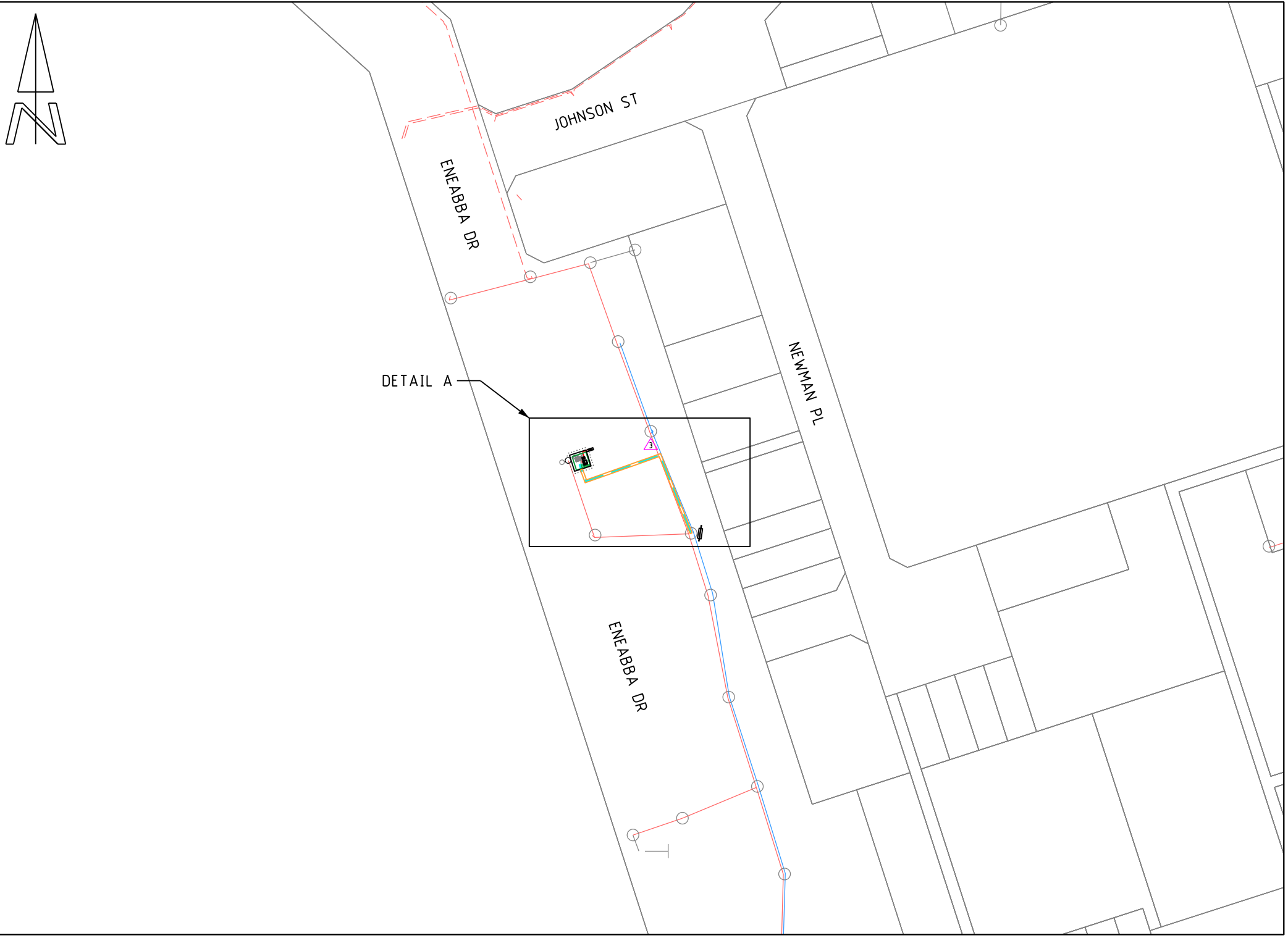
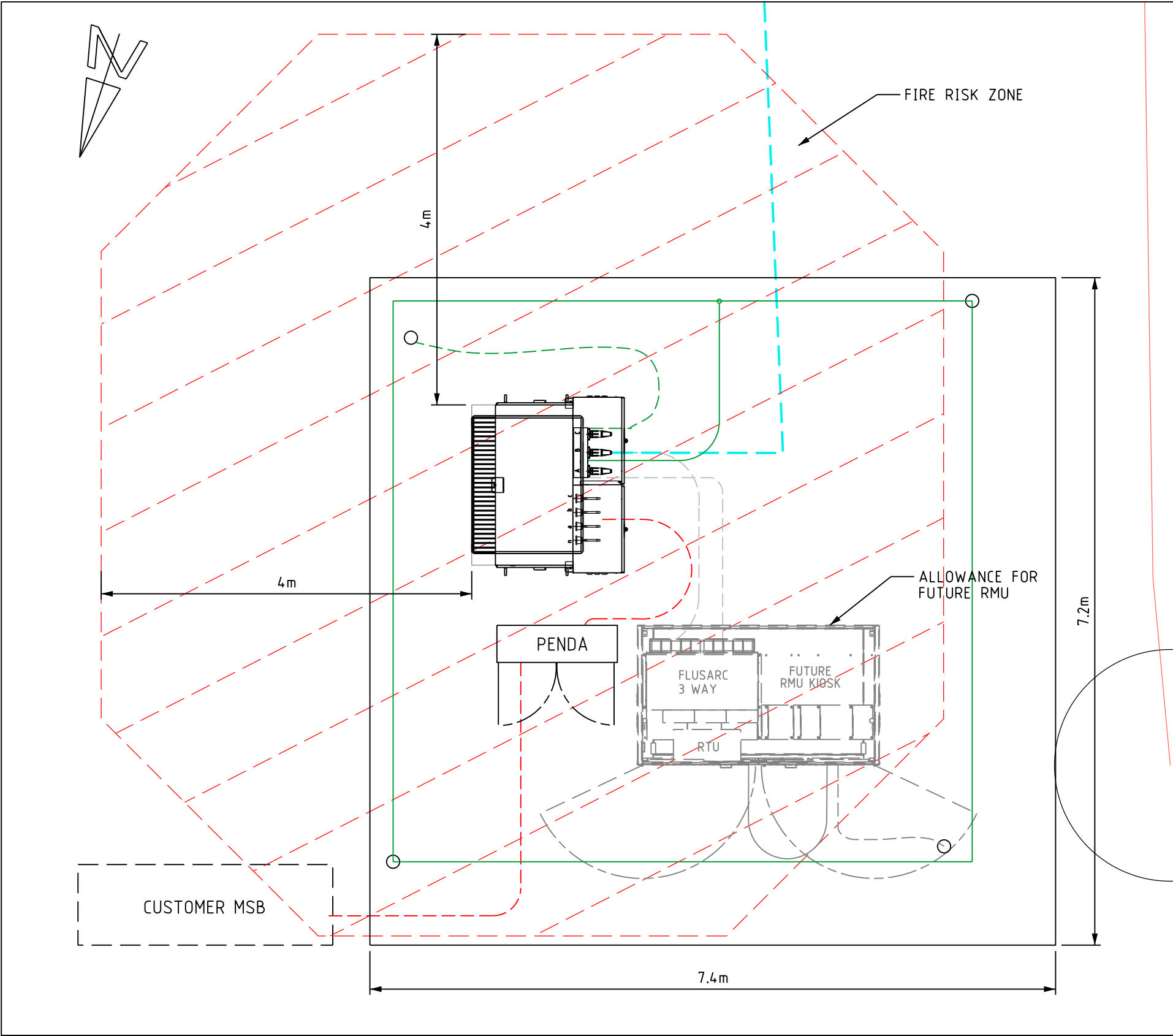


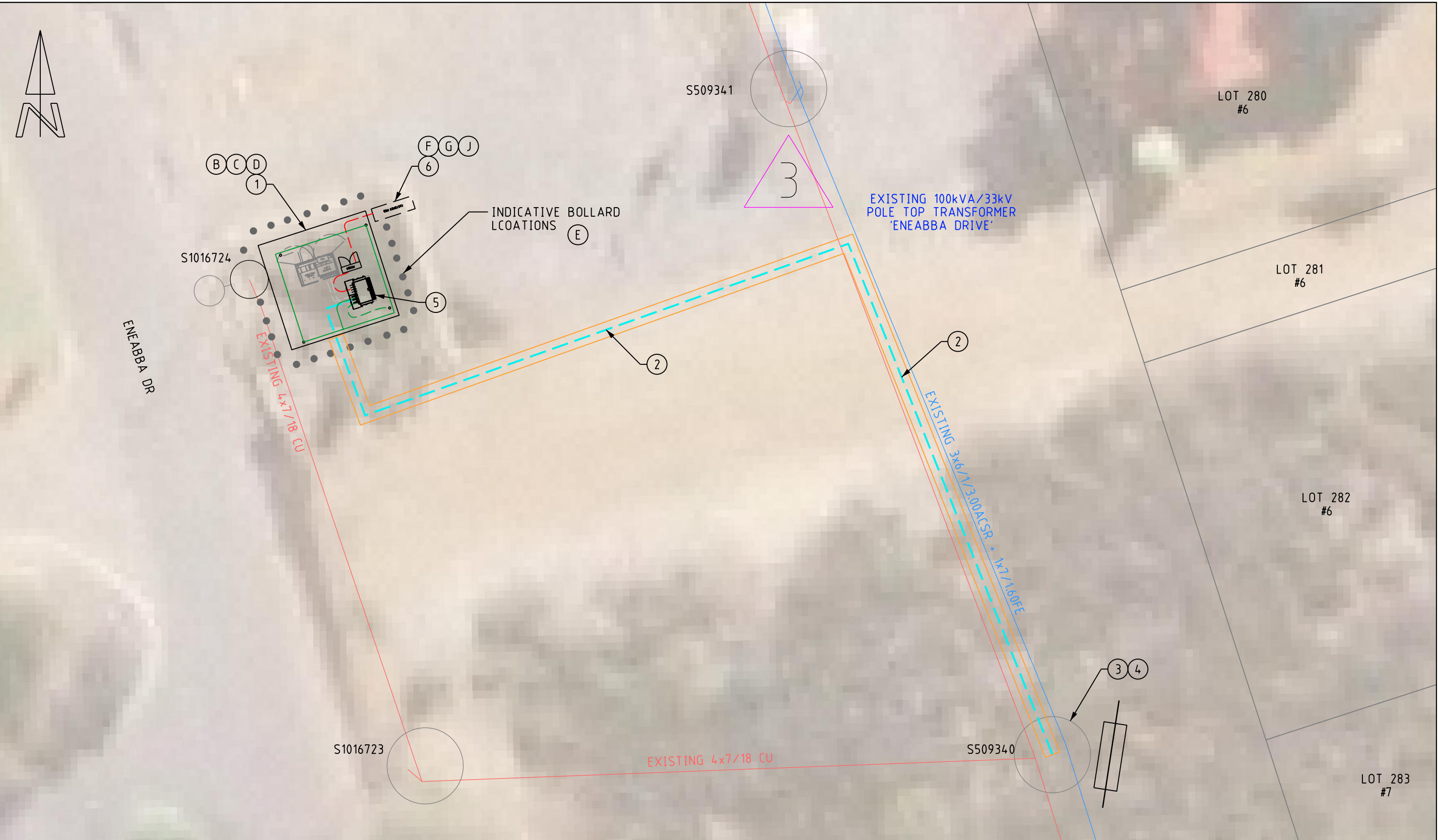
DESIGNED TO BE CONSTRUCTED DE-ENERGISED



SITE LOCATION



SUBSTATION FIRE CLEARANCE DETAIL



DETAIL A

WESTERN POWER SCOPE OF WORK

1. INSTALL 630kVA 33kV SUBSTATION AS NOTED ON DRAWING DSPM-9-04. INSTALL OIL CONTAINMENT PANEL AND POST WITH RAILWAY BALLAST/FLAME TRAP IN ACCORDANCE WITH WASIR CLAUSE 14.6.5, AND DRAWING DSPM-4-06.  
CU: HU59\_630/33, HU66\_33, CN60\_400Cx80m, LU16\_400CU16, LU16\_400CU12, LU68, HU76\_STD, LU42, LU64, LU67
2. INSTALL 50HV CABLE FROM EXISTING POLE S509340 TO NEW TRANSFORMER.  
CU: CN51x100m, CN54x6, CN73x6
3. ON POLE S509340: REPLACE EXISTING HV INTERMEDIATE CROSSARM WITH NEW INTERMEDIATE OFF SET CROSSARM AND INSTALL NEW 25A DROP OUT FUSES.  
CU: HV12\_3N, HV51\_25ED0x3
4. TERMINATE 50HV CABLE TO NEW DROP OUT FUSES ON POLE S509340.  
CU: HU20\_0, HU20\_0\_33
5. TERMINATE 50HV CABLE TO NEW TRANSFORMER.
6. INSTALL ONE (1x) NEW CT METER IN CUSTOMERS SWITCHBOARD.  
CU: LM1
7. ENVIRONMENTAL FILTER CHECKED

THE FOLLOWING ENVIRONMENTAL ISSUES HAVE BEEN IDENTIFIED FOR THIS PROJECT. ALL RELEVANT PERMITS / PROCEDURES MUST BE OBTAINED / ADHERED TO:

1. CONDITIONS OF NATIVE VEGETATION CLEARING PERMIT. NO NATIVE VEGETATION MAY BE CLEARED OR DAMAGED WITHOUT A PERMIT.
- PLEASE REFER TO THE ENVIRONMENTAL DRAWING FOR MORE INFORMATION.

CUSTOMER SCOPE OF WORK

- A. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE WESTERN AUSTRALIAN SERVICE AND INSTALLATION REQUIREMENTS.
- B. SUBSTATION TO BE DESIGNED TO MINIMUM DIMENSIONS SHOWN ON THE DRAWING AND IN CONJUNCTION WITH WESTERN POWER'S DRAWING DSPM-9-04.
- C. SUBSTATION SITE WILL BE PREPARED AS PER THE WESTERN AUSTRALIAN SERVICE AND INSTALLATION REQUIREMENTS CLAUSE 14.4.6. THIS INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

1. PEGGING, COMPACTION AND LEVELLING. A COMPACTION CERTIFICATE IS REQUIRED.
2. LOCATED 500mm ABOVE 100 YEAR FLOOD LEVEL AND NOT IN A PRECARIOUS POSITION.
3. CLEAR OF ALL SERVICES INCLUDING ENCROACHMENT.
4. CLEAN SAND FILL TO A DEPTH OF 15m. EXCAVATIONS GREATER THAN 15m TO BE IN ACCORDANCE WITH THE EXCAVATION CODE OF PRACTICE.

- D. NO BUILDINGS ALLOWED WITHIN 4m OF THE EDGE OF THE TANK UNLESS 2 HOUR FIRE RATED. SEE WESTERN POWER DRAWING DSPM-5-01 FOR DETAILS.

- E. CUSTOMER TO INSTALL NON-CONDUCTIVE BOLLARDS ADJACENT TO THE SUBSTATION SITE AS PER THE WESTERN AUSTRALIAN SERVICE AND INSTALLATION REQUIREMENTS CLAUSE 14.4.6.

- F. CUSTOMER MUST INSTALL MSB CONTIGUOUS WITH SUBSTATION.

- G. CUSTOMER TO SUPPLY AND INSTALL 'T' TYPE METERING CT'S.

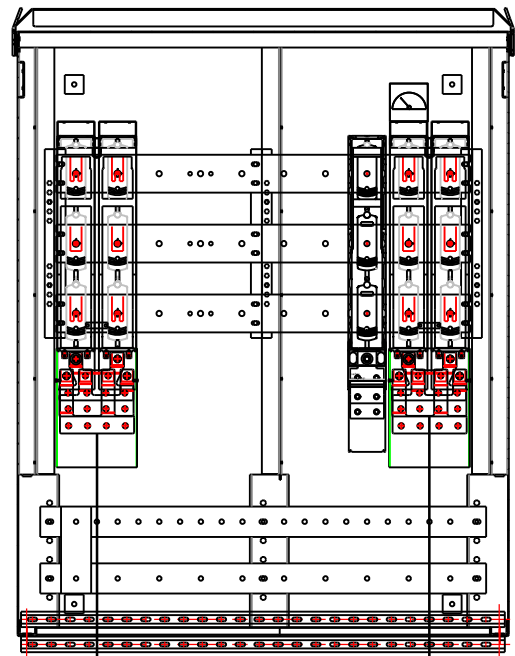
- H. CUSTOMER ELECTRICAL CONTRACTOR TO ENSURE CUSTOMER'S SPD GRADES WITH WESTERN POWER'S UPSTREAM PROTECTION AS NOTED ON THE SIMPLIFIED LINE DIAGRAM.

- I. CUSTOMER MUST COMPLY WITH POWER QUALITY LIMITS AS PER AS/NZS TS IEC 61000.3.5 AND WESTERN POWER TECHNICAL REQUIREMENTS.

- J. CUSTOMER ELECTRICAL CONTRACTOR IS TO SUPPLY SUITABLE LUGS AND CRIMPING TOOLS FOR TERMINATION OF CUSTOMERS CABLE.

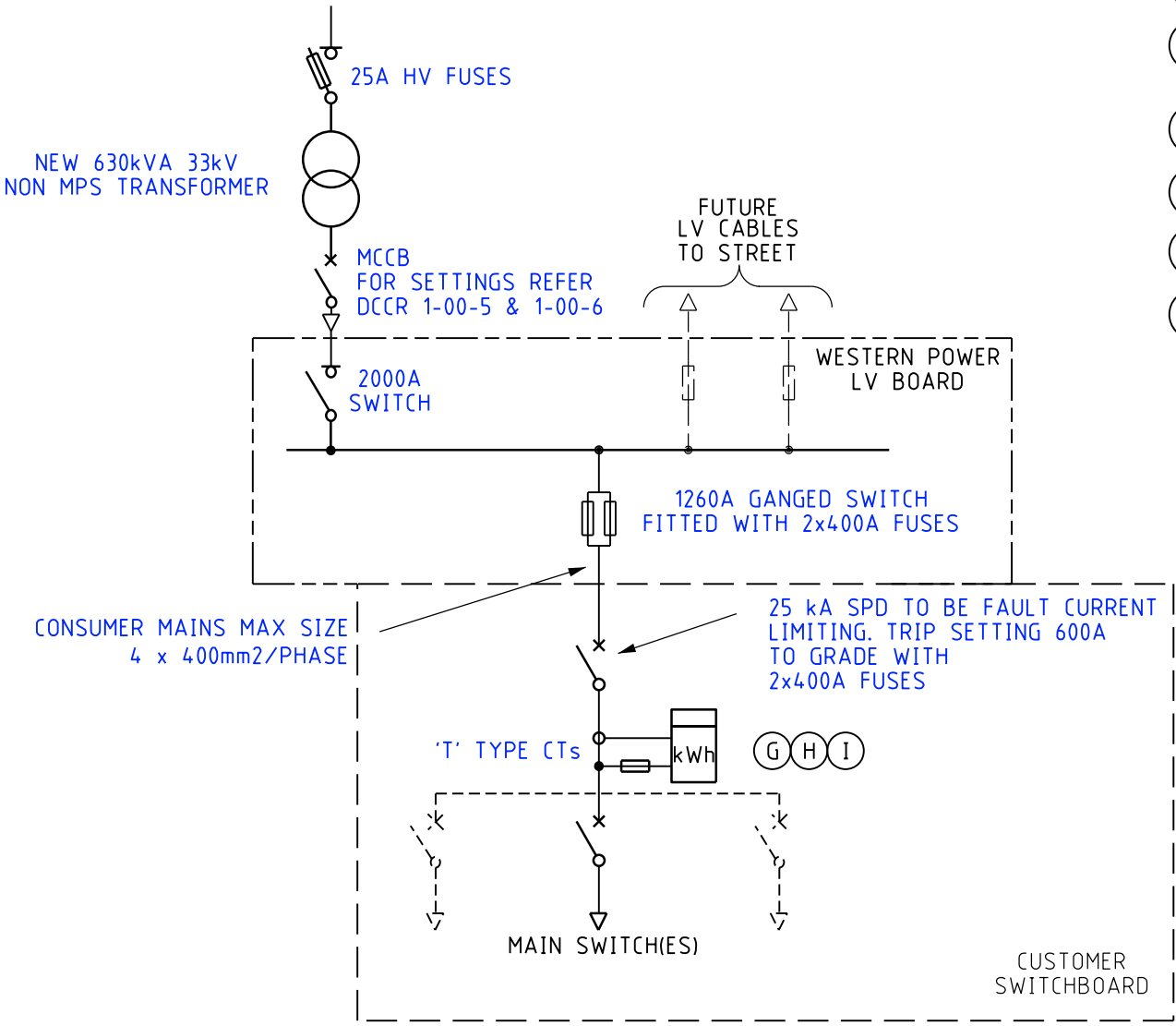
- K. CUSTOMER TO OBTAIN ALL NECESSARY ENVIRONMENTAL AND CLEARING PERMITS. REFER TO SHEET 2.

- L. CUSTOMER TO PROVIDE LABELLING TO THE SWITCHBOARD SHOWING THE EXTENT OF ELECTRICAL ZONE WITHIN ROAD RESERVE. PLEASE ENSURE A SITE MANAGEMENT PLAN IS IN PLACE WHEN INSTALLING EQUIPMENT WITHIN ROAD RESERVE.



NEW PENDA DETAIL

SIMPLIFIED SINGLE LINE DIAGRAM



NEW TYPE 2.1 PENDA CIRCUIT TABLE

LEFT	NAME/LOCATION
Circuit 1 (C1)	LU67 (ONI)
Circuit 2 (C2)	TO CONTIGUOUS CUSTOMER SMSB (EV CHARGERS)
Circuit 3 (C3)	
Circuit 4 (C4)	
Circuit 5 (C5)	
Circuit 6 (C6)	
Circuit 7 (C7)	
Circuit 8 (C8)	LU68
Circuit 9 (C9)	LU66
Circuit 10 (C10)	
	RIGHT

NEW 33kV SUBSTATION - 600A/415V SUPPLY  
ESP - EV CHARGER ENEABBA DR ROAD RESERVE

ENEABBA DR, ENEABBA  
NETWORK VOLTAGE 33kV / 415V

ISSUED FOR CONSTRUCTION

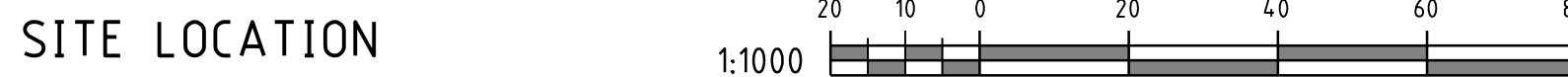
LEGEND	
SCHEME BDY.	---
RETAINING WALL	---
RESTRICTED ZONE	---
EASEMENT	---
HV CABLES	
CN53 - 400mm2 (3X1c)	---
CN49 - 240mm2 (3X1c)	---
CN48 - 185mm2 (3X1c)	---
CN50 - 95mm2 (3X1c)	---
CN51 - 50mm2 (1c)	---
CN52 - 50mm2 (1c)	---
CN46 - 35mm2 (3X1c)	---
CN47 - 35mm2 (1c)	---
EXISTING HV CABLES (SIZE AND TYPE INDICATED)	
LV-SL CABLES	
CN45 - 240mm2 (1x3c)	---
CN44 - 185mm2 (1x3c)	---
CN43 - 120mm2 (1x3c)	---
CN42 - 75mm2 (1x3c)	---
CN41 - 16mm2 SL (1c)	---
EXISTING LV CABLES (SIZE AND TYPE INDICATED)	
STREET LIGHTS	
POLE BRACKET	---
SINGLE OUTREACH	---
DOUBLE OUTREACH	---
4-WAY	---
EXISTING	
POLE BRACKET	---
SINGLE OUTREACH	---
DOUBLE OUTREACH	---
4-WAY	---
PILLARS / PITS / ETC	
MINI (WORKING END)	---
UNIVERSAL	---
MINI	---
LINK	---
CABLE MARKER LUG	---
Serviced Uncleared De-energised Lot	---
TRANSFORMER	
EXISTING	---
SWITCHGEAR	---
AERIAL CONDUCTORS AND POLES	
NEW POLE (ANY TYPE AS INDICATED)	---
EXISTING POLE (ANY TYPE AS INDICATED)	---
HY	---
LV	---
EXISTING AERIAL CONDUCTORS (SIZE AND TYPE INDICATED)	---

CUSTOMER CONTACT DETAILS  
COMPANY NAME: NRMA  
CONTACT: MATT BOOTH  
TEL: 0461 523 842

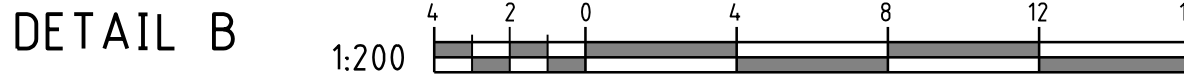
DESIGNER: JOSEPH ESLABON  
DESIGN TEAM: CCS DESIGN TEAM D  
EMAIL: ccs.esp.design@westernpower.com.au  
TEL: 13 10 87  
DATE: 09/24  
SCALE: AS NOTED  
GEO REF: Lat. - 29°49'16" S  
Long. - 115°15'58" E  
DRAWING NUMBER  
NP031930  
SHEET 01 OF 02  
REV: A ORIGINAL SIZE - A1

Rev.	ISSUED FOR CONSTRUCTION	J.E.	09/24	ENVIRONMENTAL FILTER REPORT EDM# 69236511	BYDA EDM# 69236184
1	ISSUED FOR ENGINEERING REVIEW	J.E.	09/24	HAZARD MANAGEMENT REGISTER EDM# 69557343	
REVISIONS		DRN	DATE	REFERENCE FILE DETAILS	





PLEASE NOTE: HEAVY PENALTIES MAY APPLY TO INDIVIDUALS AND BUSINESSES FOR DAMAGE TO NATIVE VEGETATION WITHOUT A PERMIT.



WITH REGARD TO YOUR REQUESTED WORKS, IT HAS BEEN IDENTIFIED BY WESTERN POWER THAT CLEARING OR POTENTIAL CLEARING IS REQUIRED TO FACILITATE THE CONNECTION. BEING A CUSTOMER-FUNDED PROJECT, THE CUSTOMER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CLEARING APPROVALS PRIOR TO THE COMMENCEMENT OF WORKS. YOU CAN ENGAGE AN ENVIRONMENTAL CONSULTANCY TO ASSIST WITH THIS.

"ALL OTHER CONSTRAINTS HAVE BEEN CONSIDERED AND CLEARING WAS DEEMED THE MOST SIGNIFICANT IMPACT. METHODS TO AVOID AND MINIMISE CLEARING CONSIDERED DURING THE DESIGN PHASE INCLUDED;

- PROPOSED RISKS AND AVOID WHERE POSSIBLE
10. USING LARGER LINE SPANS THAT CAN SPAN OVER VEGETATION
  11. USING STRUCTURES WITH SMALLER FOOTPRINTS
  12. IMPLEMENTING LOWER IMPACT CLEARING METHODOLOGIES, FOR EXAMPLE HAND CLEARING INSTEAD OF MECHANICAL CLEARING'

CLARIFICATION CAN BE SOUGHT VIA EMAILING DWER DIRECTLY VIA [info@dwer.wa.gov.au](mailto:info@dwer.wa.gov.au).

REQUIRED BY THE LANDOWNER TO CLEAR PRIOR TO WORKS PROCEEDING.

- A CLEARING PERMIT; OR
- A REFERRAL DETERMINATION NOTICE ISSUED BY DWER CONFIRMING A CLEARING PERMIT IS NOT REQUIRED; OR
- WRITTEN DETAILS OF A RELEVANT CLEARING PERMIT EXEMPTION AND SUPPORTING DOCUMENTS (INCLUDING ANY REGULATOR CORRESPONDENCE).

QUESTIONS ABOUT WESTERN POWER'S REQUIREMENTS, PLEASE CONTACT YOUR ALLOCATED DESIGNER.

LEGEND	
SCHEME BDY.	
RETAINING WALL	
RESTRICTED ZONE	
EASEMENT	
HV CABLES	
CN53 - 400mm <sup>2</sup> (3X1c)	
CN49 - 240mm <sup>2</sup> (3X1c)	
CN48 - 185mm <sup>2</sup> (3X1c)	
CN50 - 95mm <sup>2</sup> (3X1c)	
CN51 - 50mm <sup>2</sup> (3X1c)	
CN51 - 50mm <sup>2</sup> (1c)	
CN46 - 35mm <sup>2</sup> (3X1c)	
CN47 - 35mm <sup>2</sup> (1c)	
EXISTING HV CABLES (SIZE AND TYPE INDICATED)	
LV-SL CABLES	
CN45 - 240mm <sup>2</sup> (1x3c)	
CN44 - 185mm <sup>2</sup> (1x3c)	
CN43 - 120mm <sup>2</sup> (1x3c)	
CN42 - 25mm <sup>2</sup> (1x3c)	
CN61 - 16mm <sup>2</sup> SL (1c)	
400 C PILOT	
EXISTING LV CABLES (SIZE AND TYPE INDICATED)	
LV - AERIAL CONDUCTORS	
19/32.5 AAC/AAAC	
7/4.75 AAC/AAAC	
7/2.5 AAC/AAAC	
LV ABC 95	
LV ABC 150	
SERVICE 16mm	
EXISTING LV CONDUCTORS (SIZE AND TYPE INDICATED)	
HV - AERIAL CONDUCTORS	
19/32.5 AAC/AAAC	
7/4.75 AAC/AAAC	
7/2.5 AAC/AAAC	
3/2.75 SCAC	
6/11/300 AACSR/AC	
150 HENDRIX	
EXISTING HV CONDUCTORS (SIZE AND TYPE INDICATED)	
PILLARS / PITS / ETC	
MINI (WORKING END)	UPS PITS
UNIVERSAL	UTILITIES PIT
MINI	BGSP PIT
LINK	100/200AMP CUTOUT
CABLE MARKER U/G	CONDUIT / POLY PIPE
Serviced Unleaded De-energised Lot	
STREET LIGHTS	
POLE BRACKET	POLE BRACKET
SINGLE OUTREACH	SINGLE OUTREACH
DOUBLE OUTREACH	DOUBLE OUTREACH
4-WAY	4-WAY
* ALPHA CHARACTER DENOTES STREET LIGHT TYPE. REFER STREET LIGHT SCHEDULE FOR POLE & LUMINAIRE DETAILS.	
OH EQUIPMENT	
INTERMEDIATE	PITS
DOF	HV ISOLATOR
INLINE STRAIN	LV DISCONNECTOR
PTT	ISOL TX
AERIAL STAY	OUTRIGGER STAY
RECLOSER	GROUND STAY
LOAD BREAK SWITCH	SECTIONALISER
CAPACITOR	LV ABC KRONE
LBPTS	STREETLIGHT BOX