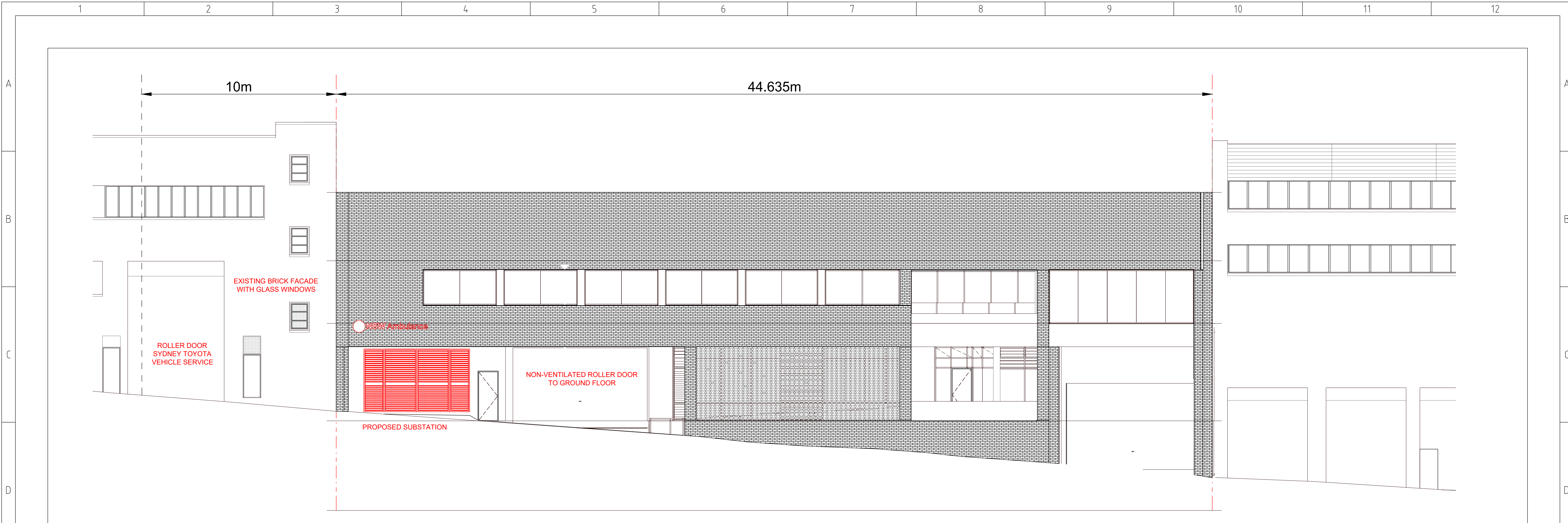
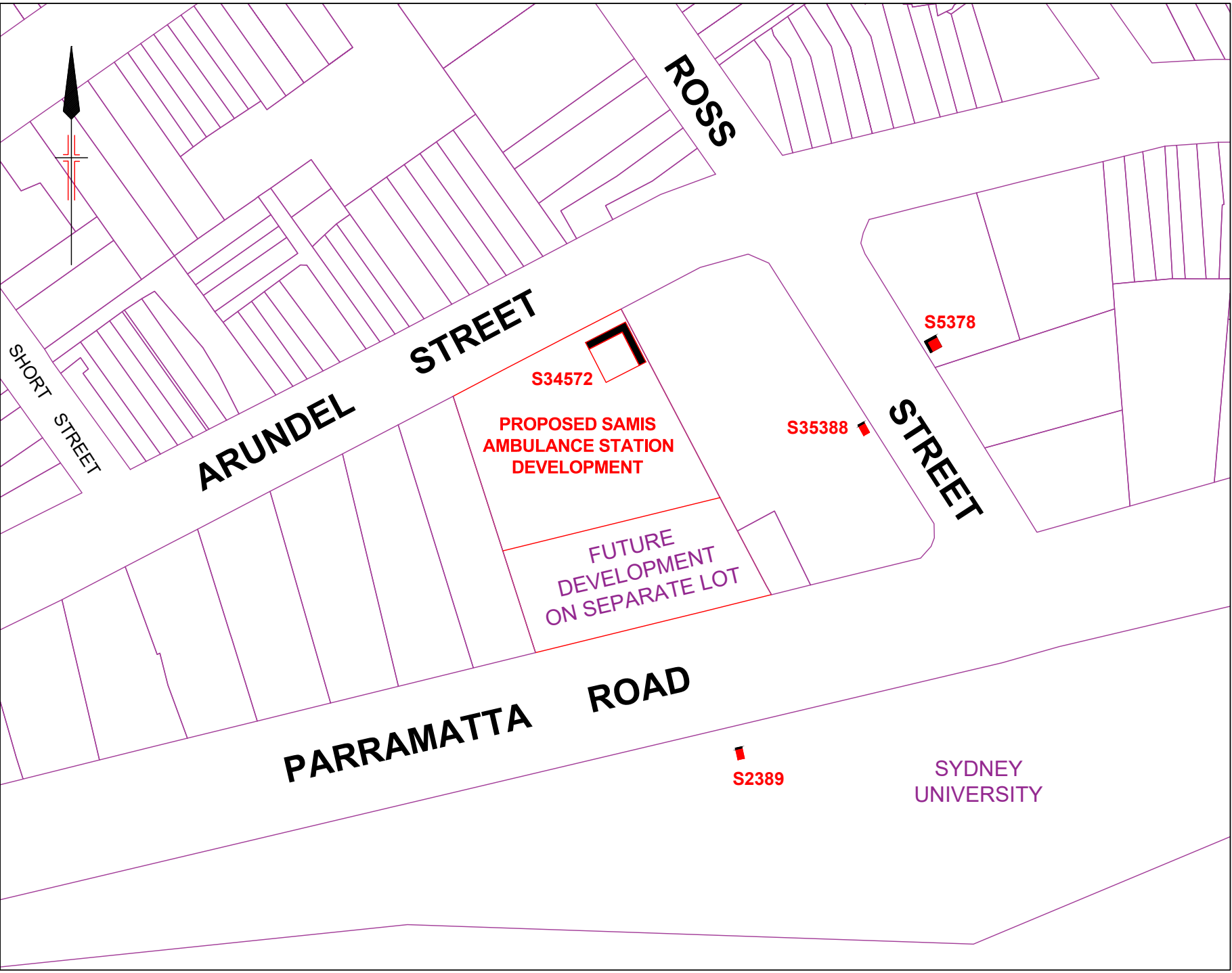
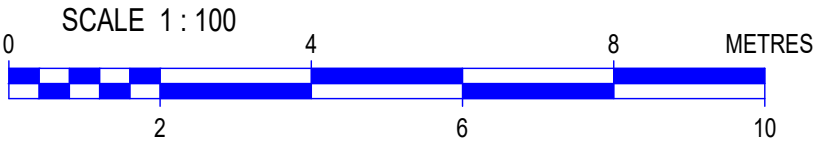




ARUNDEL STREET EXTENDED ELEVATION
SCALE 1:100



LOCATION PLAN
N.T.S.

CONSTRUCTION NOTES

1. THE ASP1 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.
2. THE ASP1 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.
3. 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).
4. THE ASP1 IS TO MAINTAIN ADEQUATE PUBLIC LIGHTING LEVELS FOR THE DURATION OF THE WORKS. IF NECESSARY, THE ASP1 IS TO ARRANGE FOR SUITABLE TEMPORARY STREET LIGHTING TO BE PROVIDED UNTIL PERMANENT LIGHTING IS RE-ESTABLISHED.
5. THIS INFORMATION INCLUDES DATA FROM THE NSW DIGITAL CADASTRAL DATABASE BY LAND AND PROPERTY INFORMATION © 2016, USED UNDER CREATIVE COMMONS LICENCE VERSION 4.0.
6. THE ASP1 IS REQUIRED TO COMPLY WITH THE CORRECT PROCEDURE(S) FOR WORKING WITH AND/OR NEAR ASBESTOS MATERIAL (REFER TO AUSGRID NS211 - WORKING WITH ASBESTOS).
7. 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.
8. ALL DUCTS WHETHER USED OR NOT USED SHALL BE SEALED IN ACCORDANCE WITH NS130 CLAUSE 10.7. ALL CABLE TRENCHES TO ACHIEVE STANDARD DEPTH OF COVER OVER INSTALLED ASSETS PER NS130. ASP1 TO ENSURE THAT STANDARD DEPTH OF COVER IS MAINTAINED WHEN CROSSING EXISTING CABLES WITH NEW CABLES. NEW ASSETS TO BE INSTALLED IN A MANNER THAT MAINTAINS DESIRABLE SEPARATION DISTANCES TO OTHER SERVICES (REFER SOCC GUIDE CLAUSE 5.5.).
9. CABLE LENGTHS AND ROUTE LENGTHS SHOWN ON THIS DESIGN ARE INDICATIVE ONLY. ASP1 TO DETERMINE ACTUAL CABLE LENGTHS THROUGH ON SITE MEASUREMENTS AND EXPERIENCE.
10. ASP1 TO MAKE ARRANGEMENTS WITH COUNCIL FOR PERMANENT REINSTATEMENT OF ALL FINISHED SURFACES IN THE PUBLIC ROAD RESERVE.
11. ASP1 TO MAKE ARRANGEMENTS WITH PROPERTY OWNERS FOR PERMANENT REINSTATEMENT OF ALL FINISHED SURFACES ON PRIVATE PROPERTY.
12. ALL WORKS TO COMPLY WITH AUSGRID 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 REQUIREMENTS SHALL PREVAIL.
13. EXISTING STREET TREES TO BE RETAINED AND PROTECTED. ASP1 TO USE NON-DESTRUCTIVE DIGGING TECHNIQUES WHEN EXCAVATING WITHIN THE TREE PROTECTION ZONE OF EXISTING ESTABLISHED TREES. REFER TO CLAUSE 6.1 OF AUSGRID'S NS174C ENVIRONMENTAL HANDBOOK. THE EXISTING STREET TREE LOCATED IN THE ARUNDEL STREET SOUTHERN FOOTWAY NEAR THE PROPOSED SUBSTATION IS PROTECTED UNDER CLAUSES 85 & 86 OF DETERMINATION APPROVAL D/2020/1088 AND (IF REQUIRED) PRUNING OF CANOPY AND/OR ROOTS MUST BE UNDERTAKEN STRICTLY IN ACCORDANCE WITH DA D/2020/1088 CLAUSE 87.

WARNING

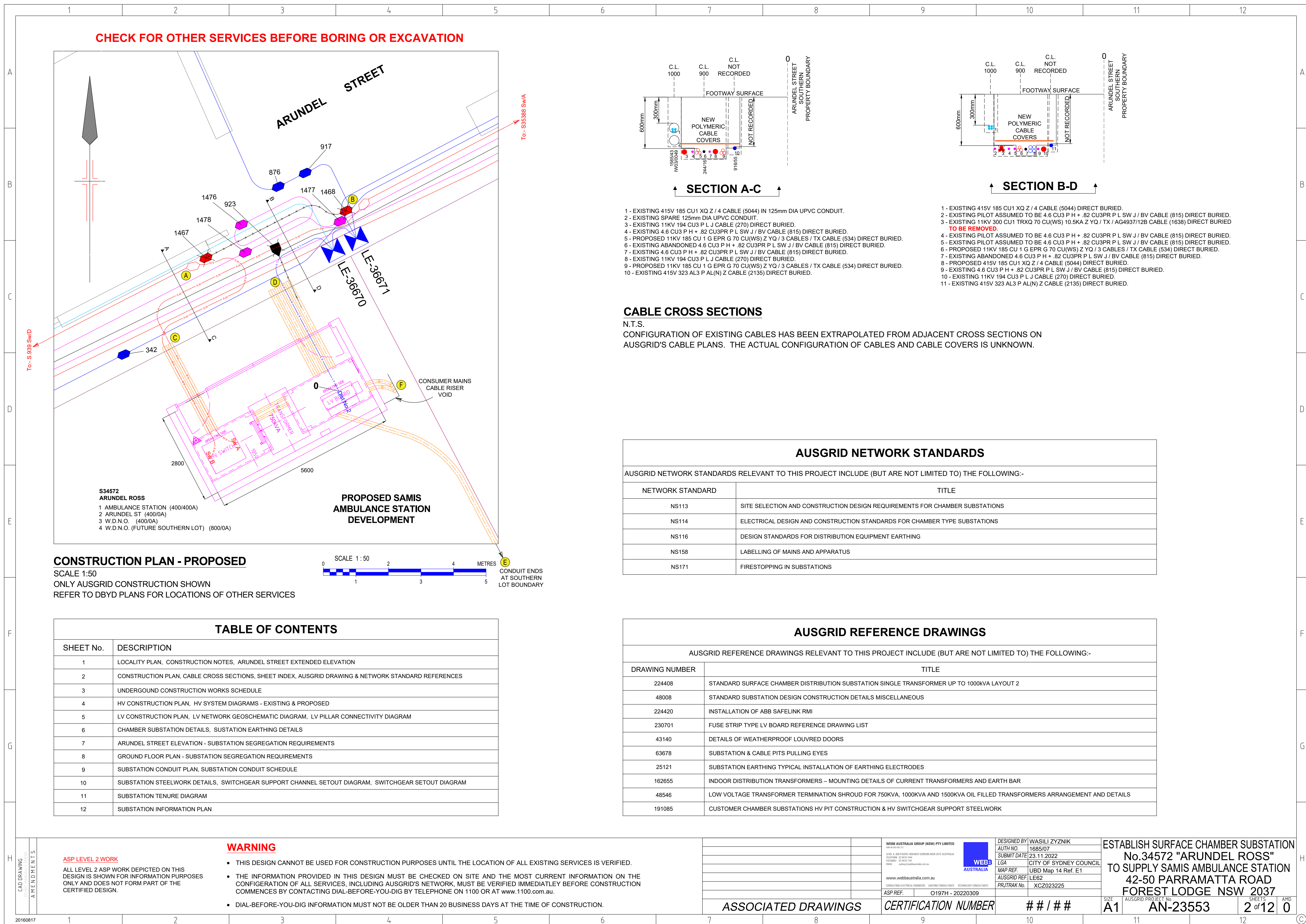
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- DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.

ASP LEVEL 2 WORK

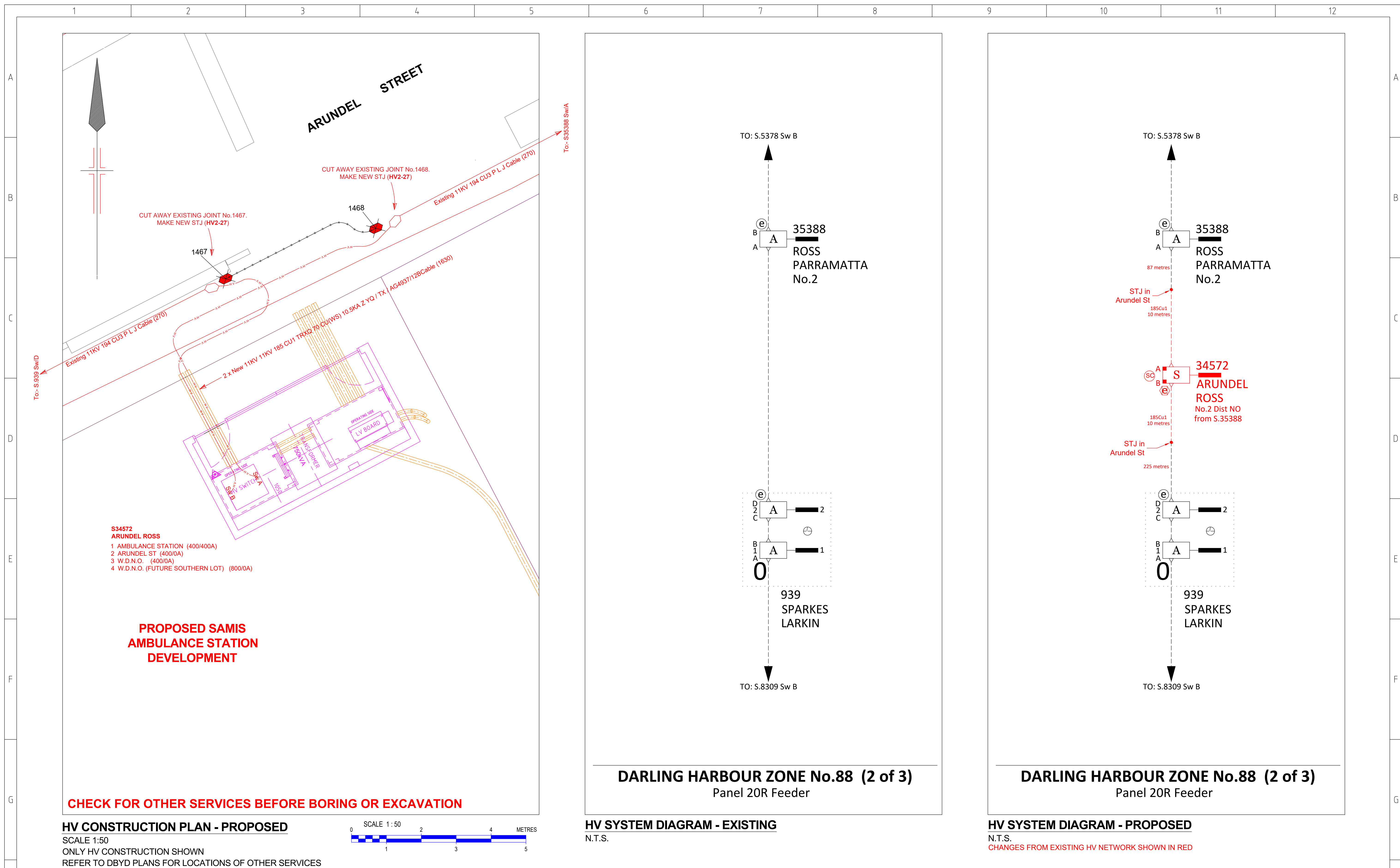
ALL LEVEL 2 ASP WORK DEPICTED ON THIS DESIGN IS SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT FORM PART OF THE CERTIFIED DESIGN.

CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION

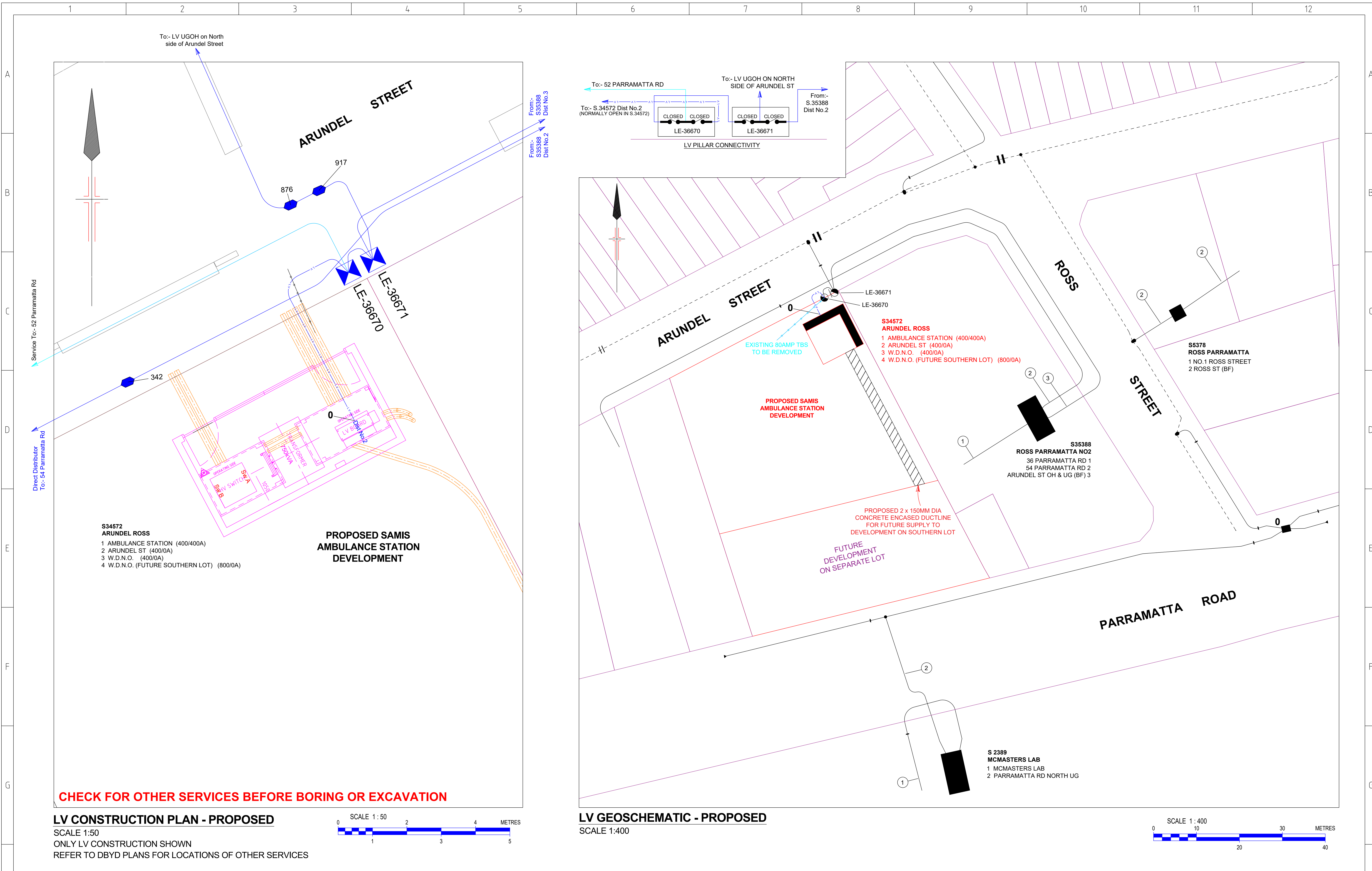
CAD DRAWING 20160817 AMENDMENTS	PROPOSED		EXISTING		PROPOSED		EXISTING		REMOVE		ASSOCIATED DRAWINGS	CERTIFICATION NUMBER	# # / # #	SIZE A1	AUSGRID PROJECT No AN-23553	SHEETS 1 of 12	AMD 0	ESTABLISH SURFACE CHAMBER SUBSTATION No.34572 "ARUNDEL ROSS" TO SUPPLY SAMIS AMBULANCE STATION 42-50 PARRAMATTA ROAD FOREST LODGE NSW 2037
	Pole	○	Pole-to be removed	●	UGOH Pot End	◁	UGOH Pot End	◁	OH lines	---								
	SL Standard	⊗	USL	⊗	Joint	○	Joint	○	LV	---								
	Pillar Standard	⊗	ABS	⊗	Conduit	▨	Conduit	▨	LV	---								
	LV Link Pillar	⊗	IDT	⊗	OH Lines	---	OH Lines	---	SL	---								
	Streetlight	○	Chamber Sub	⊗	UG Cables	---	UG Cables	---	UG lines	---								
	Streetlight-PEC	○	Pole Sub	⊗	-HV-	---	-HV-	---	HV	---								
	Streetlight-replacement	○	Two Pole Sub	⊗	-LV-	---	-LV-	---	LV	---								
	Streetlight-removal	○			-SL-	---	-SL-	---	SL	---								
					-SV-	---	-SV-	---	SV	---								
									Joint	---								
									LV	---								
									SL	---								



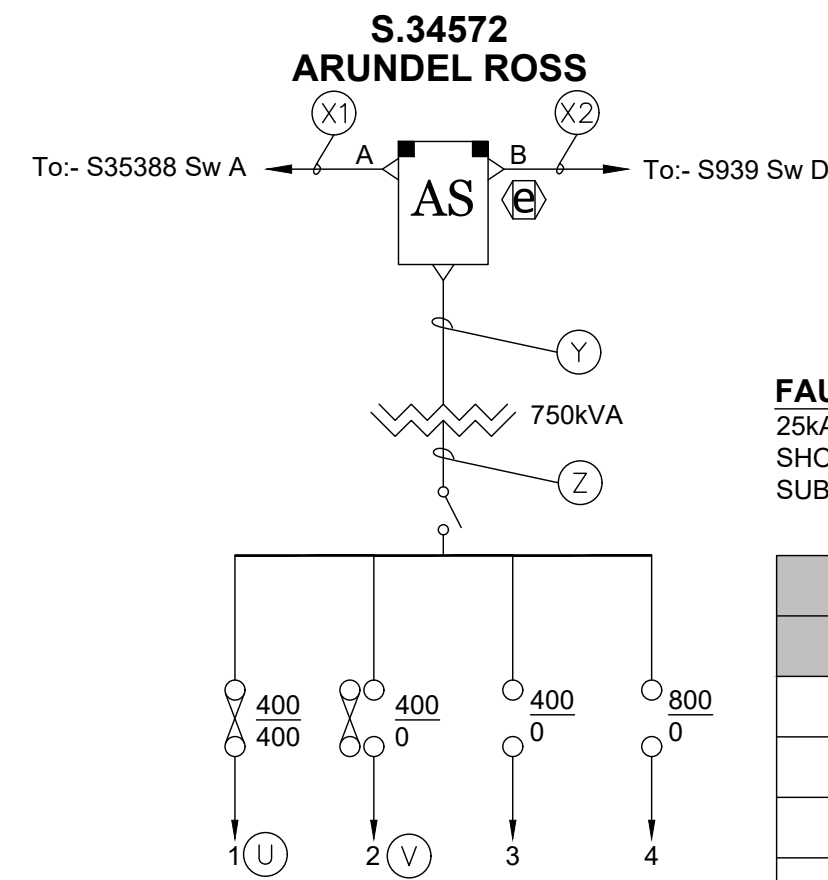
	1	2	3	4	5	6	7	8	9	10	11	12	
	UNDERGROUND CONSTRUCTION WORKS SCHEDULE (DUCT PULL VERSION 1.1)												
	REF. IDENTIFIER	ROUTE DISTANCE (m)	CIRCUIT VOLTAGE	CONDUCTOR OR ASSET DETAIL	CABLE CODE / (STOCK CODE)	MIN. INTERNAL BENDING RADIUS (mm) DURING INSTALLATION	MIN. INTERNAL BENDING RADIUS (mm) AFTER INSTALLATION	CALCULATED MAX. PULLING TENSION (kN) DURING INSTALLATION	CONSTRUCTION DETAIL				
A				CHAMBER SUBSTATION CONSTRUCTION									
	S.34572	N/A	HV/LV	750kVA SINGLE TRANSFORMER CHAMBER SUBSTATION	N/A	N/A	N/A	N/A	ESTABLISH 750kVA CHAMBER SUBSTATION S.34572 "ARUNDEL ROSS" LOCATED WITHIN PROPOSED SAMIS AMBULANCE STATION BUILDING AT 42-50 PARRAMATTA RD, FOREST LODGE. PERSONNEL & EQUIPMENT ACCESS TO THE PROPOSED CHAMBER SUBSTATION IS OFF ARUNDEL STREET. INSTALL EARTHING AS PER NS116, AUSGRID EARTHING SPECIFICATION AND THIS DESIGN. EQUIP CHAMBER SUBSTATION AS PER NS114, AUSGRID DRAWING No.224408 AND THIS DESIGN.				
	S.34572	5 5	HV LV	3 x Tx HV TAILS 7 x Tx LV TAILS	70 CU1 EPR 500CU1 XLPE/PVC	490 333	330 222	N/A	INSTALL 1 x SET OF HV Tx TAILS (1 PER PAHSE). INSTALL 1 x SET OF LV Tx TAILS (2 PER PHASE, 1 NEUTRAL).				
B				EXCAVATION & CONDUIT INSTALLATION									
	S.34572 - C	3	HV	2 x 125mm CONDUIT (HD) UPVC IN 150MM THICK CONCRETE ENCASEMENT ALL AROUND	N/A	N/A	N/A	N/A	ASP/1 TO LIAISE WITH BUILDING CONTRACTOR RE THE INSTALLATION OF CONDUITS FROM THE SUBSTATION HV PIT TO 150mm PAST THE ARUNDEL STREET SOUTH PROPERTY BOUNDARY IN CONJUNCTION WITH CONSTRUCTION OF THE SUBSTATION CHAMBER.				
	S.34572 - D	3	LV	4 x 125mm CONDUIT (HD) UPVC IN 150MM THICK CONCRETE ENCASEMENT ALL AROUND	N/A	N/A	N/A	N/A	ASP/1 TO LIAISE WITH BUILDING CONTRACTOR RE THE INSTALLATION OF CONDUITS FROM THE SUBSTATION LV PIT TO 150mm PAST THE ARUNDEL STREET SOUTH PROPERTY BOUNDARY IN CONJUNCTION WITH CONSTRUCTION OF THE SUBSTATION CHAMBER.				
	S.34572 - E	47	LV	2 x 150mm CONDUIT (HD) UPVC IN 150MM THICK CONCRETE ENCASEMENT ALL AROUND	N/A	N/A	N/A	N/A	ASP/1 TO LIAISE WITH BUILDING CONTRACTOR RE THE INSTALLATION OF CONDUITS FROM THE SUBSTATION LV PIT TO THE SOUTHERN LOT BOUNDARY IN CONJUNCTION WITH CONSTRUCTION OF THE SUBSTATION CHAMBER. FIRE SEAL CONDUITS IN ACCORDANCE WITH NS171 - FIRE STOPPING IN SUBSTATIONS.				
	S.34572 HV Pit - LV Pit	1	COMMS & EARTH	2 x 100mm CONDUIT (HD) UPVC IN 150MM THICK CONCRETE ENCASEMENT ALL AROUND	N/A	N/A	N/A	N/A	ASP/1 TO LIAISE WITH BUILDING CONTRACTOR RE THE INSTALLATION OF CONDUITS FROM THE SUBSTATION HV PIT TO THE LV PIT.				
	S.34572 LV Pit - F	1	LV	2 x 100mm CONDUIT (HD) UPVC CONDUITS	N/A	N/A	N/A	N/A	ASP/1 TO LIAISE WITH BUILDING CONTRACTOR RE THE INSTALLATION OF CONSUMER MAINS CONDUITS FROM THE SUBSTATION LV PIT TO THE CABLE RISER VOID AT 'F'.				
C	A - B - C	10	HV	EXCAVATE JOINT BAYS & CABLE TRENCH	N/A	N/A	N/A	N/A	EXCAVATE BITUMEN FOOTWAY TO EXPOSE EXISTING HV CABLES & JOINT Nos 1467 (AT 'A') & 1468 (AT 'B'). EXCAVATE JOINT BAY SUITABLE FOR HV STJ's AT LOCATIONS 'A' & 'B'. EXCAVATE CABLE TRENCH FROM LOCATIONS 'A' TO 'B', 'A' TO 'C' AND 'B' TO 'C'.				
	D - LV PILLAR No. LE-36670	3	LV	EXCAVATE CABLE TRENCH	N/A	N/A	N/A	N/A	EXCAVATE BITUMEN FOOTWAY TO PROVIDE CABLE ACCESS INTO BASE OF EXISTING LV PILLAR No. LE-36670. EXCAVATE CABLE TRENCH FROM LOCATIONS 'D' TO LV PILLAR No. LE-36670.				
				CABLE INSTALLATION									
	A - C - S.34572 Sw/B	10 (+5)	HV	1 x 11KV 185 CU 1 G EPR G 70 CU(WS) Z YQ / 3 CABLES / TX	534 (S/C 181758)	1120 /BUNDLED 870 / PHASE	745 /BUNDLED 525 / PHASE	N/A	DIRECT LAY & FEED HV CABLE THROUGH DUCT INTO SUBSTATION. ALLOW ADDITIONAL 5m CABLE FOR HV SWITCHGEAR TERMINATIONS AND JOINT. ROUTE NEW CABLES BENEATH EXISTING ASSETS AT LOCATION 'C' IF NECESSARY TO ACHIEVE STANDARD DEPTH OF COVER PER NS130.				
	B - C - S.34572 Sw/A	13 (+5)	HV	1 x 11KV 185 CU 1 G EPR G 70 CU(WS) Z YQ / 3 CABLES / TX	534 (S/C 181758)	1120 /BUNDLED 870 / PHASE	745 /BUNDLED 525 / PHASE	N/A	DIRECT LAY & FEED HV CABLE THROUGH DUCT INTO SUBSTATION. ALLOW ADDITIONAL 5m CABLE FOR HV SWITCHGEAR TERMINATIONS AND JOINT. ROUTE NEW CABLES BENEATH EXISTING ASSETS AT LOCATION 'C' IF NECESSARY TO ACHIEVE STANDARD DEPTH OF COVER PER NS130.				
D	LV PILLAR No. LE-36670 - D - S.34572 Dist No.2	7 (+5)	LV	1 x 415V 185 CU1 XQ Z / 4 CABLES	5044 (S.C. 61432)	270	180	N/A	DIRECT LAY & FEED HV CABLE THROUGH DUCT INTO SUBSTATION. ALLOW ADDITIONAL 5m CABLE FOR LV SWITCHGEAR AND PILLAR TERMINATIONS. ROUTE NEW CABLES BENEATH EXISTING ASSETS AT LOCATION 'C' IF NECESSARY TO ACHIEVE STANDARD DEPTH OF COVER PER NS130.				
	LV Dist No.1 - MSB	ASP2 TO DETERMINE	LV	CONSUMERS MAINS	ASP2 TO DETERMINE	ASP2 TO DETERMINE	ASP2 TO DETERMINE	ASP2 TO DETERMINE	ASP/1 TO INSTALL CONSUMER MAINS CABLES IN SUBSTATION ON BEHALF OF ASP/2 / CUSTOMER'S ELECTRICAL CONTRACTOR. FIRE SEAL CONDUITS IN ACCORDANCE WITH NS171 - FIRE STOPPING IN SUBSTATIONS.				
				JOINTING & TERMINATIONS									
	S.34572	N/A	HV/LV	2 x SETS OF HV FEEDER TERMINATIONS ON RMI (HV1-54) 1 SET OF HV Tx TAIL TERMINATIONS ON RMI (HV1-54) 1 SET OF HV Tx TAIL TERMINATIONS ON Tx (Refer NS177 Clause 10.18) 1 SET OF LV Tx TAIL TERMINATIONS ON Tx 1 SET OF LV Tx TAIL TERMINATIONS ON LV BOARD 1 x SET OF LV TERMINATIONS ON DIST No.1 - 400Amp PANEL (LV1-41) 1 x SET OF LV TERMINATIONS ON DIST No.2 - 400Amp PANEL (LV1-41)	534 70 CU1 EPR 70 CU1 EPR 500CU1 XLPE/PVC 500CU1 XLPE/PVC REFER CUST E/C 5044	N/A	N/A	N/A	INSTALL 2 x SETS OF HV FEEDER TERMINATIONS ON RMI (300CU1 TRIPLEX CABLE). INSTALL 1 x SET OF HV Tx TAIL TERMINATIONS ON RMI (70 CU1 EPR CABLE). INSTALL 1 x SET OF HV Tx TAIL TERMINATIONS ON Tx (70 CU1 EPR CABLE). REFER NS 177 CLAUSE 10.18. INSTALL 1 x SET OF LV Tx TAIL TERMINATIONS ON Tx (7 x 500CU1 XLPE/PVC). INSTALL 1 x SET OF LV Tx TAIL TERMINATIONS ON LV SAIF BOARD (7 x 500CU1 XLPE/PVC). INSTALL 1 x SET OF LV TERMINATIONS AT LV SAIF BOARD (CONSUMER MAINS CABLES) ON 400Amp PANEL (DIST No.1). INSTALL 1 x SET OF LV TERMINATIONS AT LV SAIF BOARD (1 x 415V 185 CU1 XQ Z / 4 CABLES) ON 400Amp PANEL (DIST No.2).				
	A	N/A	HV	1 x THREE-TO-ONE TRANSITION JOINT (3 CORE PILC TO SINGLE CORE POLYMERIC) (HV2-27)	270 (EXIST) 534 (NEW)	N/A	N/A	N/A	INSTALL 1 x HV STJ FROM NEW 11KV 185 CU 1 G EPR G 70 CU(WS) Z YQ / 3 CABLES / TX (534) TO EXISTING 11KV 194 CU3 P L J CABLE (270) TO FORM NEW S.34572 Sw/A - S.939 Sw/D HV FEEDER.				
E	B	N/A	HV	1 x THREE-TO-ONE TRANSITION JOINT (3 CORE PILC TO SINGLE CORE POLYMERIC) (HV2-27)	270 (EXIST) 534 (NEW)	N/A	N/A	N/A	INSTALL 1 x HV STJ FROM NEW 11KV 185 CU 1 G EPR G 70 CU(WS) Z YQ / 3 CABLES / TX (534) TO EXISTING 11KV 194 CU3 P L J CABLE (270) TO FORM NEW S.35388 Sw/A - S.34572 Sw/A HV FEEDER.				
	LV PILLAR No. LE-36670	N/A	LV	1 x SET OF LV DISTRIBUTOR TERMINATIONS IN EXISTING DOUBLE LINK PILLAR	5044 (NEW)	N/A	N/A	N/A	MAKE 1 x SET OF LV DISTRIBUTOR TERMINATIONS IN EXISTING DOUBLE LINK PILLAR No.36670 PER LV CONNECTIVITY DIAGRAM.				
				ASSETS REMOVED / ABANDONED									
	D	2	LV	REMOVE EXISTING ABANDONED LV CABLE & JOINT No. 923	UNKNOWN	N/A	N/A	N/A	REMOVE ABANDONED LV CABLE & JOINT Nos 923 IF THEY STILL REMAIN.				
	A - B	5	HV	REMOVE EXISTING HV CABLE & JOINT Nos 1467 & 1468	1638 (EXIST)	N/A	N/A	N/A	IDENTIFY EXISTING S.35388 Sw/A - S.939 Sw/D HV FEEDER AT LOCATIONS 'A' & 'B'. CUT AWAY AND REMOVE REDUNDANT HV CABLE & JOINT Nos 1467 & 1468.				
F	LV PILLAR No. LE-36670	N/A	N/A	LV T.B.S. TO CONSTRUCTION SITE	N/A	N/A	N/A	N/A	ASP/2 TO REMOVE EXISTING TEMPORARY BUILDER'S SERVICE TO CONSTRUCTION SITE WHEN PROPOSED SUBSTATION S.34572 IS COMMISSIONED.				
G													
H	CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION												
H	CAD DRAWING AMENDMENTS	ASP LEVEL 2 WORK ALL LEVEL 2 ASP WORK DEPICTED ON THIS DESIGN IS SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT FORM PART OF THE CERTIFIED DESIGN.				WARNING • 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 CONFIGERATION OF ALL SERVICES, INCLUDING AUSGRID'S NETWORK, MUST BE VERIFIED IMMEDIATELEY BEFORE CONSTRUCTION COMMENCES BY CONTACTING DIAL-BEFORE-YOU-DIG BY TELEPHONE ON 1100 OR AT www.1100.com.au. • DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.							
20160817		1		2		3		4		5		6	



H	CAD DRAWING SHEET NUMBER 1 OF 1 AMENDMENTS	WARNING ASP LEVEL 2 WORK ALL LEVEL 2 ASP WORK DEPICTED ON THIS DESIGN IS SHOWN FOR INFORMATION PURPOSES ONLY AND DOES NOT FORM PART OF THE CERTIFIED DESIGN. 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.1100.com.au. DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.										WEB AUSTRALIA GROUP (NSW) PTY LIMITED LEVEL 4, 401 PACIFIC HIGHWAY GORDON NSW 2072 AUSTRALIA TELEPHONE 02 9416 1100 FACSIMILE 02 9416 1100 EMAIL info@webaustralia.com.au www.webaustralia.com.au CONSULTING ELECTRICAL ENGINEERS LIGHTING CONSULTANTS TECHNOLOGY CONSULTANTS ASP REF. O197H - 20220623		DESIGNED BY WASILI ZYZNIK AUTH NO. 1685/07 SUBMIT DATE 23.11.2022 LGA CITY OF SYDNEY COUNCIL MAP REF. UBD Map 14 Ref. E1 AUSGRID REF. LE62 PRJ/TRAK NO. XCZ023225 WEB AUSTRALIA		ESTABLISH SURFACE CHAMBER SUBSTATION No.34572 "ARUNDEL ROSS" TO SUPPLY SAMIS AMBULANCE STATION 42-50 PARRAMATTA ROAD FOREST LODGE NSW 2037		SIZE A1 AUSGRID PROJECT No. AN-23553 SHEETS 4 of 12 AMD 0	
		20160817123456789101112										ASSOCIATED DRAWINGS		CERTIFICATION NUMBER		### / ###			



CHAMBER SUBSTATION DETAILS	
SUBSTATION NAME:	ARUNDEL ROSS
SUBSTATION NUMBER:	S.34572
ADDRESS:	42-50 PARRAMATTA ROAD, FOREST LODGE NSW 2037 (ACCESS OFF ARUNDEL STREET)
SUBSTATION TYPE:	SURFACE CHAMBER
SIZE (kVA):	750kVA
AUSGRID STOCKCODES:	184921 - HV RMI
	181813 - SUPPORT STAND FOR ABB RMI
	180357 - TRANSFORMER
	181790 - LV BOARD (400 / 400 / 400 / 800)
VECTOR GROUP:	Dyn1 Tx
TAP SETTING:	10835 / 433V (Tap 5)
HV SWITCHGEAR:	ABB SAFELINK2 WITH INTEGRATED EFI
HV FUSE DETAILS:	100AMP SIBA 30.020.93.100 (AUSGRID S/C 181951)
LOW VOLTAGE BOARD:	400 / 400 / 400 / 800AMP
CCT1 LV FUSE SIZE (Amps):	400A (92mm CENTRES BELL / MEM "J")
CCT2 LV FUSE SIZE (Amps):	400A (92mm CENTRES BELL / MEM "J")
CCT3 LV FUSE SIZE (Amps):	400A (92mm CENTRES BELL / MEM "J")
CCT3 LV FUSE SIZE (Amps):	800A (92mm CENTRES BELL / MEM "J")
EARTHING REQUIREMENTS:	NS116 STANDARD MINIMUM EARTHING DESIGN



FAULT LEVEL
25kA - NOMINAL PROSPECTIVE
SHORT CIRCUIT CURRENT AT
SUBSTATION LV PANEL

LV DISTRIBUTOR DETAILS	
DIST	DESTINATION
1	AMBULANCE STATION (400/400)
2	ARUNDEL ST (400/0)
3	W.D.N.O. (400/0)
4	W.D.N.O. (800/0)

SUBSTATION SCHEMATIC DIAGRAM

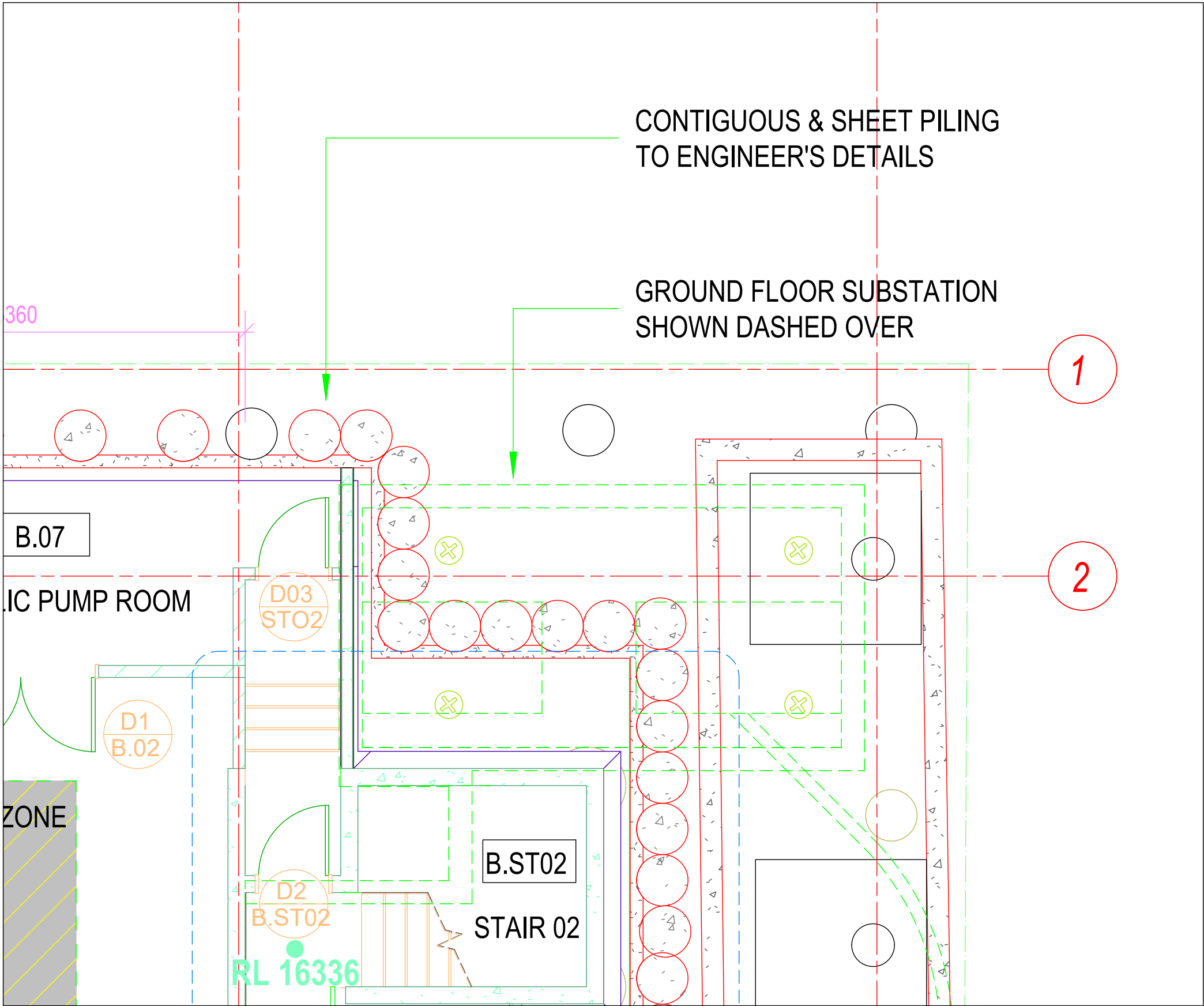
CABLE SPECIFICATIONS					
REF	TYPE	VOLTAGE	QTY.	ROUTE LENGTH (m)	TOTAL LENGTH (m)
U	CONSUMER MAINS *	415V	*	*	*
V	185 CU1 XQ Z / 4 CABLE (5044)	415V	1	REFER TO UNDERGROUND CONSTRUCTION WORKS SCHEDULE	
X1	185 CU1 EPR/3 Triplex	11kV	1	REFER TO UNDERGROUND CONSTRUCTION WORKS SCHEDULE	
X2	185 CU1 EPR/3 Triplex	11kV	1	REFER TO UNDERGROUND CONSTRUCTION WORKS SCHEDULE	
Y	70 CU1 EPR	11kV	3	5	15
Z	500 CU1 XLPE/PVC	415V	7	5	35

- * NOTES RE CONSUMERS MAINS (U):-
- CONSUMER MAINS ARE CONSIDERED ASP LEVEL 2 WORKS.
 - CABLE TYPE, CABLES PER PHASE AND CABLE SIZE TO BE DETERMINED BY CUSTOMER'S ELECTRICAL CONSULTANT.
 - FIRE RATED CABLES CAN BE USED, WITH THE EXCEPTION OF MIMS.
 - THE ASP/1 IS RESPONSIBLE FOR THE INSTALLATION AND TERMINATION OF THE CONSUMER MAINS CABLES IN THE SUBSTATION.
 - ASP/1 & CUSTOMER'S ELECTRICAL CONTRACTOR TO MINIMISE EMF BY ARRANGING CONSUMER MAIN CABLES IN QUATREFOIL BETWEEN SUBSTATION LV BOARD AND CUSTOMER'S MAIN SWITCHBOARD.

CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION

WARNING

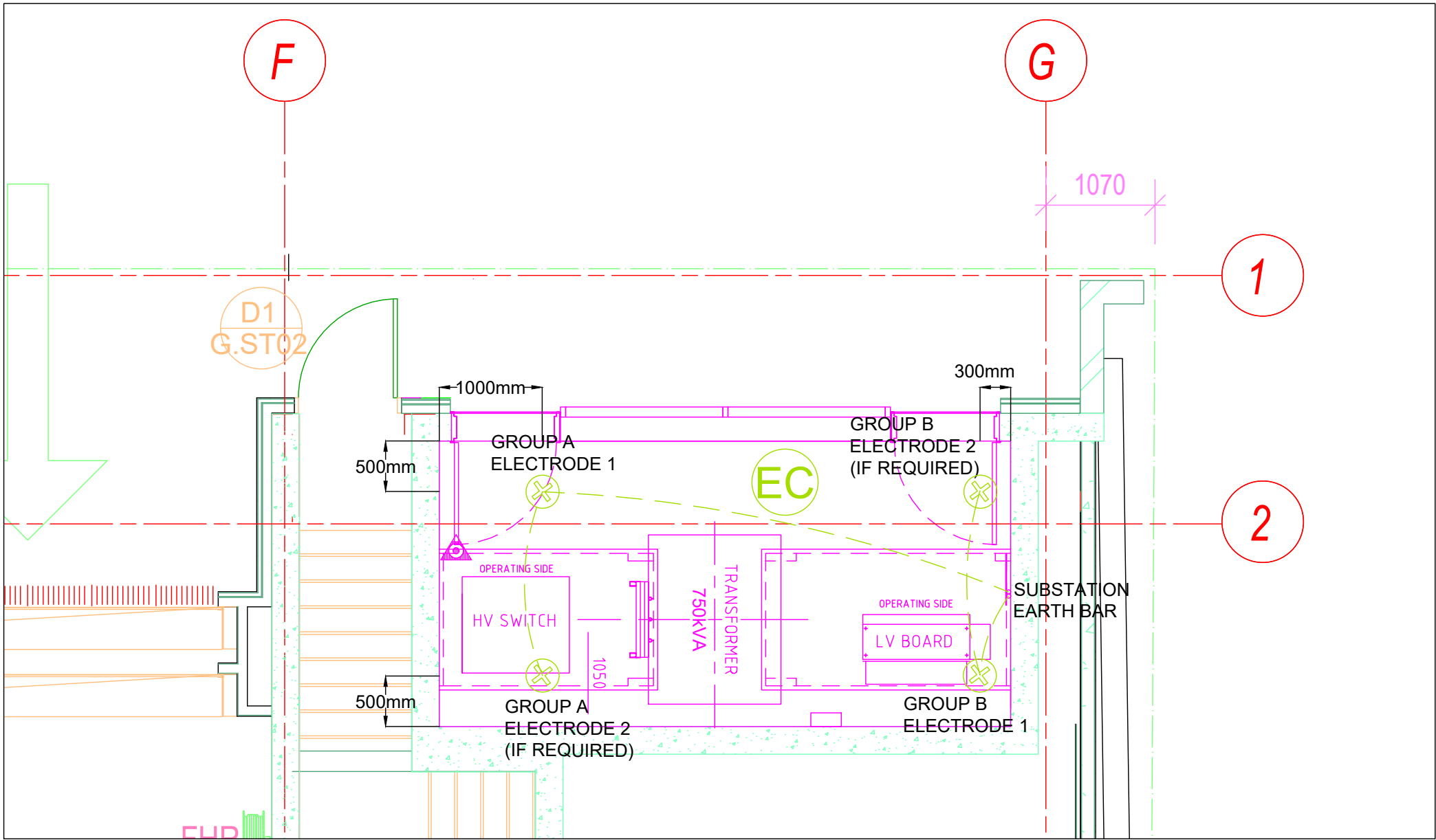
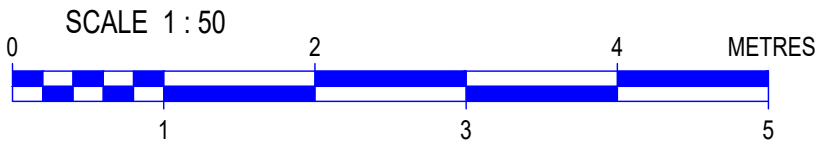
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EARTH ROD PROXIMITY TO EXISTING PILING

SCALE 1:50

EARTH RODS TO BE LOCATED CLEAR OF EXISTING PILING

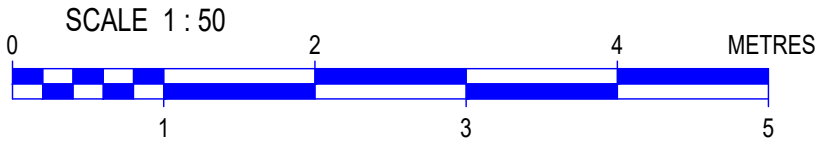


GROUND FLOOR PLAN - EARTHING LAYOUT

SCALE 1:50

EARTH RODS TO BE LOCATED CLEAR OF EXISTING PILING

SUBSTATION EARTHING INSTALLATION TO COMPLY WITH NS116



EARTHING ELECTRODE SCHEDULE		
(AS PER AUSGRID DRAWING 25121 & NS116 STANDARD MINIMUM EARTHING DESIGN REQUIREMENTS)		
GENERAL		
EARTHING CONFIGURATION:	COMBINED	
DESIGN CURVE:	ENA - TDMEN	
ELECTRODES INSTALLATION :	DRILLED	
ELECTRODES TYPE :	BARE 70sqmm CU CABLE	
	DESIGN	AS BUILT
HV ELECTRODES (GROUP A)		
NUMBER OF ELECTRODES : NOTE - INSTALL A SECOND GROUP A ELECTRODE IF THE MEASURED RESISTANCE OF THE FIRST ELECTRODE IS GREATER THAN 200 ohms.	1 (MINIMUM)	
DEPTH OF EACH ELECTRODE :	5.4 m (MIN)	
SPACING BETWEEN GROUP A ELECTRODES (IF 2 INSTALLED):	1.8 m	
MAX RESISTANCE - NORMAL :	200 ohms	
MAX RESISTANCE - DROUGHT :	200 ohms	
MEASURED :		
LV ELECTRODES (GROUP B)		
NUMBER OF ELECTRODES : NOTE - INSTALL A SECOND GROUP B ELECTRODE IF THE MEASURED RESISTANCE OF THE FIRST ELECTRODE IS GREATER THAN 200 ohms.	1 (MINIMUM)	
DEPTH OF EACH ELECTRODE :	5.4 m (MIN)	
SPACING BETWEEN ELECTRODES :	1.8 m	
MAX RESISTANCE - NORMAL :	200 ohms	
MAX RESISTANCE - DROUGHT :	200 ohms	
MEASURED :		
COMBINED		
RESISTANCE :	100 ohms (MAX)	
MINIMUM SEPARATION DISTANCES		
MINIMUM SEPARATION FROM TELCO ASSETS :	1.2 m	
MINIMUM SEPARATION BETWEEN HV AND LV AND/OR MEN ELECTRODES:	4.3 m	
REFERENCE DRAWINGS FOR THIS INSTALLATION		
25121		

EARTHING CABLE SCHEDULE				
ORIGIN	DESTINATION	Cu CABLE BLACK PVC	QTY.	LENGTH (m)
SUBSTATION EARTH BAR	GROUP A ELECTRODE 1	70mm2	1	5m
GROUP A ELECTRODE 1	GROUP A ELECTRODE 2	70mm2	1	1.8m (IF REQUIRED)
SUBSTATION EARTH BAR	GROUP B ELECTRODE 1	70mm2	1	1m
GROUP B ELECTRODE 1	GROUP B ELECTRODE 2	70mm2	1	1.8m (IF REQUIRED)
EARTH BAR	TRANSFORMER (TANK)	70mm2	2	8
EARTH BAR	EARTH BAR ON HV CABLE SUPPORT STAND	70mm2	2	7
EARTH BAR	LV BOARD FRAME EARTH	70mm2	2	2
EARTH BAR	LV BOARD NEUTRAL BAR	70mm2	2	2
EARTH BAR	HV RMI	70mm2	2	10

LEGEND	
	PROPOSED EARTH ELECTRODE LOCATION
	PROPOSED 70mm2 Cu EARTH CABLE - BLACK INSULATED
	PROPOSED COMBINED EARTHING SYSTEM

CAD DRAWING
AMENDMENTS

ASP LEVEL 2 WORK

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

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CONCEPTUAL ELECTRICAL ENGINEERING EARTHING CONSULTANTS TECHNOLOGY CONSULTANTS

ASP REF: O197H - 20220309

DESIGNED BY: WASILI ZYZNIK
AUTH NO: 1685/07
SUBMIT DATE: 23.11.2022
LGA: CITY OF SYDNEY COUNCIL
MAP REF: UBD Map 14 Ref. E1
AUSGRID REF: LE62
PRJ/TRAJ No: XCZ023225

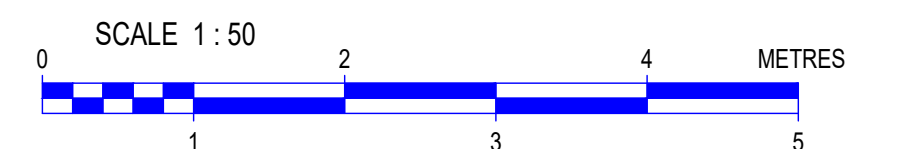
ESTABLISH SURFACE CHAMBER SUBSTATION
No.34572 "ARUNDEL ROSS"
TO SUPPLY SAMIS AMBULANCE STATION
42-50 PARRAMATTA ROAD
FOREST LODGE NSW 2037

SIZE: A1
AUSGRID PROJECT No: AN-23553
SHEETS: 6 of 12
AMD: 0

ASSOCIATED DRAWINGS

CERTIFICATION NUMBER

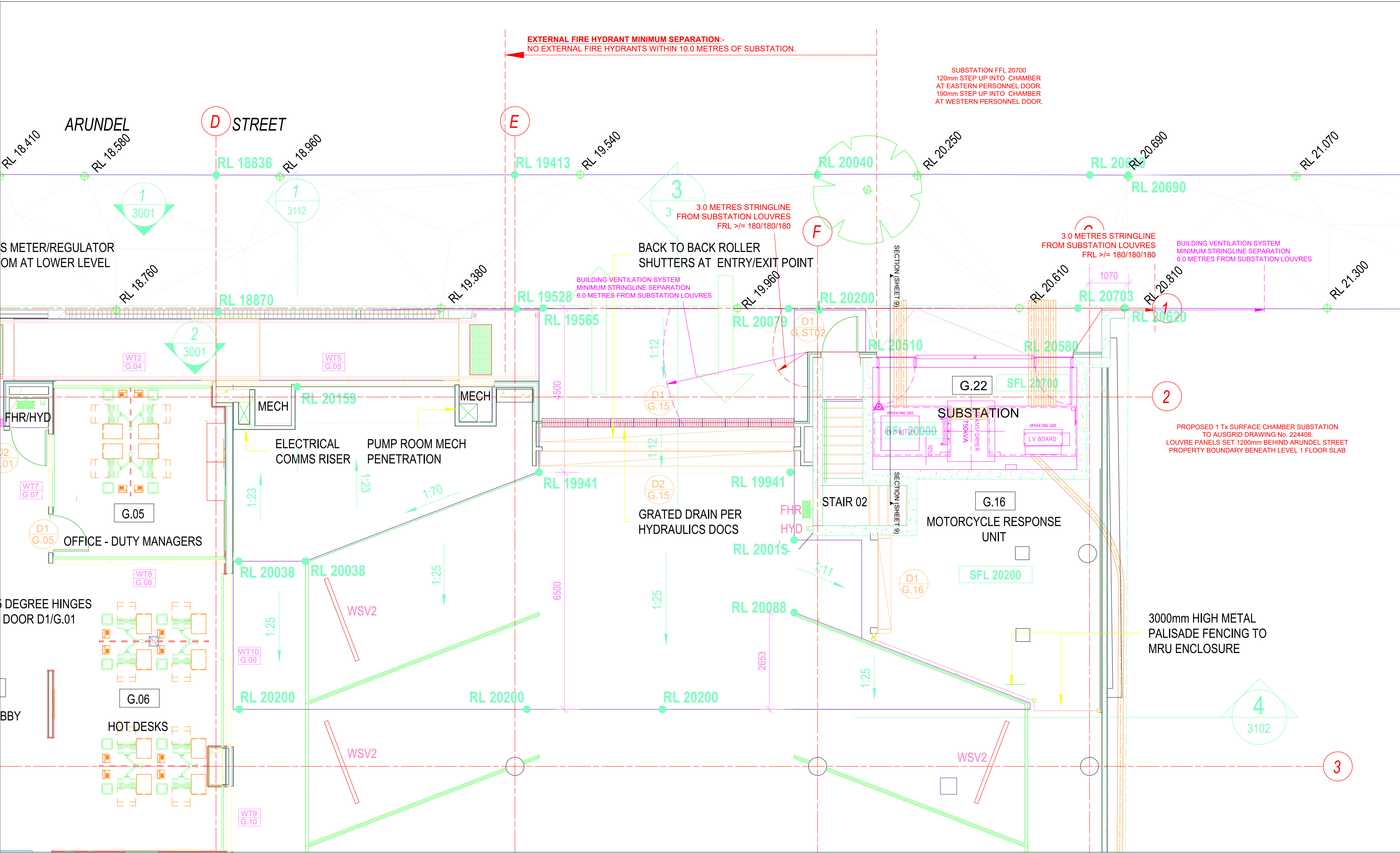
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- DIAL-BEFORE-YOU-DIG INFORMATION MUST NOT BE OLDER THAN 20 BUSINESS DAYS AT THE TIME OF CONSTRUCTION.

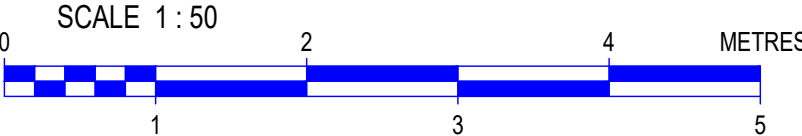
		WEBB AUSTRALIA GROUP (NSW) PTY LIMITED ABN 19 602 182 222 LEVEL 4, 420 PACIFIC HIGHWAY CORDON NSW 2072 AUSTRALIA TELEPHONE: 02 9419 1100 FACSIMILE: 02 9419 1101 EMAIL: info@webbaustralia.com.au www.webbaustralia.com.au CONSULTING ELECTRICAL ENGINEERS · LIGHTING CONSULTANTS · TECHNOLOGY CONSULTANTS				DESIGNED BY: WASILI ZYZNIK AUTH NO.: 1685/07 SUBMIT DATE: 23.11.2022 LGA: CITY OF SYDNEY COUNCIL MAP REF.: UBD Map 14 Ref. E1 AUSGRID REF.: LE62 PRJ/TRAK No.: XCZ023225		ESTABLISH SURFACE CHAMBER SUBSTATION No.34572 "ARUNDEL ROSS" TO SUPPLY SAMIS AMBULANCE STATION 42-50 PARRAMATTA ROAD FOREST LODGE NSW 2037							
		ASP REF.		O197H - 20220623		## / ##		A1 AUSGRID PROJECT No.		AN-23553		SHEETS 7 of 12		AMD 0	
ASSOCIATED DRAWINGS						CERTIFICATION NUMBER									

CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION



GROUND FLOOR PLAN - SUBSTATION SEGREGATION REQUIREMENTS

SCALE 1:50
3m & 6m STRINGLINES DETAILED ON THIS ELEVATION ACCOUNT FOR SUBSTATION LOUVRES BEING SET BACK 1200mm FROM ARUNDEL STREET PROPERTY BOUNDARY.



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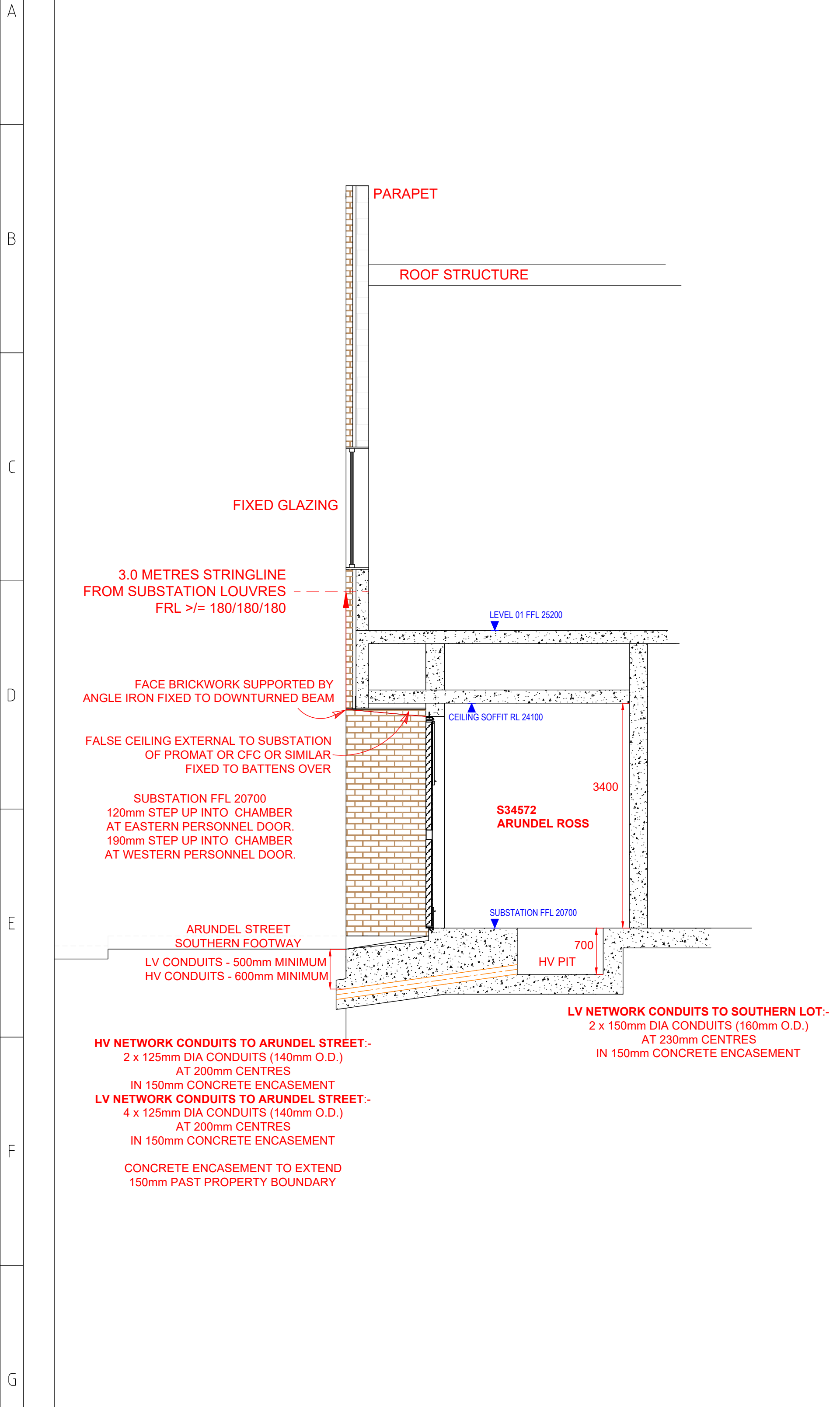
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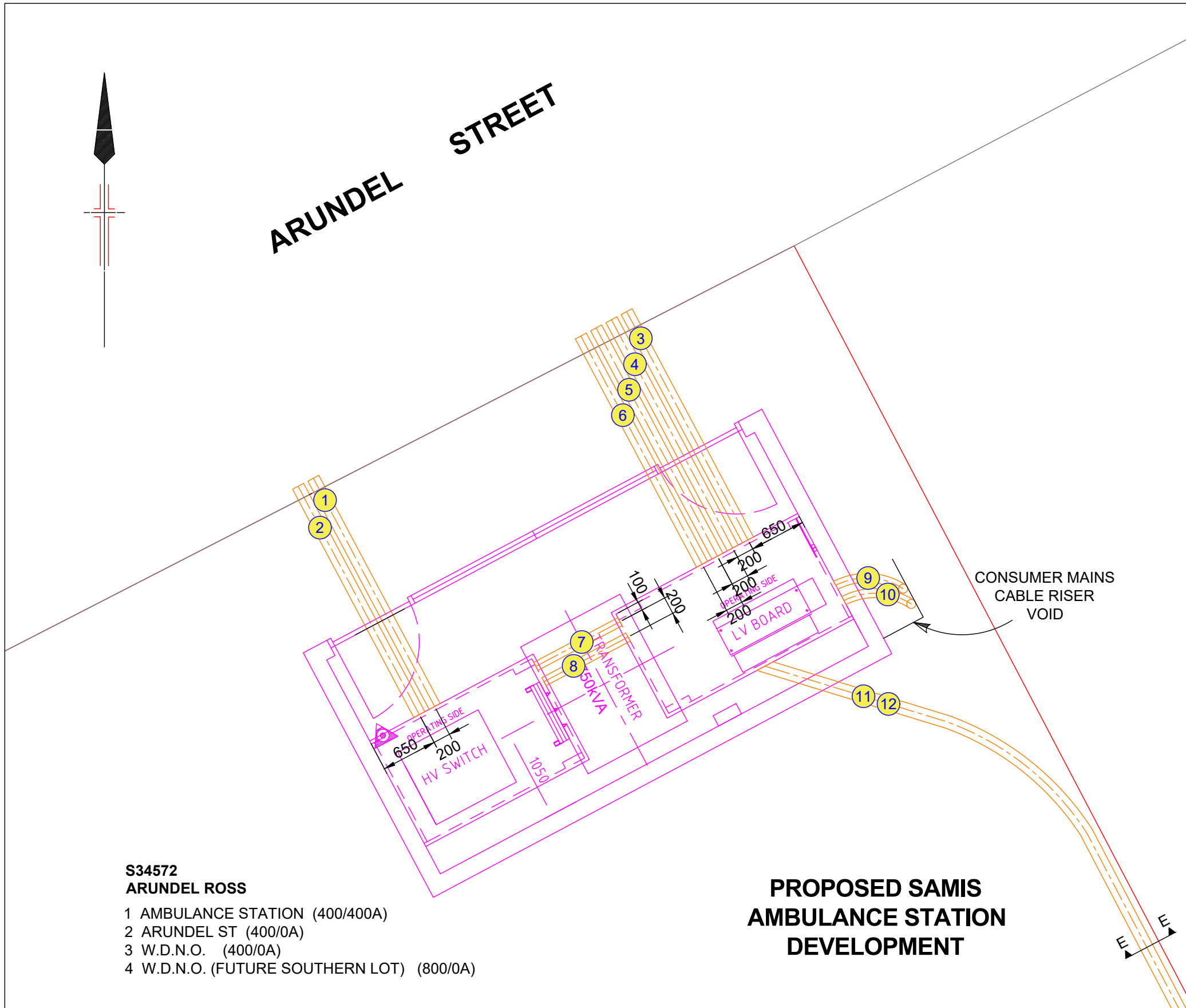
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ESTABLISH SURFACE CHAMBER SUBSTATION
No.34572 "ARUNDEL ROSS"
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42-50 PARRAMATTA ROAD
FOREST LODGE NSW 2037

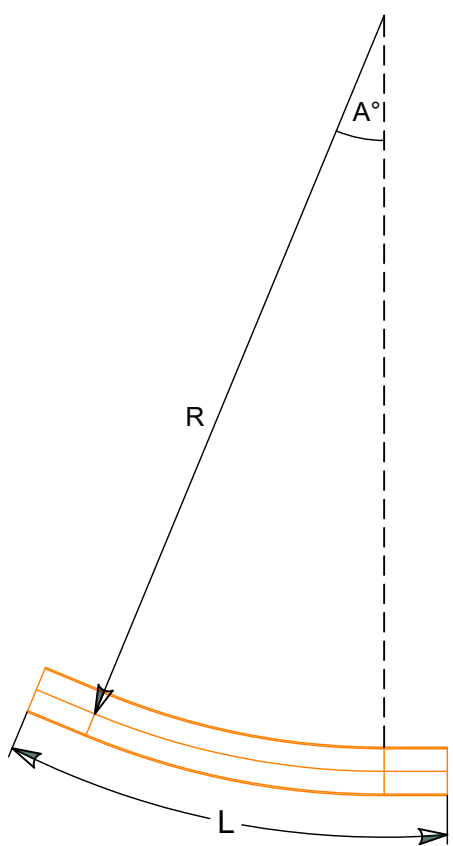
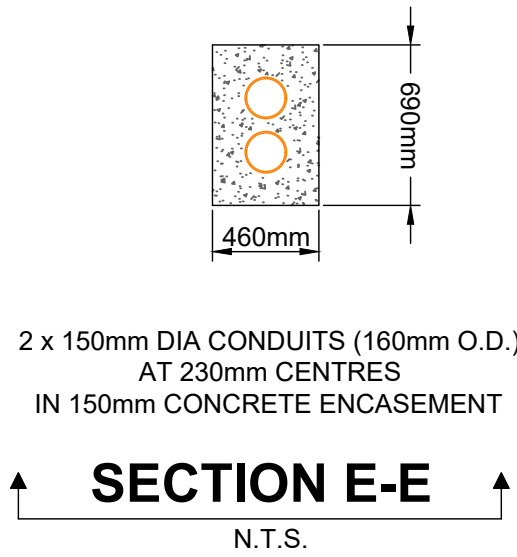
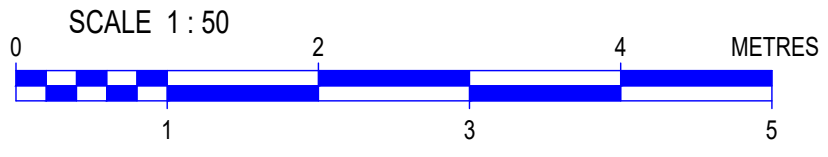
SIZE A1
AUSGRID PROJECT No. AN-23553
SHEETS 8 of 12
AMD 0



SECTION LOOKING EAST
SCALE 1:50



CONDUIT PLAN
SCALE 1:50



CONDUIT SCHEDULE							
No.	FUNCTION	ORIGIN	DESTINATION	SIZE	TYPE	BENDS	CONSTRUCTION NOTES
1-2	HV FEEDERS	ARUNDEL STREET	HV SWITCHGEAR PIT	125mm (140mm OD)	HD PVC	Nil	150mm CONCRETE ENCASEMENT TO 150mm NORTH OF ARUNDEL STREET PROPERTY BOUNDARY
3-6	LV NETWORK CABLES	ARUNDEL STREET	LV SWITCHGEAR PIT	125mm (140mm OD)	HD PVC	Nil	150mm CONCRETE ENCASEMENT TO 150mm NORTH OF ARUNDEL STREET PROPERTY BOUNDARY
7	EARTHING	HV SWITCHGEAR PIT	LV SWITCHGEAR PIT	100mm (114mm OD)	HD PVC	Nil	150mm CONCRETE ENCASEMENT
8	FUTURE DM&C	HV SWITCHGEAR PIT	LV SWITCHGEAR PIT	100mm (114mm OD)	HD PVC	Nil	150mm CONCRETE ENCASEMENT
9-10	CONSUMER MAINS	LV SWITCHGEAR PIT	CONSUMER MAIN CABLE RISER VOID	100mm (114mm OD)	HD PVC	1 x B1	150mm CONCRETE ENCASEMENT BENEATH SUBSTATION CHAMBER FOOTPRINT
11-12	FUTURE LV DISTRIBUTOR TO SOUTHERN LOT	LV SWITCHGEAR PIT	WALL PENETRATIONS ABOVE LV RISER	150mm (160mm OD)	HD PVC	1 x B2	150mm CONCRETE ENCASEMENT TO SOUTHERN LOT BOUNDARY

BEND SCHEDULE					
BEND DESIGNATION	CONDUIT DIA. (mm)	RADIUS "R" (m)	ANGLE "A" (Degrees)	NOMINAL LENGTH "L" FROM COUPLING TO COUPLING (mm)	AUSGRID STOCK CODE
B1	100	0.6	90.0	1300	77602
B2	150	2.5	22.5	1400	179065

- NOTES:**
- THE ASP/1 SHALL INSTALL ALL CONDUITS IN THE CHAMBER SUBSTATION IN ACCORDANCE WITH THE DESIGN DRAWING AND THE CONDUIT SCHEDULE INDICATED ON IT. ALL CONDUITS WITHIN THE SUBSTATION CHAMBER SUB-FLOOR MUST BE ENCASED WITH A MINIMUM ENCASEMENT OF 150mm OF CONCRETE. ALL CONDUITS TO BE INSTALLED WITHIN THE CHAMBER ARE TO BE AS INDICATED IN THE CONDUIT SCHEDULE. HEAVY DUTY (HD) RIGID UPVC (ORANGE) TO AS/NZS 2053.2.
 - THE ENDS OF CONDUITS SHALL BE SMOOTH, CLEANLY CUT AND INTERNALLY RADIUSED USING A ROUTER WITH A Ø24 TIP.
 - CONDUITS BETWEEN THE SUBSTATION CHAMBER AND THE CONSUMER MAINS CABLE RISER VOID; AND BETWEEN THE SUBSTATION CHAMBER AND THE THE SOUTHERN LOT BOUNDARY; MUST BE FIRE SEALED IN ACCORDANCE WITH NS171 - FIRE STOPPING IN SUBSTATIONS.
 - BOTH ENDS OF ALL EXTERNAL CONDUITS TERMINATING IN THE SUBSTATION CHAMBER ARE TO BE SEALED WITH CONDUIT SEALING FOAM KIT - AUSGRID S/C 180112.
 - INSTALL CONDUITS AND BENDS FROM THE SUBSTATION CHAMBER TO THE SOUTHERN LOT BOUNDARY AS POSITIONED IN ARCHITECT'S MODEL.

CHECK FOR OTHER SERVICES BEFORE BORING OR EXCAVATION

CAD DRAWING
30/06/2022
AMENDMENTS

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DESIGNED BY	WASILI ZYZNIK
AUTH NO.	1685/07
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MAP REF.	UBD Map 14 Ref. E1
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