

Figure 1: Access layout diagram for 31-100 ecm/day from the 1999 PPM

https://www.nzta.govt.nz/resources/planning-policy-manual/

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Figure 2: 2007 PPM publication date

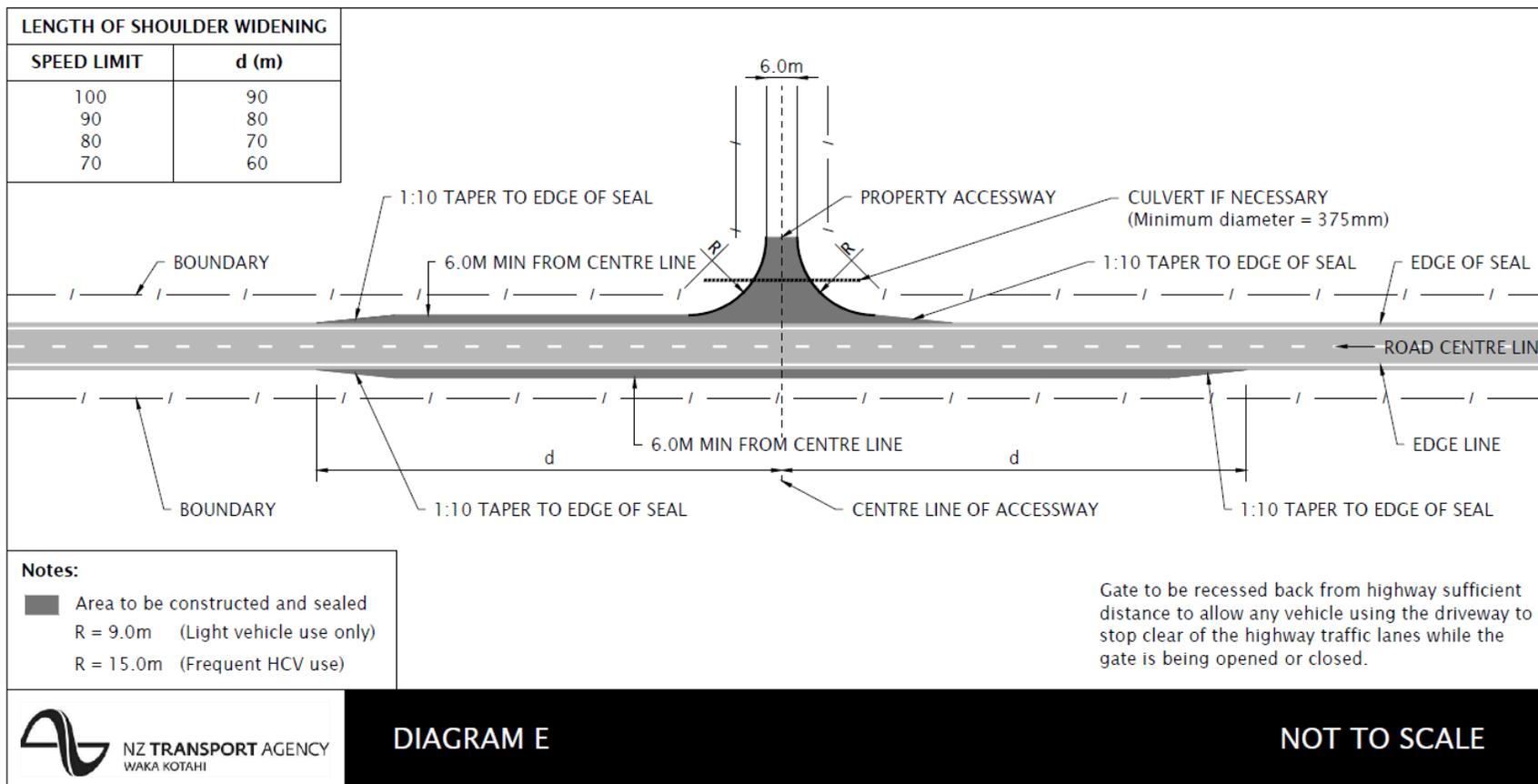


Figure 3: Access layout diagram for 31-100 ecm/day with more than one slow, heavy, or long vehicle movement per week from the 2007 PPM

Access Design for Rural State highways

All accesses directly to a rural State highway require design appropriate to the highway they are connecting to in order to avoid, remedy, or mitigate the adverse effects. Diagrams C and D provide appropriate standard designs for accesses up to 30 and 100 equivalent car movements per day respectively.

Figure 4: Extract from 1999 PPM showing that accesses with up to 100 ecm/day qualified for the above layout.

Appendix 5B – Accessway standards and guidelines

Table App5B/4 – Accessway types

Type of traffic using accessway (more than one slow, heavy or long vehicle movements per week?)	Volume of traffic using accessway (ecm/day ⁵)	Volume of traffic using state highway (vpd)	Accessway type
No	1-30	< 10,000	Diagram and Perspective C
		>=10,000	Diagram and Perspective D
	31-100	< 10,000	Diagram and Perspective D
		>=10,000	Diagram and Perspective E
Yes	1-30	All	Diagram and Perspective D
	31-100	All	Diagram and Perspective E

Figure 5: Access type selection matrix from the 2007 PPM.

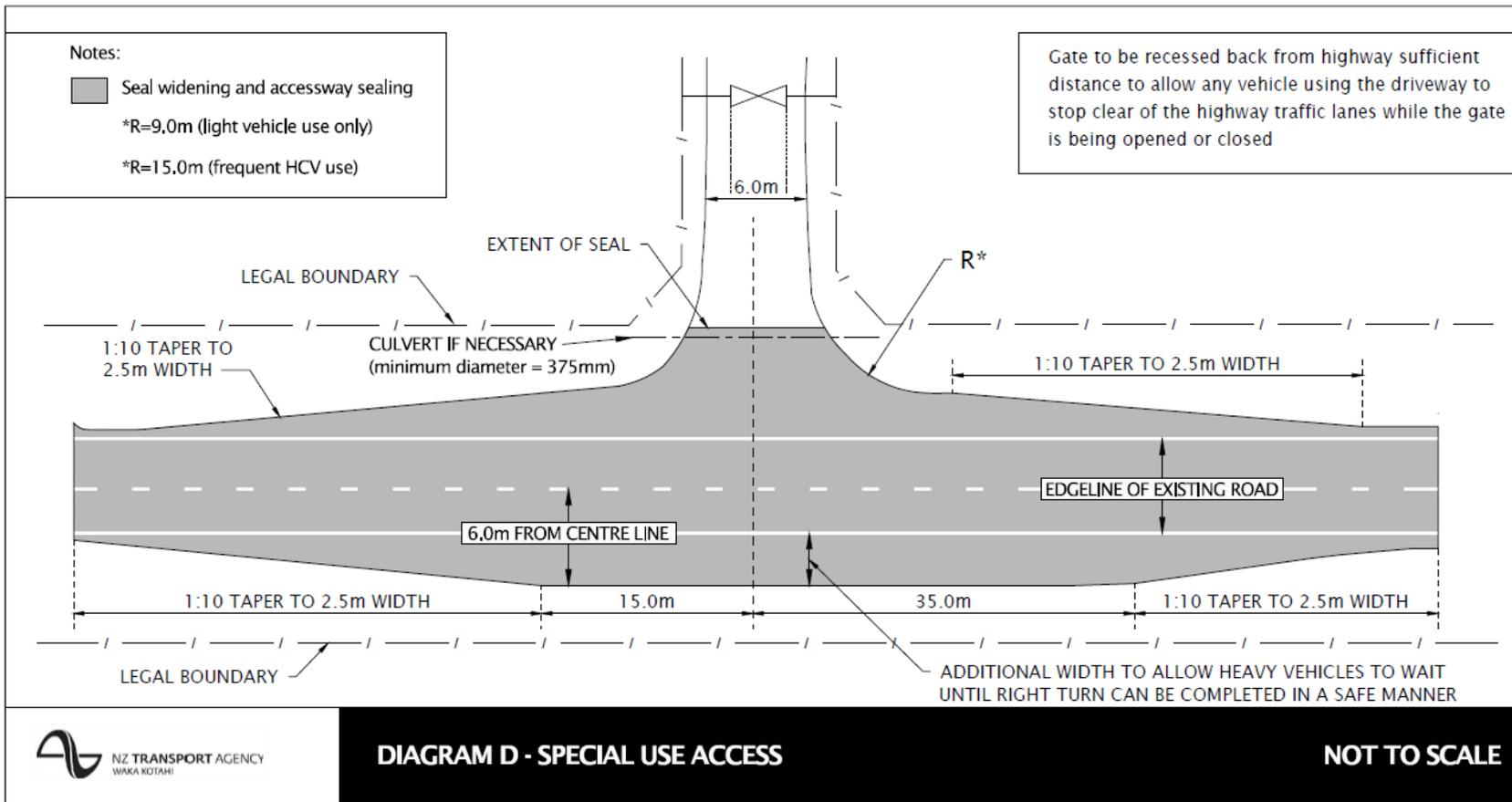


Figure 6: Diagram D from 2007 PPM

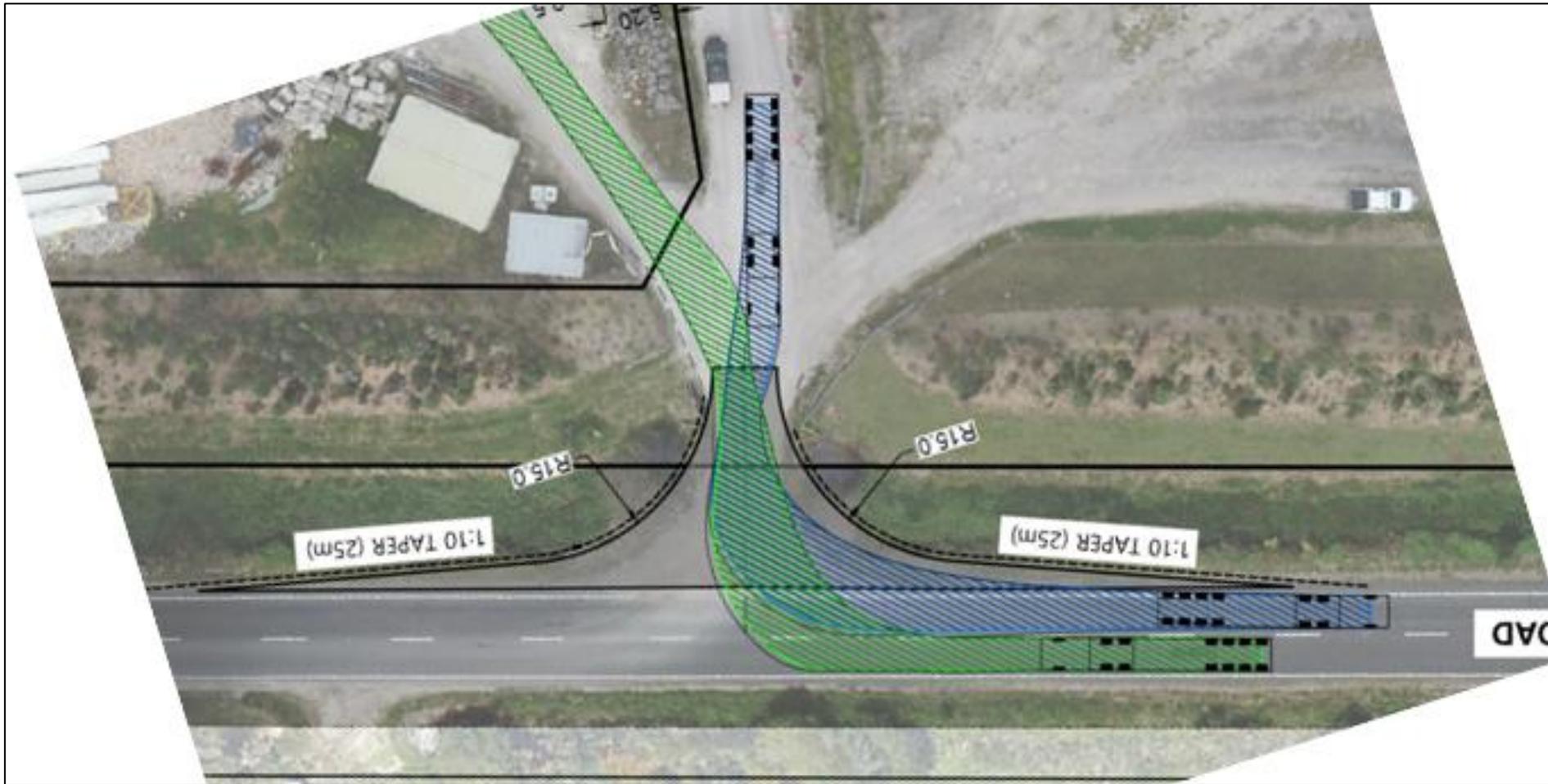


Figure 7: Access layout for subject application, provided in S92 information, May 2023.

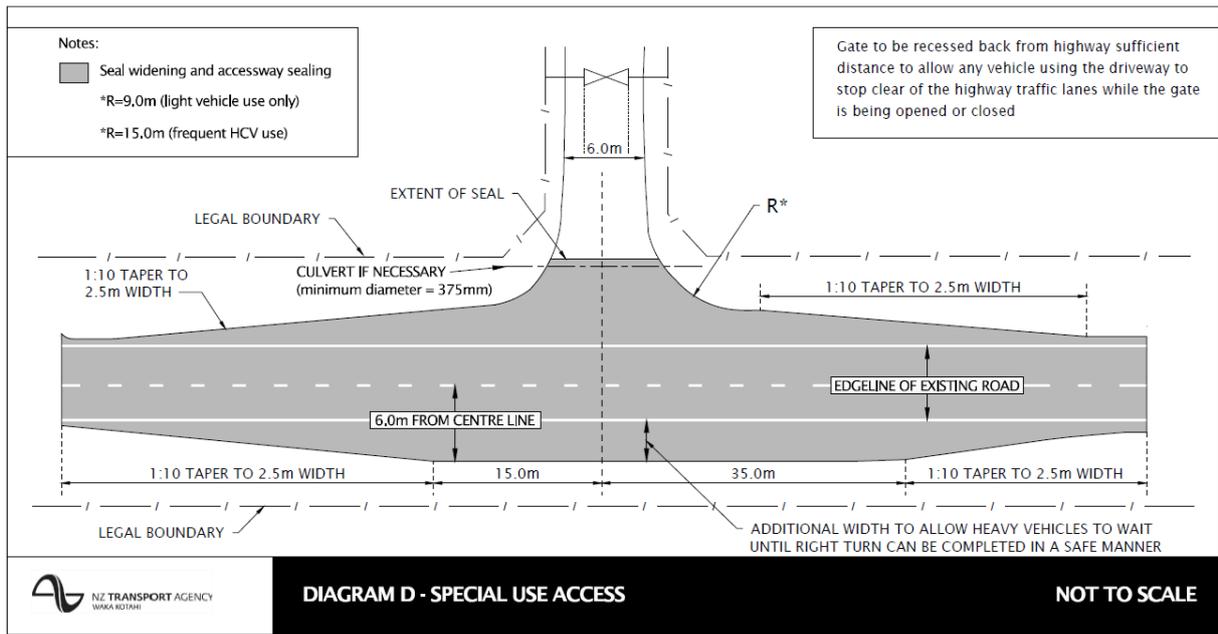


Figure 6: Diagram D from 2007 PPM

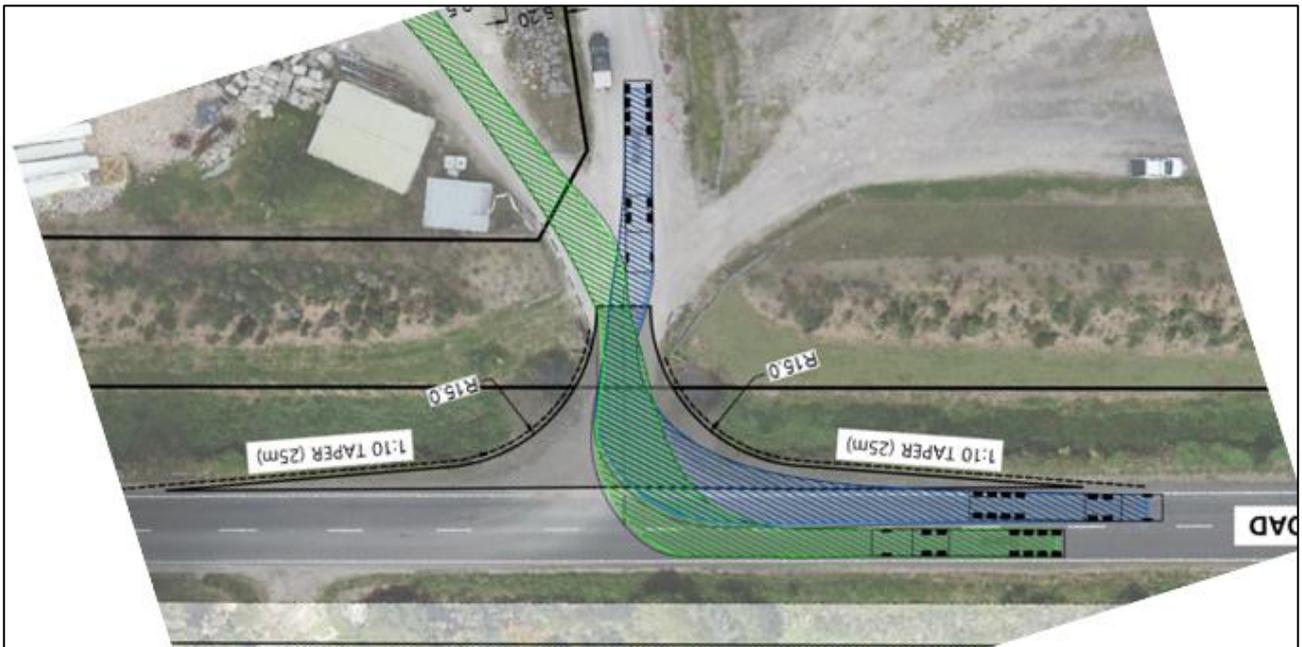


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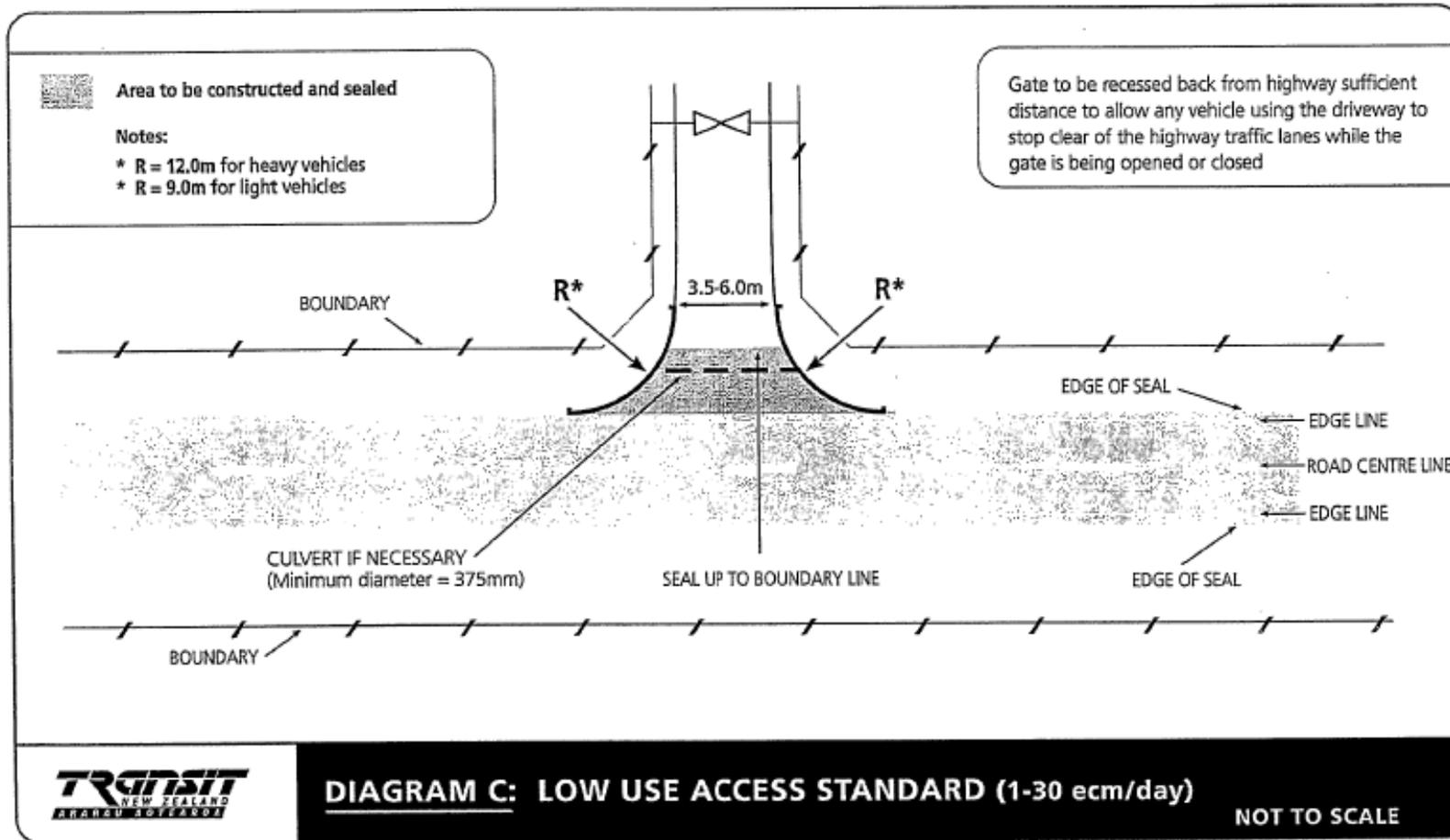


Figure 8: Diagram C: Low use access standard (1-30 ecm/day) from the 1999 PPM

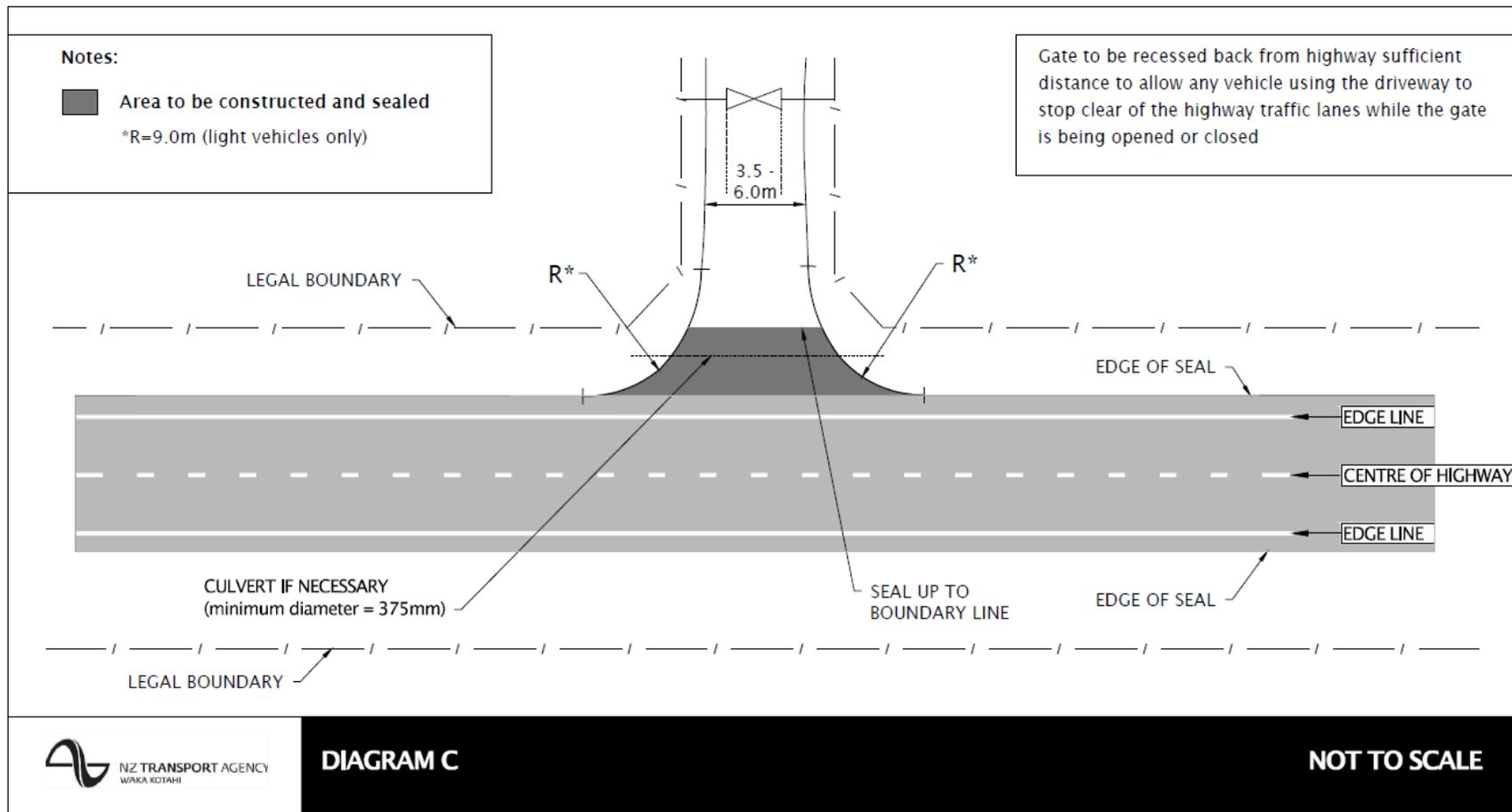


Figure 9: Diagram C from the 2007 PPM. Refer to the access selection matrix from Appendix 5B for criteria for this layout.

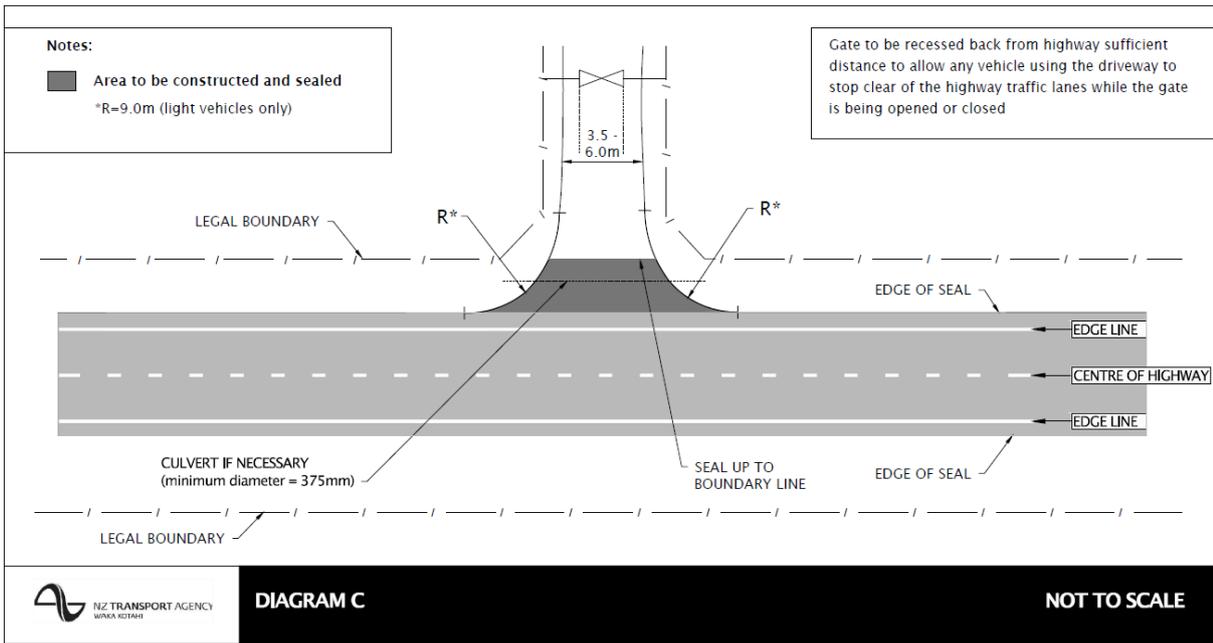


Figure 9: Diagram C from the 2007 PPM. Refer to the access selection matrix from Appendix 5B for criteria for this layout

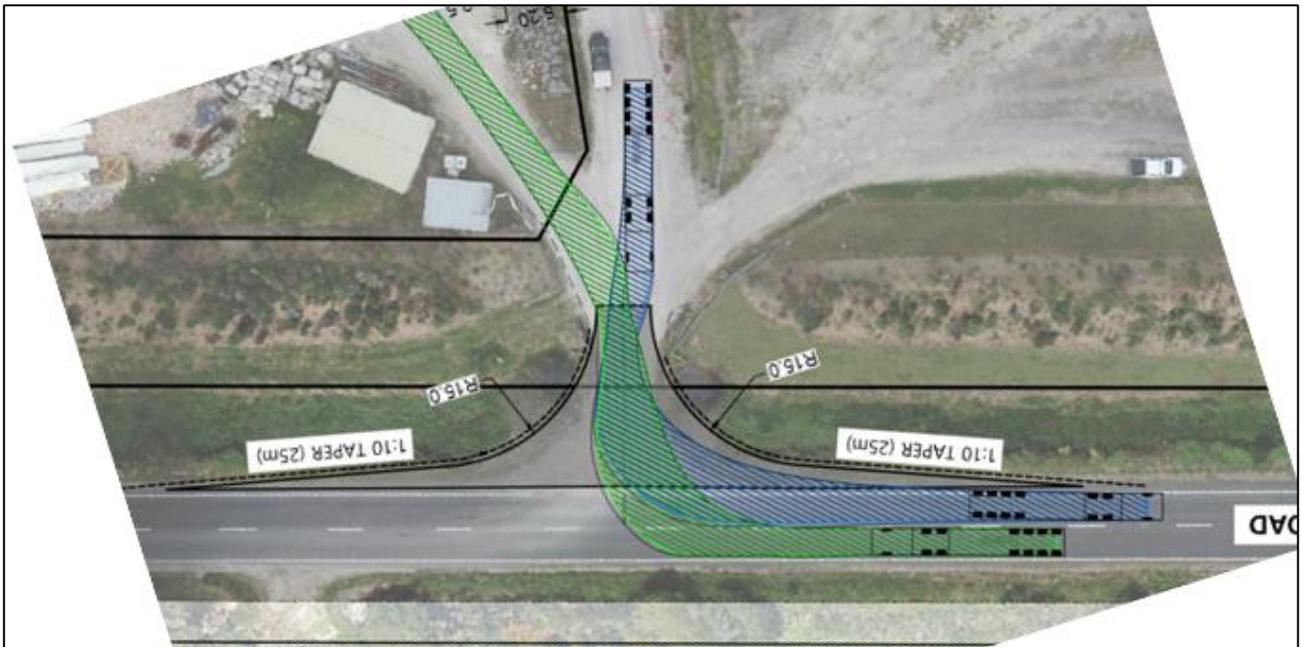


Figure 7: Access layout for subject application, provided in S92 information, May 2023

The traffic generation data given in Section 0 of this report identified 10% of vehicles travelling to and from the west. This is approximately one vehicle turning right into the site per day. Given this very low level of traffic generation from the west, it is assessed that the widening on the opposite side of the carriageway, as shown on Diagram A above, is not required. It is therefore recommended that the existing vehicle entrance be upgraded in accordance with Diagram A of the Development Code, however without the widening on the opposite side of the carriageway.

Figure 10: Extract from Mr Harrison's November 2022 Ref 548 TA v1 Transportation Assessment Ref 548 TA v1 that was submitted with the subject application in May 2023.

Figure 3.1: Rural basic (BA) turn treatments

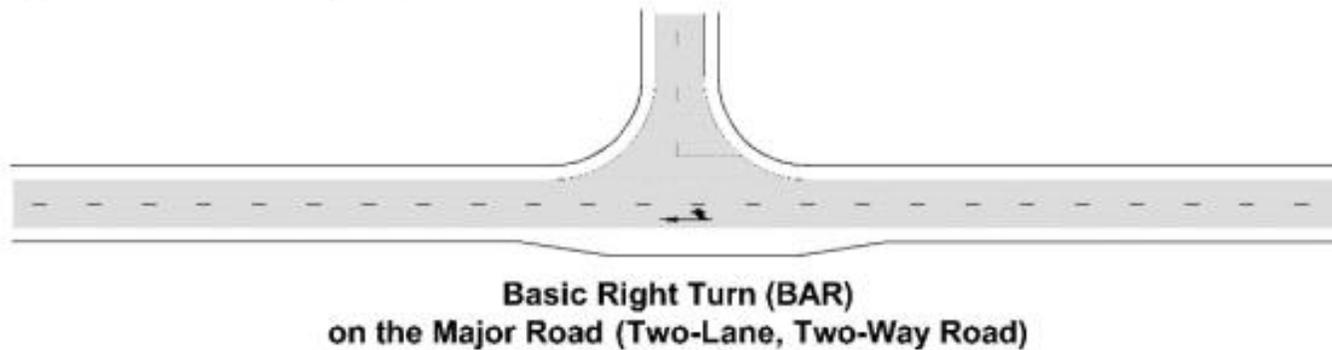


Figure 11: Extract from Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossing Management showing the minimum treatment at intersections.

https://www.nzta.govt.nz/assets/Roads-and-Rail/onf/docs/ONF-detailed-design-document-november-2022.pdf

Draw | Read aloud | Ask Bing AI | 31 of 55

31

Rural Connectors

Rural Connectors make it easy for people and goods to move between different parts of rural areas, and link Rural Roads with Interregional Connectors. They support an increased level of traffic moving through the area, while also providing access from the land they pass through. Land around rural connectors is usually farmland, and these roads may also run through national parks or other natural areas. There are low levels of roadside activity related to the way surrounding land is used.

Place/Movement rankings:

- P5
- M2/3

Function:

- Movement of people and goods between different parts of rural areas.
- Linking rural roads with State Highway network.
- Access to adjacent land use.

Density of on-street activity	Intensity of use (dwell time)	Adjacent land-use (indicative)	Place function - primary attributes	Movement function – primary attributes
Low	Low	<ul style="list-style-type: none"> • Farmland • Conservation land • Natural areas 	<ul style="list-style-type: none"> • Low levels of roadside activity associated with residents going about their daily lives 	<ul style="list-style-type: none"> • High-medium levels of motor vehicle traffic, including freight

Waka Kotahi NZ Transport Agency | One Network Framework (ONF)

Figure 12: Extract from the Detailed Design guidance for the One Network Framework (ONF).

		Severity outcome				
		Non-injury	Minor	Serious	Fatal	
		Property damage only (PDO)	Injury which is not 'serious' but requires first aid, or which causes discomfort or pain to the person injured.	Injury (fracture, concussion, severe cuts or other injury) requiring medical treatment or removal to and retention in hospital.	A death occurring as the result of injuries sustained in a road crash within 30 days of the crash.	
Probability of a crash	Very likely	Minor	Moderate	Safe System injury threshold	Serious	Serious
	Likely	Minor	Moderate		Serious	Serious
	Unlikely	Minor	Minor		Significant	Serious
	Very unlikely	Minor	Minor		Significant	Significant

Figure 1 Safety concern risk rating matrix

Figure 13: Safety Concern Risk Rating matrix from Waka Kotahi's Safe System Audit template.

TRANSPORTATION

W437

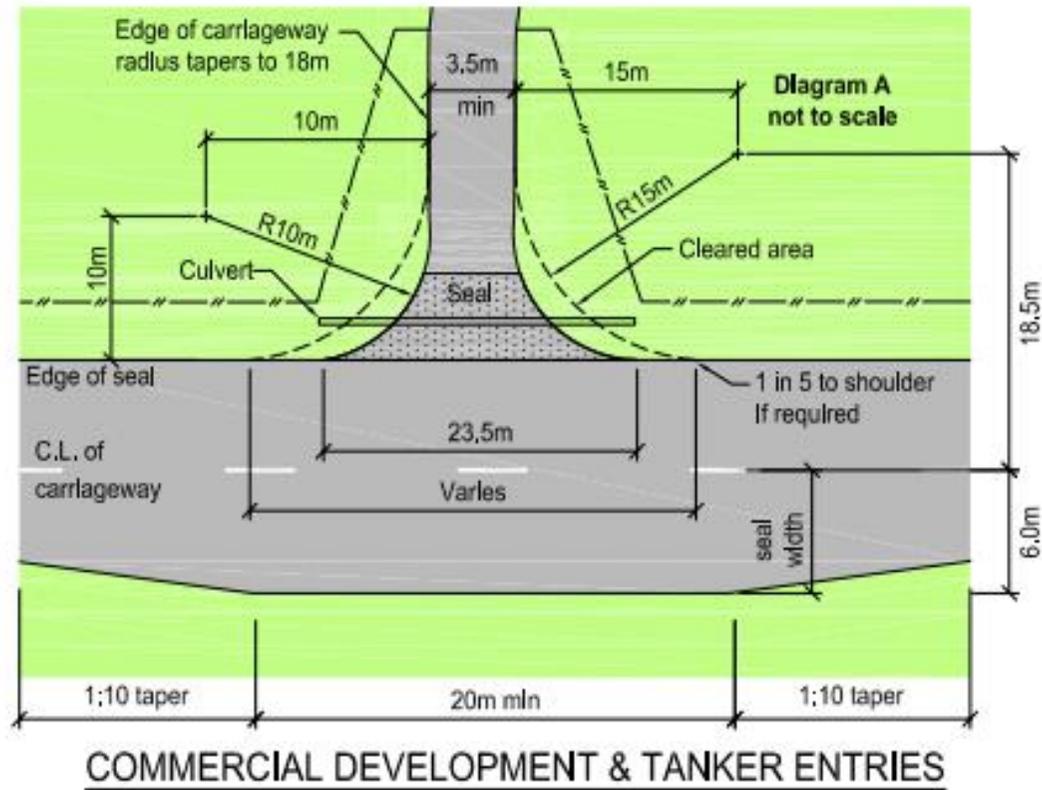


Figure 14: Extract from the Development Code showing the Commercial Development access layout. This is Drawing W437 Diagram A.

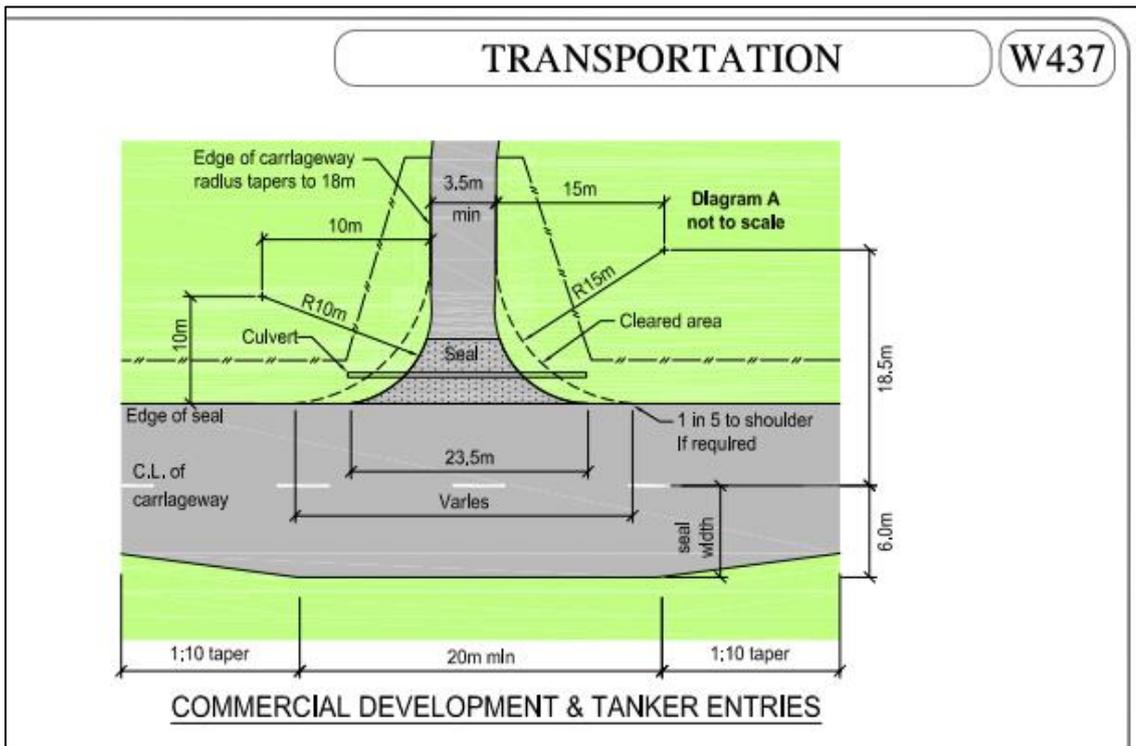


Figure 14: Extract from the Development Code showing the Commercial Development access layout. This is Drawing W437 Diagram A.

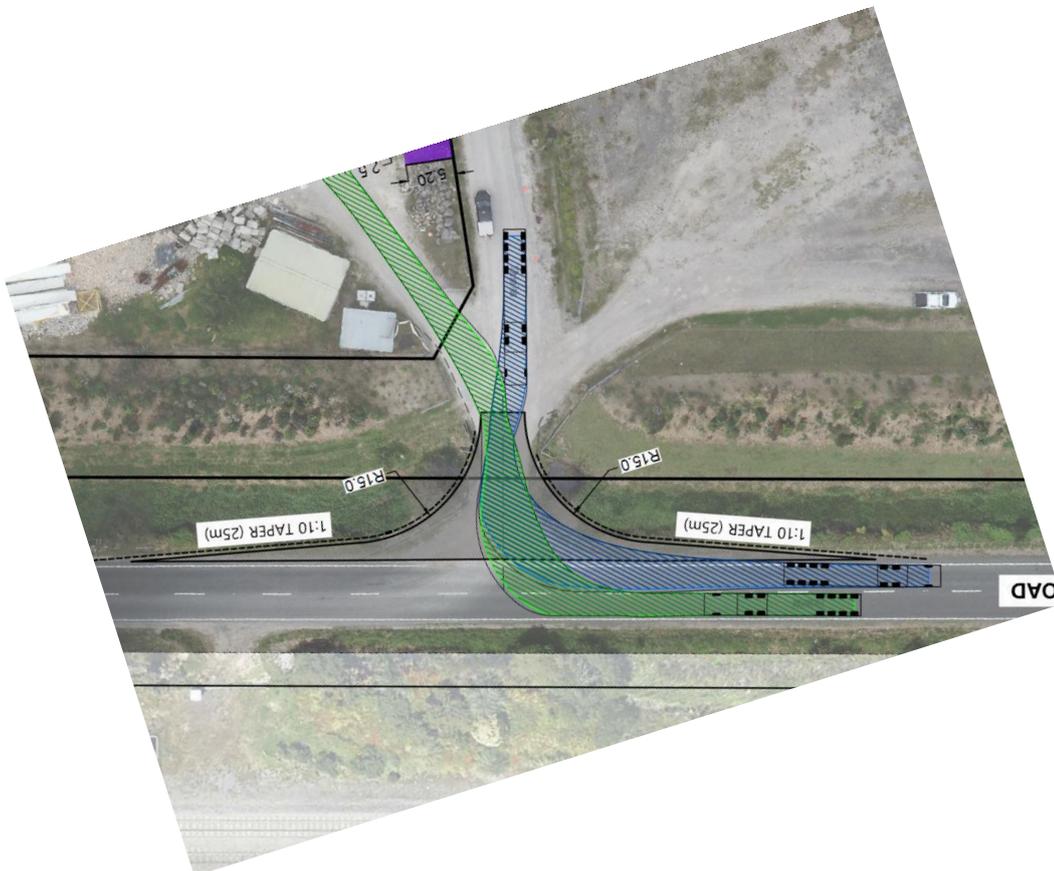


Figure 7: Access layout for subject application, provided in S92 information, May 2023



Figure 15: Looking towards Tauranga from the site access, from my eye height in an Outlander SUV.



Figure 16: Looking towards Katikati from the site access, from my eye height in an Outlander SUV.

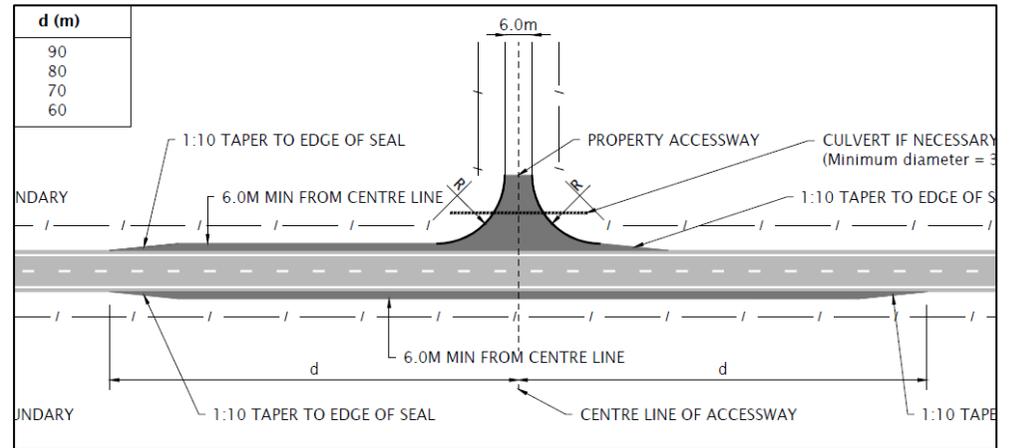
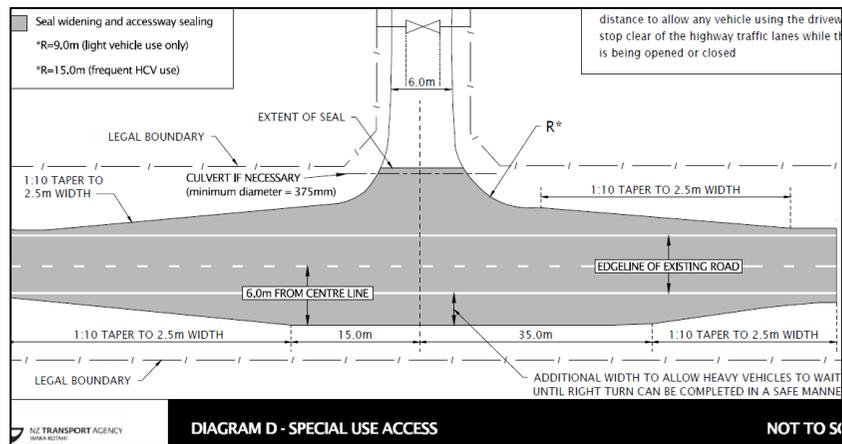
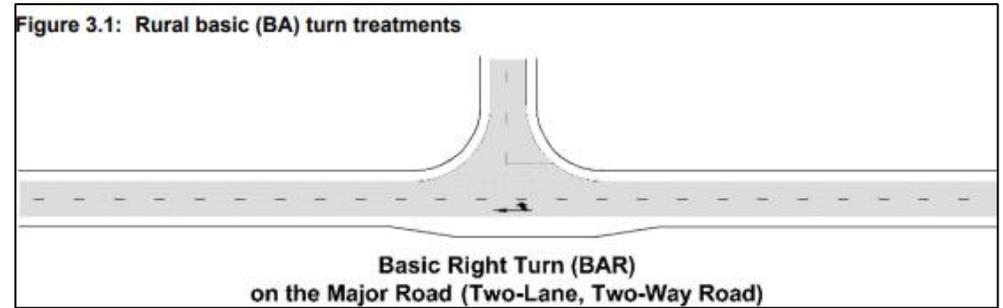
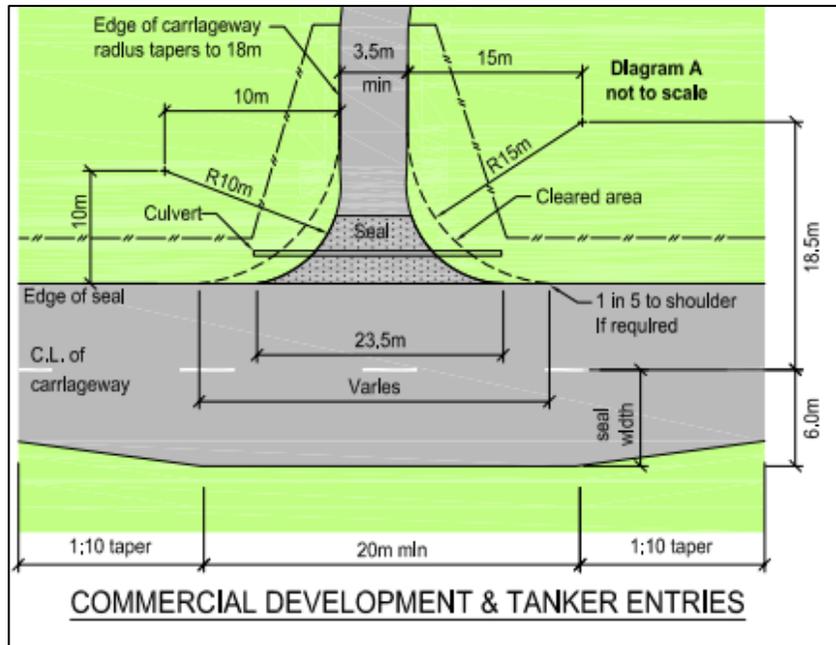


Figure 17 – Copies of all of the standard access layouts, and the BAR from Austroads, that have been discussed above. These are provided on one page for ease of comparison. Of note, they all feature widening opposite the access/intersection.

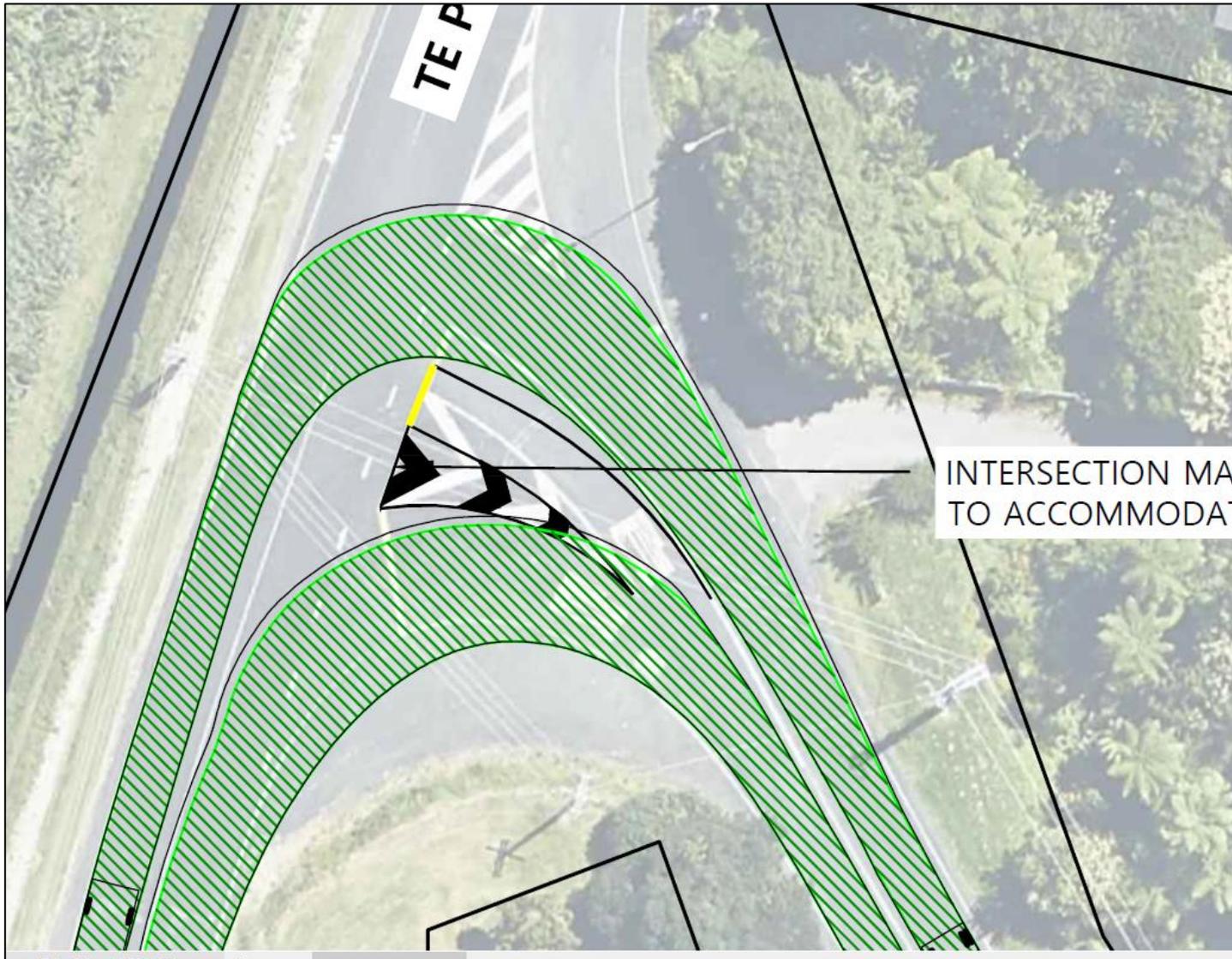


Figure 18: Tracking curve and proposed new markings on Te Puna Station Road. Drawing 423022 CIV D001 from S92 information.

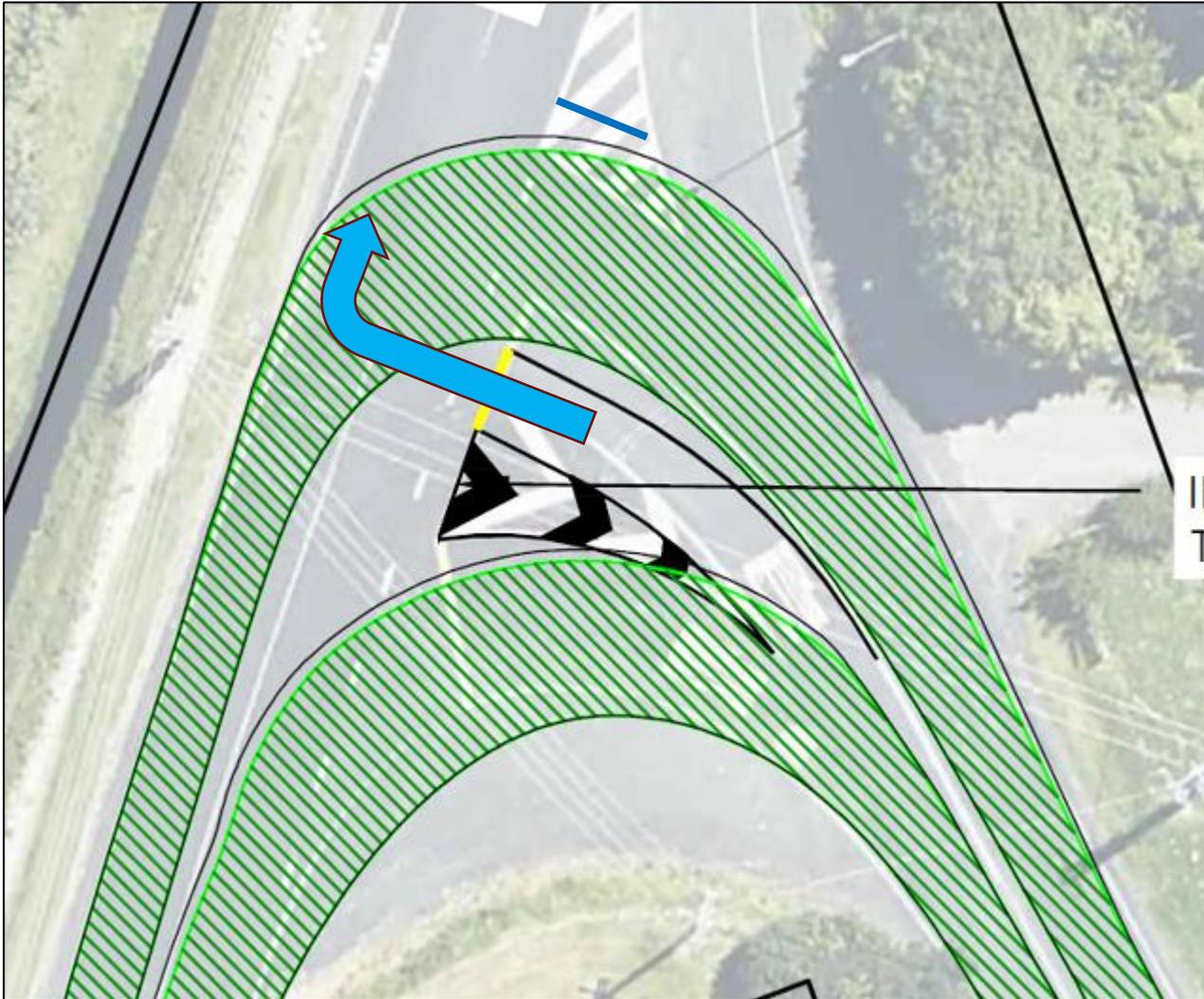


Figure 19: Tracking curve for right turn out to be checked. Flush splitter island to be pulled back.



Figure 20: Sight line to intersection is shown by the blue line (approximately 60m long).



Figure 21: Sight line to intersection that might be available if there is no traffic in the southbound lane (approximately 77m). Note that this is note how standard sight distance is measured.



Figure 22: Sight line to intersection that might be available if there is no traffic in the southbound lane and if there are no obstructions in the opposing berm (approximately 130m). Note that this is not how standard sight distance is measured.



Photo 1: Looking towards Te Puna Station Road, approximately 200m prior to the intersection.



Photo 2: Looking towards Te Puna Station Road, approximately 150m prior to the intersection.



Photo 3: Looking towards Te Puna Station Road, approximately 125m prior to the intersection.



Photo 4: Looking towards Te Puna Station Road, approximately 100m prior to the intersection.



Photo 5: Looking towards Te Puna Station Road, approximately 75m prior to the intersection.



Photo 6: Looking towards SH 2, from the intersection with Te Puna Station Road.