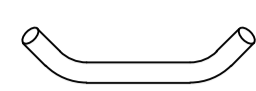


Drawing to be read in conjunction with the following SA Power Networks specification documents. Please note: It is the responsibility of the Constructor to refer to the most recent standard

- Specification**
- Trenching & Conduit Standard (TS-085)
  - Construction Standard (TS-087)
  - Electrical Design Standard for Underground Cable Networks (TS-100)
  - Public Lighting Standard for Overhead & Underground Networks (TS-101)
  - Easement Standards (TS-102)
  - Testing Standard for Underground Cable Networks (TS-105)
  - Earthing of the Distribution Network (TS-109)
  - Information for an Applicant Undertaking a Contestable Extension (NICC-400)
  - Working in the vicinity of SA Power Networks Infrastructure - Network Access Permit (NICC-404)

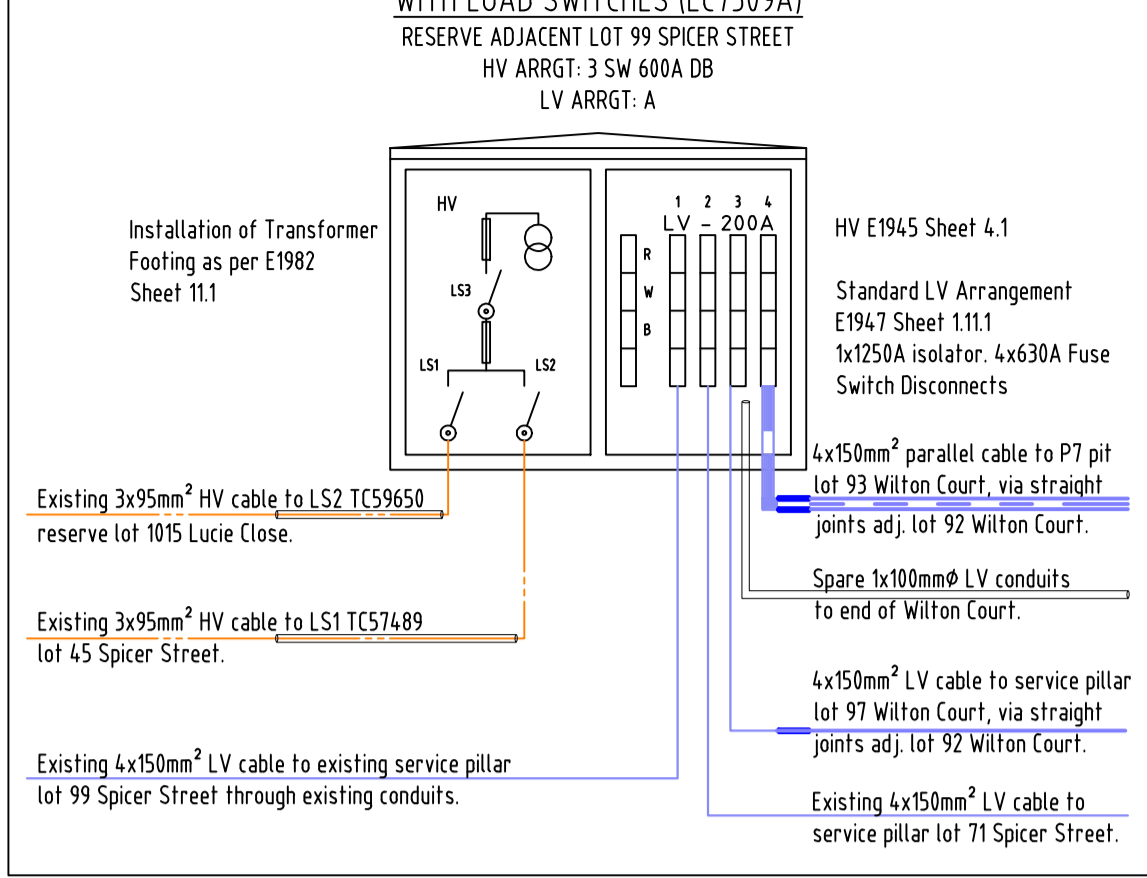
**CONDUIT BEND DETAIL**  
(Not To Scale)

All conduit bends to contain 45° angles, using High Density conduit.



Hundred of Strathalbyn in the area named MOUNT BARKER Town of Mount Barker

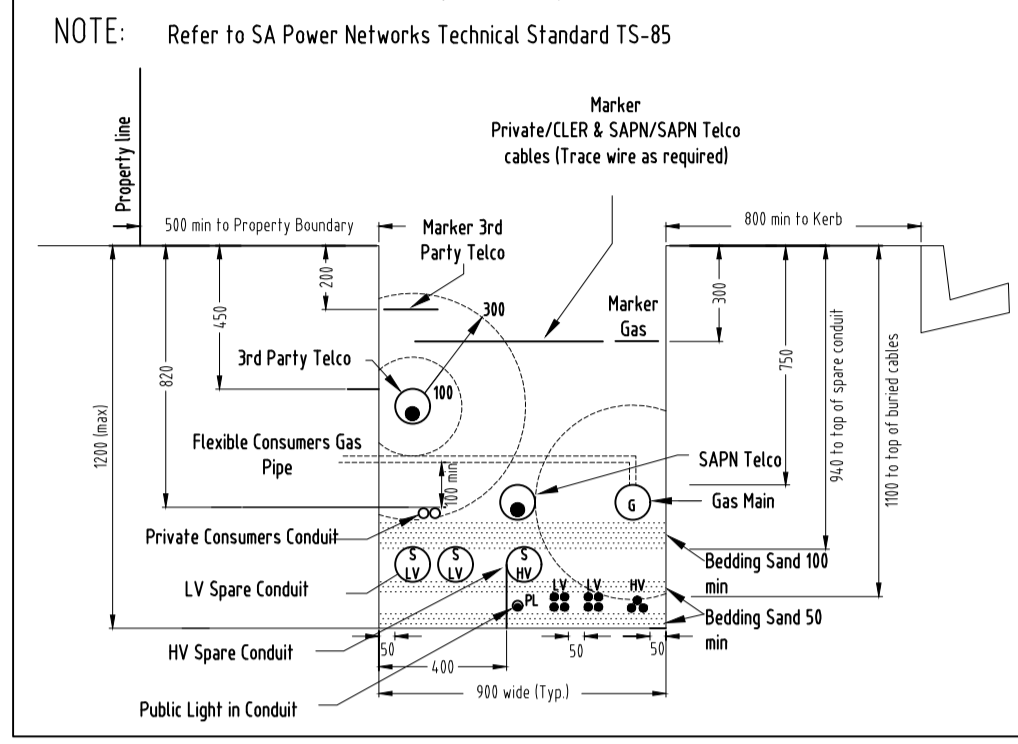
**EXISTING MK7 TC59854 11/0.4kV 315kVA LOOP TRANSFORMER WITH LOAD SWITCHES (LC7309A)**



**LEGEND**

- Existing 3x95mm<sup>2</sup> 11kV XLPE cable.
- Proposed 4x150mm<sup>2</sup> LV UBC XLPE cable.
- Existing 4x150mm<sup>2</sup> LV UBC XLPE cable.
- Parallel 4x150mm<sup>2</sup> LV UBC XLPE cable.
- Existing spare conduits.
- Proposed P/L cable 6.0mm<sup>2</sup> Cu Twin & 6.0mm<sup>2</sup> Cu Earth in 4.0mm HD conduit.
- Proposed 4.0mm HD orange electrical conduit & draw rope for consumers main to AS/NZS 3000. Depth 800mm. Refer typical CST cross section & standard SA Power Networks service pit location arrangement.
- Proposed LV open point
- Proposed fused radial pillar
- Proposed fused loop pillar
- Proposed fused tee-off pillar
- Trafficable P7 unfused LV junction pit with Gelports. P7 pit to be reinforced with 200mm concrete surround, M12 bar top and bottom 480mm deep as per E1921 Sht 7.3.
- Existing padmount transformer
- 17W Aeroscreen LED, 4000K, Black Finish (EMA004), mounted on black 6.5m modern A.D. Coles column with 15m modern outreach (NWA407).
- Existing 18W LED luminaire.

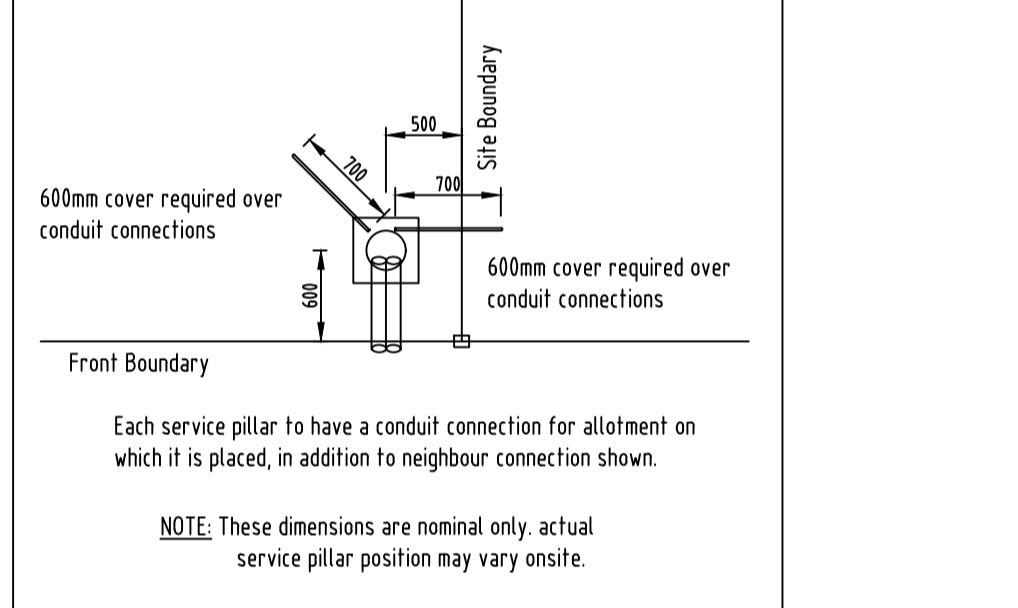
**TYPICAL COMMON SERVICE TRENCH CROSS SECTION**  
(Not to scale)



**SCOPE OF WORKS**

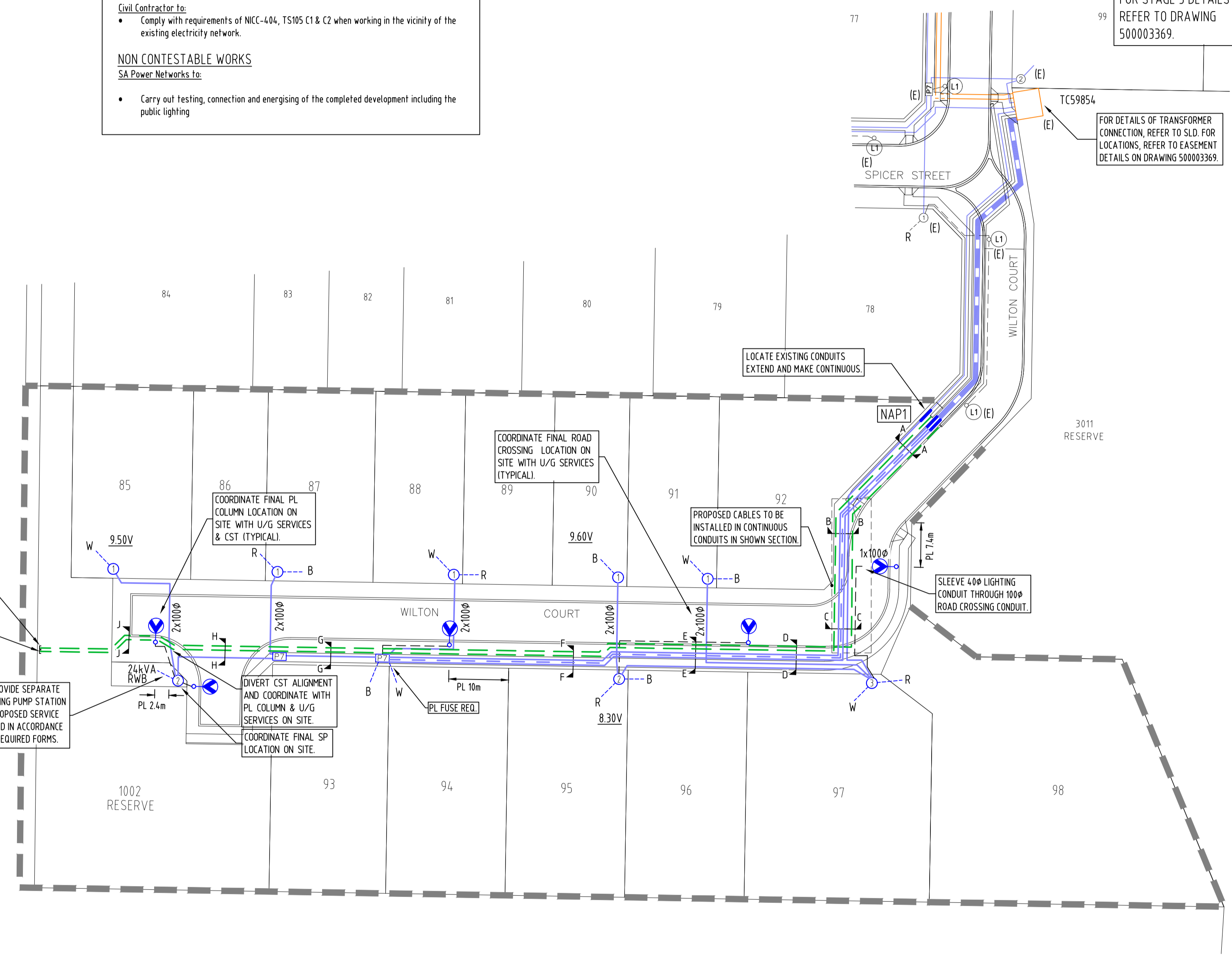
- CONTESTABLE WORKS**
- Electrical Contractor to:
- Undertake all new work within development.
  - Provide completed TS-105 C1 & C2 forms.
  - Provide 'as constructed' drawings to SA Power Networks management group at no charge.
- NAP1**
- Supply and install 3 sets of 4x150mm<sup>2</sup> LV cable straight joints onto existing capped LV cables in jointing bay adjacent lot 92 Wilton Court.
- Civil Contractor to:
- Comply with requirements of NICC-404, TS105 C1 & C2 when working in the vicinity of the existing electricity network.
- NON CONTESTABLE WORKS**
- SA Power Networks to:
- Carry out testing, connection and energising of the completed development including the public lighting

**TYPICAL SERVICE PILLAR ARRANGEMENT**  
(NOT TO SCALE)

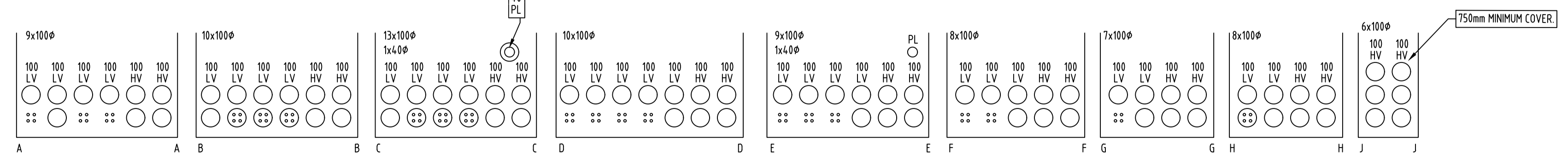


**UNFUSED P7 PIT WITH GEL PORTS ARRANGEMENT**

- Service fuses required in customer's meter box when supplied from unfused P7 junction pit. Install 4.0mm 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 service 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 14.0 and Field Instruction FI-A1.
- 
- 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.



- 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 conduit at all road crossings unless otherwise stated. Road crossing conduits for radial (TypeI) 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 conduit) as per E1904 Sheet 4, with conduit between pillars installed in such way that it will facilitate quick cable replacement. If this is achieved a spare conduit is not required.
  - Spare conduits for LV cables are to be inserted to approximately 25mm and capped within P7 pits. HV spares are to be diverted around pits, as per TS-085 section 11.2 and appendix D requirements.
  - For NBN Developments, install the CST Road Crossing 90° to the allotment boundary.
  - Cables to have 100mm 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 E1919.
  - 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 TFI LED and all-night burning.
  - Number of allotments - 14 Lots + Pump Station = 120kVA Total.
  - Number of public lights - 5x14W LED (TFI LED Tariff).
  - Developer - Lanser Communities.
  - Consulting Engineer - Greenhill Consulting Engineers Pty Ltd.
  - Surveyor - Fyfe Earth Partners 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 ensure Hydro Vacuum Excavation maximum working pressure is limited to 200psi as per TS-085 section 10.14. Any proposed excavation methods adjacent SA Power Networks infrastructure should be in accordance with NICC-404. Network Access Permits (NAP) required for works on and/or around SA Power Networks exclusion and/or restricted zones as per NICC-404 section 9.1 - figures 1.2 and 3.
  - 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 formal 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)	0.5m
PUBLIC LIGHTING ALIGNMENT (from back of kerb)	1.0m

**DESIGN INFORMATION**

Termite resistant cable:	Yes
Earthing:	C MEN
The Design ADM / lot:	8 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.

SCALE 0 5 10 15 20 25 METRES 50

FOR CONSTRUCTION  
2 October 2018

**W&G**

ASH158.3.12005 LIGHTING DESIGN ROAD CATEGORY

- ALL ROADS P4

DATE: 23/06/2016

NAME: A. Iarossi (TechES)

REV	DETAILS OF REVISION	RVD	CKD	APD	DATE	REV	DETAILS OF REVISION	RVD	CKD	APD	DATE	REV	DETAILS OF REVISION	RVD	CKD	APD	DATE
D	FOR CONSTRUCTION - LOT LAYOUT UPDATED				02.10.18												
C	FOR CONSTRUCTION				16.10.17												
B	PRELIMINARY ISSUE				27.09.16												
A	PRELIMINARY ISSUE				24.06.16												

DRAWN	L LUKANOV	24.06.16	Head Office: 1 Anzac Highway Keswick South Australia 5035
DESIGNED	L LUKANOV	23.06.16	Postal address: GPO Box 77 Adelaide South Australia 5001
CHECKED	M DENNES	24.06.16	
PROJECT MANAGER	R GEUE MT BARKER Ph: (08) 8391 7721		Corporate switchboard 08 8404 5667 19:00am - 5:00pm Monday to Friday)



**W&G**  
WALLBRIDGE & GILBERT  
Consulting Engineers

60 Wyatt Street, Adelaide  
South Australia 5000  
Telephone 08 8223 7433  
Email: adelaide@wga.com.au

ZONE MGA-54-GDA94  
MAP REF: 6627/07/MAN  
GRID REF: 3074.18.45 E  
6114.8714.3 N

**HBFRA** HIGH BUSHFIRE RISK AREA

FEEDER NO: MTB-13  
FEEDER NAME: BUGLE RANGES 11kV  
SUBSTATION NO: SSD-777  
SUBSTATION NAME: Mt Barker Distribution  
ASSET OWNER: SA POWER NETWORKS  
PROJECT DEFINITION: NOTIFICATION TYPE  
NC-004.250 CN PROJECT TYPE RD

307217.18 E  
6114.729.96 N

**FOR CONSTRUCTION**

ASTON HILLS, STAGE 6  
PROPOSED UNDERGROUND RESIDENTIAL DEVELOPMENT  
DEV. No. 580/D043/12

SCALE 1:500 A1 500004992 SHEET 1 OF 1 REV D