CONTRACTOR NOTES:

DRAWINGS AND SPECIFICATIONS.

2. ALL WORKS TO BE COMPLETED IN LINE WITH WESTERN POWER POLICIES, INCLUDING THE UDS, WADCM, DDC, DSM,

DRAWING TO BE READ IN CONJUNCTION WITH CONTRACT

- DCSH, UCIM AND EARTHING FAQ. ALL MATERIALS USED MUST BE APPROVED WESTERN POWER MATERIALS.

 3. VERIFY ALL MATERIAL QUANTITIES AGAINST SITE CONDITIONS PRIOR TO QUOTATION AND ADVISE
- ELECTRICAL CONSULTANTS OF ANY VARIATIONS.

 4. SHOW CAUTION IN PROXIMITY TO EXISTING ASSETS.
 ALWAYS REFER TO CURRENT DBYD DRAWINGS.POTHOLE
 TO LOCATE IF NECESSARY.PROTECT SERVICES AS
 REQUIRED.DO NOT ENCROACH MINIMUM APPROACH
- DISTANCES FOR UNDERGROUND OR OVERHEAD ASSETS.

 5. LIAISE WITH WESTERN POWER AS REQUIRED.ORGANISE PRE-HANDOVER INSPECTION AND ENERGISATION SCHEDULE WITH ELECTRICAL SUPERINTENDENT/INSPECTOR PRIOR TO COMPLETION OF WORKS.
- 6. CONTRACTOR TO COMPLETE & PROVIDE AS CONSTRUCTED PACKAGE AS PER UDS.ENGAGE 3E CONSULTING ENGINEERS TO DRAFT WP COMPLIANT CAD AS CONS DRAWINGS. INCLUDE 3E'S COSTS FOR DRAFTING AS CON DRAWINGS IN TENDER PRICE.MAINTAIN AND PROVIDE COMPLETE, CLEAR & LEGIBLE RED-LINE AS CONSTRUCTED DRAWING MARK-UPS TO 3E CONSULTING ENGINEERS.
- 7. MAKE ALLOWANCE FOR TERRACING OF CABLES WHERE REQUIRED, INCLUDING FOR ROAD CROSSINGS.
- 8. CLEAN BEDDING SAND TO BE IMPORTED FOR CABLE TRENCHES WHERE EXISTING MATERIALS DO NOT MEET WP REQUIREMENTS.
- 9. PLAN CABLE RUNS TO LIMIT THE NUMBER OF STRAIGHT JOINTS.
- 10. COMMENCE LAYING CABLES FROM THE TRANSFORMER, SWITCHGEAR OR UNIVERSAL PILLAR.
- 11. ALL CABLES LAID NEXT TO RETAINING WALLS TO BE IN CONDUIT.EXTEND CONDUIT 2m PAST WALL ON STRAIGHT SECTIONS
- 12. INSTALL HEATSHRINK "END CAP" AT ALL CABLE ENDS.

 13. INSTALL HEATSHRINK GLOVES ON ALL LV CABLE TERMINATION ENDS.
- 14. STREETLIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS.PEG POLES LOCATIONS PRIOR TO INSTALL
- AND NOTIFY 3E OF CLASHES IN ADVANCE.

 15. ERECT LIGHT POLES ONLY AFTER NEARBY EXISTING OVERHEAD POWERLINES ARE REMOVED, WHERE NOTED.
- 16. BORE UNDER EXISTING ROADS.
 17. CONTRACTOR TO LEAVE SUFFICIENT CABLE COILED AT ALL INTERFACE POINTS (INCLUDING JOINTS, PILLAR TERMINATIONS & POLE TERMINATIONS) TO ALLOW WP TO COMPLETE INTERFACE WORKS. INSTALL END CAPS TO PROTECT CABLE.
- 18. CONTRACTOR TO INSTALL STREETLIGHT ON 2.50m ALIGNMENT, WHERE NOTED.
- 19. CONTRACTOR TO DEFER STREET LIGHT POLE INSTALL FOR POLES IN THE VICINITY OF EXISTING OVERHEAD POWER LINES, UNTIL IMMEDIATELY AFTER WESTERN POWER HAVE REMOVED THE POWER LINES. REFER UDS TABLE 11.
- 20. CONTRACTOR TO SET BACK NEW PILLAR IN EXISTING LOT SUCH THAT THE PILLAR CLEAR ZONE IS CLEAR OF
- 21. ELECTRICAL CONTRACTOR TO INSPECT EXISTING METER BOARD AND AERIAL SUPPLY, TO DETERMINE APPROPRIATE NEW CONSUMER MAINS ARRANGEMENT. SUPPLY, INSTALL & TERMINATE NEW UNDERGROUND CONSUMER MAINS FROM EXISTING METER BOARD TO NEW PILLAR. MAKE APPROPRIATE ALTERATIONS TO EXISTING METER BOARD. COMPELTE WORKS AS PER WAER, AS3000 & WP REQUIREMENTS. CABLES TO BE UNDERGROUND IN ORANGE HD CONDUIT AT 500mm (MIN) DEPTH. MINIMUM CABLE SIZE OF 3Ph TO BE 6sqmm FOR 1Ph TO BE 10sqmm. COMPLETE PRELIM & COMPLETION NOTICES AS PER REQUIREMENTS.

WESTERN POWER SCOPE OF WORKS

EXISTING FENCE.

- A WP TO COST TO CARRY OUT REMOVAL OF EXISTING SEALED ENDS AND STRAIGHT JOINT NEW 240LV CABLES TO EXISTING 240LV CABLES, WP TO EXCAVATE AND BACKFILL JOINT BAY AND SUPPLY JOINT.
- B WP TO COST TO REMOVE ALL AERIAL ASSETS BETWEEN POLE #S198521 AND POLE #S198518. WP TO CARRY OUT ALL ASSOCIATED WORKS.
- WP TO COST TO INSTALL NEW STAY ON EXISTING POLE #S198518 AND TERMINATE NEW 240LV CABLE, WP TO SUPPLY MATERIALS AND CARRY OUT ALL ASSOCIATED WORKS

WP TO COST AND CARRY OUT REMOVAL OF EXISTING

THIRD PARTY APPROVALS:

- A1. CITY OF SWAN TO APPROVE NEW POLE & GROUND STAY WIRE LOCATION
- A2. LANDOWNER TO APPROVE CONVERSION OF EX O/H SERVICE TO UNDERGROUND

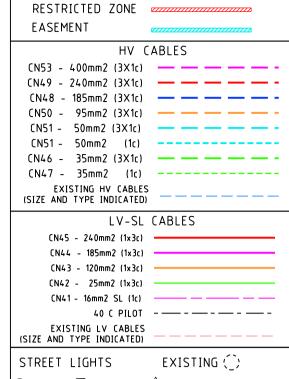
LINK IN UNI PILLAR ON LOT 141 AS SHOWN.

ARROW DENOTES DIRECTION TO PEG WITH WHICH DUCTS ARE TO BE ALIGNED

DUCTS TO BE LAID TO WP SPECIFICATION AS OUTLINED

IN UNDERGROUND DISTRIBUTION SCHEMES MANUAL POLICY AND INSTALLATION OPTIONS

DENOTES PREVIOUSLY REQUESTED DUCTS



LEGEND

SCHEME BDY.

RETAINING WALL

RETAINING WALL

EXTRA FOOTING

0 42W CFL 70W HPS 70W MH 20W LED 1E

■ 80W MV 150W HPS 150W MH 53W LED 2E

■ 125W MV 250W HPS 250W MH 80W LED 4E

■ 160W LED 5E

■ 250W HPS AERODROME 170W LED 6E

LEGEND DEFINES TYPE & WATTAGE - NOT COLOUR

PILLARS / PITS / ETC

MINI (WORKING END)

U UNIVERSAL

MINI
LINK

STANDARD WP
MARKER POST

CUSTOM FOOTPATH
CABLE MARKER PLATE

PIT
CONCRETE
HV CABLE PIT
P# - TYPE
B/D - TRAFFICABLE
LID RATING

SERVICED UNCLEARED
DE-ENERGISED LOT

CONDUIT / POLY PIPE

TRANSFORMER EXISTING SWITCHGEAR

()

AERIAL CONDUCTORS AND POLES

NEW POLE (ANY TYPE AS INDICATED)

EXISTING POLE (ANY TYPE AS INDICATED)

HV LV EXISTING AERIAL CONDUCTORS (SIZE AND TYPE INDICATED)

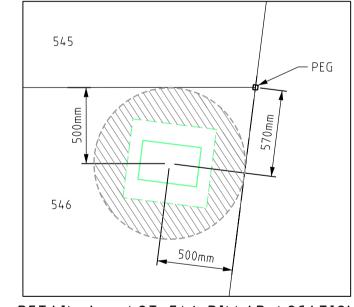
TYPICAL PILLAR EXCLUSION ZONE

NOT TO SCALE

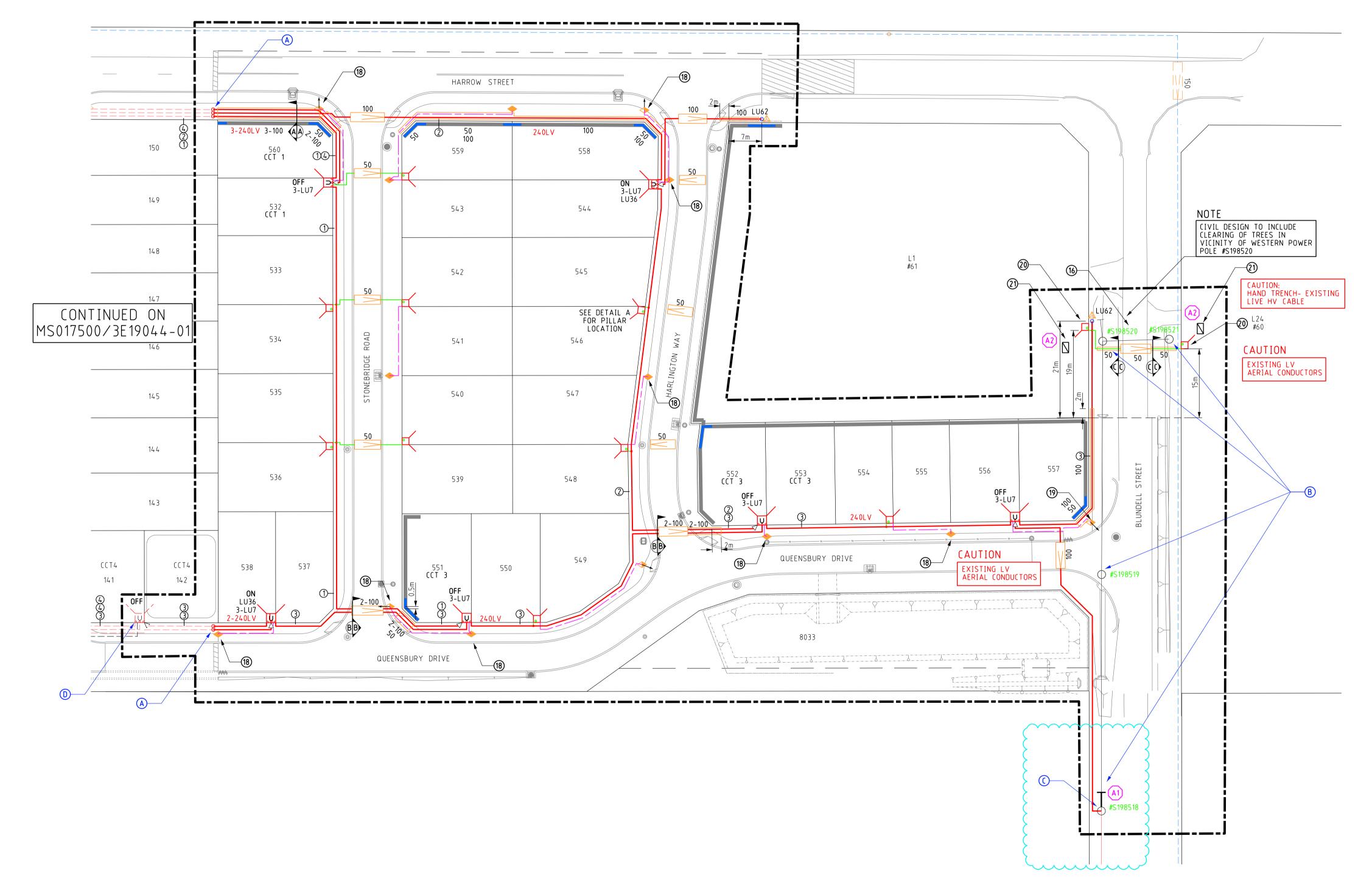
OTHER SERVICES
(600mm FOR
STORMWATER)

EARTH STAKE

UNI PILLAR
MINI PILLAR
MINI PILLAR
BOUNDARY
BOUNDARY
BOUNDARY



DETAIL A - LOT 546 PILLAR LOCATION
NOT TO SCALE



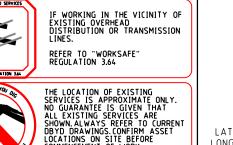
REV	DESCRIPTION	DATE	DRWN	CHKD
А	ISSUED TO CLIENT FOR COMMENT	13-05-21	DA	JH
В	NEW OH POLE LOCATION REVISED, CIVIL LAYOUT UPDATED	27.05.2021	DA	JH
0	ISSUED TO WESTERN POWER FOR CONFORMANCE	25.06.2021	DA	JH
1	CIVIL LAYOUT REVISED, DESIGN AND DETAILS UPDATED TO SUIT	30.07.2021	DA	JH
2	SCOPE OF WORKS REVISED AS PER WP COMMENTS	15.09.2021	DA	JH



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REFER TO 'WORKSAFE' REGULATION

LAT 31° 50′ 46″ S LONG 115° 38′ 34″ E

	0 5 10	20	30	40
	Scale	1:500	a A1 Origin	al Paper Size
\ \	Base File Date	29-07-2021	H. Datum	PCG94
1/	Designed: DA	Drawn: DA	Checked: JH	Appr: JH
\	Western Power Reference No.	MS018199	WAPC No.	160391
46" S 3'34" E	Local Authority	CITY OF SW	/AN	

Civil Consultant TABEC

ST LEONARDS ESTATE, DAYTON - STAGE 1Y-1 29 RESIDENTIAL LOTS ELECTRICAL NETWORK

Sheet Of 3E Drawing Number 1 2 3E21052-01

CONTRACTOR NOTES:

- DRAWING TO BE READ IN CONJUNCTION WITH CONTRACT DRAWINGS AND SPECIFICATIONS.
- ALL WORKS TO BE COMPLETED IN LINE WITH WESTERN POWER POLICIES, INCLUDING THE UDS, WADCM, DDC, DSM, DCSH, UCIM AND EARTHING FAQ. ALL MATERIALS USED
- MUST BE APPROVED WESTERN POWER MATERIALS. VERIFY ALL MATERIAL QUANTITIES AGAINST SITE

CONDITIONS PRIOR TO QUOTATION AND ADVISE

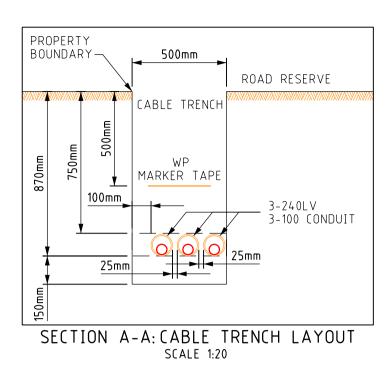
- ELECTRICAL CONSULTANTS OF ANY VARIATIONS. SHOW CAUTION IN PROXIMITY TO EXISTING ASSETS. ALWAYS REFER TO CURRENT DBYD DRAWINGS. POTHOLE TO LOCATE IF NECESSARY. PROTECT SERVICES AS REQUIRED. DO NOT ENCROACH MINIMUM APPROACH
- DISTANCES FOR UNDERGROUND OR OVERHEAD ASSETS LIAISE WITH WESTERN POWER AS REQUIRED. ORGANISE PRE-HANDOVER INSPECTION AND ENERGISATION SCHEDULE WITH ELECTRICAL SUPERINTENDENT/ INSPECTOR PRIOR TO COMPLETION OF WORKS.
- CONTRACTOR TO COMPLETE & PROVIDE AS CONSTRUCTED PACKAGE AS PER UDS. ENGAGE 3E CONSULTING ENGINEERS TO DRAFT WP COMPLIANT CAD AS CONS DRAWINGS. INCLUDE 3E'S COSTS FOR DRAFTING AS CON DRAWINGS IN TENDER PRICE. MAINTAIN AND PROVIDE COMPLETE, CLEAR & LEGIBLE RED-LINE AS CONSTRUCTED DRAWING MARK-UPS TO 3E CONSULTING ENGINEERS.
- MAKE ALLOWANCE FOR TERRACING OF CABLES WHERE REQUIRED, INCLUDING FOR ROAD CROSSINGS
- CLEAN BEDDING SAND TO BE IMPORTED FOR CABLE TRENCHES WHERE EXISTING MATERIALS DO NOT MEET WP REQUIREMENTS.
- PLAN CABLE RUNS TO LIMIT THE NUMBER OF STRAIGHT
- . COMMENCE LAYING CABLES FROM THE TRANSFORMER, SWITCHGEAR OR UNIVERSAL PILLAR.
- ALL CABLES LAID NEXT TO RETAINING WALLS TO BE IN CONDUIT.EXTEND CONDUIT 2m PAST WALL ON STRAIGHT SECTIONS
- 2. INSTALL HEATSHRINK "END CAP" AT ALL CABLE ENDS. 3. INSTALL HEATSHRINK GLOVES ON ALL LV CABLE
- TERMINATION ENDS. . STREETLIGHT POLES MUST NOT BE INSTALLED IN FOOTPATHS.PEG POLES LOCATIONS PRIOR TO INSTALL
- AND NOTIFY 3E OF CLASHES IN ADVANCE. 5. ERECT LIGHT POLES ONLY AFTER NEARBY EXISTING OVERHEAD POWERLINES ARE REMOVED, WHERE NOTED.
- . BORE UNDER EXISTING ROADS. 7. CONTRACTOR TO LEAVE SUFFICIENT CABLE COILED AT ALL INTERFACE POINTS (INCLUDING JOINTS, PILLAR TERMINATIONS & POLE TERMINATIONS) TO ALLOW WP TO COMPLETE INTERFACE WORKS. INSTALL END CAPS TO
- PROTECT CABLE. 8. CONTRACTOR TO INSTALL STREETLIGHT ON 2.50m
- ALIGNMENT, WHERE NOTED. 9. CONTRACTOR TO DEFER STREET LIGHT POLE INSTALL FOR POLES IN THE VICINITY OF EXISTING OVERHEAD POWER LINES UNTIL IMMEDIATELY AFTER WESTERN POWER HAVE REMOVED THE POWER LINES. REFER UDS TABLE 11.
- O. CONTRACTOR TO SET BACK NEW PILLAR IN EXISTING LOT SUCH THAT THE PILLAR CLEAR ZONE IS CLEAR OF EXISTING FENCE.
- . ELECTRICAL CONTRACTOR TO INSPECT EXISTING METER BOARD AND AERIAL SUPPLY TO DETERMINE APPROPRIATE NEW CONSUMER MAINS ARRANGEMENT. SUPPLY, INSTALL & TERMINATE NEW UNDERGROUND CONSUMER MAINS FROM EXISTING METER BOARD TO NEW PILLAR, MAKE APPROPRIATE ALTERATIONS TO EXISTING METER BOARD. COMPELTE WORKS AS PER WAER, AS3000 & WP REQUIREMENTS. CABLES TO BE UNDERGROUND IN ORANGE HD CONDUIT AT 500mm (MIN) DEPTH. MINIMUM CABLE SIZE OF 3Ph TO BE 6sqmm FOR 1Ph TO BE 10sqmm. COMPLETE PRELIM & COMPLETION NOTICES AS PER REQUIREMENTS

WESTERN POWER SCOPE OF WORKS

- A) WP TO COST TO CARRY OUT REMOVAL OF EXISTING SEALED ENDS AND STRAIGHT JOINT NEW 240LV CABLES TO EXISTING 240LV CABLES, WP TO EXCAVATE AND BACKFILL JOINT BAY AND SUPPLY JOINT.
- B WP TO COST TO REMOVE ALL AERIAL ASSETS BETWEEN POLE #S198521 AND POLE #S198518. WP TO CARRY OUT ALL ASSOCIATED WORKS.
- WP TO COST TO INSTALL NEW STAY ON EXISTING POLE #S198518 AND TERMINATE NEW 240LV CABLE, WP TO SUPPLY MATERIALS AND CARRY OUT ALL ASSOCIATED WORKS
- WP TO COST AND CARRY OUT REMOVAL OF EXISTING LINK IN UNI PILLAR ON LOT 141 AS SHOWN.

HIRD PARTY APPROVALS:

- 1. CITY OF SWAN TO APPROVE NEW POLE & GROUND STAY WIRE LOCATION
- 2. LANDOWNER TO APPROVE CONVERSION OF EX O/H SERVICE TO UNDERGROUND



SPECIFICATIONS

AND LOCATION

630kVA Tx

22kV (827A)

ADMD: 4.7kVA

LOT 1

*ASTERISK DENOTES CHANGE IN LOAD ON AN EXISTING CIRCUIT

NO.

|FUSEWAY| CIRCUIT | FUSE | CABLE |

×3

NO. AMPS

POLE FINISH

GALVANISED

WP STANDARD 6.5m

SINGLE OUTREACH POLE

NOT TO SCALE

6.5m WP STANDARD POLE + ROAD GRACE 20W LED 1E LUMINAIRE

6.5m WP STANDARD POLE + ROAD GRACE 53W LED 2E LUMINAIRE

TYPE OF EQUIPMENT

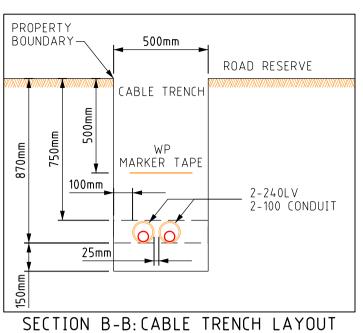
315 | 240 | UNI LOT 551

315 | 240 | LES BLUNDELL STREET

315 | 240 | UNI LOT 141, UNI LOT 532

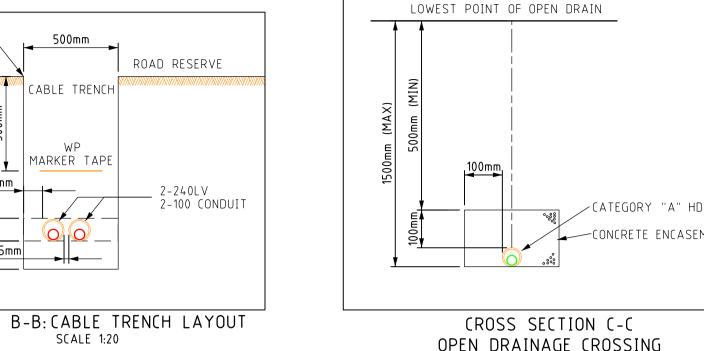
315 | 240 | UNI LOT 114 (OFF), UNI LOT 123 (OFF)

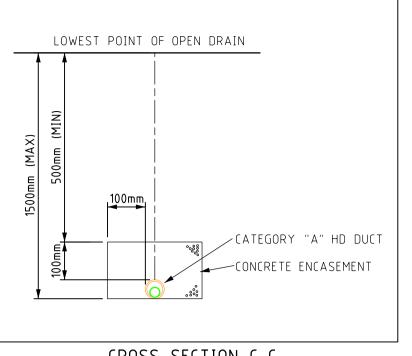
NOTE: ALL UNMETERED SUPPLIES and STREETLIGHTS MUST BE INCLUDED IN DESIGN DRAWING



CIRCUIT NAME

315 | 240 | UNI LOT 552 (OFF) & LES HARROW ST | 4.90V | 59A





NOT TO SCALE

ALIGNMENT), UNLESS NOTED OTHERWISE.

LOT B

STRAIGHT ROAD

PRIOR APPROVAL FROM THE SUPERINTENDENT.

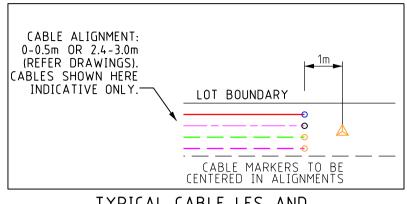
LOT A

BOUNDARY NOT

FRONT BOUNDARY

PERPENDICULAR TO

BOUNDARY. REFER TO SPECIFIC DETAILS FOR NON-STANDARD LOCATIONS.



TYPICAL CABLE LES AND MARKER LOCATIONS NOT TO SCALE

- BOUNDARY PEGS ROAD CROSSING CONDUIT RETAINING WALL FRONT BOUNDARY FRONT BOUNDARY 2m (MIN) 2m (MIN)

MINIMUM CONDUIT EXTENSION AT WALLS TO AVOID DEEPENED FOOTINGS NOT TO SCALE

WP STREETLIGHT POLES TO BE LOCATED WITHIN 2.4-3.0m UTILITY ALIGNMENT (TYPICALLY CENTRED ON 2.7m

POLES LOCATIONS TYPICALLY TO BE IN LINE WITH SIDE LOT BOUNDARY PEG. PERPENDICULAR TO FRONT LOT

STREETLIGHT POLES SHALL BE LOCATED EXACTLY AS PER THE DRAWINGS AND CANNOT BE MODIFIED WITHOUT

LOT A

KERB NOT PARALLEL

WITH FRONT LOT

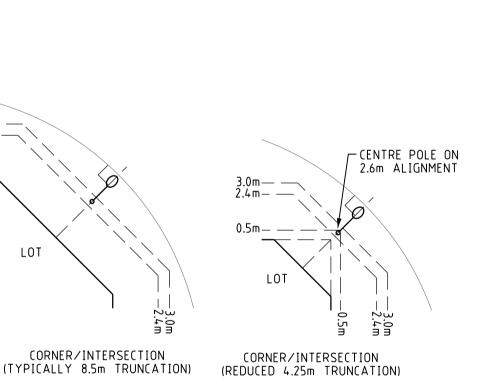
BOUNDARY

LOT B

LOT A

ROAD BEND

LOT B



LEGEND

HV CABLES

CN53 - 400mm2 (3X1c) — — — — -

CN49 - 240mm2 (3X1c) — — — — — -

CN48 - 185mm2 (3X1c) — — — — —

CN50 - 95mm2 (3X1c) — — — — —

CN46 - 35mm2 (3X1c) — — — — —

CN47 - 35mm2 (1c) -----

LV-SL CABLES

◯42W CFL 🦙 70W HPS 🖊 70W MH 🔷 20W LED 1E

125W MV 250W HPS 250W MH 80W LED 4E 160W LED 5E

LEGEND DEFINES TYPE & WATTAGE - NOT COLOUR

PILLARS / PITS / ETC

TRANSFORMER EXISTING SWITCHGEAR

AERIAL CONDUCTORS AND POLES

EXISTING AERIAL CONDUCTORS

(SIZE AND TYPE INDICATED)

EXISTING POLE (ANY TYPE AS INDICATED)

NEW POLE (ANY TYPE AS INDICATED)

40 C PILOT -------

250W HPS AERODROME 4 170W LED 6E

UMS PIT

CONCRETE

P# P# - TYPE B/D - TRAFFICABLE

☐ 100/200AMP CUTOUT

SERVICED UNCLEARED
DE-ENERGISED LOT

SERVICED UNCLEARED

EXISTING ()

SCHEME BDY.

RETAINING WALL

RETAINING WALL

EXTRA FOOTING

EASEMENT

RESTRICTED ZONE

CN51 - 50mm2 (3X1c)

CN51 - 50mm2 (1c)

EXISTING HV CABLES (SIZE AND TYPE INDICATED)

CN45 - 240mm2 (1x3c)

CN44 - 185mm2 (1x3c)

CN43 - 120mm2 (1x3c)

CN42 - 25mm2 (1x3c)

CN41 - 16mm2 SL (1c)

EXISTING LV CABLES (SIZE AND TYPE INDICATED)

STREET LIGHTS

MINI (WORKING END)

UNIVERSAL

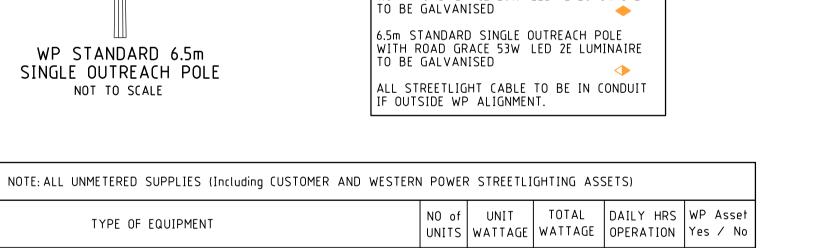
STANDARD WE

MARKER POST

CUSTOM FOOTPATH

CABLE MARKER PLATE

CONDUIT / POLY PIPE



180W | DUSK/DAWN

265W | DUSK/DAWN

YES

YES

8.29V 137A

11.90V | 157A

8.64V 196A

STREETLIGHTS TO BE ORIENTATED PERPENDICULAR TO

STREET LIGHT ORIENTATION DETAILS

NOT TO SCALE

6.5m STANDARD SINGLE OUTREACH POLE

20W

53W

WITH ROAD GRACE 20W LED 1E LUMINAIRE

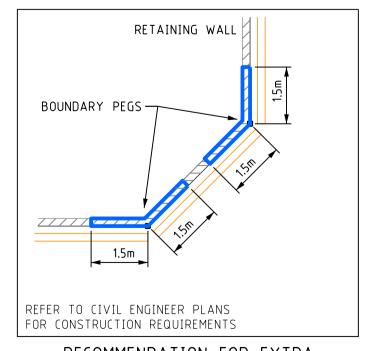
ADJACENT KERB LINE, UNLESS NOTED OTHERWISE BY

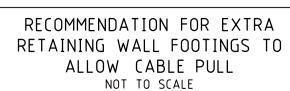
10.30V | 115A | 566A

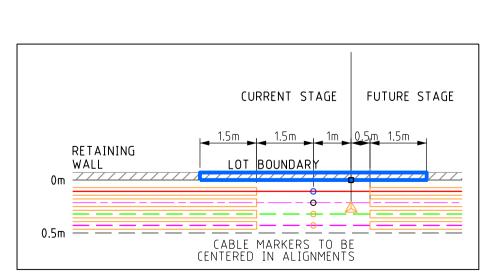


LOT B

ROAD BEND







LOT

TYPICAL DETAIL FOR CONDUIT CABLE & LES SET-OUT AT PROJECT BOUNDARY ADJACENT TO WALL NOT TO SCALE

2	SCOPE OF WORKS REVISED AS PER WP COMMENTS	15.09.2021	DA	JH
1	CIVIL LAYOUT REVISED, DESIGN AND DETAILS UPDATED TO SUIT	30.07.2021	DA	JH
0	ISSUED TO WESTERN POWER FOR CONFORMANCE	25.06.2021	DA	JH
В	NEW OH POLE LOCATION REVISED, CIVIL LAYOUT UPDATED	27.05.2021	DA	JH
А	ISSUED TO CLIENT FOR COMMENT	13-05-21	DA	JH
REV	DESCRIPTION	DATE	DRWN	CHKD



Suite 1, Level 2, Condor Tower 22 St George's Tce, Perth WA 6000 PO Box 3184 East Perth WA 6892 Tel: 08 6314 9000 Email: admin@3ece.com.au

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г	LAT 31° 50′ 46″ S LONG 115° 38′ 34″

	Scale	N/A	a A1 Origin	al Paper
7	Base File Date	29-07-2021	H. Datum	PCG94
V	Designed: DA	Drawn: DA	Checked: JH	Appr:
50′ 46″ S	Western Power Reference No.	MS018199	WAPC No.	160391
38′ 34″ E	Local Authority	CITY OF SW		
	Civil Consultant	TABEC		

ST LEONARDS ESTATE, DAYTON - STAGE 1Y-1 29 RESIDENTIAL LOTS ELECTRICAL NETWORK

Sheet Of 3E Drawing Number 3E 21052-01