

8.6 SECTION 8 - APPENDICES

8.6.1 APPENDIX 1: TABLE 3.1 – URBAN / RURAL ROAD AND ACCESS STANDARDS FOR THE HAURAKI DISTRICT

URBAN AREAS ¹

	Road Classification		Lots / Dwellings served	Maximum Length (m) ²	Legal Road Width (m)	Widths (m) ¹¹				Minimum Total Seal Width ¹¹ (m)	Foot Path	Maximum Gradient ⁵	Minimum Kerb Radius (m)	Pavement Marking Treatment	Pavement Surfacing	Amenity Treatment	
	Hierarchy	Description				Lane Details	Service strip (min)	Sealed Shoulder	Parking								Total Seal Width
Internal Accessways	Residential	Access leg	1		3.5											Refer to relevant section	
		Accessway	2 to 4	60 (58.114)	9	1 x 2.8	2 x 0.35	2.8	2.8								
	Low Density Residential	Access leg	1		6												
		Accessway	2 to 3	200	9	1 x 2.8 ³	2 x 0.35	2.8	2.8								
	Industrial Township/Town Centre	Access leg	1 to 2	50	6	1 x 3.5	2 x 1.25	3.5	3.5								
		Accessway	4 to 8	30	3.5	1 x 2.8	2 x 0.35	2.8	2.8								
Public Roads	Roads	Service lane			10			Nil	Nil	6	6	Nil	10%			Refer to relevant section	
		Cul de sac (no exit)			15	2 x 3.0		1 x 0.5	1 x parallel parking	9	6	1 x 1.4m ⁶	12.5%	R=12m	Centreline only		2 Coat seal
		Local						Nil	2 x parallel parking	12	12		5%	R=15m	Centreline and edge lines		A/C
		Industrial (local road)			20	2 x 3.5		Nil	2 x parallel parking	12 (plus for angle parking)	12	2 x 1.4m	10%	R=20m	2 Coat seal/(A/C to reduce noise)		
		Town Centre							2 x 2.5 parking	12	8						
		Collector									11		8%				

RURAL AREAS ¹

	Road Classification		Traffic Volume (ADT)	Maximum Length (m)	Minimum Legal Road Or Accessway Width (m)	Widths (m) ¹¹				Minimum Total Seal Width ¹¹ (m)	Alignment			Feather Edge Pavement Slope (width)	Sealing the High Side of Horizontal Curves	Clear zone Requirements ⁸	Turning Facility (No exit roads)	Pavement Marking Treatment	Delineation	Pavement Surfacing
	Hierarchy	Lots / Dwellings served				Formation Width	Lane Details	Sealed Shoulder	Total Seal Width		Minimum Horizontal Radius (m)	HCV Tracking Widening	Maximum Gradient ^{4,5}							
Internal Accessways	Access leg	1			6															
	Accessways	2 to 3 (58.112) 4 to 5 (58.113)		500 (58.115) 1000 (58.115)	9	2.8	1 x 2.8 ³	2.8 ⁴	2.8 ⁴	4.8 ⁴	4.8 ⁴	Yes	12.5% Standard 12.5 – 20% Specific Design (58.110)							2 coat seal ⁹ (58.116)
Public Roads	Local Road		< 300		15	10 (147.29)	2 x 2.5	2 x 0.5	6	5	15	Yes	12.50%	10%	4 to 1 (2.0m)					
	Collector Road		300 to 700		20	12 (147.29)	2 x 3	2 x 1.0	7	6.5	20	Yes	10%	10%	5 to 1 (2.5m)	Yes (0.5m)		Yes	Painted Centreline	Edge marker posts only
			700 to 1000		13 (147.29)				8											
			1000 to 2500		14 (147.29)				9											
Arterial Road		>2500		20	16 (147.29)	2 x 3.5	2 x 1.5	10	7.5	25	Yes	8%	8%	6 to 1 (3.0m)	Yes (1.0m)	Yes		Centreline and edge lines	Edge marker posts and centreline raised pavement markers	

NOTES

- These standards exclude Karangahake, Mackaytown & Waikino. The specific requirements for these towns are addressed in Volume 2 Part 3 & Table 3.2
- Traffic calming measures are required where the length exceeds 50 m or there is no clear line of sight. Design to be approved by the HDC Manager of Engineering Services.
- Passing lane are required at 100m maximum spacings or at appropriate locations not exceeding 50 m where there is no clear line of sight.
- Where accessway gradients exceed 12.5%, specifically approved surfacing is required. (58.111)
- The first 5m of the entrance shall have a maximum gradient of 12.5% (1 in 8).
- A pedestrian strip 1.4m wide shall be incorporated for pedestrian access. Concrete surfacing is acceptable, however, alternative surface treatments may be utilised with specific approval of the HDC Manager of Engineering Services. These must minimally be to the same standard.
- Alternative pavement and surfacing designs can be considered with specific approval of the Council through the Resource Consent process.
- Refer to Transit NZ Draft State Highway Geometric Design manual for details (clear zone recovery widths are based on 85%ile design speeds).
- This is required for the first 20 m only (where off a sealed road) to prevent tracking of metal onto the road.
- Some local roads may be metalled with the specific approval of the Council through the Resource Consent process.
- Dispensations for a reduction in seal width below the target requirement must be approved by the Council through the Resource Consent process.
- Sealing of the high side of a horizontal curve on a local road is optional. Should it be sealed then the minimum width is 0.3m.

8.6.2 APPENDIX 2: TABLE 3.2 – URBAN ROAD AND ACCESS STANDARDS FOR THE SETTLEMENTS OF WAIKINO, KARANGAHAKE AND MACKAYTOWN

	Road Classification		Lots / Dwellings served	Maximum Length (m) ¹	Legal Road Width (m) ¹¹	Minimum Width (m)			Foot Path	Alignment				Minimum Feather Edge Pavement Slope (width)	Sealing the High Side of Horizontal Curves	Clear zone Requirements (m)	Turning Facility (No exit roads)	Centreline Pavement Marking Treatment	Road Edge Delineation	Centreline Raised Pavement Markers	No Passing Lines	Street Lighting	Kerb and Channel urbanising ⁶	Pavement Surfacing
	Hierarchy	Description				Lane Details	Service strip	Seal Width		Minimum Horizontal Radius (m)	HCV Tracking Widening	Maximum Gradient ^{4,5}	Maximum Super-elevation											
Internal Access-ways	Residential	Access leg	1		3.5						Yes	12.5% Standard 12.5 – 20% Specific Design											2 coat seal ^{8,9}	
		Accessway	2 to 4	60		1 x 2.8	2 x 0.35	2.8																
Public Roads	Roads	Cul de sac (no exit)			15	2 x 2.5		5 ²		15	Yes	12.5%	10%	4 to 1 (1.6m) ¹³		2	Yes					Intersection flag lights only	No (Possibly considered in constrained situations)	2 coat seal ¹⁰
		Local																						
		Collector			20	2 x 3.0		6		20				4 to 1 (2.0m)	Yes (0.5m)			Yes	Marker posts only					

NOTES

- 1 Traffic calming measures are required where the length exceeds 50 m or there is no clear line of sight. Design to be approved by the HDC Manager of Engineering Services.
- 2 A minimum seal width of 4.4m is acceptable in constrained topographical situations with specific approval from the Council through the Resource Consent Process.
- 3 A pedestrian strip 1.4m wide shall be incorporated for pedestrian access. Concrete surfacing is acceptable, however, alternative surface treatments may be utilised with specific approval of the Council through the Resource Consent process.
- 4 Where accessway gradients exceed 12.5%, specifically approved surfacing is required.
- 5 The first 5m of the entrance shall have a maximum gradient of 12.5% (1 in 8).
- 6 Throat island installations not required.
- 7 No painted centreline marking is required for seal widths less than 5.0m.
- 8 Alternative pavement and surfacing designs can be considered with specific approval of the Council through the Resource Consent process. These must be minimally to the same standard.
- 9 This is required for the first 20 m only (where off a sealed road) to prevent tracking of metal onto the road.
- 10 Some local roads may be metalled with the specific approval of the Council through the Resource Consent process.
- 11 There are a number of existing roads with legal road widths of 10m and 15m. These widths will be retained. The legal road width shown in Table 3.2 refers to any future roading development.
- 12 Sealing of the high side of a horizontal curve on a cul de sac or local road is optional. Should it be sealed then the minimum width is 0.3m.
- 13 A 3 to 1 feather edge pavement slope may be utilised with the specific approval of the Council through the Resource Consent process.

8.6.3 STRUCTURE PLANS

8.6.3.1 INTRODUCTION

- (1) Structure plans have been developed for the new growth areas that have been identified for residential and industrial purposes in Ngatea, Turua, Kerepehi, Paeroa, Waikino and Waihi. These will provide a development framework for future development and assist in coordinating subdivision in these areas.
- (2) The design of subdivisions in the urban zones needs to include provision for the future subdivision of adjoining land in order to ensure that urban development occurs in a coordinated and efficient manner.
- (3) The efficient and effective provision of infrastructure also needs to be built into subdivision design, to ensure health and safety requirements as well as long term operational and maintenance requirements are met. The structure plans provide a framework for this to be achieved.
- (4) The proposed road, pedestrian/cycleway linkages shown on the structure plans are based on the information available without detailed design work having been undertaken, and relate to topography and minimum subdivision lot size. They therefore show the general design principles to be followed:
 - (a) through roads, good linkages through out, and with surrounding development
 - (b) provision for pedestrian and cycleways additional to the road network
 - (c) Trunk mains to be laid through the structure plan areas to link into existing infrastructure
- (5) Proposals to depart from the details of the structure plans will be assessed on how well the design principles are still adhered to, as a Restricted Discretionary Activity. (168.210)
- (6) Proposals to depart from the structure plan principles will be assessed as a Discretionary Activity

8.6.4 APPENDIX 3: STRUCTURE PLAN – KEREPEHI INDUSTRIAL

8.6.4.1 DESCRIPTION

- (1) This structure plan applies to the Tiritiri 2A1A and Tiritiri 3A Blk VI Waihou Survey District, being an area of 5.7 hectares, on the northern side of Kerepehi, west of State Highway 2 and north of Kerepehi Town Road.
- (2) The area is to be developed for industrial purposes having regard to the following infrastructure requirements:

(a) Access

The roading layout as shown in the structure plan ensures that the most suitable access connections to the existing roading network, internal circulation and access connections are provided.

(b) Water

The area is to be reticulated from the main on Kerepehi Town Road, with a trunk main(s) of a sufficient size being installed, located so as to serve the entire area. The design for each individual development or subdivision is to implement this by providing for the reticulation of the whole structure plan area in a comprehensive and efficient manner, minimising the number of water mains and maximising the use of existing water infrastructure.

(c) Wastewater

The area is to be reticulated for sewage disposal, with a trunk main(s) of sufficient size being installed, located so as serve the entire area. The design for each individual development or subdivision is to implement this by providing for the servicing of the whole structure plan area in a comprehensive and efficient manner, minimising the number of main sewers, rising mains and pump stations required and including appropriate linkages to the existing reticulation.

(d) Stormwater

The design for each individual development or subdivision is to be such as to readily provide for the servicing (via a piped reticulation) of the whole structure plan area in a comprehensive and efficient manner.

8.6.4.2 ISSUES

- (1) Land suitable for industrial development in Kerepehi is constrained by the location of existing residential development, the State Highway and surrounding lower lying rural land. Accordingly the land that is available for industrial development needs to be used wisely. In addition industrial land development needs to be undertaken giving effect to good quality urban design principles.
- (2) Unplanned development of this Greenfield area could result in:
 - (a) Inefficiencies in the provision of infrastructure and longer term operation and maintenance costs; and

- (b) Access provisions for all modes of transport giving poor connectivity and linkages to the existing industrial area and the road network and poor traffic flows through the new industrial area.

8.6.4.3 PURPOSE

- (1) The structure plan seeks to ensure that this industrial area is developed in a well planned and comprehensive manner having regard to:-
 - (a) Quality urban design principles;
 - (b) Transportation links;
 - (c) Infrastructure; and
 - (d) Efficient use of industrial land

8.6.4.4 OBJECTIVES

- (1) Provide a safe, useable and attractive industrial environment.
- (2) Cost efficient and effective infrastructure provided.

8.6.4.5 POLICIES

- (1) Good urban design principles for industrial development implemented.
- (2) Industrial development infrastructure undertaken in an integrated and strategic manner to give effect to Objective 8.6.4.4(2).

8.6.4.6 ACTIVITY STATUS AND RULES FOR SUBDIVISION

- (1) *Subdivision* of Tiritiri 2A1A and Tiritiri 3A Blk VI Waihou Survey District in accordance with the provisions of the Kerepehi (Industrial) Structure Plan shall be a *Controlled Activity*, provided that it also complies with:
 - (a) *Subdivision rules* in Section 9.0;
 - (b) Specific and District Wide provisions in Section 7.0; and
 - (c) District Wide Performance Standards in Section 8.0.
- (2) *Subdivision* of Tiritiri 2A1A and Tiritiri 3A Blk VI Waihou Survey District not in accordance with Rules 8.6.4.6 (1) (a), (b) or (c) shall have the same activity status as that specified in either Section 7.0, 8.0 or 9.0.
- (3) *Subdivision* of Tiritiri 2A1A and Tiritiri 3A Blk VI Waihou Survey District not in accordance with the details of the Structure Plan shall be a *Discretionary Activity*.

8.6.4.7 ACTIVITY STATUS AND RULES FOR DEVELOPMENT

- (1) Any activity listed as a *Permitted Activity* in Rule 5.12.4.1 Industrial Zone is a *Permitted Activity* in the Kerepehi (Industrial) Structure Plan area, provided that the development:
- (a) Is in accordance with and within land that has been subdivided under the provisions of Rule 8.6.4.6 and *Certificates of Title* have been issued;
 - (b) Complies with the Zone Development Standards specified in Rule 5.12.5;
 - (c) Complies with the Activity Specific Standards specified in Rule 5.12.6;
 - (d) Complies with the Conservation and Heritage provisions in Section 6.0;
 - (e) Complies with the Specific and District Wide provisions in Section 7.0; and
 - (f) Complies with the District Wide Performance Standards in Section 8.0.
- (2) Any activity listed as a *Controlled Activity* in Rule 5.12.4.2 Industrial Zone is a *Controlled Activity* in the Kerepehi (Industrial) Structure Plan area, provided that the development:
- (a) Is in accordance with and within land that has been subdivided under the provisions of Rule 8.6.4.6 and *Certificates of Title* have been issued;
 - (b) Complies with the Zone Development Standards specified in Rule 5.12.5;
 - (c) Complies with the Activity Specific Standards specified in Rule 5.12.6;
 - (d) Complies with the Conservation and Heritage provisions in Section 6.0;
 - (e) Complies with the Specific and District Wide provisions in Section 7.0; and
 - (f) Complies with the District Wide Performance Standards in Section 8.0.
- Conditions* may be imposed in relation to the matters over which control has been reserved as specified in Rule 5.12.4.2 and the following:
- (g) Whether the development assists in the implementation of integrated infrastructure to serve the whole Kerepehi (Industrial) Structure Plan area.
- (3) Any activity listed as a *Restricted Discretionary Activity* in Rule 5.12.4.3 Industrial Zone is a *Restricted Discretionary Activity* in the Kerepehi (Industrial) Structure Plan area, provided that the development:
- (a) Is in accordance with and within land that has been subdivided under the provisions of Rule 8.6.4.6 and *Certificates of Title* have been issued;
 - (b) Complies with the *Restricted Discretionary Zone* Development Standards specified in Rule 5.12.5;
 - (c) Complies with the Activity Specific Standards specified in Rule 5.12.6;
 - (d) Complies with the Conservation and Heritage provisions in Section 6.0;
 - (e) Complies with the Specific and District Wide provisions in Section 7.0; and
 - (f) Complies with the District Wide Performance Standards in Section 8.0.
- Conditions* may be imposed in relation to the matters over which the *Council* has exercised its discretion as set out in Rule 5.12.4.3

- (4) The following are a *Discretionary Activity* in the Kerepehi (Industrial) Structure Plan area:
- (a) Any *permitted, controlled or restricted discretionary activity* listed in Rules 8.6.4.7 (1) – (3) that is located on land that has not been subdivided under the provisions of Rule 8.6.4.6 and/or *Certificates of Title* have not been issued;
 - (b) Any *Discretionary Activity* listed in Rule 5.12.4.4 Industrial Zone.
- (5) The following are a *Non Complying Activity* in the Kerepehi (Industrial) Structure Plan area:
- (a) Any *Non Complying Activity* listed in Rule 5.12.4.5 Industrial Zone.
- (6) The following are a *Prohibited Activity* in the Kerepehi (Industrial) Structure Plan area:
- (a) Any *Prohibited Activity* listed in Rule 5.12.4.6 Industrial Zone.

8.6.4.8 STRUCTURE PLAN MAP – KEREPEHI INDUSTRIAL (147.30)

