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Version: 1.0

Technical Document: Street Lighting

- Street lighting shall be provided in accordance with Council's requirements (low cost and efficient) and be designed by a suitability qualified consultant.
- According to Australian Standards, the primary purpose of street lighting is to *"assist pedestrians to orientate themselves and detect potential hazards and to discourage fear of crime and crime against the person while protecting the integrity of the nighttime environment through control of light spill and glare"*.
- Street lighting shall be constructed as a standard (height and style) galvanised pole. Black powder coating is allowable but will be replaced without powder coating when/if replacement occurs.
- Decorative luminaries/columns, paint and coloured column treatments are not permitted or supported.
- The default globe type shall be the one nominated by council and supplied by Ausgrid generally based on energy efficiency. The street lighting design must incorporate cut-off luminaires to reduce glare and ensure adequate illumination for pedestrian activities, with the default lamp type being that provided by Ausgrid.
- Street lighting for new subdivisions shall be provided in accordance with AS1158 series, Ausgrid NS119, Council's Standard Drawing SD001 (for pole location and footing) and this Technical Document:

Road Type	Road Width	Mid-block Lighting Category	Intersection Lighting Category
Local – Place & Cul-de-sacs	8m	PR5 PR4 with pedestrian traffic	Same as mid-block
Local Streets (at Council's discretion)	8m to <11m	PR4	Same as mid-block
Collector – Secondary	8m to <11m	PR4	Same as mid-block

Collector – Primary	11m	PR4	Same as mid-block
Distributor – Secondary	14m	PR3	V5 ^{A, B, C} V4 ^D
Distributor – Primary	15m	PR3	V5 ^{A, B, C} V4 ^D
Sub-Arterial	≥15.4m ^E	PR3	V5 ^{A, B, C} V4 ^D
Business/School Precinct	12m	PR3	V5 ^{A, B, C} V4 ^D
Industrial Areas	13m	PR4 Minor Industrial PR3 Trunk/pedestrian traffic	V5 ^{A, B, C} V4 ^D
Commercial Areas	13m	PR3	V5 ^{A, B, C} V4 ^D
Pedestrian Crossings	-	PX1 Arterial/Sub-Art ^F PX2 Local Collector/Sub-Art ^G PX3 Local Road	-
Pedestrian Refuges	-	In accordance with AS1158.3.1, a minimum horizontal illuminance of 3.5 lx or greater	-
Pedestrian Paths and Shared Paths (not part of the road)	-	As required by council, use Tables 2.2 and 3.4 in AS1158.3	-
Laneways	-	As required by council, consider PR5 for pedestrian activity areas and/or with development adjoining laneways and PR6 for	-

lower pedestrian activity and no development adjoining laneways.

- A. Trunk road to trunk road intersections.
- B. includes intersections and roundabouts.
- C. Intersections with state roads/highways require consultation with TfNSW for suitable illumination.
- D. Posted speed limit greater than or equal to 80km/h.
- E. Road connecting Arterial Roads to urban districts and carrying traffic directly from one district or precinct to another, for example Settles Boulevard.
- F. Sub-Arterial with a posted speed limit greater than 60km/h.
- G. Sub-Arterial with a posted speed limit less than or equal to 60km/h.

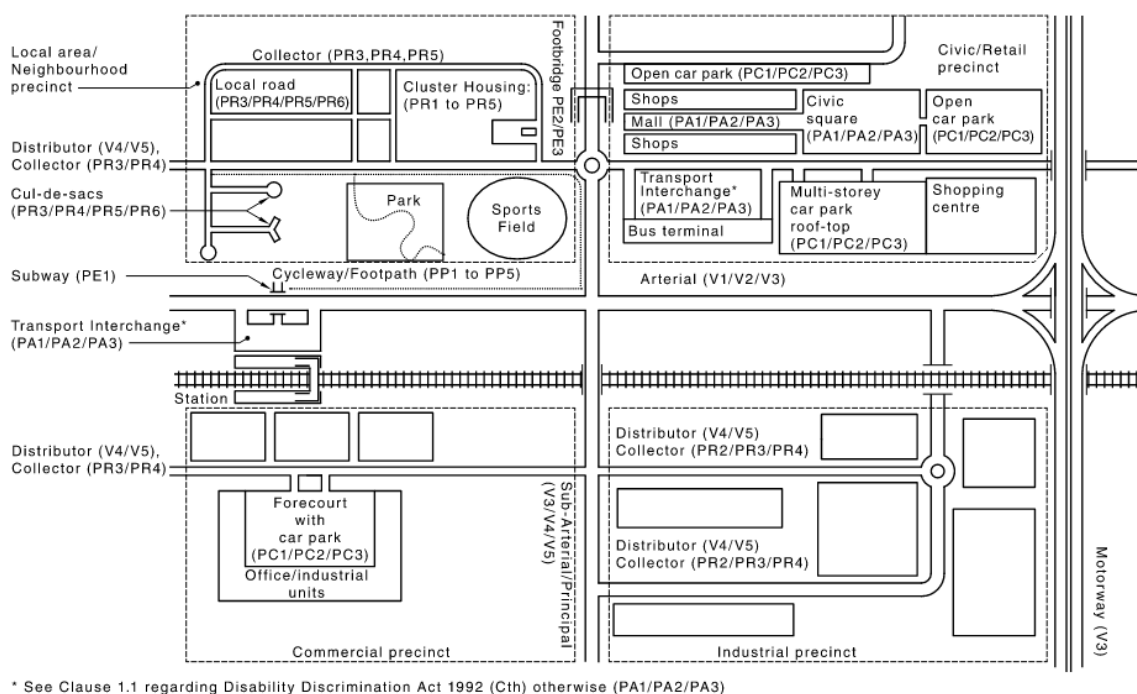


FIGURE 2.1 EXAMPLE OF ROAD AND PUBLIC SPACE TYPES AND INDICATIVE LIGHTING CATEGORIES AND SUBCATEGORIES

AS/NZS 1158.3.1:2020

- Street lighting may require a higher standard at the following locations:
 - Major road intersections
 - Minor rural road intersections (consider flag-lit subject to speed zone and safety)
 - Pathways and underpasses
 - Public car parks
 - Taxi ranks

- Bus stops/shelters
- Stairways
- Luminaires shall be the default supply of Ausgrid (Light Emitting Diode Type) that contain both a NEMA and Zhaga Book 18 Receptacle.
- Solar-powered street lighting is not generally accepted. Special circumstances may only be considered following extensive consultation with Council.
- Street lighting is generally not supported in Large Lot (R5) and Rural (RU1 and RU2) zone areas. Lighting in these areas may be required by Council, subject to adequate warrants, where special circumstances exist such as proximity to destination points for potential nighttime pedestrian traffic.
- Lighting in the vicinity of the Rutherford aerodrome shall comply with the Civil Aviation Safety Authority's Civil Aviation Regulations, specifically the "Manual of Standards Part 139."
- Street lighting shall be placed at the entrance and termination of new laneways with an appropriate lighting category as determined by Council.
- Consideration shall be given to roads with central medians ensuring that street lighting design accounts for the required landscape and trees in the medians while still providing adequate illumination to the public areas.
- Street lighting shall be located:
 - Complementary with tree planting locations, medians, footpaths, and tram ramps that optimise pedestrian safety and complement lighting spillage.
 - On trunk roads, generally one (1) lux for public footpaths and three (3) lux for minor intersections to enhance safety and minimise areas of low visibility.
 - At sharp bends and traffic control devices (kerb blisters etc.).
 - Generally, in line with abutting property boundaries and offset from the face of the kerb as per Council's Standard Drawings.
 - in a staggered pattern alternating from one side of the road to the other.
- Electrical conduits:
 - Shall be found no less than 750mm from the finished surface level under roads.
 - Shall be found no less than 600mm from the finished surface level under footpaths.
- Any major utility items (kiosks and the like) larger than individual lot scale provisions, are to be located within the private lots covered by easements and are not to be located on the public road reserve and public drainage reserve. All kiosk substation sites shall comply with the Ausgrid Technical Guide NS141 and the Standards Australia Handbook SAA HB100 (CJC4). Note: Typically, Council does not accept major utility items in parks. If no suitable alternative solution is available, approval from Council's recreational team shall be obtained.
- A Lighting Spill Diagram is required to be submitted to Council with any public lighting designs. The performance criteria for public lighting designs include facilitating safe movement and reducing the fear of nighttime crime by eliminating significant dark spots.