

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
- 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
- NICC-404 Working in the Vicinity of SA Power Networks Infrastructure - Network Access Permit Process

Visit SA Power Networks web site for the current version of the Technical Standards

FOR CONDUIT BEND DETAIL REFER SA POWER NETWORKS TS-085 TABLE 7 to 9.

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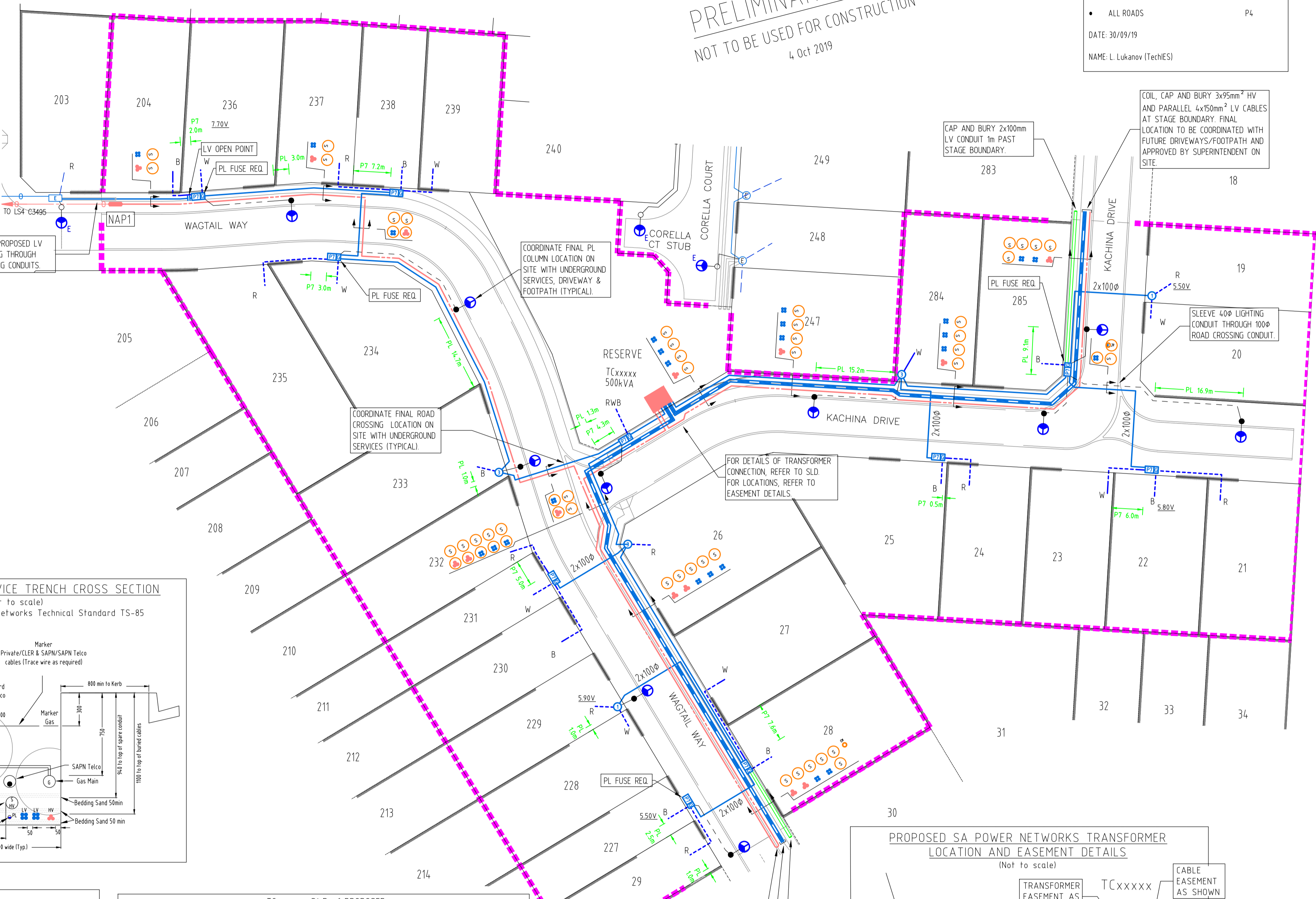
**WGA**  
WALLBRIDGE GILBERT AZTEC

AS158 3.1 2005 LIGHTING DESIGN ROAD CATEGORY  
ALL ROADS P4  
DATE: 30/09/19  
NAME: L. Lukanov (TechNES)

PRELIMINARY ISSUE  
NOT TO BE USED FOR CONSTRUCTION  
4 Oct 2019

**LEGEND**

- PROPOSED 3x95mm<sup>2</sup> HV XLPE CABLE (10kV006)
- EXISTING 95mm<sup>2</sup> HV CABLE
- PROPOSED 150mm<sup>2</sup> LV UBC XLPE CABLE (10kV310)
- EXISTING 150mm<sup>2</sup> LV CABLE
- PROPOSED PARALLEL 150mm<sup>2</sup> LV UBC XLPE CABLE (10kV310)
- PROPOSED PUBLIC LIGHTING CABLE 6mm<sup>2</sup> TWIN & 6mm<sup>2</sup> EARTH IN 40mm CONDUIT
- EXISTING PUBLIC LIGHTING CABLE
- PROPOSED 40mm HD ORANGE ELECTRICAL CONDUIT & DRAW ROPE FOR CONSUMERS MAIN TRAYS/NZS 3000 DEPTH 800mm REFER TYPICAL CST CROSS SECTION & STANDARD SA POWER NETWORKS SERVICE PIT LOCATION ARRANGEMENT.
- EXISTING CONSUMERS MAIN
- PROPOSED LV UNDERGROUND OPEN POINT
- PROPOSED SPARE CONDUITS
- EXISTING SPARE CONDUITS
- PROPOSED TRAFFICABLE P7 UNFUSED LV JUNCTION PIT WITH GEL PORTS. P7 PIT TO BE REINFORCED WITH 200mm CONCRETE SURROUND, NZ BAR TOP AND BOTTOM 48mm DEEP AND STEEL LD AS PER E1921 SHT 7.3
- EXISTING JUNCTION PIT
- PROPOSED FUSED RADIAL PILLAR
- PROPOSED FUSED LOOP PILLAR
- PROPOSED FUSED 1/OFF PILLAR
- EXISTING SERVICE PILLAR
- PROPOSED HV CABLE JOINT
- PROPOSED PADMOUNT TRANSFORMER
- TW STREETLED AEROSCREEN LED, 4000K, BLACK FINISH (EM4022) MOUNTED ON BLACK 65mm MODERN COLUMN WITH 15mm DECORATIVE MODERN OUTREACH (WGA077)
- EXISTING LED LUMINAIRE
- BOUNDARY/PROPERTY LINE
- KERB LINE



**SCOPE OF WORKS**

**CONTESTABLE WORKS**  
Electrical Contractor to:

- Undertake all new work within development.
- Provide completed TS-105 C1 & C2 forms.
- Provide 'As Constructed' drawings to SA Power Networks Network Management group at no charge.
- Provide documented tests proving condition of the existing infrastructure:
  - megger and phase ID all cables
  - megger all screens and carry out core to screen/earth test for all HV cables
  - contact NPO for direction if any faults discovered.

Developer/Civil Contractor to:

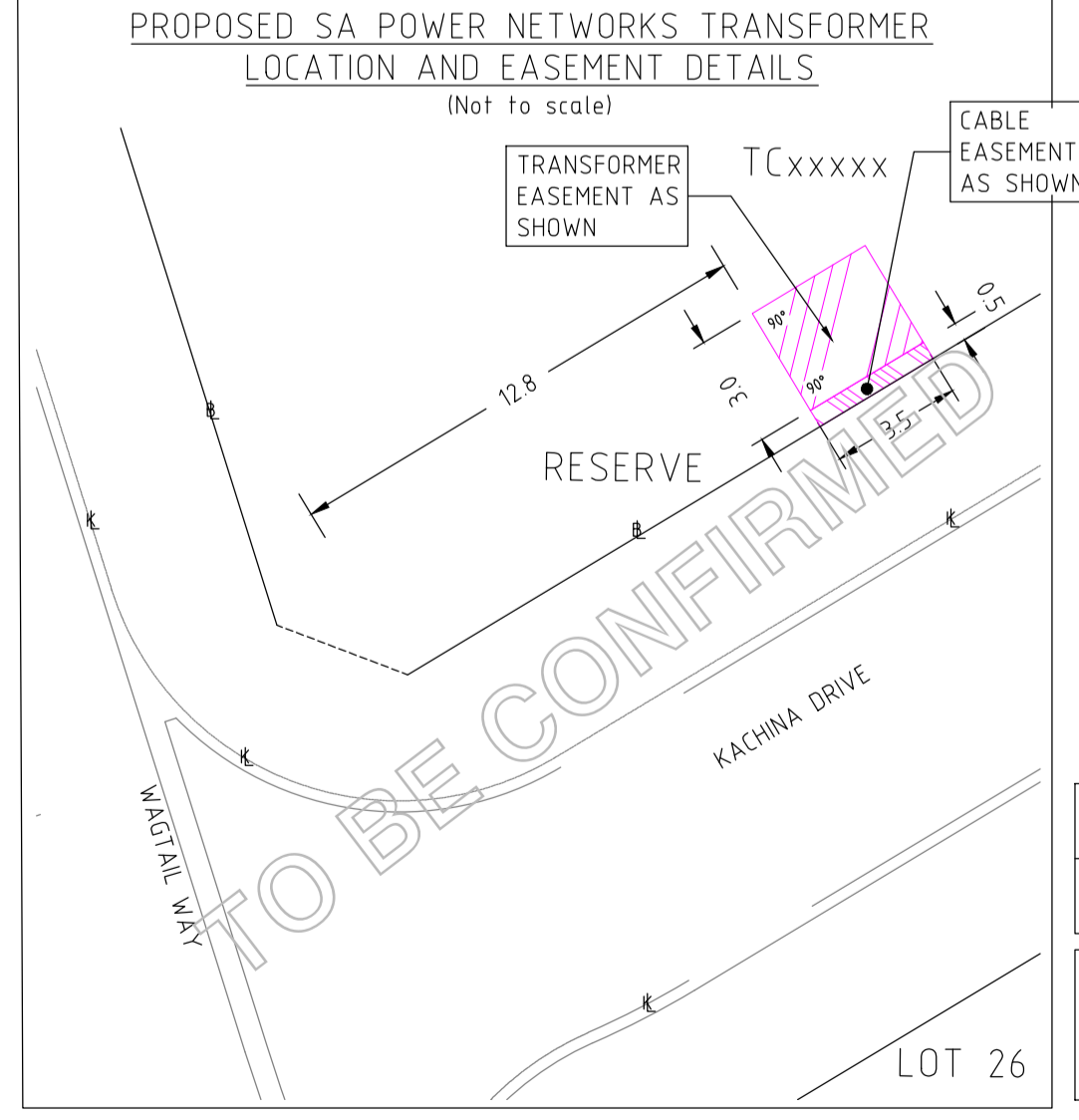
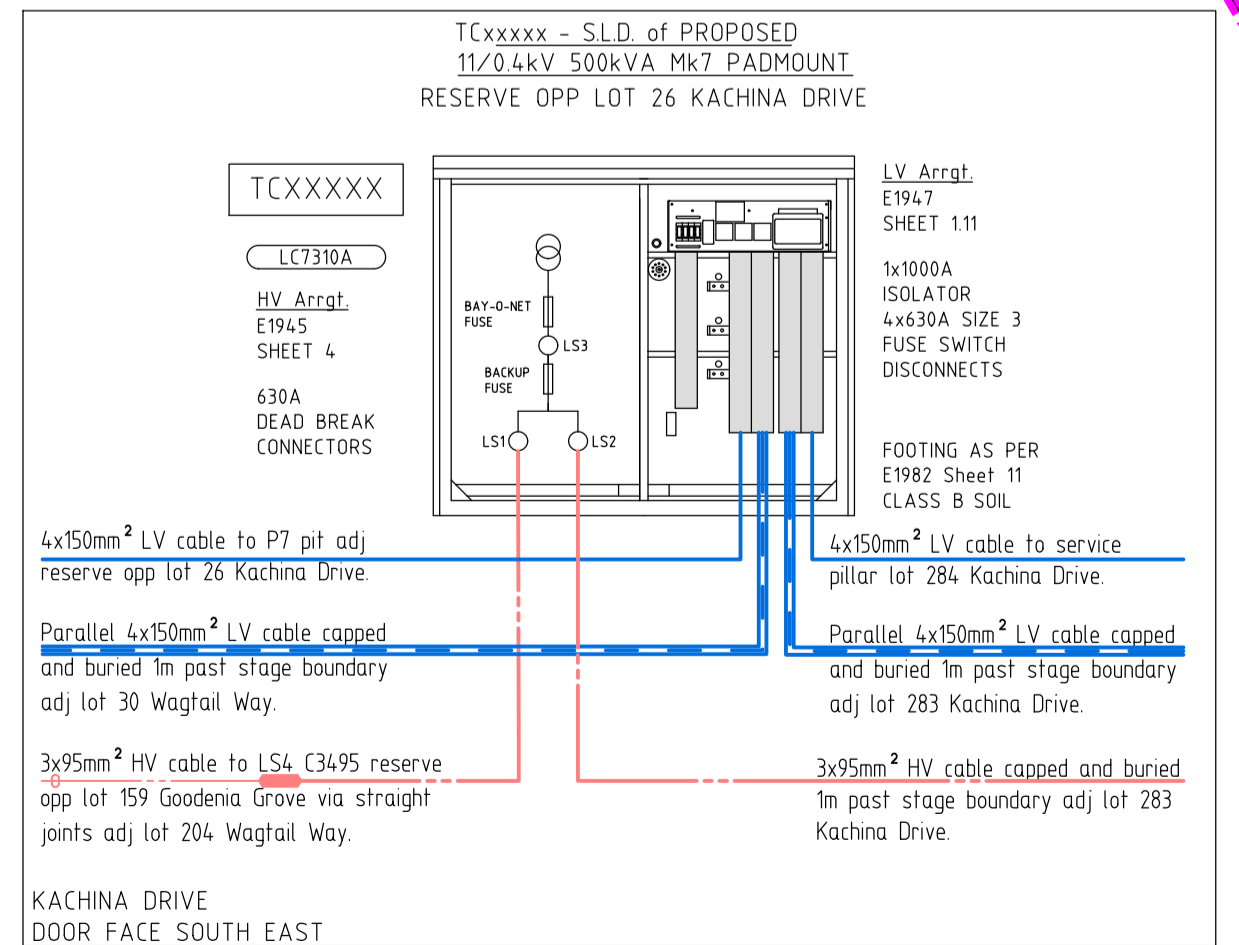
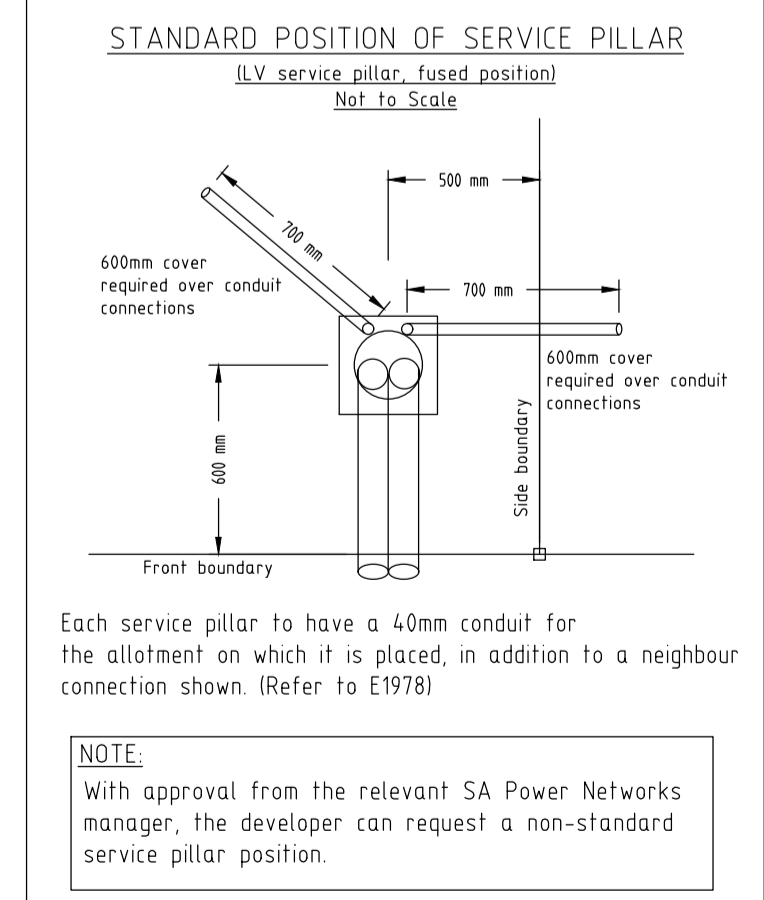
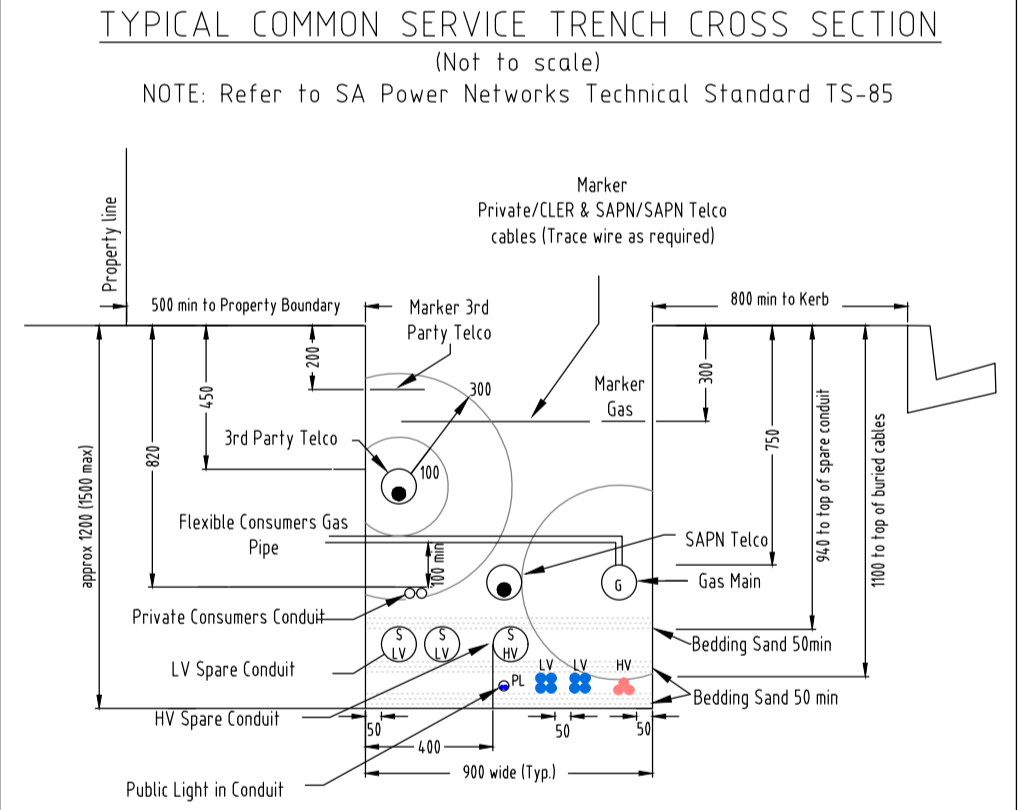
- Comply with requirements of NICC-404, TS105-C1 & C2 when working in the vicinity of the electricity network.

**NON CONTESTABLE WORKS**  
SA Power Networks to:

- Terminate & connect 4x150mm<sup>2</sup> LV cable into existing P7 pit adj lot 203 Wagtail Way.
- Carry out testing, connection and energising of the development.

**NOTES:**

- 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 beyond kerb.
- 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.
- For NBN Developments, install the CST Road Crossing 90° to the allotment boundary.
- For MEN areas resistance of Neutral to Earth at any point must be less than 10ohms and the minimum distance between earth rods of different voltage networks shall be 35m. Refer to TS-087 & E1905 for details.
- Cables to have 1000mm minimum cover.
- 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.
- 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.
- Phasing of consumer connections as shown.
- Public lighting to be all-night burning.
- Number of allotments - 27 lots
- Number of public lights - 10x17W led
- Developer - Lanser Communities.
- Consulting Engineer - Wallbridge Gilbert Aztec.
- Surveyor - Alexander & Symonds Pty Ltd.
- Due to the schematic nature of the drawing, the position of equipment shown is indicative only. Actual locations should be verified on site.
- 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 the easement.
- All walls, fences, ceilings and floors within 12m of the padmount transformer station shall have a 3 hour fire rating as determined by the Building Code of Australia.
- SA Power Networks is responsible for the connecting and energising of the stage.
- 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.
- Construction by - 'As Constructed' details provided by - WGA is not responsible for the accuracy of the 'As Constructed' details provided.



EDGE OF COMMON SERVICE TRENCH (from boundary line)	0.7m
PUBLIC LIGHTING ALIGNMENT (from back of kerb)	1.0m
<b>DESIGN INFORMATION</b>	
Termite resistant cable:	Yes
Earthing:	M.E.N
The Design ADM / lot:	6 kVA

**NOTE:**  
Any changes to be made on site to the location of the common service trench, and/or electrical & street lighting equipment must first be verified by the electrical designer and the project manager/engineering consultant. Any changes to work within proposed SA Power Networks easements must also be verified by the project surveyor.

**WGA**  
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**PRELIMINARY**

CLOVER PARK - STAGE 3 - MT BARKER  
PROPOSED UNDERGROUND RESIDENTIAL DEVELOPMENT  
DEV. No. 580/D063/16

REV	DETAILS OF REVISION	RVD	CKD	APD	DATE	REV	DETAILS OF REVISION	RVD	CKD	APD	DATE
A	PRELIMINARY ISSUE				04.10.19						

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CHECKED	L.LUKANOV	03-10-19	Corporate switchboard 08 8404 5667 19:00am - 5:00pm Monday to Friday)
PROJECT MANAGER	R. GEUE MT BARKER (08) 8391 7721		www.sapowernetworks.com.au

