

SHIRE OF TAMMIN - RURAL ROAD HIERARCHY CRITERIA

Functional Type Activity	Class 1	Class 2	Class 3	Class 4	Class 5
	Regional Distributor	Local Distributor A	Local Distributor B	Access Road A	Access Road B
<b>Essential Criteria</b> <sup>1</sup>	<b>Must be an Agreed 2040 "Local Government Significant" Road</b>	Must function as a Distributor Road	Main function is as either a Distributor Road or a Property Access Road - usually services less than 10 properties / km	Main function is as a Property Access Road - usually services less than 5 properties / km.	Main function is as a Property Access Road - usually services less than 2 properties and most often is a No Through Rd.
<b>Predominant Activity</b> <sup>2</sup>	Major Local Government roads linking other significant destinations and designed for efficient movement of people and goods	Local government roads accomodating Heavy Vehicles, machinery, tourists and some times slower moving traffic	Roads other than Regional and Local Distributor Roads which form part of the local distribution network to individual properties	Roads other than Regional and Local Distributor Roads which form part of the local distribution network to individual properties	Roads other than Regional and Local Distributor Roads which form part of the local distribution network to individual properties
<b>Degree of connectivity</b>	High. Connects to Primary (MRWA) and Other Regional Distributor Roads	Medium. Connects to Regional & Other Local Distributor Roads	Medium. Generally connects to local distributors and other Local Access Roads A.	Low. Generally connects to local distributors and Local Access Roads A and B.	Low. Generally connects to Local Access Roads B and C.
<b>Intersections</b>	Controlled with appropriate measures such as signing and line marking (where warranted) <sup>7</sup>	Controlled with measures such as signing <sup>7</sup>	Controlled with measures such as signing <sup>7</sup>	Controlled with measures such as signing <sup>7</sup>	Controlled with measures such as signing <sup>7</sup>
<b>Indicative Traffic Volumes</b> <sup>3</sup>	Up to OR Greater than 150 vehicles per day	Up to 50 vehicles per day	Up to 50 vehicles per day	Up to 20 vehicles per day	Up to 10 vehicles per day
<b>Heavy Vehicle Access</b>	Road is capable of accomodating Heavy Vehicle and machinery traffic - under NO restrictive Operating Conditions (since expected to be all weather sealed roads)	Road is capable of accomodating Heavy Vehicle and machinery traffic - ideally under no restrictive Operating Conditions (except Condition 2 if unsealed)	Road is capable of accomodating Heavy Vehicle and machinery traffic under some restrictive Operating Conditions - see Tables below.	Road is capable of accomodating Heavy Vehicle and machinery traffic under the restrictive Low Volume Type A or B Road Operating Conditions - see Tables below.	Road is capable of accomodating Heavy Vehicle and machinery traffic under the restrictive Low Volume Type A or B Road Operating Conditions - see Tables below.
<b>Frontage Access Allowed</b>	Preferably none but limited access exists to service individual properties.	Yes. Majority of property access should be from these roads	Yes. Majority of property access should be from these roads	Yes. Majority of property access should be from these roads	Yes. Majority of property access should be from these roads
<b>Recommended Operating Speed</b>	Generally - Derestricted Open Speed Limit (Light vehicles to Maximum 110 kph and Heavy Vehicles / Towing Vehicles to Maximum 100 kph).	Generally the Derestricted Open Speed Limit - but MAY have Speed Restrictions due to road geometry / condition issues <sup>6</sup>	Safe operating speed may be limited due to road geometry, surface and condition <sup>6</sup>	Safe operating speed may be limited due to road geometry, surface and condition <sup>6</sup>	Safe operating speed may be limited due to road geometry, surface and condition <sup>6</sup>
<b>Buses Allowed</b>	Yes	Yes	School buses if required - Ensure a suitable maintenance regime if roads not paved.	School buses if required - Ensure a suitable maintenance regime if roads not paved.	School buses if required - Ensure a suitable maintenance regime if roads not paved.
<b>Signs &amp; Line Marking</b>	Linemark centrelines (where warranted - needs to be > 350 VPD). Signage: Install Advisory (yellow backed) speed signs (on sealed sections ONLY), intersection, curve, crest and floodway signs, and consider installing D4-6 "Cams" signs around Deficient Raddii Curves if they cannot be realigned to > 600m radius; MR-HM-2 Barrier Boards at T-Junction Intersections; Guide (green backed) and Service (blue backed) signs. <sup>7</sup>	Signage: Install Advisory (yellow backed) speed signs (on sealed sections ONLY), intersection, curve, crest and floodway signs, and consider installing D4-6 "Cams" signs around Deficient Raddii Curves to improve safety; MR-HM-2 Barrier Boards at T-Junction Intersections. <sup>7</sup>	Signage: Install Advisory (yellow backed) speed signs (on sealed sections ONLY), intersection, curve, crest and floodway signs, and consider installing D4-6 "Cams" signs around Deficient Raddii Curves to improve safety; MR-HM-2 Barrier Boards at T-Junction Intersections. <sup>7</sup>	Signage: Install MR-HM-2 Barrier Boards at T-Junction Intersections and Advisory (yellow backed) intersection signs; consider installing Advisory (yellow backed) curve, crest and floodway signs, and D4-6 "Cams" signs around Deficient Raddii Curves to improve safety (may likely be unaffordable given Council's many other assets and hazards to manage, and the minimal funding available). <sup>7</sup>	Signage: Install MR-HM-2 Barrier Boards at T-Junction Intersections and Advisory (yellow backed) intersection signs; consider installing Advisory (yellow backed) curve, crest and floodway signs, and D4-6 "Cams" signs around Deficient Raddii Curves to improve safety (may likely be unaffordable given Council's many other assets and hazards to manage, and the minimal funding available). <sup>7</sup>
<b>Responsibility</b>	Local Government	Local Government	Local Government	Local Government	Local Government

<b>General Description of Existing Road Type</b>	<b>Type 5 Standard Road</b> (seal width = 7.0m) and pavement width approx 10.0m, <b>OR a Type 6 Standard Road</b> (seal width > 7.2 m - prefefably 8.0m on straight sections and > 8.0m on deficient raddii curves) and pavement width approx. 10m width.	Mainly a <b>Type 4 Standard Road</b> (seal width = 3.7 to 7.0m) and pavement width approx. 8.0 to 9.0m, and Type 5 Standard road (seal width = 7.0m) and pavement width approx. 9.0 to 10.0m width <b>OR Type 3 Standard Road</b> - Unsealed but Paved - with Pavement width approx. 8.0 to 9.0m.	Mainly a <b>Type 3 Standard Road</b> - Unsealed but Paved with Pavement width approx 6.5 to 8.0m, <b>OR a Type 2 Standard Road</b> - Unsealed / Formed Road with Carriageway width 6.5 - 8.0m width.	Mainly a <b>Type 2 Standard Road</b> - Unsealed / Formed Road (Paved or Unpaved) with Carriageway width > 6.2m (so minimum 60 kph speed limit can be imposed with Operating Conditions - for a Low Volume Type A road under the RAV Route Assessment Guidelines).	<b>Type 1 Standard Road</b> - Unsealed / Unformed Road (generally unpaved) with Carriageway width > 3.5m (so minimum 40 kph speed limit can be imposed with Operating Conditions - for a Low Volume Type B road under the RAV Route Assessment Guidelines).
<b>Capital Works Warrant</b> (as available funding permits)	Reconstruct roads to the required 2040 standard for sealed roads - the minimum Type 5 standard (7.0m seal width) OR preferably a Type 6 standard (> 7.0m seal width - possibly 8.0m on straights and sufficient raddii curves, and 9.0m on deficient <sup>4</sup> raddii curves) where the traffic counts meet the Type 5 standard traffic warrant (AADT > 150 OR ESA > 41) OR the Type 6 standard traffic warrant (AADT > 500 OR ESA > 60) .	Reconstruct existing sealed roads to a minimum Type 4 standard (3.7 to <7.0m seal width), and Type 5 standard (7m seal width) where the traffic counts meet the warrant (AADT > 50 OR ESA > 21). Widen, reform and Gravel Resheet unsealed roads to a minimum 9.0m carriageway width and 150 thick pavement depth.)	Widen, reform and Gravel Resheet unsealed roads to a minimum 8.0m carriageway width (so no Low Volume Road with limiting Operating Conditions have to be imposed under the RAV Route Assessment Guidelines) and 100 thick pavement depth - if affordable and all unsealed Local Distributor Roads have been paved to a suitable standard.	Nil	Nil
<b>Road Maintenance Warrant</b> (as available funding permits)	Maintenance Grade Unsealed Shoulders once per annum, including cleaning out table and side drains and cutting out regrowth. Carry out pothole, edge break and crack patching as required to provide a high level of service. Trim Verge Vegetation back to edge of Maintenance Zone on a regular basis to provide a high level of service in maintaining table drains and visibility.	On Sealed Roads, Maintenance Grade Unsealed Shoulders once per annum, including cleaning out table and side drains and cutting out regrowth. Carry out pothole, edge break and crack patching as required to provide a moderate level of service. On Unsealed Roads, carry out 1 x Early Off Peak Winter Maintenance Grade including cleaning out table and side drains, 1 x Peak Winter Maintenance Grade, and 1 x Summer Grade during the busy harvest period to remove corrugations. Trim Verge Vegetation back to edge of Maintenance Zone on an affordable basis to provide a moderate level of service in maintaining table drains and visibility.	Carry out 1 x Peak Winter Maintenance Grade including cleaning out table and side drains and cutting out regrowth and 1 x Summer Grade during the busy harvest period to remove corrugations. Trim Verge Vegetation back to edge of Maintenance Zone on an affordable basis to provide a low level of service in maintaining table drains (where applicable) and visibility.	Carry out 1 x Off Peak Winter Maintenance Grade including cleaning out table and side drains and cutting out regrowth. Consider gravel sheet patching small dangerous clay surfaced sections on School Bus Routes - if required.	Carry out 1 x Summer Maintenance Grade including cleaning out table and side drains and cutting out regrowth. Consider gravel sheet patching small dangerous clay surfaced sections on School Bus Routes - if required.

1. Ideally, when considering road networks, every road would need to meet all criteria of one Functional Road Hierarchy type, but many roads meet some of the criteria appropriate to several different hierarchal types and are designated by determining the majority of criteria that apply. All must meet the Essential Criteria.

2. Predominant Activity - "Significant Designations" as defined by the Roads 2040 criteria includes State and regional tourist destinations, communities of greater than 500 population and remote communities with greater than 250 population or remote communities of greater than 50 population with limited road access

3. Indicative Traffic Volumes - As these criteria are for Statewide use, the traffic volume figures are intended to reflect volumes in the majority of regions. However, some Regions will have roads that don't reach the indicative volume while others will have volumes far in excess of those indicated

4. Deficient Raddii Curves are those with Raddii Length < 400m (note that the desired minimum curve raddii length is 600m if the curve is to be realigned - since this radius permits a 110 kph Operating Speed through the curve at the maximum suggested 6.0% superelevation - from the Austroads Road Design Guide Part 3: Geometric Design).

**The above criteria is based on the MRWA Regional Functional Road Hierarchy as amended criteria 21/03/2001 - with the Primary Class (MRWA Controlled Road) removed - and Criteria Descriptions adjusted to suit the Shire of Tammin's Road Network**

5. The Heavy Vehicle Operating Conditions below have been taken from the RAV Route Assessment Guidelines

6. Advisory (yellow backed) Speed Warning Signs are not permitted to be erected on unsealed roads (only on sealed roads) and consequently, speed limits cannot be imposed on these roads. However, consider at least managing safety through curved sections with advanced warning curve signs and D4-6 "CAMS" signs around the outside of curves as per section 4.4 of AS 1742.2 - Manual of Uniform Traffic Control Devices

7. Under MRWA Authority ONLY, install Giveaway Signs at all four (4) way intersections, giving preference to a Major Road and Minor Road for right of way for vehicles approaching the intersection from along the Major Road.

Standard Restricted Access Vehicle Route Assessment Guidelines

**Appendix E: Operating Conditions**

These and other similar operating conditions may be applied to the assessment of low volume roads.

1. When travelling at night, the RAV must travel at a maximum speed of 40km/h and display an amber flashing warning light on the prime mover.
2. No operation on unsealed road segment when visibly wet, without road owner's approval.
3. Headlights must be switched on at all times.
4. Speed restrictions of 40 km/h or 60 km/h as determined from [Appendix B](#).
5. Direct radio contact must be maintained with other RAVs to establish their position on or near the road (suggested UHF Ch 40).
6. For a single lane road, the road must not be entered until the driver has established via radio contact that there is no other RAV on the road travelling in the oncoming direction.
7. Operation is not permitted while the school bus is operating on the road. Operators must contact the relevant schools directly and obtain school bus timetables; or where direct contact can be made with the school bus driver, operation is permitted once the school bus driver confirms all school drop-offs/ pick-ups have been completed on the road.
8. Current written support from the road asset owner, endorsing use of the road, must be obtained, carried in the vehicle and produced upon request.

Standard Restricted Access Vehicle Route Assessment Guidelines

**Appendix B Low Volume Rural Road Minimum Widths**

Type A Road (suitable for two-way RAV traffic)

	40 km/h	60 km/h
	Carriageway Width (m)	Carriageway Width (m)
RAVs Categories 2-7	5.8	6.1
RAVs Categories 9-10	5.9	6.3

**Notes:**

- This section is not to be used for assessing routes for RAV Category 8.
- For Type A low volume roads, [Appendix E](#) operating conditions 1, 2, 3, 4, 5, 7 and 8 may be applied as a condition;
- If a road is at least 1.0 metre wider than the widths specified for 60km/h, an 80km/h speed restriction should be considered. A speed restriction above 80km/h should only be considered if the road is sealed, has good sight distance and presents no significant safety concern.

Type B Road (unsuitable for two-way RAV traffic)

	40 km/h
	Carriageway Width (m)
RAVs Categories 2-7	3.5*
RAVs Categories 9-10	3.5*

**Note:**

- For type B low volume roads, [Appendix E](#) operating conditions 1, 2, 3, 4, 5, 6, 7 and 8 may be applied as a condition.