THIS DRAWING TO BE READ IN CONJUNCTION WITH THE FOLLOWING SA POWER NETWORKS TECHNICAL STANDARDS TS-085 Trenching and Conduit Standard for Underground Distribution Cable Networks (not to scale) TS-087 Construction Standard for Underground Cable Networks TS-099 Distribution and Sub-Transmission CAD Drafting Standards TS-100 Electrical Design Standard for Underground Distribution Cable Networks TS-101 Public Lighting - Design and Installation TS-102 Easement Standard for Distribution Networks TS-105 Testing for Underground & Overhead Distribution Powerlines up to and including 33kV Networks TS-107 Overhead Line Design Standard for Transmission & Distribution Systems TS-108 Technical Standard for Distribution Equipment and Transformer Rooms TS-109 Earthing of the Distribution Network NICC-400 Information for an Applicant Undertaking a Contestable Extension

CONDUIT BEND DETAIL All conduit bends to contain 45° angles, using High Density conduit and lubrication points.

WALLBRIDGE GILBERT AS1158.1.1:2005 & AS1158.3.1:2005 LIGHTING DESIGN ROAD CATEGORY HEYSEN BLVD

NICC-404 Working in the Vicinity of SA Power Networks Infrastructure

Information & Requirements for Customers/Contractors

<u>Visit SA Power Networks web site for the current version of the Technical Standards</u>

NICC-802 11kV & 7.6kV to Low Voltage Mk7 Padmount Transformers

- Network Access Permit Process

DATE: 18/09/2018 NAME: L Lukanov (Tech.IES)

ALL OTHER ROADS

S.L.D. OF EXISTING 11/0.4kV 500kVA LOOP Mk7 PADMOUNT TRANSFORMER <u>TCXXXXX – (LC7310A)</u> RESERVE OPP LOT 200 SWALLOWTAIL STREET TCXXXXX SHEET 1.11 LC7310A 1×1000Δ ISOLATOR <u>HV Arrgt.</u> BAY-O-NET FUSE 4x630A SIZE 3 E1945 FUSE SWITCH SHEET 4 DISCONNECTS BACKUP FUSE 630A DEAD BREAK CONNECTORS E1982 Sheet 11 Existing 3x95mm<sup>2</sup> HV cable to 3x95mm² HV cable to LS1 LS4 Cxxxxx, located reserve Cxxxxx, located reserve adj opp lot 199 Lilac Parade. lot 268 Swallowtail Street, through existing conduits. Existing 4x150mm<sup>2</sup> LV Al to Parallel 4x150mm²LV Al service pillar lot 198 Lilac Parade. to P7 pit adj lot 245 Existing\_parallel 4x150mm<sup>2</sup> L\_V Al Swallowtail Street. to P7 pit adj lot 188 Lilac Parade. Existing 4x150mm<sup>2</sup> LV Al to service pillar lot 200 Swallowtail Street. SWALLOWTAIL STREET DOOR FACE SOUTH-WEST

S.L.D. OF PROPOSED 11/0.4kV 500kVA LOOP Mk7 PADMOUNT TRANSFORMER TCXXXXX - (LC7310A) RESERVE ADJACENT LOT 268 SWALLOWTAIL STREET TCXXXXX SHEET 1.11 (LC7310A) 1x1000A ISOLATOR <u>HV Arrgt.</u> BAY-0-NET 4x630A SIZE 3 E1945 FUSE SWITCH SHEET 4 DISCONNECTS BACKUP FUSE 630A DEAD BREAK CONNECTORS FOOTING AS PER E1982 Sheet 11 CLASS B SOIL 13x95mm² HV cable to LS2 3x95mm² HV Al cable capped & TCxxxxx, located reserve opp buried 1m past stage boundary lot 200 Swallowtail Street. adj lot 271 Kachina Dr. 4x150mm<sup>2</sup> LV Al to P7 pit adj 4x150mm<sup>2</sup> LV AL to P7 pit adj lot 4 Kachina Drive. lot 259 Swallowtail Street. Parallel 4x150mm² LV Al cable capped & buried 1m past stage boundary adj lot 271 Kachina Dr. Parallel 4x150mm² LV Al to P7 pit adj lot 270 Kachina Drive. SWALLOWTAIL STREET DOOR FACE SOUTH-WEST

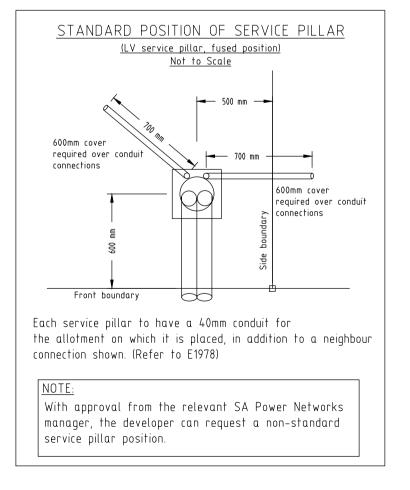
Hundred of Maccesfield in the area named MOUNT BARKER

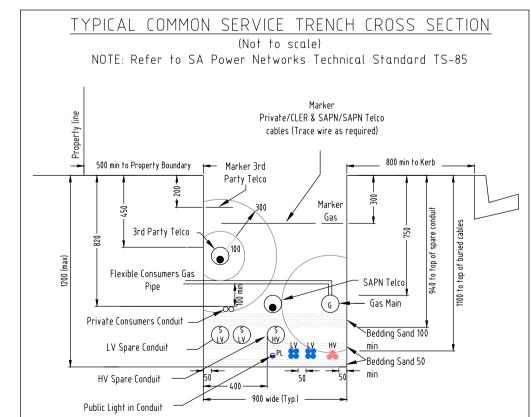
City of Mount Barker

UNFUSED P7 PIT WITH GEL PORTS ARRANGEMENT Service fuses required in customer's meter box when supplied from unfused P7 junction pit. Install 40mm HD orange electrical conduit from P7 pit to property boundary as per AS/NZS3000. • For service connections details refer E1921 Sheet 4 and TS-085 for cable entry and exiting positioning. • For unmetered supply/public lighting supply refer E1921 Sheet 4.3. • For P7 Gelports pit arrgt. refer DST 1745 Sheet, arrgt. 1, 2 & 3 • For LV main cable junction connection details refer E1921 Sheet 3.3. For installation and connection refer E-drawings, JSWP 140 and Field Instruction FI-A1. Mains side — — Service side LV Roadcrossing

The pit may be offset to avoid a driveway by aligning the short side of the pit with the shared side boundary of the property. The mains and service side can be on either the left or right to suit the site installation.

NOTE: Ends of consumers mains to be extended above ground level and marked with a 'star dropper' and orange marker tape.





EDGE OF COMMON SERVICE TRENCH  $\mid$  0.7m  $\mid$   $\mid$  NOT (from boundary line) PUBLIC LIGHTING ALIGNMENT (from back of kerb) <u>DESIGN INFORMATION</u> Termite resistant cable: Yes Earthing: The Design ADMD / lot: 8 kVA

PRELIMINARY ISSUL
NOT TO BE USED FOR CONSTRUCTION
29 November 2018

C.M.E.N

lighting equipment must first be verified by the

DRAWING No. LD-500018690-02-CN.dwg

electrical designer and the project

also be verified by the project surveyor.

LEGEND

\_\_\_\_\_

\_\_\_\_\_

TRAFFICABLE P7 UNFUSED LV JUNCTION PIT WITH GELPORTS. P7 G P7 PIT TO BE REINFORCED WITH 200mm CONCRETE SURROUND, N12 BAR TOP AND BOTTOM 480mm DEEP AND STEEL LID AS PER E1921 SHT 7.3 EXISTING P7 UNFUSED LV JUNCTION PIT PROPOSED FUSED RADIAL PILLAR. PROPOSED PARALLEL 150mm<sup>2</sup> LV UBC XLPE CABLE (CK5310) PROPOSED FUSED LOOP PILLAR. PROPOSED FUSED-T/OFF PILLAR. PROPOSED PADMOUNT TRANSFORMER EXISTING PADMOUNT TRANSFORMER PROPOSED PUBLIC LIGHTING CABLE 6mm<sup>2</sup> TWIN & 6mm<sup>2</sup> EARTH 17W AEROSCREEN LED, 4000K, BLACK FINISH (EM4004) MOUNTED ON BLACK 6.5m MODERN COLUMN WITH 1.5m DECORATIVE MODERN OUTREACH (WA4017). PROPOSED 40mm HD ORANGE ELECTRICAL CONDUIT & DRAW ROPE FOR CONSUMERS MAIN TOAS/NZS 3000. DEPTH 800mm. 105W LED. 4000K, BLACK FINISH (EM4110) MOUNTED ON REFER TYPICAL CST CROSS SECTION & STANDARD SA POWER BLACK 9.0m IMPACT ABSORBING COLDMN (WA4113) WITH SINGLE 3.0m MODERN OUTREACH (WA4531). 105W LED 4000K, BLACK FINISH (EM4110), MOUNTED ON BLACK 9.0 MPACT ABSORBING COLUMN (WA4113) WITH DOUBLE 3.0m MODERN OUTREACH (WA4530). EXISTING LED LUMINAIRE LV/HV CABLES CAPPED IN CABLE PIT E1926/E1979

PROPOSED 3x630mm 2 11kV XLPE CABLE (CK6039)

PROPOSED 3x95mm<sup>2</sup> 11kV XLPE CABLE (CK6006)

PROPOSED 150mm<sup>2</sup> LV UBC XLPE CABLE (CK5310)

EXISTING PARALLEL 150mm<sup>2</sup> LV UBC XLPE CABLE

NETWORKS SERVICE PIT LOCATION ARRANGEMENT.

PROPOSED LV UNDERGROUND OPEN POINT

PROPOSED SPARE CONDUITS

EXISTING SPARE CONDUITS

EXISTING 3x630mm 2 11kV XLPE CABLE

EXISTING 3x95mm<sup>2</sup> 11kV XLPE CABLE

EXISTING 150mm<sup>2</sup> LV UBC XLPE CABLE

IN 40mm CONDUIT

- Developer responsible for trenching in accordance with SA Power Networks trenching & conduit standard TS-085. Construction to be in accordance with SA Power Networks technical standards and SA Power Networks 'E' drawings.
- Cables to be laid in 1x100mm dia. LD (low duty) orange pipe at all road crossings unless otherwise stated. Road crossing conduits for radial (type1) service pits are to extend to the boundary line of the property and be fully continuous. Other road crossings to extend 900mm bevond kerb.
- 3. The conduit for a radial low voltage road crossing installation needs to be continuous (fully conduited) as per E1904 Sheet 4, with conduit between pillars installed in such a way that it will facilitate quick cable replacement. If this is achieved a spare conduit is not required.
- 4. For NBN Developments, install the CST Road Crossing 90° to the allotment boundary.
- 5. Cables to have 1000mm minimum cover.
- 6. Cables through easements to be installed in conduit with spare and marker tape as per TS-085 clause 10.12. Cable markers are to be installed in cable easement as per E1979.
- Electrical contractor to provide 45° sweep bends. Provide lube injection points prior to each bend for long cable pulling distances. Refer SA Power Networks E1906 drawings for detailed requirements.
- 8. Any existing underground services shown on these drawings are indicative only, no claim is made that the existing services shown are accurate or complete. Other services may be present which shall be the contractor's responsibility to locate and depth prior to any construction works Any cable system and equipment must be treated as energised unless otherwise confirmed by SA Power Networks.
- 9. Phasing of consumer connections as shown.
- 10. Public lighting to be all-night burning.
- 11. Number of allotments (36 lots (30@8kVA + 6@6kVA + lot 500 unserviced) = 276kVA.
- 12. Number of public lights 14x17W led + 6x80W (TFI Tariff).
- 13. Developer Lanser Communities.
- 14. Consulting Engineer Wallbridge Gilbert Aztec.
- 15. Surveyor Alexander & Symonds Pty Ltd.
- 16. Due to the schematic nature of the drawing, the position of equipment shown is indicative only. Actual locations should be verified on site.
- 17. Retaining walls are required around transformer and switching cubicle easements where the final level changes by more than 300mm in the 2.0m adjacent the easement. The walls are to be built prior to installation of the transformer or switching cubicle and are to be located on
- 18. All walls, fences, ceilings and floors within 1.2m of the padmount transformer station shall have a 3 hour fire rating as determined by the Building Code of Australia.
- 19. SA Power Networks is responsible for the connecting and energising of the stage.
- 23. Contractor to provide as constructed drawings to SA Power Networks for approval prior to practical completion. Changes can be made by design consultant for hourly rate charge or AutoCAD format drawings can be purchased from consultant for revision by contractor.
- 24. Construction by -'As Constructed' details provided by -

WGA is not responsible for the accuracy of the 'As Constructed' details provided.

THIS DRAWING TO BE READ IN CONJUNCTION WITH DRAWING 500018690 SHEET 2

Any changes to be made on site to the location of the 1.0m | common service trench, and/or electrical & street WALLBRIDGE GILBERT AZTEC manager/engineering consultant. Any changes to work within proposed SA Power Networks easements must

60 Wyatt Street, Adelaide South Australia 5000

Telephone 08 8223 7433

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HBFRA HIGH BUSHFIRE RISK AREA MAP REF:6627-07-a FEEDER NO: MTB-14 303672.70 E FEEDER NAME: FLAXLEY 11kV 6114994.00 N SUBSTATION NO: SSD-777 SUBSTATION NAME: Mt Barker Distribution SSET OWNER: SA POWER NETWORKS PROJECT DEFINITION: NOTIFICATION TYPE PROJECT TYPE XX-000000 303446.30 E

Email adelaide@wga.com.au	303446.30 E 6114670.30 N	PRELIMINARY
LLUVER PAR	RK – STAGE	E 2 – MT BARKER
PROPOSED UNDER	GROUND RES	SIDENTIAL DEVELOPMEN'

19-09-18 | Head Office: DRAWN L KLEINIG 1 Anzac Highway CLOVER Keswick South Australia 5035 | DESIGNED | L LUKANOV Power Postal address: GPO Box 77 Networks 21-09-18 | Adelaide South Australia 5001 CHECKED A IAROSSI DEV. No. 580/D030/15 WGA AI 29.11.18 B PRELIMINARY ISSUE - LOT LAYOUT UPDATED Corporate switchboard A PRELIMINARY ISSUE WGA | AI 21.09.18 PROJECT MT BARKER MANAGER 08 8404 5667 SHEET 1 OF 2 (9.00am - 5.00pm 500018690 DETAILS OF REVISION RVD | CKD | APD | DATE | REV | DETAILS OF REVISION RVD | CKD | APD | DATE | REV | DETAILS OF REVISION RVD | CKD | APD | DATE www.sapowernetworks.com.au Monday to Friday) (08) 8391 7721