

**SCHEDULE 2 – INTERNAL, CONNECTING AND EXTERNAL
INFRASTRUCTURE – DESIGN AND CONSTRUCTION
STANDARDS**

SCHEDULE 2 – INTERNAL, CONNECTING & EXTERNAL INFRASTRUCTURE – DESIGN AND CONSTRUCTION STANDARDS¹

Division 1 – Internal or Connecting Roads

1.1 Planned Standards of Service

(1) Tables S2.1 to S2.4 identify the planned standards of service for road and road drainage works, including works for reconfiguring a lot, within the Localities within the Shire:

Table S2.1 – Rural Locality

Design Criteria	Planned Standards of Service
Maximum design speed and minimum sight distance:	100km/hr 170 metres
Carriageways: (a) Lanes (b) Formation (c) Shoulder width (d) Seal and pavement width	2x 3 metres 9 metres – measured between shoulder points 1.5 metres 6.5 metres
Reserve width:	20.0 metres.
Kerbing:	Nil
Footpath and Cycleway	For networks shown in PSP No. 8 as existing or future trails

Table S2.2 – Rural Residential and Village Locality

Road Type (refer to definitions at the end of this Schedule)	Bitumen sealed width	Dedicated reserve width	Nominal design speed and volume range	Typical traffic catchment	Shoulder type (Refer Table S2.6)
Access place/street (NB – highest order road type in the Village Locality)	2 lanes at 6 metres wide	16 metres with 5 metres verge (min)	50km/hr (minimum) carrying 10 vehicle trips per day per lot	Relates to maximum street length under S8.5 of <i>Queensland Streets</i>	B1
Collector/ Trunk Collector - Distributor	2 lanes at 8 metres wide	20 metres with 5 metres verge (min)	60km/hr with 2400 vehicles per day	300 lots – increasable based on widened reserve under Table 8.5B and C of <i>Queensland Streets</i>	B2
Council Sub-arterial to Arterial	2 lanes at 8 metres wide	30 metres	100km/hr (maximum)	na	B2

¹ Copies of the most recent versions of publications, standards, codes, manuals and other references quoted as standards for planning, design and construction in Schedule 2 are held by Council and may be viewed or purchased at Council chambers.

Table S2.3 – Urban Locality – Residential/Community Expansion Zone

Road Type (refer to definitions at the end of this Schedule)	Bitumen sealed width	Dedicated reserve width	Nominal design speed and volume range	Typical traffic catchment	Kerb and channel (K&C) and footpath/cycleway
Access place/street	2 lanes at 8 metres - inc parking	16 metres with 3 metres verge (min)	50km/hr carrying up to 500 vehicles per day	50-100 lots	Concrete drive-over K&C on both sides of the road. No footpath or cycleway
Collector/ Trunk Collector - Distributor	2 lanes at 10 metres - inc parking	20 metres with 3.5 metres verge (min)	60km/hr for: - collector - up to 3000 vehicles per day - trunk – up to 10000 vehicles per day	300 lots – increasable based on a widened reserve under Table 8.5B and C of <i>Queensland Streets</i>	Concrete drive-over K&C on both sides of the road. Dual use path on one side with a minimum width of 1.2 metres
Council Sub-arterial to Arterial	2 lanes at 10 metres width	30 metres with 4.5 metres verge (min)	100km/hr	na	na

Table S2.4 – Urban Locality - Industrial Zone

Road Type (refer to definitions at the end of this Schedule)	Bitumen sealed width	Dedicated reserve width	Maximum design speed and volume	Typical traffic catchment	Kerb and channel (K&C) and footpath/cycle way
Access place/street	2 x 3.5 metres lanes for moving plus 2 x 2.5 metres as parking lanes	20 metres with 4 metres verge (min)	60km/hr carrying up to 3000 vehicles per day	8ha	Concrete barrier-type K&C on both sides of the road. Footpath/cycleway not required.
Collector/ Trunk Collector - Distributor	2 x 3.5 metres lanes for moving plus 2 x 3.0 metres as parking lanes	24 metres with 4 metres verge (min) and a median	60km/hr carrying up to 10000 vehicles per day	30ha	Concrete barrier-type K&C on both sides of the road. Dual use path on one side with a minimum width of 1.2 metres.

1.2 Location and Design Standards for New Roads related to Reconfiguring a Lot

(1) Table S2.5 identifies the locational and design standards for infrastructure works, including works for reconfiguring a lot, for roads and road drainage works within the Localities within the Shire:

Table S2.5 – Location and Design Standards

Infrastructure Component	Location and Design Standards
<p>(a) Roads and Streets <i>(including grades and carriageway cross-fall (two-way) and verges)</i></p>	<p>(1) For roads and streets of collector or lower order status (refer definitions at the end of this Schedule), the following sections of <i>Queensland Streets</i>:</p> <p><u>(i) All Circumstances:</u></p> <p>(A) Section 6.0 “<i>The Road System</i>” (B) Section 3.7 “<i>The No-Access Street</i>” (C) Section 3.8 “<i>Practical Collector System Design</i>” (D) Section 3.9 “<i>The Access Street System</i>”</p> <p><u>(ii) Rural Residential Locality:</u></p> <p>(A) Section 8.0 “<i>Rural Residential Streets</i>”</p> <p><u>(iii) Residential Zone:</u></p> <p>(A) AMCORD - Element 1.3 “<i>Street Network</i>” and Element 2.1 “<i>Street Design and On-Street Car Parking</i>” (B) Design Element A4 Street Design – Part 4 – Subdivision – <i>Queensland Residential Design Guideline</i> (C) Section 2.0 “<i>The Residential Street</i>” (D) Section 10.0 “<i>Multi-Unit Residential Streets</i>”</p> <p><u>(iv) Industrial Zone:</u></p> <p>(A) Section 9.0 “<i>Industrial Streets</i>”</p> <p><u>(v) Rural Locality:</u></p> <p>(A) <i>Rural Road Design Guide to the Geometric Design of Rural Roads</i>, AUSTRROADS (2) <i>Institute of Public Works Engineering Australia (IPWEA) – Standard Drawings – Road/Street – Type Cross Sections</i> (3) For sub-arterial and higher order roads, the following: (A) <i>Road Planning and Design Manual</i> – Queensland Department of Main Roads, and (B) <i>Guide to Traffic Engineering Practice</i>, AUSTRROADS</p>
<p>(b) Road Flooding</p>	<p>In accordance with <i>Queensland Urban Drainage Manual – Volume 1: Text – Section 5.00</i>.</p>

Table S2.5 – Location and Design Standards continued

Infrastructure Component	Location and Design Standards		
<i>(c) Public utilities in Road Reserves</i>	<i>IPWEA Standard Drawings – Road/Street - R0100 and R0101</i>		
<i>(d) Blind or Dead-end Road (Cul-de-sac) – refer IPWEA Standard Drawings – Road/Street – Type Cross Sections</i>	Zone	Maximum length (m)	Maximum turning circle diameter (m)
	Rural Residential and Residential:	Over 200 metres in length has an alternative emergency route	15 metres sealed
	Industrial & Other: - Access Street - Collector - Turning Radius	Refer <i>IPWEA Standard Drawings – Road/Street – R-0032</i>	Section 2.12 “Turning Areas” of <i>Queensland Streets</i>
<i>(e) Truncations of properties at corners (where intersections form the boundaries to properties)</i>	Except where a corner is already truncated, truncations are: (i) right angled to be six metres by three equal chords, or (ii) otherwise, truncation occurs at the intersection of existing and new or planned roads or where an intersection forms a boundary to land, and (iii) dedicated as road and cleared of improvements or obstructions (free of cost to Council) prior to: (A) plan sealing for reconfiguring of a lot, or (B) commencement of a use or works, and (iv) formed and graded with construction of a roadway on the truncated area.		
<i>(f) Intersections or Roundabouts</i>	(i) Location/Design – (A) Part 5 to 7 of AUSTRROADS “ <i>Guide to Traffic Engineering Practice</i> ” (B) Chapters 13 and 14, Road Planning and Design manual, QDMR (C) Section 3.3 and 2.11 of <i>Queensland Streets</i> (ii) Spacings – Section 2.11 “ <i>Intersections</i> ” of <i>Queensland Streets</i> (iii) Acceleration and deceleration lanes and intersections with State-controlled roads - <i>Department of Main Roads Standard Specifications Roads – Volume 1 and 2</i>		

1.3 Construction Standards

(1) Table S2.6 identifies the standards of construction for infrastructure works, including works for reconfiguring a lot, for roads and road drainage works within the Localities within the Shire.

(2) To be constructed prior to:

- (a) plan sealing where involving reconfiguring a lot,
- (b) commencement of any approved use or building works (whichever is first).

Table S2.6 – Construction Standards

Infrastructure Component	Construction Standards
<i>(a) Rural Residential Locality - Shoulder Type</i>	B1 – gravel, 1.5 metres wide and unsealed B2 – gravel, 1.5 metres wide and unsealed No kerb and channel and provide for grass swale or earth table drains with a maximum grade of 16% and a minimum grade of 0.5% Footpath or cycleway where shown on PSP No.8
<i>(b) Road subgrade and pavement</i>	<i>Department of Main Roads - Standard Specifications Roads - Volume 1 and 2 and Pavement Design Manual</i>
<i>(c) Kerbing and channelling in Urban Locality</i>	<i>IPWEA Standard Drawings – Road/Street – Kerb and Channels</i>
<i>(d) Footpath</i>	On level areas in the road reserve with forming and grading to the permanent level for the full length of the road frontage in accordance with <i>IPWEA Standard Drawings – Road/Street – R.0065</i> with: <i>(i) Rural and Residential Locality</i> – for a width of 1.5 metres with grassed surface for stability <i>(ii) Residential and Industrial Zone</i> – for a width of 1.2 metres with a minimum cross fall of 1.5% and a maximum crossfall of 4% width, 100mm depth of approved loam and grassing for stability <i>(iii) Commercial and Business Zone</i> – formation and paving for the full width of the length of the road frontage of the site with a minimum cross fall of 1.5% and a maximum cross fall of 5% <i>(iv) In parks or easements</i> - paved width of 1.2m
<i>(e) Cycleway</i>	<i>Guide to Traffic Engineering Practice, Part 14 - Bicycles, AUSTROADS, 1999</i>
<i>(f) Maintenance</i>	Materials and works maintained for 12 months at the proponents expense

Division 2 – Road Frontage or Site External Works

2.1 Planned Standards of Service

(1) The following standards of service are provided for at the road frontage(s) to the site in accordance with the specifications in Table S2.7:

- (a) reinforced crossing(s),
- (b) footpath formation and pavement for the full length of the road frontages of the land in the Urban or Rural Residential Locality or where shown on PSP No. 8,
- (c) other than in the Industrial zone, kerbing and channelling to the full frontage(s) of the site in the Urban Locality,
- (d) where the road is partially sealed, the area between the seal and the kerb alignment/full seal width along the full frontage(s) of the land is formed, constructed and sealed, and
- (e) any repair, reinstatement, relocation or alteration of existing roadworks, public utility mains, services or installations and drainage works to the frontage of the land made necessary due to construction works for the site.

2.2 Design and Construction Standards

(1) Table S2.7 identifies the standards of design and construction for infrastructure works, including works for reconfiguring a lot, for frontage works within the Localities within the Shire.

(2) To be constructed prior to:

- (a) plan sealing where involving reconfiguring a lot, or
- (b) commencement of any approved use or building works (whichever is first).

Table S2.7 – Design and Construction Standards

Infrastructure Component	Design and Construction Standards																
(a) Property Access/Crossover/Turn-out and Inverts²	<p>(1) For reconfiguring a lot or an assessable development, vehicular access to a collector or higher order road conforms to specifications in Section 10.9 “Access” of <i>Queensland Streets</i>.</p> <p>(2) If in the Rural, Rural Residential, Urban or Village Locality and except as specified in an applicable use code, where more than one property access is needed, access points from the same road are separated by at least 15 metres with setbacks of at least 10 metres from any intersection or property access on an adjoining site.</p> <p>(3) Reinforced crossover through the kerb and channelling or in the shoulder/verge width to the property alignment are designed and constructed:</p> <ol style="list-style-type: none"> (A) for the Rural, Village and Rural Residential Locality - full width gravel construction (refer <i>DMR Pavement Design Manual</i> for specifications), or (B) for the Urban Locality – as per <i>IPWEA Standard Drawings – Road/Street - R-0050</i> (Residential) or <i>R-0052</i> (Commercial /Industrial). <p>(4) Access strips or easements to rear lots arising from reconfiguring a lot have the following construction standards from the pavement edge of the road for its full length:</p> <p>(A) minimum strip width of:</p> <table border="1"> <thead> <tr> <th>Locality</th> <th>Minimum (metres)</th> </tr> </thead> <tbody> <tr> <td>Rural Residential</td> <td>7</td> </tr> <tr> <td>Urban:</td> <td></td> </tr> <tr> <td>- Residential Lots</td> <td>7</td> </tr> <tr> <td>- Commercial/Industrial or Other Lots</td> <td>10</td> </tr> </tbody> </table> <p>(B) minimum construction:</p> <table border="1"> <thead> <tr> <th>Locality</th> <th>Minimum</th> </tr> </thead> <tbody> <tr> <td>Rural Residential</td> <td>100mm compact gravel for 4 metres width unless involving a reciprocal easement in which case a driveway width is not less than 5 metres with 2 coat bitumen seal for 3.5 metres width</td> </tr> <tr> <td>Urban:</td> <td>Reinforced concrete not less than 100mm deep for 3.5 metre width unless involving a reciprocal easement in which case a driveway width is not less than 12 metres with 2 coat bitumen seal for 7 metres width</td> </tr> </tbody> </table> <p>(C) maximum longitudinal grade of 1:6, (D) maximum cross fall of 1:20, (E) above the 1 in 10 year flood, (F) single straight truncations at each end of a minimum of 4 metres, and (G) undergrounding of services.</p>	Locality	Minimum (metres)	Rural Residential	7	Urban:		- Residential Lots	7	- Commercial/Industrial or Other Lots	10	Locality	Minimum	Rural Residential	100mm compact gravel for 4 metres width unless involving a reciprocal easement in which case a driveway width is not less than 5 metres with 2 coat bitumen seal for 3.5 metres width	Urban:	Reinforced concrete not less than 100mm deep for 3.5 metre width unless involving a reciprocal easement in which case a driveway width is not less than 12 metres with 2 coat bitumen seal for 7 metres width
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(b) Footpath Formation	Refer Table S2.6 (d)																
(c) Kerbing and channelling	Refer Table S2.6 (c)																
(d) Pavement and Subgrade Construction	Refer Table S2.6 (b)																

² Written approval from the Department of Main Roads (Southern District) is required for:

- Work within a state controlled road (Transport Infrastructure Act 1994)
- Direct access to a State Controlled Road (Transport Infrastructure Act 1994)

Division 3 – Water Supply and Sewerage

3.1 Planned Standards of Service

(1) Table S2.8 identifies the planned standards of service for infrastructure to service activities, including lots arising from reconfiguring a lot, with water supply in the Shire:

Table S2.8 – Water Supply Standards of Service

Area	Planned Standards of Service
(a) Rural Locality	(i) No existing or planned municipal water supply reticulation system. (ii) <i>Residential uses</i> have a minimum 45000litre rain water tank. (iii) <i>Non residential uses</i> are provided with secure and reliable water supply to meet all water consumption needs on the site including: (A) fire fighting as provided at 3000litres/hr for a 5 hour period, (B) potable and ablution supply at 140litres/head/day, or (C) animal health and sanitation, as relevant.
(b) Rural Residential Locality	All uses and lots provide for the standards of service in (a) (ii) or (iii) above.
(c) Village Locality	(i) Connection of any use (except <i>Farming</i>) or lot to: - Council's reticulated potable water supply in Benarkin, - outside Benarkin, provision for the standards of service in (a) (ii) or (iii) above.
(d) Urban Locality	
(1) Residential Zone and Community Expansion Zone	(i) Connection of any use or lot to Council's reticulated water supply system, with 20 metres of head of pressure at the property boundary for fire fighting, except: (A) in the Community Expansion Zone where: 1. for non-urban uses having no requirement for potable water supply, or 2. where not involving subdivision or water demand exceeding 20EP on the site, in which case the development meets standards in (a) (ii) or (iii) above
(2) Business and Commercial Zone and Parks and Open Space Zone	Connection of any use or lot to the Council's reticulated water supply system, with 20 metres of head of pressure at the property boundary for fire fighting. In the Parks and Open Space zone, connection to reticulated supply where in conjunction with building works.

Table S2.8 – Water Supply Standards of Service continued

Area	Planned Standards of Service
(d) Urban Locality	
(3) Industrial Zone	<p>Connection of any use or lot to the Council’s reticulated water supply system, except:</p> <p style="padding-left: 40px;">(A) in the Rural Industry preferred land use area, (B) in the Industry Expansion preferred land use area where:</p> <ol style="list-style-type: none"> 1. for development which does not require potable water supply, or 2. development does not involve subdivision or water demand exceeding 20EP on the site, <p>in which case development meets standard in (a) (ii) or (iii) above. Flows and pressures at the property boundary accord with Queensland Water Resources Commission’s (DNRM&E) <i>Guidelines for Planning and Design of Urban Water Schemes</i>.</p>

(2) Table S2.9 identifies the planned standards of service for infrastructure to service activities, including lots arising from reconfiguring a lot, for sewerage in the Shire:

Table S2.9 – Sewerage Standards of Service

Locality	Planned Standards of Service
(a) Rural, Village, Rural Residential and Bunya Mountains	<p>(i) No existing or planned servicing by a municipal sewerage system (as regulated under the <i>Water Act 2000</i> or the <i>Environmental Protection Act, 1994</i>).</p> <p>(ii) Except as provided for in (iii) below, purposes producing domestic waste water at a peak design capacity of 20 or less EP (4200l/day) are serviced by an on-site sewerage treatment works (including those forming part of a common effluent drainage scheme) and land disposal area located, sized, serviced and maintained in accordance with the <i>Plumbing and Drainage Act 2002</i> and the <i>On-site Sewerage Code, 2002</i>.</p> <p>(iii) In the Bunya Mountains Locality, for circumstances outlined in (ii) above, provision is made for a minimum standard of secondary quality effluent compliant with the characteristics contained in Table 1, Clause 6 of the <i>On-site Sewerage Facility – Guidelines for Effluent Quality</i> in the <i>On-site Sewerage Code, 2002</i>.</p>
(b) Urban	<p>Connection of a use or lot to Council’s reticulated sewerage scheme in accordance with the <i>Water Act 2000</i>, except:</p> <p style="padding-left: 40px;">(A) in the Community Expansion zone or the Industrial Expansion preferred land use area where for non-urban development having no requirement for connection to the sewer, or</p> <p style="padding-left: 40px;">(B) in the Rural Industry preferred land use area, in which case, development meets standard in (a) (ii) above</p>

3.2 Design and Construction Standards

- (1) Table S2.10 identifies the standards of design and construction for infrastructure works, including works for reconfiguring a lot, for water supply and sewerage within the Shire.
- (2) To be constructed prior to:
 - (a) plan sealing where involving reconfiguring a lot, or
 - (b) commencement of any approved use or building works (whichever is first)

Table S2.10 – Water Supply and Sewerage Design and Construction Standards

Locality	Design and Construction Standards
(a) Rural, Village, Rural Residential and Bunya Mountains	<p>(i) Black/grey water treatment systems for domestic sewerage with a peak design capacity of 20 or less EP (4200litres) is designed and constructed in accordance with:</p> <ul style="list-style-type: none"> (A) <i>On-site Sewerage Code, 2002.</i> (B) Australian Standard AS/NZS 3500.2:2003 - <i>Plumbing and Drainage – Sanitary Plumbing and Drainage</i> and AS 3500 – Part 2.1:1996 – <i>National Plumbing and Drainage – Sanitary Plumbing and Drainage – Performance Requirements.</i> (C) Australian Standard AS/NZS 1547:2000 – <i>On-site Domestic Waste Water Management - Section 1 and 3.</i> (D) Australian Standard AS/NZS 1546.1:1998 – <i>On-site Domestic Waste Water Treatment Units – Septic Tanks.</i> (E) Australian Standard AS/NZS 1546.3:2001 – <i>On-site Domestic Waste Water Treatment Units – Aerated Waterless Toilets.</i> <p>(ii) Waterless composting toilets, chemical toilets and incinerating or other toilets designed and constructed in accordance with Australian Standard AS/NZS 1546.2:2001 – <i>On-site Domestic Waste Water Treatment Units – Composting Toilets</i> and the <i>Environmental Protection (Waste Management) Regulation 2000.</i></p> <p>(iii) On-site water supply designed and constructed in accordance with:</p> <ul style="list-style-type: none"> (A) Australian Standard AS/NZS 3500.1:2003 – <i>Plumbing and Drainage – Water Services</i> and AS 3500 – Part 1.1:1998 – <i>National Plumbing and Drainage – Water Supply – Performance Requirements.</i> (B) Australian Standard AS/NZS 2180-1986 – <i>Metal Rainwater Goods – Selection and Installation.</i>
(b) Urban	<p>(i) Reticulated water supply:</p> <ul style="list-style-type: none"> - Design: <ul style="list-style-type: none"> (A) the Queensland Water Resources Commission’s <i>Guidelines for Planning and Design of Urban Water Schemes.</i> (B) <i>DNR Technical Bulletin – Fire Fighting, No.3/1997, September, 1997</i> - Construction: <ul style="list-style-type: none"> (A) the <i>Water Supply Code of Australia (WSA03-2002)</i>, or substituting Queensland version and if the matter is not dealt with by WSA03-2002, the <i>IPWEA Standard Drawings – Water.</i> - Maintenance: <ul style="list-style-type: none"> (A) Materials and works maintained by the proponent at their expense for 12 months. <p>(ii) Reticulated Sewerage System:</p> <ul style="list-style-type: none"> - Design: <ul style="list-style-type: none"> (A) the Queensland Water Resources Commission’s <i>Guideline for Planning and Design of Sewerage Systems.</i> - Construction: <ul style="list-style-type: none"> (A) the <i>Sewerage Code of Australia (WSA04-2001)</i> and the <i>Sewerage Pumping Station Code (WSA04-2001)</i> (or substituting Queensland versions) or if the matter is not dealt with by these Codes, the <i>IPWEA Standard Drawings – Sewerage.</i> - Maintenance: <ul style="list-style-type: none"> (A) Materials and works maintained by the proponent at their expense for 12 months.

Division 4 – Stormwater

4.1 Planned Standards of Service

(1) Tables S2.11 and S2.12 identify the planned standards of service for infrastructure to service activities, including lots arising from reconfiguring a lot, for stormwater quantity and quality management in the Shire:

Table S2.11 – Stormwater Quantity Standards of Service

Locality	Planned Standards of Service
(a)(i) <i>Rural, Rural Residential, Village and Bunya Mountains</i>	In all circumstances: (i) No existing or planned municipal stormwater collection systems. (ii) Roof water drained to a 4500litre roof water tank. (iii) Drainage is discharged from the boundary of the development site: (A) without nuisance and annoyance to adjoining or downstream properties, (B) into natural systems, and (C) with conveyance to a lawful point of discharge including by way of easement where drainage systems traverse private property into natural systems,
(a)(ii) <i>Urban – In the Zones, Industrial (Rural Industry preferred land use area)</i>	For reconfiguring a lot: (i) Impervious surfaces, roads or lot drainage captured and infiltrated on site to prevent an increase in the outflow from the site under normal operating conditions. (ii) No concentrated runoff, prolonged ponding, scour, undercut or erosion from runoff. (iii) Overland flow paths held in a grassed state.
(b) <i>Urban – where not specified in (a)(ii) above</i>	(i) Roof water, impervious surface, road or lot drainage captured and drained to prevent concentrated flows or downstream nuisance in accordance with standards of service in the <i>Queensland Urban Drainage Manual – Volume 1: Text, 1994</i> .

Table S2.12 – Stormwater Quality Standards of Service

Locality	Planned Standard of Service
<i>All</i>	No net worsening of the quality of stormwater discharging from the site during construction and for 2 years thereafter as related to the documented pre-development state.

4.2 Design and Construction Standards

(1) Table S2.13 identifies the standards of design and construction for infrastructure works, including works for reconfiguring a lot, for stormwater management in the Shire.

(2) To be constructed prior to:

- (a) plan sealing where involving reconfiguring a lot, or
- (b) commencement of any approved use or building works (whichever is first).

Table S2.13 – Stormwater Design and Construction Standards

Design Feature	Design and Construction Standards
(a) Drainage systems/structures for roads, lots and culverts	(A) <i>Urban and Rural Residential Locality - Queensland Urban Drainage Manual – Volume 1: Text 5.18 and IPWEA Standard Drawings – Drainage.</i> (B) <i>Rural and Village Locality - Queensland Department of Main Roads – Urban Road Design – Volume 2 – Culvert Design (Sect 10-1800 to 10-2080) and IPWEA Standard Drawings – Drainage.</i>
(b) Roof drainage systems	(A) Australian Standard – AS2180-1986 – <i>Metal Rainwater Goods – Selection and Installation.</i> (B) Australian Standard – AS3500.3.1 – 1998 – <i>National Plumbing and Drainage - Part 3.1: Stormwater Drainage – Performance Requirements.</i>
(c) Design rainfall for stormwater flows	Australian Rainfall and Runoff
(d) Temporary and permanent methods of water quality control	<i>Soil Erosion and Sediment Control – Engineering Guideline for Queensland Construction Sites</i> , Institute of Engineers, Australia (Queensland Division), 1996
(e) Maintenance of Works	Materials and works maintained by the proponent at their expense for 12 months.

Division 5 – Electricity, Telecommunications and Street Lighting

5.1 Planned Standards of Service

(1) Tables S2.14 identifies the planned standards of service for infrastructure to service activities, including lots arising from reconfiguring a lot, for electricity and telecommunications in the Shire.

(2) To be constructed prior to:

- (c) plan sealing where involving reconfiguring a lot, or
- (d) commencement of any approved use or building works (whichever is first).

Table S2.14 – Electricity, Telecommunications and Street Lighting Standards of Service and Construction

Element	Planned Standards of Service and Construction
Electricity	<p>(A) All Localities - The standards of services nominated by the electricity supply authority with reticulated electricity to be made available at the property boundary.</p> <p>(B) Rural Locality - Alternative power may be considered where agreed to by the electricity service authority.</p> <p>(C) Urban Locality - Electricity supply is to be undergrounded with common trenching of services restricted to electricity and telecommunications in one trench with sewer and water mains in separate trenches.</p> <p>(D) Construction – Ergon Specifications URD Underground Residential Distribution.</p>
Telecommunications	<p>The standards of service nominated by the relevant telecommunications supply authority with reticulated services to be made available at the property boundary.</p> <p>In the Urban Locality, common trenching of services is restricted to electricity and telecommunications in one trench with sewer and water mains in separate trenches.</p>
Street Lighting in the Urban and Rural Residential Locality	<p>Reconfiguring a lot involving the opening of a road or the creation of 5 or more lots provides for street lighting installed and designed in accordance with the requirements of:</p> <p>(A) Ergon,</p> <p>(B) Australian Standard AS 1158.3.1-Public Lighting Code (1986) – Table 1.1 certified by a RPEQ,</p> <p>(C) Guide to Traffic Engineering Practice – Part 12, Roadway Lighting, AUSROADS, and</p> <p>(D) if on a State-controlled road or a Council sub-arterial or higher order road, the requirements contained in the Department of Main Roads Standard Drawings</p>

ROAD TYPE CLASSIFICATION:

Type³	Characteristics
Access Place/Street	Local systems providing lot access and movement in a local area (where speed and volume are low) with connection to collector roads.
Collector Road	Collects traffic from access streets and provides for a higher volume of traffic including bus movement and carriageway parking in the Urban Locality. In the Industrial or the Business and Commercial zones, direct property access to collector roads is acceptable
Trunk Collector/Distributor Road	Roads that collect and distribute traffic from all local areas, moderate use visitor sites and to or from surrounding road systems. Roads cater for moderate travel speeds and large vehicles but exclude the provision for lot accesses or verge parking
Council Sub-Arterial to Arterial Road	Primary roads providing largely for the main traffic movements into and through regions including access to high visitor uses. Roads cater generally to higher travel speed vehicles, busses and trucks. No further property access or on-street parking is envisaged to maintain through-traffic safety and efficiency of movement. Systems feed the National Highways and other state controlled district systems

³ Existing collector and higher order roads are mapped on the Zone maps