



## **SECTION 9 UTILITY OPERATIONS**

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### **9.1 OBJECTIVE**

The objective of this section is to ensure that provision is made for the servicing of all lots with gas, electricity and telecommunication services. The services are to be provided to allow easy and quick connection of the lots to these services at a future date with minimal disruption to the street.

### **9.2 MINIMUM REQUIREMENTS**

- 9.2.1 The design of the service shall be approved by the respective owner of the utility service.
- 9.2.2 Location of services in the berm shall be in accordance with the Standard Engineering Plan 12908/103.
- 9.2.3 Construction shall comply with the requirements specified in Council's "Excavation and Reinstatement of Trenches" document.
- 9.2.4 The subdivider shall comply with Council's "Conditions for Use of the Street by Utility Operators" document.

### **9.3 MEANS OF COMPLIANCE**

- 9.3.1 The design and installation of the utility service shall allow for the full development of the subdivision and any likely expansion into adjacent land.
- 9.3.2 The services shall be installed to the requirements of the utility service provider and to Council's construction standards.
- 9.3.3 All services shall be underground except for approved surface chambers or above ground plant which shall be of minimum possible size.
- 9.3.4 All above ground or at surface components (eg surface covers) shall be located away from kerbs, footpaths and vehicle crossings. The positions shall be noted on the as built drawings.



- 9.3.5 All services crossing the road carriageway shall be enclosed in duct lines constructed of permanent materials capable of withstanding the loads likely to be imposed on it from traffic.
- 9.3.6 Duct lines across roadways shall be installed prior to road basecourse and sub-basecourse construction being undertaken.
- 9.3.7 Utility service lines and equipment shall not be located in parks or reserves.
- 9.3.8 Appropriate easements shall be provided where services for a particular lot cross adjoining lots.

**9.4 LIGHTING OF ROADS & ACCESSWAYS**

The design and provision of lighting in roads and accessways shall:

- be cost effective with regard to operating costs and maintenance;
- comply with NZS 6701:1983 with respect to luminance, glare and uniformity;
- meet the performance levels shown in the following table:

Based on NZS 6701:1983 the following performance values apply to the provision of lighting in roads and accessways:

**(a) Strategic Routes and Arterials**

Min L	=	1.2cd/m <sup>2</sup>
Min Uo	=	0.35
Min UL	=	0.30
Max TI	=	20%

**(b) Collector Roads**

Min L	=	1.0 cd/m <sup>2</sup>
Min Uo	=	0.30
Min UL	=	0.30
Max TI	=	20%

**(c) Local Roads**

Min E	=	2.5 lux
Min L	=	0.2 cd/m <sup>2</sup>
Min Uo	=	0.20
Min UL	=	0.25
Max TI	=	25%



(d) **Accessways**

Min E = 15 lux (with no area less than 10 lux)

Where

E = average illuminance  
L = average luminance  
Uo = overall uniformity  
UL = longitudinal uniformity  
TI = threshold uniformity  
cd = candelas  
m<sup>2</sup> = square metres

Poles shall be of a type approved by the Council Engineer prior to erection.