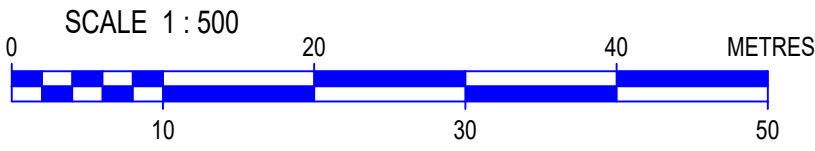


CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION. PHONE DIAL-BEFORE-YOU-DIG ON TELEPHONE 1100 OR AT www.byda.com.au



CONSTRUCTION PLAN



LOT 21
DP 731407

HC37495
DENMAN BATTERY

SEE DETAIL
PLAN 'A' ON
SHEET 2

SEE DETAIL PLAN 'B'
ON SHEET 2

MERRIWA RD
LEMON

DESIGN NOTES

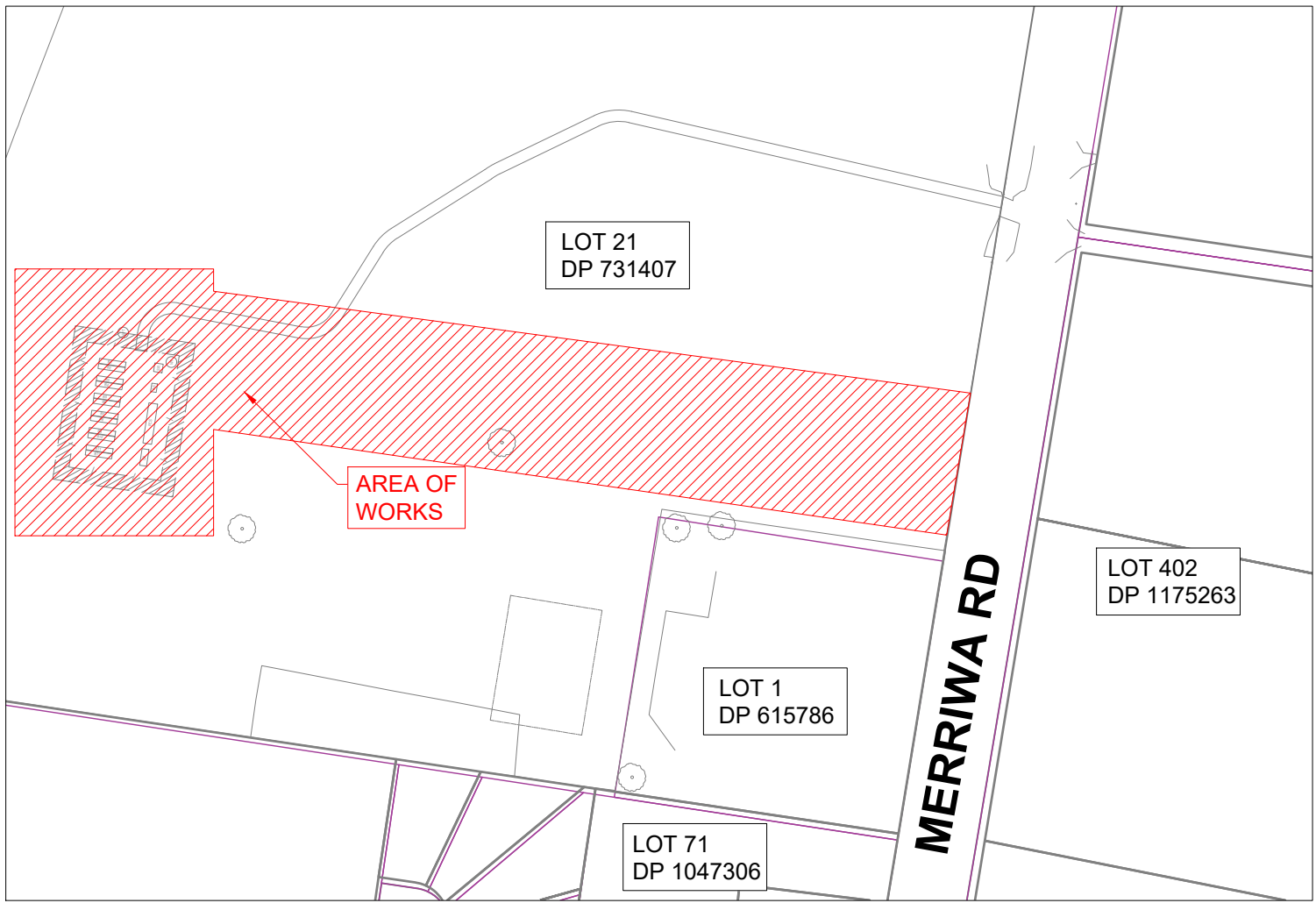
- THIS DRAWING TO BE READ IN CONJUNCTION WITH AND MUST COMPLY WITH AUSGRID'S NETWORK STANDARDS. REFER TO BUT NOT LIMITED TO: - NS104, NS113, NS116, NS130, NS156, NS114, NS127, NS129 & NS177.
- ALL SERVICE WORK TO BE DONE IN ACCORDANCE WITH AS3000:2007 AND THE N.S.W. SERVICE AND INSTALLATION RULES.
- ALL TRENCHING, PITS, CABLES & CONDUITS ARE TO BE SURVEYED MARKED, & PHOTOGRAPHED (INSPECTED BY COMPLIANCE OFFICER PRIOR TO BACKFILLING)
- CONSTRUCTOR IS TO ENSURE THAT ALL CABLES AND CONDUITS ARE INSTALLED RELATIVE TO FINAL LEVELS.
- DO NOT PLACE ANY RELIANCE ON ANY QUANTITIES OR DIMENSIONS GIVEN IN THIS DRAWING. QUANTITIES AND DIMENSIONS GIVEN IN THIS DRAWING ARE BASED ON DESIGN INFORMATION AND SITE CONDITIONS AT THE TIME OF DESIGN. AS QUANTITIES AND DIMENSIONS ARE SUBJECT TO CHANGE, THE BUILDER OF THIS PROJECT MUST CHECK ALL QUANTITIES AND DIMENSIONS ON THE SITE PRIOR TO TENDERING AND PRIOR TO CONSTRUCTION.
- 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.
- HAND EXCAVATION IS TO BE USED IN THE VICINITY OF EXISTING UNDERGROUND CONSTRUCTION.
- ALL CONDUITS ARE TO BE IN ACCORDANCE TO NS130.
- ACCREDITED DESIGNER TO BE CONTACTED REGARDING ISSUES RAISED WITH THIS DESIGN.
- CONSUMER MAINS LENGTH TO BE IN ACCORDANCE WITH AS3000.
- DUCT CONFIGURATIONS SHOWN ARE A GUIDE ONLY - REFER DBYD SEARCHES AND AUSGRID UNDERGROUND MAPS FOR MORE DETAIL.
- HV MAINS TO HAVE MIN 600mm COVER IN FOOTPATH & MIN 750mm COVER IN ROADWAY. LV MAINS TO HAVE MIN 500mm COVER IN FOOTPATH & MIN 750mm COVER IN ROADWAY.
- TELSTRA AND OPTUS TO BE NOTIFIED OF PROPOSED WORK PRIOR TO CONSTRUCTION:
CONTACTS:
TELSTRA: f0204107@team.telstra.com (EMAIL)
OPTUS: dartsnw@optus.com.au (EMAIL)
- EXCAVATION NEAR TREES TO BE DONE IN ACCORDANCE WITH AS4970.

GENERAL NOTES

- CLAIMS FOR VARIATIONS TO THE COST OF NON-CONTESTABLE WORKS, INCLUDING ROCK EXCAVATION, WILL NOT BE ACCEPTED UNLESS VERIFIED ON SITE BY AUSGRID WHILE THE WORKS ARE IN PROGRESS.
- THE ASP/1 IS RESPONSIBLE FOR UNDERTAKING SATISFACTORY CONSULTATION WITH ALL LOCAL CUSTOMERS WHO MAY POTENTIALLY BE AFFECTED BY THE CONSTRUCTION WORKS INCLUDING ALL ALTERATIONS TO SERVICE MAINS.
- THE ASP/1 MUST MINIMISE THE IMPACT OF THE WORKS ON THE ELECTRICITY SUPPLY TO CUSTOMERS AND INTERRUPTIONS TO SUPPLY MUST BE AVOIDED WHEREVER POSSIBLE. AT LEAST FOUR (4) CLEAR BUSINESS DAYS NOTICE MUST BE PROVIDED TO ALL AFFECTED CUSTOMERS PRIOR TO ANY PLANNED INTERRUPTIONS TO THE ELECTRICITY SUPPLY. NOTICE MUST BE IN WRITING IN ACCORDANCE WITH CLAUSE 90 OF THE NATIONAL ENERGY RETAIL RULES.
- SPECIFIC PRIOR APPROVAL MUST BE SOUGHT FROM AUSGRID FOR ANY PLANNED ELECTRICITY SUPPLY INTERRUPTIONS WHERE THE PLANNED INTERRUPTION WILL EXCEED ONE (1) HOUR IN DURATION OR THE DURATION WILL BE LESS THAN ONE HOUR, BUT A SUITABLE TIME FOR THE INTERRUPTION CANNOT BE MUTUALLY AGREED TO WITH THE AFFECTED CUSTOMER(S).
- THE ASP/1 IS TO MAINTAIN ADEQUATE PUBLIC LIGHTING LEVELS FOR THE DURATION OF THE WORKS. IF NECESSARY, THE ASP/1 IS TO ARRANGE FOR SUITABLE TEMPORARY STREET LIGHTING TO BE PROVIDED UNTIL PERMANENT LIGHTING IS RE-ESTABLISHED.
- THE ASP/1 IS TO CO-ORDINATE THE MODIFICATION AND TESTING OF ANY REQUIRED PROTECTION RELAY WITH THE AUSGRID TECHNICAL SERVICES GROUP
- THE ASP/1 IS REQUIRED TO COMPLY WITH THE CORRECT PROCEDURE(S) FOR WORKING WITH AND/OR NEAR ASBESTOS MATERIAL (REFER TO AUSGRID NUS 211 - WORKING WITH ASBESTOS PRODUCTS).
- THIS INFORMATION INCLUDES DATA FROM THE NSW DIGITAL CADASTRAL DATABASE BY LAND AND PROPERTY INFORMATION © 2016, USED UNDER CREATIVE COMMONS LICENCE VERSION 4.0.
- FOR IDENTIFICATION AND JOINTING PURPOSES, ALL CABLE ENDS SHALL BE LABELLED AT THE TERMINATION LOCATIONS AND IN JOINT BAYS DURING CABLE INSTALLATION. THE CABLES MUST BE LABELLED AS PER CERTIFIED DESIGN DRAWING

ASP LEVEL 2 WORK

- ALL LEVEL 2 ASP WORK DEPICTED ON THIS DRAWING IS SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT FORM PART OF THE CERTIFIED DESIGN.



LOCALITY MAP

NOT TO SCALE

ALL WORKS TO COMPLY WITH AUSGRIDS NETWORK STANDARDS, UNLESS NETWORK STANDARD VARIATION IN ACCORDANCE WITH NS181 HAS BEEN APPROVED IN WRITING BY AUSGRID. IN THE EVENT OF A DISCREPANCY BETWEEN THIS CERTIFIED DESIGN AND AUSGRID'S NETWORK STANDARDS, THE NETWORK STANDARD REQUIREMENT SHALL PREVAIL.



- This design cannot be used for construction purposes until the location of all existing services is verified.
- The information provided in this design must be checked on site and the most current information on the configuration of all services, including ausgrid's network, must be verified immediately before construction commences by contacting dial-before-you-dig by telephone on 1100 or at www.byda.com.au.
- Dial-before-you-dig information must not be older than 20 business days at the time of construction.
- Check for other services before boring or excavating

CAD DRAWING
20160817

AMENDMENTS

PROPOSED EXISTING
Pole ○
SL Standard ⊗
Pillar Standard ⊗
LV Link Pillar ⊗
Streetlight ⊗
Streetlight-PEC ⊗
Streetlight-replacement ⊗

PROPOSED EXISTING
Pole-to be removed ●
USL ⊗
ABS ⊗
IDT ⊗
Kiosk Sub ⊗
Chamber Sub ⊗
Pole Sub ⊗
Two Pole Sub ⊗

PROPOSED EXISTING
UGOH ○ Pot End ⊗
Joint ○ Sealed End ⊗
Conduit ⊗
OH Lines ⊗
UG Cables ⊗
OH Lines ⊗
UG Cables ⊗

PROPOSED EXISTING
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OH Lines ⊗
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OH Lines ⊗
UG Cables ⊗



ASP REF: SY230159 - R07 - STAGE 1

CERTIFICATION NUMBER

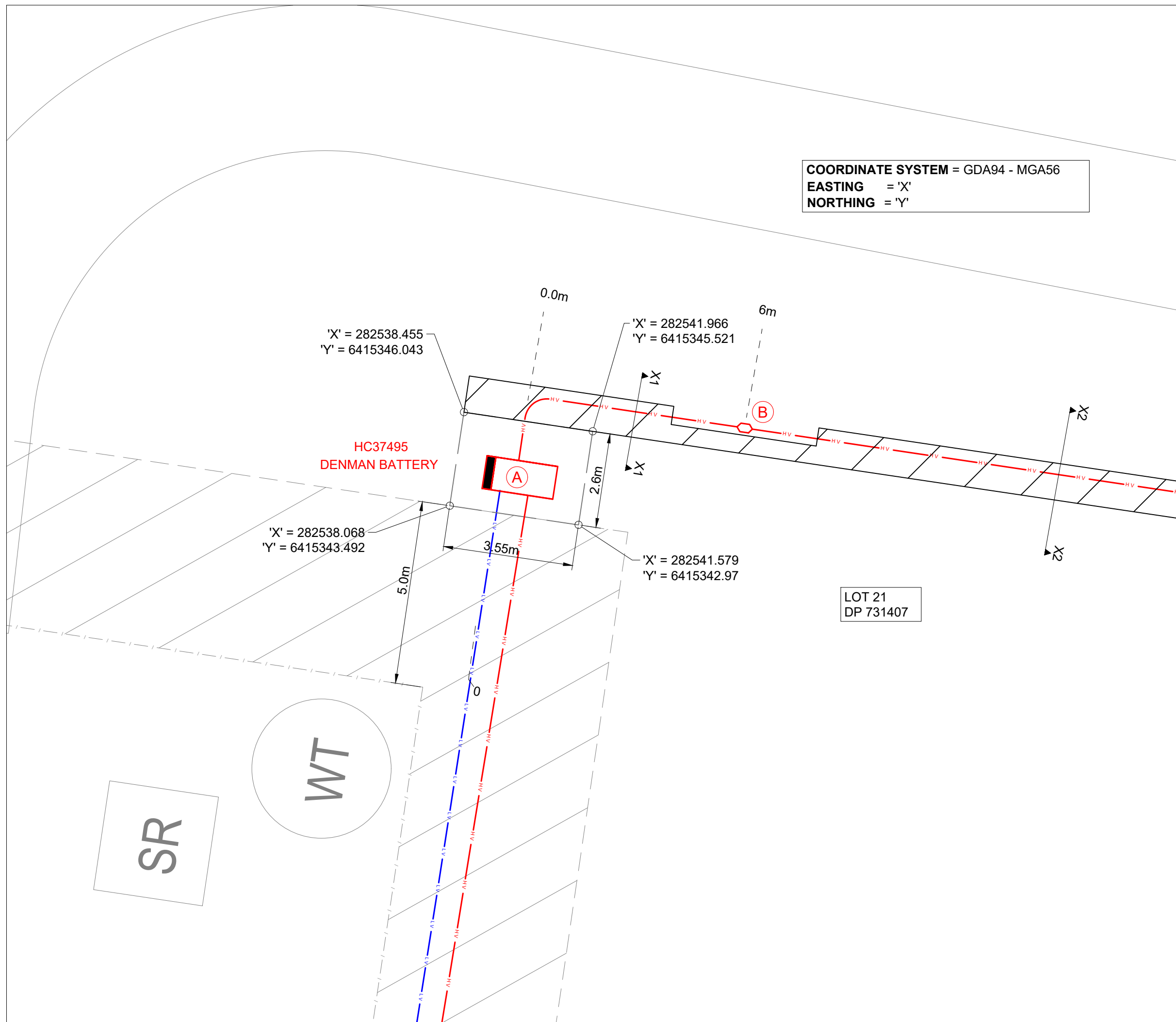
DESIGNED BY: Braj Dubey
AUTH NO: 6245
SUBMIT DATE: 21.11.2023
LGA: MUSWELLBROOK
MAP REF: UBD or STREET DIR. REF
AUSGRID REF: 8M33
PRJ/TRA No: XCW027919

/

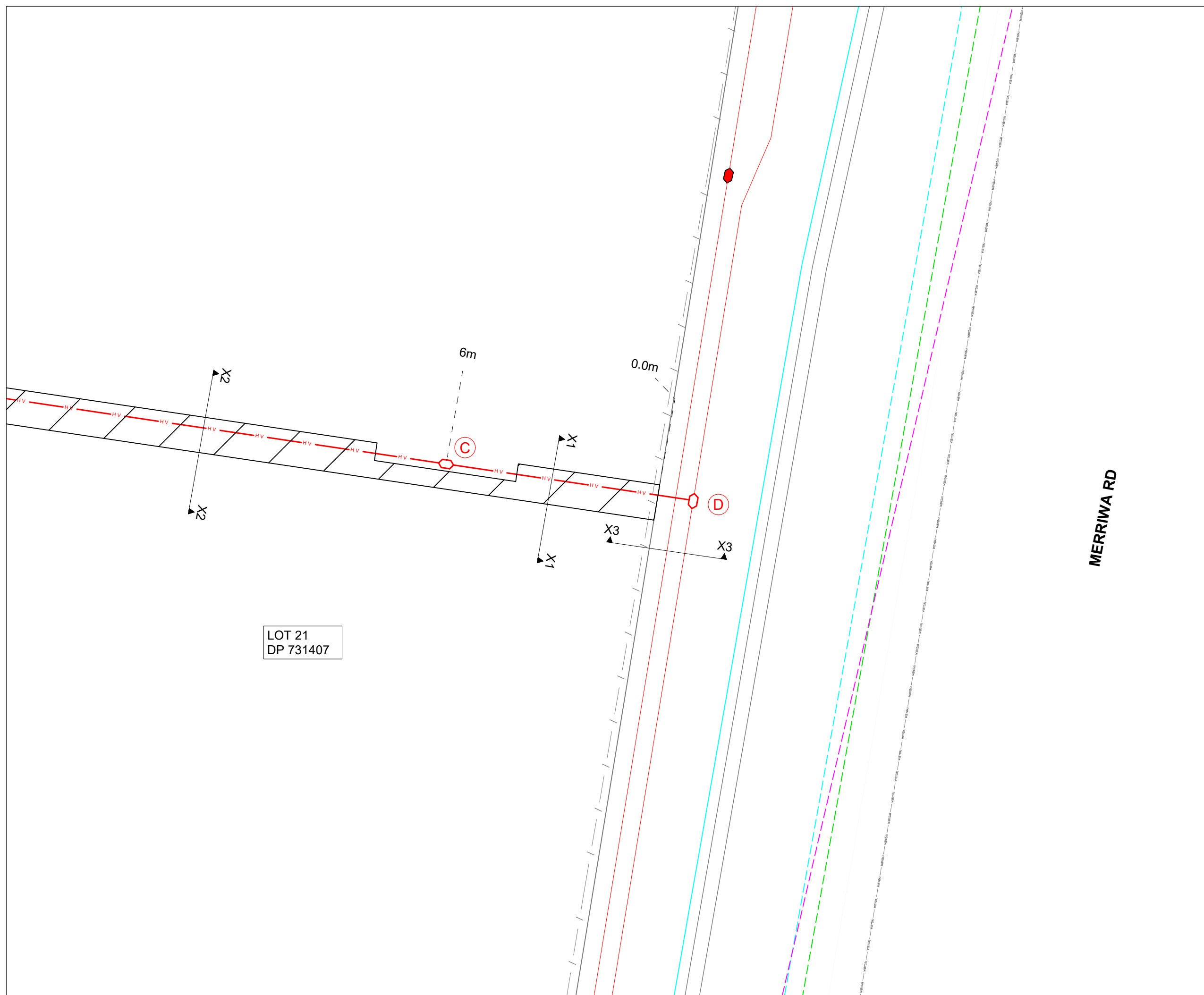
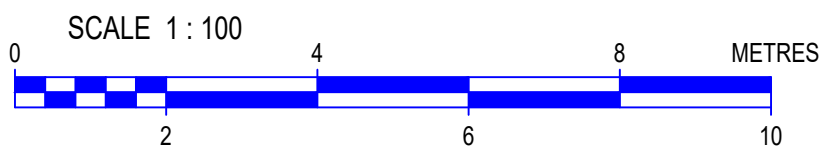
PROPOSED 11kV HVC KIOSK KIOSK & 11kV EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

SIZE: A1
AUSGRID PROJECT NO: AN-25002
SHEETS: 1 of 7
AMD: 0

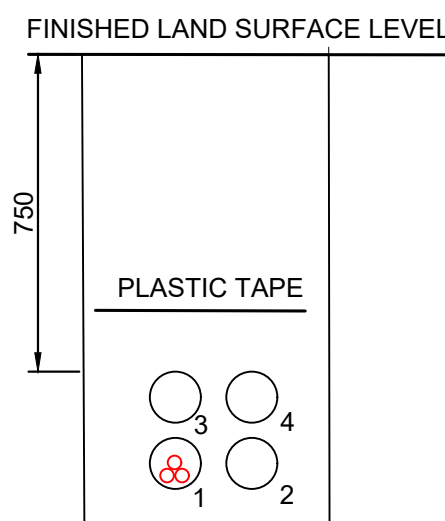
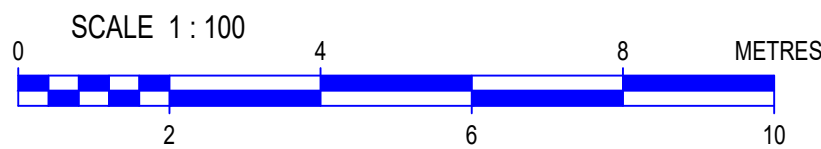
CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION. PHONE DIAL-BEFORE-YOU-DIG ON TELEPHONE 1100 OR AT www.byda.com.au



DETAIL PLAN A

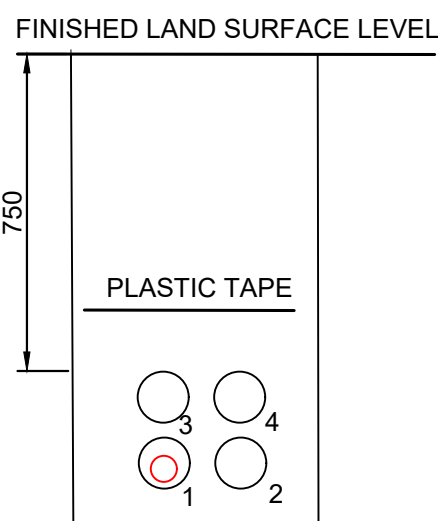


DETAIL PLAN B



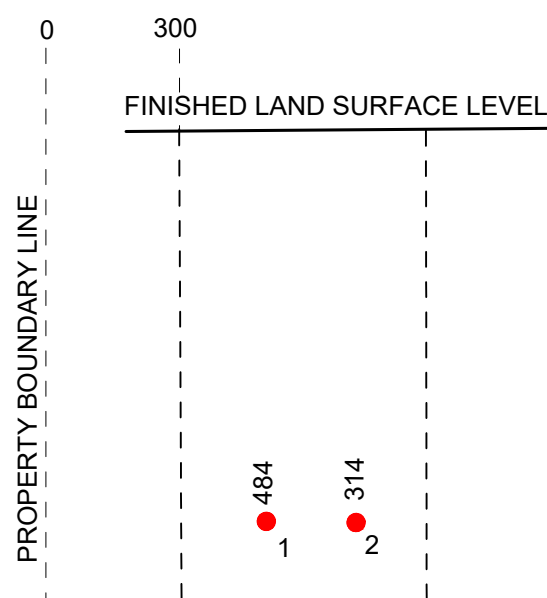
SECTION X1

- 1 - 1 x 11kV 300CU1/TRIPLEX IN NEW 150MM CONDUIT
- 2 - SPARE NEW 150MM CONDUIT
- 3 - SPARE NEW 150MM CONDUIT
- 4 - SPARE NEW 150MM CONDUIT



SECTION X2

- 1 - 1 x 11kV 400AL3 IN NEW 150MM CONDUIT
- 2 - SPARE NEW 150MM CONDUIT
- 3 - SPARE NEW 150MM CONDUIT
- 4 - SPARE NEW 150MM CONDUIT



SECTION X3

- 1 - EXISTING HV CABLE
- 2 - EXISTING HV CABLE

CAD DRAWING
AMENDMENTS

PROPOSED
Pole
SL Standard
Pillar Standard
LV Link Pillar
Streetlight
Streetlight-PEC
Streetlight-replacement

EXISTING
Pole-to be removed
USL
ABS
IDT
Kiosk Sub
Chamber Sub
Pole Sub
Two Pole Sub

PROPOSED
UGOH Pot End
Joint Sealed End
Conduit
OH Lines
UG Cables
OH Lines
UG Cables

EXISTING
UGOH Pot End
Joint Sealed End
Conduit
OH Lines
UG Cables
OH Lines
UG Cables

REMOVE
OH lines
LV
SL
UG lines
HV
LV
SL
Joints
HV LV SL

Pole Sub
Ground Sub
Node Point
Open Point
Mains Section Change
LV Links
OH Mains
UG Mains

PROPOSED
OH lines
LV
SL
UG lines
HV
LV
SL
Joints
HV LV SL

EXISTING
OH lines
LV
SL
UG lines
HV
LV
SL
Joints
HV LV SL

PROPOSED
OH lines
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SL
UG lines
HV
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Joints
HV LV SL

EXISTING
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Joints
HV LV SL

PROPOSED
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UG lines
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Joints
HV LV SL

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Joints
HV LV SL

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PROPOSED
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SL
UG lines
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LV
SL
Joints
HV LV SL

EXISTING
OH lines
LV
SL
UG lines
HV
LV
SL
Joints
HV LV SL

NORTHROP
Sydney
345 George Street, Sydney, N.S.W. 2000
Ph (02) 9241 4188 Fax (02) 9241 4324 Email: sydney@northrop.com.au
P.O. Box H171, Australia Square, N.S.W. 1215
A80 41 004 433 100

DESIGNED BY: Braj Dubey
AUTH NO.: 6245
SUBMIT DATE: 21.11.2023
LGA: MUSWELLBROOK
MAP REF: UBD or STREET DIR. REF
AUSGRID REF: 8M33
PRJ/TRA No.: XCW027919

PROPOSED 11kV HVC KIOSK
& 11kV EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

ASSOCIATED DRAWINGS

CERTIFICATION NUMBER

/

SIZE A1

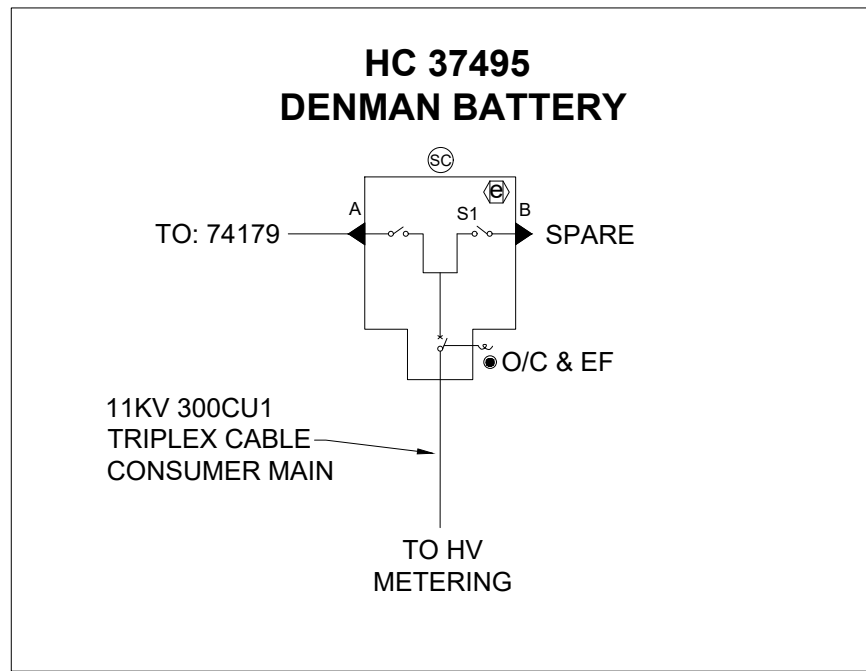
AUSGRID PROJECT NO: AN-25002

SHEETS 2 of 7

AMD 0

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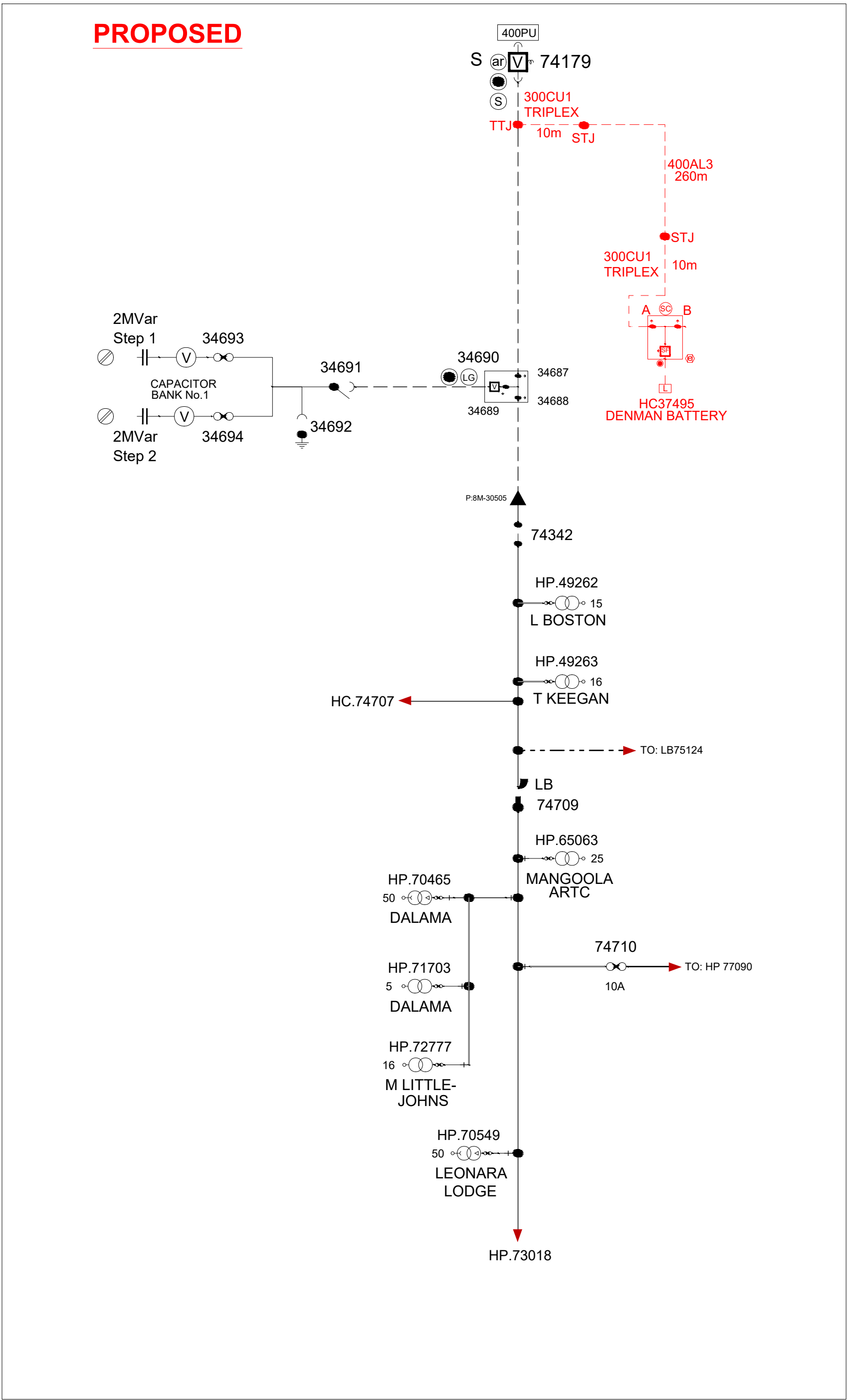
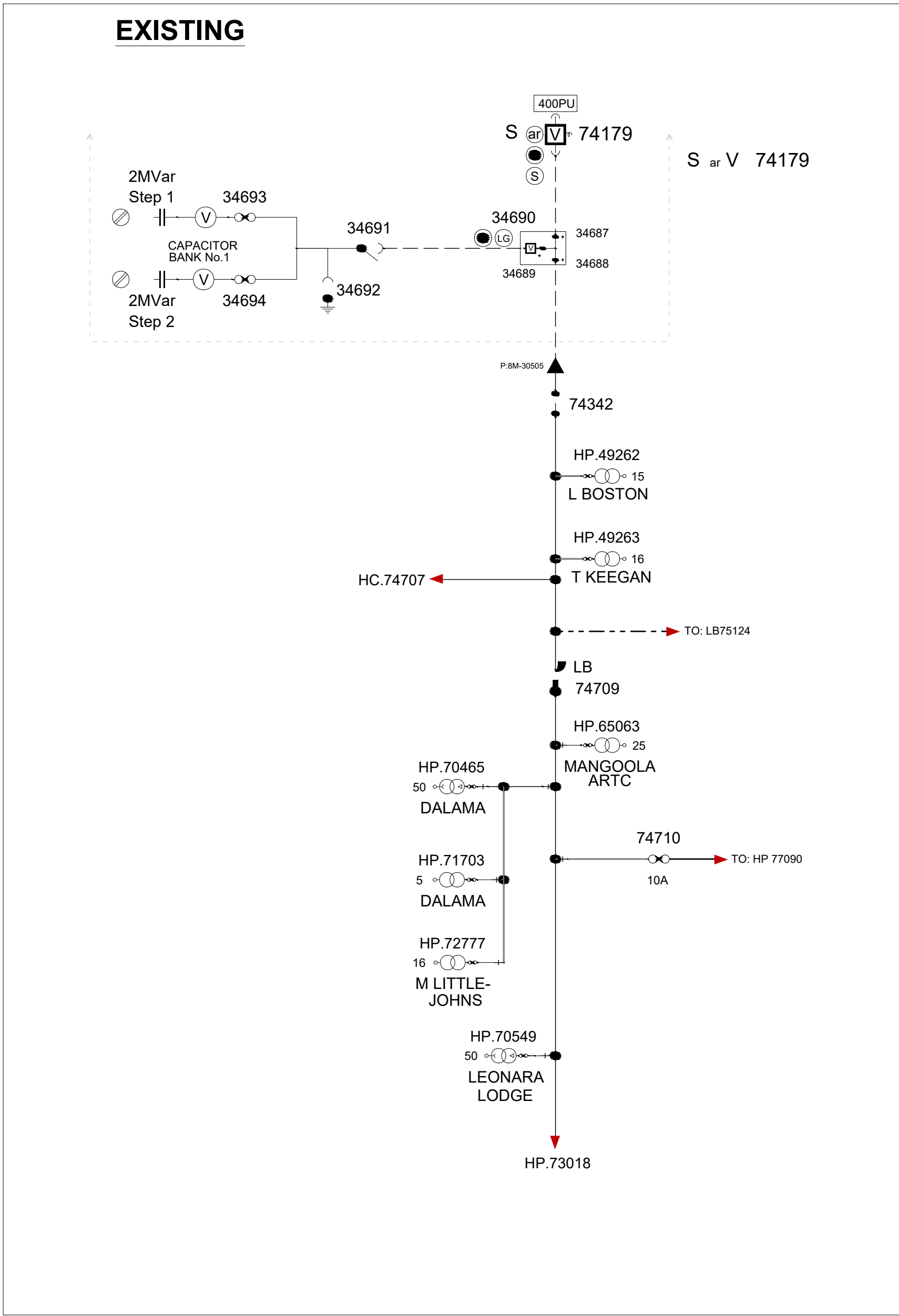
ZN.807 DENMAN 11kV DISTRIBUTION



SUBSTATION SCHEMATIC

HVC DETAILS			
SUBSTATION NAME:	HC.37495		
SUBSTATION NUMBER:	DENMAN BATTERY		
ADDRESS:	105 MERRIWA RD, DENMAN		
SUBSTATION TYPE:	KR		
SIZE (kVA):	N/A		
VECTOR GROUP:	N/A		
TAP SETTING:	N/A		
HV SWITCHGEAR:	SCHNEIDER ELECTRIC RM6 RMICB		
HV FUSE DETAILS:	N/A		
LOAD CYCLE:	N/A		
PHASING DETAIL:	N/A		
CONFIGURE AS:	Dyn11		
EARTHING REQUIREMENTS:	NS116 & SITE SPECIFIC ON SHEET 5		
HVC PIERING:	NS195 DRAWING NUMBER 258017		
EASEMENT PLAN DETAIL:	AS PER SHEET 7		

FAULT CURRENT (kA)			
?	?	?	?
3 PHASE	PHASE TO PHASE	PHASE TO GND (DESIGN)	PHASE TO GND (ACTUAL)
7.900 $\angle$ -85.2°	6.844 $\angle$ -55.2°	8.307 $\angle$ -81.9°	2.773 $\angle$ -21.6°



CAD DRAWING
20160817

AMENDMENTS

PROPOSED EXISTING

Pole ○ ●

SL Standard ⊗ ⊗

Pillar Standard ⊗ ⊗

LV Link Pillar ⊗ ⊗

Streetlight ⊗ ⊗

Streetlight-PEC ⊗ ⊗

Streetlight-replacement ⊗ ⊗

PROPOSED EXISTING

Pole-to be removed ○ ●

USL ⊗ ⊗

ABS ⊗ ⊗

IDT ⊗ ⊗

Kiosk Sub ⊗ ⊗

Chamber Sub ⊗ ⊗

Pole Sub ⊗ ⊗

Two Pole Sub ⊗ ⊗

PROPOSED EXISTING

UGOH ○ Pot End ●

Joint ○ Sealed End ●

Conduit ⊗ ⊗

OH Lines UG Cables ⊗ ⊗

OH Lines UG Cables ⊗ ⊗

REMOVE

OH lines ⊗ ⊗

LV ⊗ ⊗

SL ⊗ ⊗

UG lines ⊗ ⊗

HV ⊗ ⊗

LV ⊗ ⊗

SL ⊗ ⊗

Joints ⊗ ⊗

LV ⊗ ⊗

SL ⊗ ⊗

PROPOSED EXISTING

Pole Sub ⊗ ⊗

Ground Sub ⊗ ⊗

Node Point ⊗ ⊗

Open Point ⊗ ⊗

Mains Section Change ⊗ ⊗

LV Links ⊗ ⊗

OH Mains ⊗ ⊗

UG Mains ⊗ ⊗

ASSOCIATED DRAWINGS

NORTHROP

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A201-01 004 023 100

DESIGNED BY: Braj Dubey

AUTH NO.: 6245

SUBMIT DATE: 21.11.2023

LGA: MUSWELLBROOK

MAP REF: UBD or STREET DIR. REF

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PRJ/TRAJ No.: XCW027919

PROPOSED 11kV HVC KIOSK
& 11kV EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

SIZE: A1

AUSGRID PROJECT NO: AN-25002

SHEETS: 3 of 7

AMD: 0

CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION. PHONE DIAL-BEFORE-YOU-DIG ON TELEPHONE 1100 OR AT www.byda.com.au

NOTE

IT IS THE RESPONSIBILITY OF CUSTOMERS TO ENSURE THAT ONLY SERVICE PROVIDERS WHO ARE SUITABLY ACCREDITED ARE ENGAGED ON CONTESTABLE WORKS, AND TO ENSURE THAT ONLY AUTHORISED PERSONS ARE EMPLOYED ON AUTHORISED WORK. THE CUSTOMER IS RESPONSIBLE FOR THE CONSTRUCTION, OPERATION AND MAINTENANCE OF THE HIGH VOLTAGE CUSTOMER'S INSTALLATION IN ACCORDANCE WITH THE AUSTRALIAN WIRING RULES AS/NZS 3000, THE SERVICE AND INSTALLATION RULES OF NSW AND ANY SPECIFIC REQUIREMENTS OF THE AUSGRID'S NOMINATED MODEL STANDING OFFER OR NEGOTIATED CONNECTION OFFER.

UNDERGROUND CONSTRUCTION WORKS SCHEDULE (DUCT PULL 1.1 SOFTWARE USED)								
REF. IDENTIFIER	ROUTE DISTANCE (m)	CIRCUIT VOLTAGE	CONDUCTOR OR ASSET DETAIL	CONDUCTOR CODE / STOCK CODE	MIN. INTERNAL BENDING RADIUS (mm) DURING INSTALLATION	MIN. INTERNAL BENDING RADIUS (mm) AFTER INSTALLATION	CALCULATED MAX. PULLING TENSION (kN) DURING INSTALLATION	CONSTRUCTION DETAIL
HVC & TERMINATION								
A		11KV	1 x KR TYPE KIOSK HVC	S/C-186402	N/A	N/A	N/A	INSTALL KR TYPE KIOSK HVC AS PER DRAWING NUMBER 258017. EARTHING AS 116. PIERING AS PER NS117&NS141. NOTE: HV METERING EQUIPMENT SHALL BE PROVIDED IN ACCORDANCE WITH THE REGULATIONS AND AUSGRID'S ELECTRICAL STANDARD ES 3 - METERING INSTALLATIONS. THE CUSTOMER'S HV METERING EQUIPMENT (VTS AND CTS) SHALL BE PART OF THE CUSTOMER'S INSTALLATION AND SHALL BE SUPPLIED AND MAINTAINED BY THE CUSTOMER. METERING EQUIPMENT SHALL NOT BE LOCATED WITHIN ANY PART OF AUSGRID'S HVC. THE TYPE OF CONSUMER'S MAINS AND ASSOCIATED CABLE ACCESSORIES SHALL BE COMPATIBLE WITH, AND SUITABLE FOR CONNECTION TO, AUSGRID'S HVC EQUIPMENT, INCLUDING PROTECTION CTS, ETC. NOTE: AUXILIARY LOW VOLTAGE SUPPLY: A NOMINAL 240VAC 20A SINGLE PHASE CIRCUIT SHALL BE PROVIDED FROM THE CUSTOMER'S MAIN LOW VOLTAGE SWITCHBOARD. THIS IS REQUIRED TO PROVIDE SUPPLY FOR PROTECTION BATTERY CHARGING, LIGHTING AND POWER WITHIN THE HVC SUBSTATION. THE SUB-CIRCUIT ORIGINATING FROM THE CUSTOMER'S MAIN SWITCHBOARD MUST BE DEDICATED FOR AUSGRID'S EXCLUSIVE USE ONLY AND SHALL NOT HAVE ANY RESIDUAL CURRENT DETECTION (RCD) OR ELCB DEVICE. THIS IS TO AVOID SPURIOUS TRIPPING. THE CIRCUIT SHALL TERMINATE IN THE HVC SUBSTATION SERVICE BOARD AS SHOWN ON AUSGRID DRAWING 169394. THE CIRCUIT MAINS SHALL BE DOUBLE INSULATED AND CONSIST OF ACTIVE AND NEUTRAL CONDUCTORS ONLY; NO EARTHING CONDUCTOR IS TO BE INCLUDED IN THE CIRCUIT MAINS. THE NEUTRAL IS TO BE TERMINATED ON THE NEUTRAL INSULATED BUSBAR IN A KIOSK SITUATION. NOTE: ORDER LARGER RMU TO SUIT CONNECTION. STANDARD RMU HAS 200A RATED T OFF TO MSB.
A		11KV	1xHV TERMINATION (HV1-52)	N/A	N/A	N/A	N/A	TERMINATE 1 x 300CU1 TRIPLEX CABLE
CONDUIT								
A - B	6	N/A	NEW 4 x150mm PVC CONDUIT (3 SPARE)	N/A	N/A	N/A	N/A	INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X1
B - C	260	N/A	NEW 4 x150mm PVC CONDUIT (3 SPARE)	N/A	N/A	N/A	N/A	INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X2
C - D	6	N/A	NEW 4 x150mm PVC CONDUIT (3 SPARE)	N/A	N/A	N/A	N/A	INSTALL CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X1
TRENCH								
A - B	10	N/A	PROPOSED TRENCH	N/A	N/A	N/A	N/A	EXCAVATE AS PER TRENCH CROSS SECTION
B - C	260	N/A	PROPOSED TRENCH	N/A	N/A	N/A	N/A	EXCAVATE AS PER TRENCH CROSS SECTION
C - D	10	N/A	PROPOSED TRENCH	N/A	N/A	N/A	N/A	EXCAVATE AS PER TRENCH CROSS SECTION
CABLES								
A - B	10	11KV	1 x 300 CU1 TRXQ 70 CU(WS) Z YQ/Triplex	179122	1275(Bundled) 960 (Phase)	850 (Bundled) 575 (Phase)	MANUAL	RUN UNDERGROUND CABLE IN CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X1
B - C	260	11KV	1 x 400 AL3 TRXQ 35 CU(WS) Z YQ	177562	2180	1305	7.50KN	RUN UNDERGROUND CABLE IN CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X2
C - D	10	11KV	1 x 300 CU1 TRXQ 70 CU(WS) Z YQ/Triplex	179122	1275(Bundled) 960 (Phase)	850 (Bundled) 575 (Phase)	MANUAL	RUN UNDERGROUND CABLE IN CONDUIT AS PER ASSOCIATED TRENCH CROSS SECTION X1
JOINTING BAY								
B	3	11KV	1 x JOINTING BAY	N/A	N/A	N/A	N/A	EXCAVATE JOINTING BAY
C	3	11KV	1 x JOINTING BAY	N/A	N/A	N/A	N/A	EXCAVATE JOINTING BAY
D	3	11KV	1 x JOINTING BAY	N/A	N/A	N/A	N/A	EXCAVATE JOINTING BAY
JOINTS								
B	N/A	11KV	1x THREE-TO-ONE JOINT (POLYMERIC TO POLYMERIC) HV2-23	177790	N/A	N/A	N/A	TERMINATE NEW 400AL3 CABLE TO NEW 300CU1 TRIPLEX CABLE INTO POLYMERIC TO POLYMERIC JOINT
C	N/A	11KV	1x THREE-TO-ONE JOINT (POLYMERIC TO POLYMERIC) HV2-23	177790	N/A	N/A	N/A	TERMINATE NEW 400AL3 CABLE TO NEW 300CU1 TRIPLEX CABLE INTO POLYMERIC TO POLYMERIC JOINT
D	N/A	11KV	1 x POLYMERIC TEE JOINTS (POLYMERIC TO POLYMERIC) HV3-40	178132	N/A	N/A	N/A	TERMINATE EXISTING 2 x 300CU3 TO NEW 300CU1/TRIPLEX INTO POLYMERIC TO POLYMERIC TEEJOINT

CAD DRAWING
20160817
AMENDMENTS

PROPOSED
Pole
SL Standard
Pillar Standard
LV Link Pillar
Streetlight
Streetlight-PEC
Streetlight-replacement

EXISTING
Pole
USL
ABS
IDT
Kiosk Sub
Chamber Sub
Pole Sub
Two Pole Sub

PROPOSED
Pole-to be removed

EXISTING
Pole-to be removed

PROPOSED
UGOH Pot End
Joint
Conduit
OH Lines
UG Cables

EXISTING
UGOH Pot End
Joint
OH Lines
UG Cables

REMOVE
OH lines
LV
SL
UG lines
HV
LV
SL
Joints
HV

PROPOSED
Pole Sub
Ground Sub
Node Point
Open Point
Mains Section Change
LV Links
OH Mains
UG Mains

EXISTING
Pole Sub
Ground Sub
Node Point
Open Point
Mains Section Change
LV Links
OH Mains
UG Mains

PROPOSED
Pole Sub
Ground Sub
Node Point
Open Point
Mains Section Change
LV Links
OH Mains
UG Mains

EXISTING
Pole Sub
Ground Sub
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UG Mains

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Pole Sub
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Ground Sub
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Open Point
Mains Section Change
LV Links
OH Mains
UG Mains

EXISTING
Pole Sub
Ground Sub
Node Point
Open Point
Mains Section Change
LV Links
OH Mains
UG Mains



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Email: sydney@northrop.com.au

Sydney
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DESIGNED BY
AUTH NO.
SUBMIT DATE
LGA
MAP REF.
AUSGRID REF.
PRJ/TRAK No.

Braj Dubey
6245
21.11.2023
MUSWELLBROOK
UBD or STREET DIR. REF.
8M33
XCW027919

PROPOSED 11kv HVC KIOSK
& 11kv EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

SIZE
A1
AUSGRID PROJECT NO.
AN-25002
SHEETS
4 of 7
AMD
0

ASSOCIATED DRAWINGS

CERTIFICATION NUMBER

/

Technical drawing of an HV Switchgear Kiosk showing dimensions and specifications:

- Dimensions:**
 - Overall width: 2600
 - Overall height: 1100
 - Front panel height: 900
 - Front panel width: 600
 - Internal width: 500
 - Internal height: 600
 - Base width: 1950
 - Base height: 0561
 - Internal width (bottom): 008
 - Internal height (bottom): 005
- Specifications:**
 - 70mm² BARE COPPER GRADING RING @ 500 DEPTH
 - RIGHT OF WAY & CABLE EASEMENT REQUIRED AROUND KIOSK
 - NO PLANTING IS ALLOWED IN THIS AREA
 - EARTH RODS (2 OFF)
 - 70mm² PVC COVERED COPPER CONDUCTORS
 - 230VAC LV SUPPLY CONDUIT FROM CUSTOMER'S MSB (NO EARTH CONDUCTOR)
- Labels:**
 - FRONT
 - INTERNAL EARTH BAR
 - HV SWITCHGEAR KIOSK

EARTHING LEGEND

(REFER TO NS0116 FOR MORE DETAILS)

	70mm ² BARE COPPER GRADING RING
	70mm ² PVC COVERED COPPER CONDUCTOR
	ELECTRODE

SPECIFIC EARTHING DESIGN TO BE UNDERTAKEN AS INDICATED IN NETWORK STANDARD NS116

GENERAL		
EARTHING CONFIGURATION :		HV ONLY
DESIGN CURVE :		ENA - TDMEN
ELECTRODES INSTALLATION :		DRIVEN
	DESIGN	AS BUILT
HV ELECTRODES		
NUMBER OF ELECTRODES :	2	
DEPTH OF EACH ELECTRODE :	5.4	m
SPACING BETWEEN ELECTRODES :	2.3	m
MAX RESISTANCE - NORMAL :	0.47	ohms
MAX RESISTANCE - DROUGHT :	0.93	ohms
MEASURED :		ohms
MINIMUM SEPARATION DISTANCES *		
MINIMUM SEPARATION FROM TELCO ASSETS :	1.2	m
MINIMUM SEPARATION FROM LONG METALLIC ASSETS WITH HIGH LIKELIHOOD OF CONTACT:	1.200	m
AND/OR MEN ELECTRODES :	6.0	m
REFERENCE DRAWINGS FOR THIS INSTALLATION		
258017		

PROPOSED		EXISTING		PROPOSED		EXISTING		REMOVE		PROPOSED		EXISTING	
Pole			Pole-to-be removed		UG OH Pot End		UG OH Pot End	OH Lines		Pole Sub			
SL Standard			USL		Joint		Joint			Ground Sub			
Pillar Standard			ABS		Conduit		UG Cables			Node Point			
LV Pillar			IDT		OH Lines		UG Cables			Open Point			
LV Link Pillar			Kiosk Sub		-HV-		-HV-			Mains Section Change			
Streetlight			Chamber Sub		-LV-		-LV-			LV Links			
Streetlight-PCC			Pole Sub		-SL-		-SL-			OH Mains			
Streetlight-replacement			Two Pole Sub		-SV-		-SV-			UG Mains			

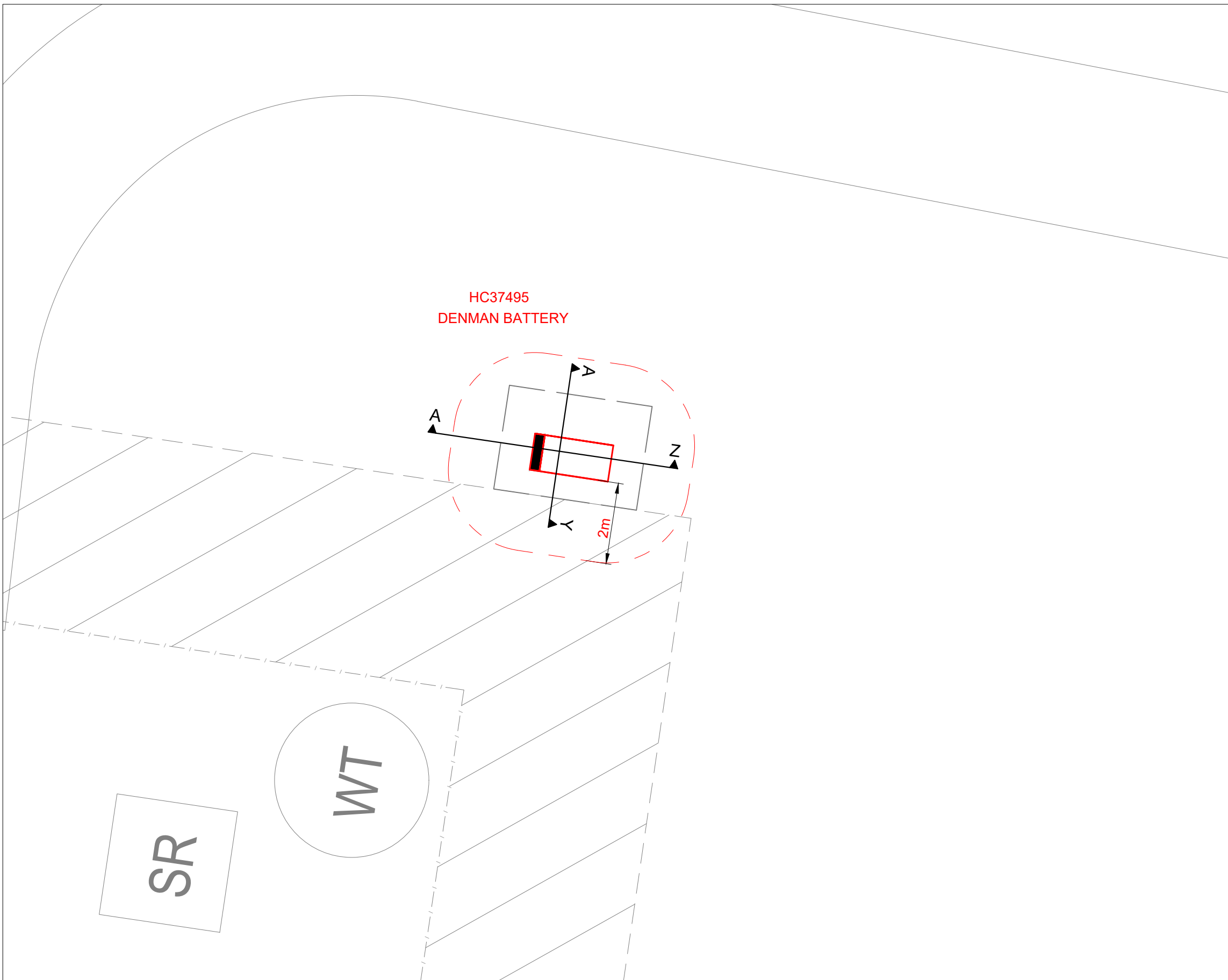
<i>ASSOCIATED DRAWINGS</i>	

 Sydney 345 George Street Sydney, N.S.W. 2000 Fax: (02) 924 4188 FAX: (02) 924 4230 P.O. Box 1147 Australia, Sydney, N.S.W. 1215 E-mail: nstphsy@northrop.com.au ASN 91 434 420 100		DESIGNED BY A/UTH NO. SUBMIT DATE LGA MAP REF. UNGAO REF. PRJ/TRK NO. Bray Dubey 6245 21.11.2003 MUSWELLBROOK UBD or STREET DIR. REF. 8M33 XCW027919	
ASP REF.	SY230159 - R07 - STAGE 1		
CERTIFICATION NUMBER		## / ##	

PROPOSED 11kV HVC KIOSK
& 11kV EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

SIZE A1	AUSGRID PROJECT No. AN-25002	SHEETS 5 of 7	AMD. 0
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CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION. PHONE DIAL-BEFORE-YOU-DIG ON TELEPHONE 1100 OR AT www.byda.com.au



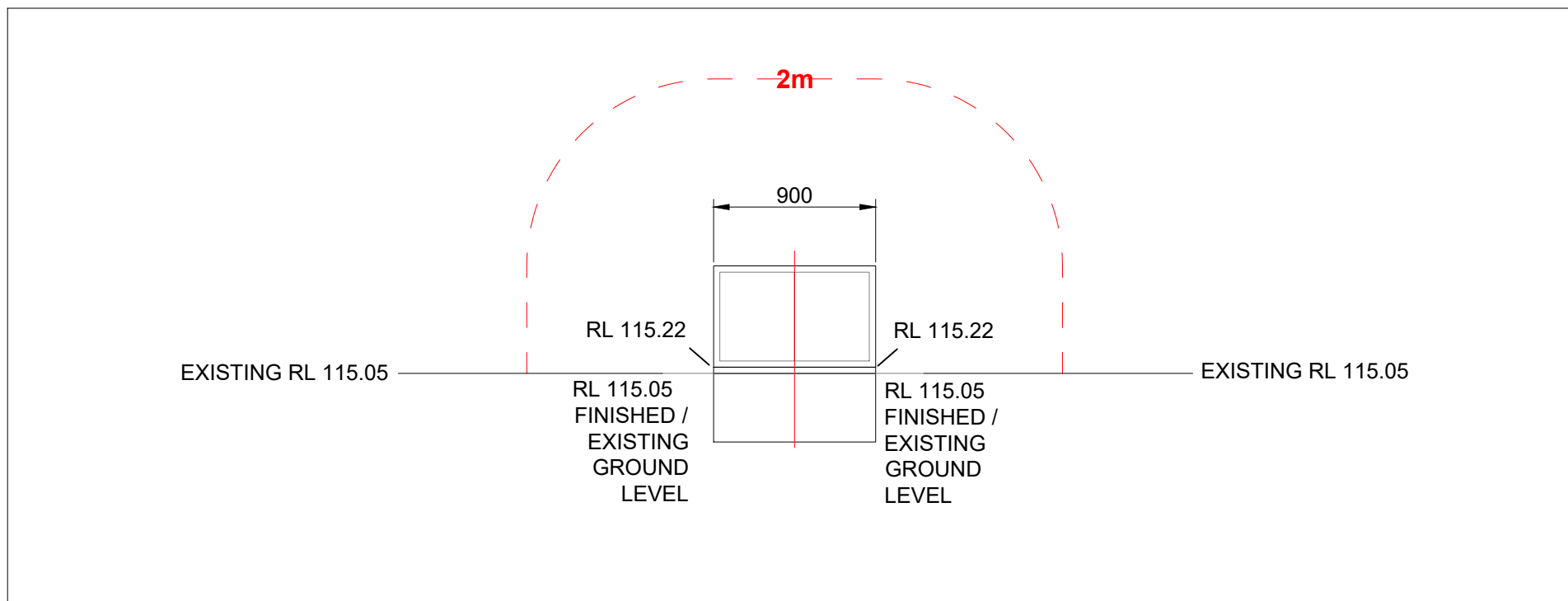
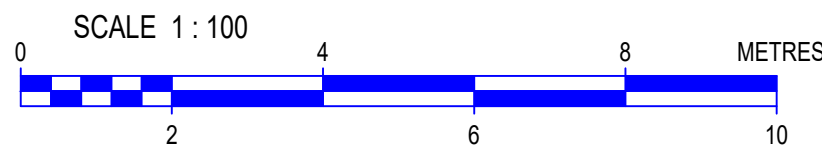
SUBSTATION VENTILATION & RESTRICTION ZONE NOTES:

2m CLEARANCE:
- ANY PORTION OF A BUILDING WITHIN 2 METRES IN ANY DIRECTION FROM THE HOUSING OF A KIOSK
SUBSTATION SHALL BE CONSTRUCTED FROM NON-COMBUSTIBLE MATERIALS, UNLESS IT IS SHELTERED BY A NON-IGNITABLE BLAST-RESISTING BARRIER;

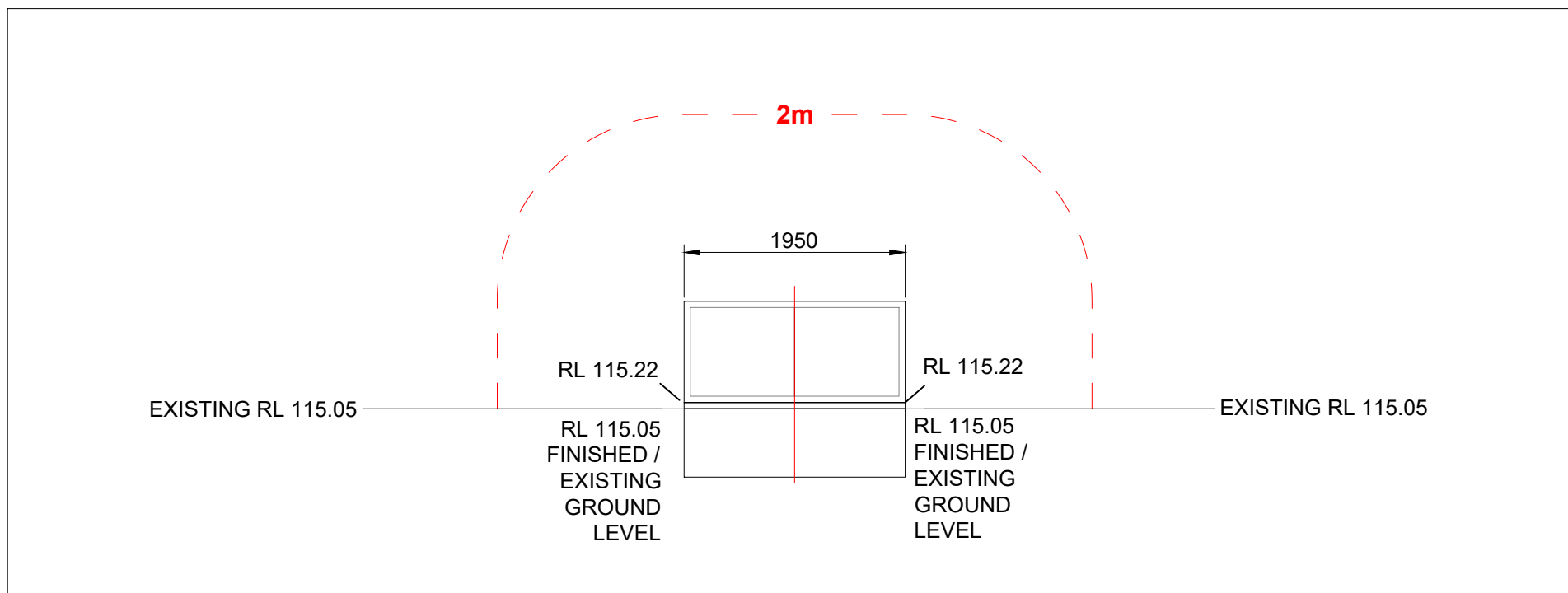
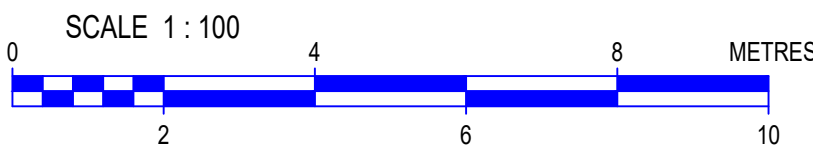
- OPENABLE OR FIXED WINDOWS OR GLASS BLOCKWORK OR SIMILAR, IRRESPECTIVE OF THEIR FIRE RATING, ARE NOT PERMITTED WITHIN 2 METRES IN ANY DIRECTION FROM THE HOUSING OF A KIOSK SUBSTATION, UNLESS THEY ARE SHELTERED BY A NON-IGNITABLE BLAST RESISTING BARRIER;

- ANY METER, REGULATOR OR EXPOSED PIPE WORK ASSOCIATED WITH THE RETICULATION OF GAS WHICH IS WITHIN 2 METRES IN ANY DIRECTION FROM THE HOUSING OF A KIOSK SUBSTATION AND WHICH DOES NOT HAVE A FIRE RESISTANCE LEVEL OF 60/60/60, SHALL BE SHELTERED BY A NON-IGNITABLE BLAST-RESISTING BARRIER

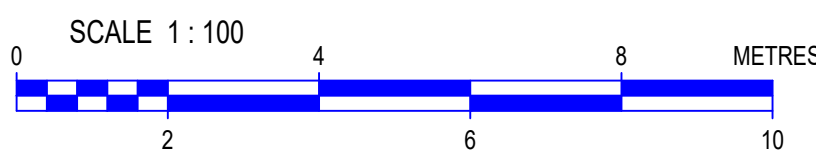
SUBSTATION VENTILATION & RESTRICTION ZONE DIAGRAM



SUBSTATION SITE PROFILE SECTION A-Y



SUBSTATION SITE PROFILE SECTION A-Z



CAD DRAWING
AMENDMENTS

20160817

PROPOSED EXISTING
Pole ○ ●
SL Standard ⊗ ⊗
Pillar Standard ⊗ ⊗
LV Link Pillar ⊗ ⊗
Streetlight ⊗ ⊗
Streetlight-PEC ⊗ ⊗
Streetlight-replacement ⊗ ⊗

PROPOSED EXISTING
Pole-to be removed ○ ●
USL ⊗ ⊗
ABS ⊗ ⊗
IDT ⊗ ⊗
Kiosk Sub ⊗ ⊗
Chamber Sub ⊗ ⊗
Pole Sub ⊗ ⊗
Two Pole Sub ⊗ ⊗

PROPOSED EXISTING
UGOH ○ ● Pot End ⊗ ⊗
Joint ○ ● Sealed End ⊗ ⊗
Conduit ⊗ ⊗
OH Lines UG Cables ⊗ ⊗
OH Lines UG Cables ⊗ ⊗
OH Lines UG Cables ⊗ ⊗

PROPOSED EXISTING
UGOH ○ ● Pot End ⊗ ⊗
Joint ○ ● Sealed End ⊗ ⊗
Conduit ⊗ ⊗
OH Lines UG Cables ⊗ ⊗
OH Lines UG Cables ⊗ ⊗
OH Lines UG Cables ⊗ ⊗

REMOVE
OH lines ⊗ ⊗
LV ⊗ ⊗
SL ⊗ ⊗
UG lines ⊗ ⊗
HV ⊗ ⊗
LV ⊗ ⊗
SL ⊗ ⊗
Joints ⊗ ⊗
HV ⊗ ⊗
LV ⊗ ⊗
SL ⊗ ⊗

PROPOSED EXISTING
Pole Sub ⊗ ⊗
Ground Sub ⊗ ⊗
Node Point ⊗ ⊗
Open Point ⊗ ⊗
Mains Section Change ⊗ ⊗
LV Links ⊗ ⊗
OH Mains ⊗ ⊗
UG Mains ⊗ ⊗

PROPOSED EXISTING
Pole Sub ⊗ ⊗
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Open Point ⊗ ⊗
Mains Section Change ⊗ ⊗
LV Links ⊗ ⊗
OH Mains ⊗ ⊗
UG Mains ⊗ ⊗

ASSOCIATED DRAWINGS

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DESIGNED BY: Braj Dubey
AUTH NO.: 6245
SUBMIT DATE: 21.11.2023
LGA: MUSWELLBROOK
MAP REF: UBD or STREET DIR. REF
AUSGRID REF: 8M33
PRJTRAK No.: XCW027919

PROPOSED 11kv HVC KIOSK & 11kv EXTENSION
LOT 21 DP 731407
105 MERRIWA ROAD
DENMAN NSW 2328

SIZE: A1
AUSGRID PROJECT NO.: AN-25002
SHEETS: 6 of 7
AMD: 0

