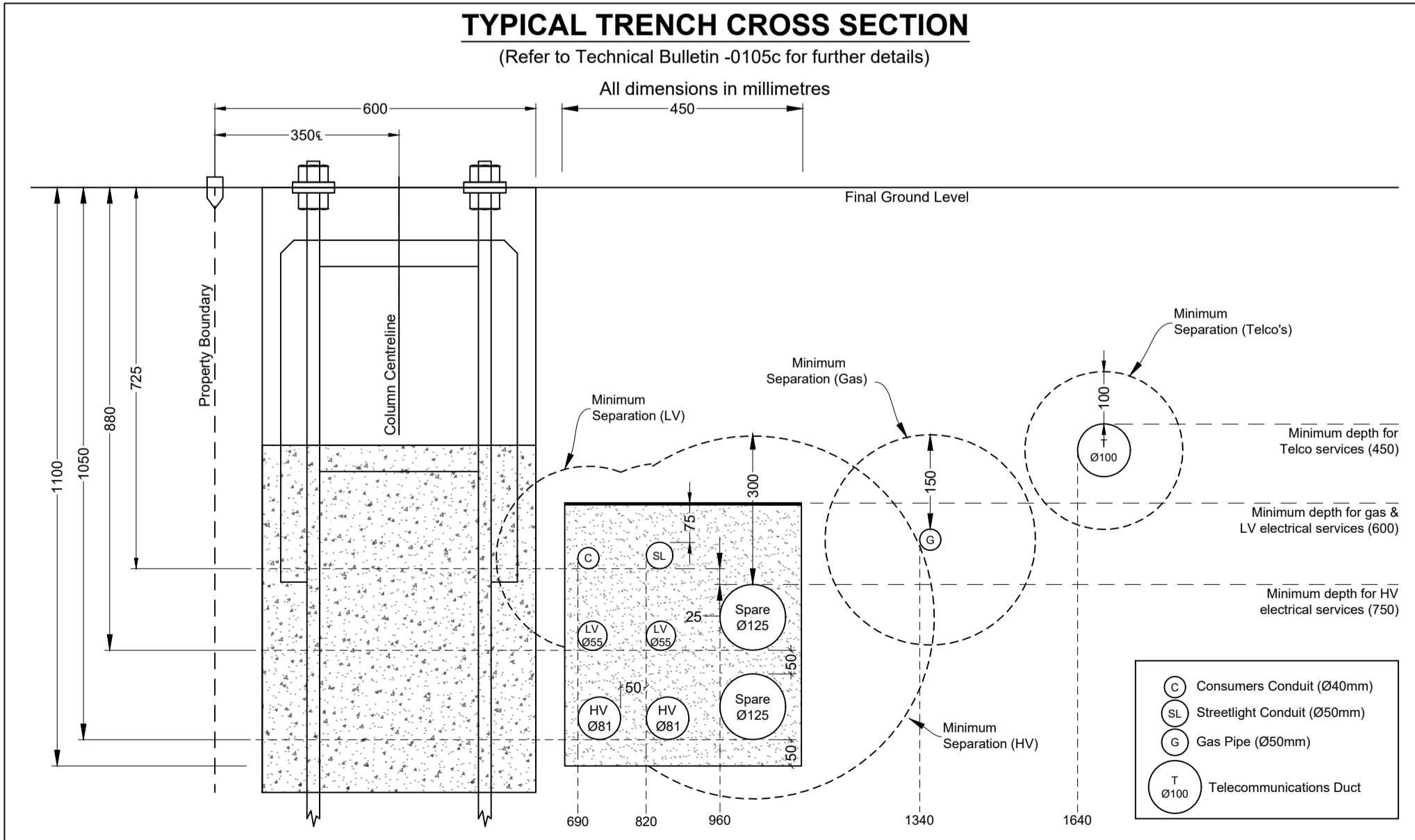
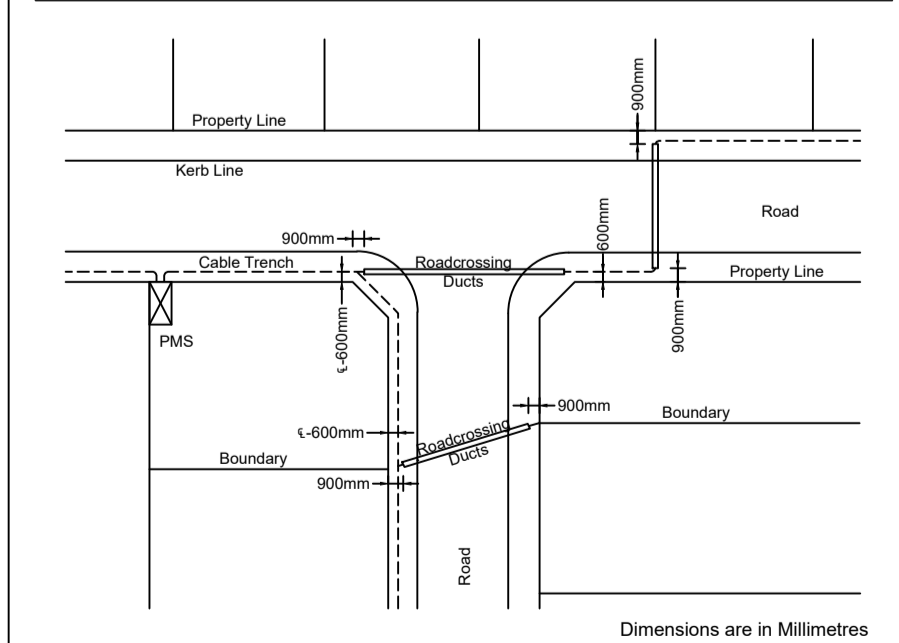
Pioneer Cost Share Reimbursement SCHEME - Expiry Date : N/A

Pro-Rate Reimbursement for Customer's Load Over 50kVA

Asset	Asset Cost Estimate (\$)	Unit Quantity	Net Asset Capacity (kVA)	Original Customer Utilization (kVA)	Maximum Reimbursement Amount (\$)
HV Mains	N/A	(km)			N/A
LV Mains	N/A	(km)			N/A
Substation	N/A				N/A



## TYPICAL ROAD CROSSING CONFIGURATION



**DIAL BEFORE YOU DIG**  
Ref: 20795600 Date: 16 December, 2020  
DBYD searches indicates the presence of services within the proposed work-site. The Level 1 ASP /Constructor is to confirm the location of "all" services prior to the commencement of works.

**Caution**  
A current services search of all utilities must be carried out prior to the commencement of works.

**Caution**  
Existing live electrical assets located in this vicinity, appropriate safety precautions must be utilized.

**Caution**  
Telstra assets in this area. Constructor to contact Telstra on ph 1800 653 935 prior to the commencement of works.

**Caution**  
High Pressure Gas Assets in this area. constructor to contact Jemena on ph 1300 665 380 prior to the commencement of works.

**Final Ground Level**  
The constructor is to confirm finished ground level with the developer prior to the commencement of construction

**Route Lengths**  
All route lengths are to be confirmed on site by the constructor prior to ordering materials.

**Pollution**  
Requirements of the environmental protection authority pollution control legislation is to be strictly adhered to.

**Service Ducts**  
The end of service ducts must not be placed under proposed driveways. (Refer to Developers Representative for details for details)

**Streetlight LV Supply**  
All active conductors extending from LV pillars to service streetlight columns to be fitted with a 16A in line fuse.

**Streetlight Columns**  
All streetlight columns are to be installed 350mm from the property boundaries unless otherwise indicated.

**Painting of Columns**  
Local council requires a certificate from the manufacturer supplied confirming the power coated columns are in accordance with the requirements of AS/NZ 4506-2005.

**Cable Lengths**  
Cable Lengths specified on this design have been calculated utilizing 2 dimensional data to align with Endeavour Energy's AVS. The Constructor will need to allow for additional cable to cater for topographic influences as well as cable terminations, cable setting, and vertical indifference.

**Service Work**  
All service works to be carried out by an authorized level 2 ASP in accordance with the New South Wales Service & Installation Rules, Australian Standards and all other relevant standards.

**Design Compliance and Indemnity**  
This design complies with Endeavour Energy's relevant standards as current at this time & 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,  
• MCI: Mains Construction Instruction,  
• MDI: Mains Design Instruction,  
• PDI: Protection Design Instruction,  
• SDI: Substation Design Instruction,  
• SAD: Design Drawing Standard,  
• MMI: Mains Maintenance Instruction,  
• SMI: Substation Maintenance Instruction,  
• LDI: Public Lighting Electrical Design Element.  
Additionally, where relevant, the design complies with AS/NZS7000 "Overhead Line Design - Detailed Procedures" published by The Australian Standards.  
Power Line Design Pty Ltd indemnifies Endeavour Energy for any loss or damage resulting from non-compliance of the design with the above standards.  
Signed: Mike Baranowski  
Name: Michael J Baranowski  
Service Provider Number: 2486 Date: 12-11-2021

**WORK COMPLETED / FIELD BOOK**  
CONSTRUCTED BY C.J. DOYLE CONTRACTING  
WORKS COMPLETED CHRIS JOWETT  
SIGNATURE C.J. DOYLE DATE 08/09/22  
INSPECTED BY MICHAEL WEIR  
SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
**ASSET RECORDING**  
I STEVE FRIDAY  
OF C.J. DOYLE CONTRACTING  
CONTACT No. 8784-1922  
HEREBY CERTIFY THAT ASSETS MARKED AS-BUILT ON THIS DRAWING HAVE BEEN RECORDED AS PER ENDEAVOUR ENERGY STANDARD SAD 0004.  
SIGNATURE STEVE FRIDAY DATE 08/09/22

**Certified by Endeavour Energy**  
Amendment: \_\_\_\_\_  
Date Approved: \_\_\_\_\_  
Examiner's Signature: \_\_\_\_\_  
Print Name: \_\_\_\_\_  
This Certification is issued subject to Endeavour Energy's Standard Certification Terms.

**APPROVAL TO CONNECT TO PUBLIC LIGHTING**  
Reviewers Name: \_\_\_\_\_  
Date Approved: \_\_\_\_\_  
Reviewers Signature: \_\_\_\_\_  
This Approval is issued subject to Endeavour Energy's General Terms & Conditions for Connection of Public Lighting and is specifically for drawing No. \_\_\_\_\_ Amendment \_\_\_\_\_.

Notes	
1.	This drawing is to be read in conjunction with the relevant Endeavour Energy Network Standards and Connection Policy.
2.	Endeavour Energy Contact Phone: 131081.
3.	Design certification shall lapse where: (i) notice of intent has not been received within six (6) months of this certification, or (ii) construction has been interrupted for more than six (6) months. where design certification has lapsed the design must be resubmitted for certification by the accredited designer.
4.	Accredited Service Provider to notify Endeavour Energy asset data customer department daily when cable works in progress. (ph. 131 081).
5.	<b>ATTENTION:</b> Permanent survey marks may exist in this area, these are to be located by a surveyor prior to commencement of work.
6.	<b>ATTENTION:</b> All services searches must be checked before construction.
7.	<b>ATTENTION:</b> The preparation of this design has been undertaken giving due consideration to the location of existing services. The Constructor is however responsible for the verification of services and permanent survey marks prior to the commencement of construction. No responsibility or liability will be accepted by the designer for damage to existing services as a result of this design.
8.	<b>WARNING:</b> Live Endeavour Energy cables & other services in this area. Please contact "Dial Before You Dig" on telephone: 1100 for searches two days prior to excavation.
9.	<b>Material Quantities Specified on this Design:</b> The quantities or dimensions specified on this design are based on design information supplied and site conditions at the time of the design. As quantities and dimensions are subject to change, the Constructor must check all quantities and dimensions on site prior to tendering and prior to construction.
10.	<b>Reimbursements:</b> Reimbursements will be paid to the nominated party on the letter of intent after the works have been completed and the letter of acceptance has been issued. The reimbursed amount is shown in the "Funding Arrangements for Scope of Work table". Any disagreement with the amount should be resolved with Endeavour energy prior to the commencement of works.
11.	<b>Operational Limitations:</b> Unless approved otherwise, interruption to any customer's supply must be avoided. The following alternatives should be considered: • mobile generators and substations, • live line work, • design alternatives, • low voltage parallels, • work practices/standards. The cost is to be funded by the customer/developer.
12.	<b>Environmental Management plan:</b> EMP EMS0001 is part of this design (refer to EIA for details).
13.	<b>Pollution Controls:</b> All the requirements of the Environmental Protection Authority pollution control legislation is to be strictly adhered to.
14.	<b>Aboriginal Heritage:</b> If during construction of this project the constructor or developer becomes aware of any previously unidentified Aboriginal Object(s), all work likely to affect the object(s) shall cease immediately, and the Office of Environment & Heritage shall be notified immediately in accordance with section 89a of the National Parks & Wildlife ACT 1974. Works shall not commence until written authorization from the NSW Office of Environment and Heritage has been issued, in addition to written consent from the local aboriginal land council.
15.	<b>Heritage:</b> If during construction of this project the constructor or developer becomes aware of any previously unidentified heritage object(s), all work likely to affect the object(s) shall cease immediately, and the Heritage Council of NSW shall be notified immediately in accordance with Section 146 of the Heritage ACT1977. Works shall not commence until written authorization from the heritage council has been issued.
16.	<b>Telecommunications:</b> Telecommunications assets are <b>NOT</b> affected by the proposed works.
17.	<b>Existing Assets:</b> Have all the existing assets been field checked and are accurate at the time of design? <b>YES</b>