

## 8.6 SECTION 8 - APPENDICES

8.6.1 APPENDIX 1: TABLES 3.1 – ROAD AND ACCESS STANDARDS FOR RURAL AND URBAN

URBAN AREAS <sup>1</sup>

	Road Classification		Lots / Dwellings served	Maximum Length (m) <sup>2</sup>	Legal Road Width (m)	Widths (m) <sup>11</sup>					Minimum Total Seal Width <sup>11</sup> (m)	Foot Path	Maximum Gradient <sup>4,5</sup>	Minimum Kerb Radius (m)	Pavement Marking Treatment	Pavement Surfacing
	Hierarchy	Description				Lane Details	Service strip (min)	Sealed Shoulder	Parking	Total Seal Width						
Private Accessways	Residential	Access leg	1		3.5							12.5% Desirable 20% absolute	R=6m		Concrete/AC/ 2 coat seal <sup>7</sup>	
		Accessway	2 to 4	60	1 x 2.8	2 x 0.35	2.8	2.8	1 x 1.4 <sup>6</sup>							
		5 to 8	100	2 x 2.4	2 x 0.6	4.8	4.8									
	Low Density Residential	Access leg	1		6											
		Accessway	2 to 3	200	1 x 2.8 <sup>3</sup>	2 x 0.35	2.8	2.8								
			4 to 8		9	2 x 2.4	2 x 0.6	4.8		4.8						
Industrial	Accessway	1 to 2	50	6	1 x 3.5	2 x 1.25	3.5	3.5		5%						
Township/Town Centre	Accessway		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%			
		Cul de sac (no exit)			15	2 x 3.0		1 x 0.5	1 x parallel parking	9	6	1 x 1.4m	12.5%	R=12m	Centreline only	2 Coat seal
		Local						Nil	2 x parallel parking	12	12	2 x 1.4m	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		10%	R=20m		2 Coat seal/ (A/C to reduce noise)
		Town Centre						2 x 2.5 parking	12	8						
		Collector								11	8%					
Arterial																

RURAL AREAS <sup>1</sup>

	Road Classification		Traffic Volume (ADT)	Maximum Length (m)	Minimum Legal Road Or Accessway Width (m)	Widths (m) <sup>11</sup>				Minimum Total Seal Width <sup>11</sup> (m)	Alignment				Feather Edge Pavement Slope (width)	Sealing the High Side of Horizontal Curves	Clear zone Requirements <sup>8</sup>	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 <sup>4,5</sup>	Maximum Super-elevation							
Private Accessways	Accessleg	1			6							Yes	12.5% Desirable 20% absolute								2 coat seal <sup>9</sup>
	Accessways	2 to 3		500		2.8	1 x 2.8 <sup>3</sup>		2.8 <sup>4</sup>	2.8 <sup>4</sup>											
			4 to 5		1000		4.8	2 x 2.4		4.8 <sup>4</sup>	4.8 <sup>4</sup>										
Public Roads	Local Road		< 300		15	10	2 x 2.5	2 x 0.5	6	5	15		12.50%		4 to 1 (2.0m)	Optional (0.3m)	Optional (where terrain allows)		Painted Centreline	Edge Marker posts only	2 coat seal <sup>10</sup>
	Collector Road		300 to 700			12	2 x 3		7		20	Yes	10%	5 to 1 (2.5m)	Yes (0.5m)	Yes (or as approved)	Yes	Centreline and edge lines	Edge marker posts and centreline raised pavement markers		
			700 to 1000		13		8	6.5													
			1000 to 2500		14		9	7.5													
Arterial Road		>2500		20	16	2 x 3.5	2 x 1.5	10	7.5	25	8%									8%	6 to 1 (3.0m)

NOTES

- (1) These standards exclude Karangahake, Mackaytown & Waikino. The specific requirements for these towns are addressed in Volume 2 Part 3 & Table 3.2
- (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.
- (3) Passing lanes are required at 100m maximum spacings or at appropriate locations not exceeding 50 m where there is no clear line of sight.
- (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) 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.
- (7) Alternative pavement and surfacing designs can be considered with specific approval of the HDC Manager of Engineering Services.
- (8) Refer to Transit NZ Draft State Highway Geometric Design manual for details (clear zone recovery widths are based on 85%ile design speeds).
- (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 HDC Manager of Engineering Services.
- (11) Dispensations for a reduction in seal width below the target requirement must be approved by the HDC Manager of Engineering Services.

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) <sup>1</sup>	Legal Road Width (m) <sup>11</sup>	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 <sup>6</sup>	Pavement Surfacing	
	Hierarchy	Description				Lane Details	Service strip	Seal Width		Minimum Horizontal Radius (m)	HCV Tracking Widening	Maximum Gradient <sup>4, 5</sup>	Maximum Super-elevation												
Private Access-ways	Residential	Access leg	1		3.5																				
		Accessway	2 to 4	60		1 x 2.8	2 x 0.35	2.8				Yes	12.5%												2 coat seal <sup>8,9</sup>
			5 to 8	100	9	2 x 2.4	2 x 0.6	4.8	1 x 1.4 <sup>3</sup>																
Public Roads	Roads	Cul de sac (no exit)			15	2 x 2.5		5 <sup>2</sup>		15	Yes	12.5%	10%	4 to 1 (1.6m) 3 to 1 (absolute min.)	Optional (0.3m)	2	Yes (as approved)	Optional <sup>7</sup>	Optional			Intersection flag lights only	No (Possibly considered in constrained situations)	2 coat seal <sup>10</sup>	
		Local												4 to 1 (2.0m)	Yes (0.5m)			Yes	Marker posts only	Optional	Optional				
		Collector			20	2 x 3.0		6		20															

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 HDC Manager of Engineering Services
- (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 HDC Manager of Engineering Services.
- (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) Centreline marking shall be omitted where the seal width is less than 5.0m
- (8) Alternative pavement and surfacing designs can be considered with specific approval of the HDC Manager of Engineering Services
- (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 HDC Manager of Engineering Services
- (11) There are number of existing roads with legal road widths of 10m and 15m. These widths will be retained. The legal road width shown in Table 3.1 refers to any future roading development.

### 8.6.3 APPENDIX 3: STRUCTURE PLAN – KEREPEHI INDUSTRIAL

#### PURPOSE

Information to come.

#### DESCRIPTION

This development is located immediately to the north of the existing industrial zoned land on the northern side of Kerepehi Town Road and adjoining State Highway 2. Access to the Structure Plan area is off the existing ring road serving the adjoining industrial zoned land.

The landform is flat.

#### ACTIVITY STATUS AND RULES FOR SUBDIVISION

Refer to Sections 9.2.2 and 9.2.8 of the District Plan

#### INFRASTRUCTURE REQUIREMENTS

(1) **Roading**

The natural ground is flat and suitable for roadway. The roading layout should be generally in accordance with the structure plan.

(2) **Water**

Water supply to be reticulated through existing water-main along Kerepehi Town Road.

(3) **Wastewater**

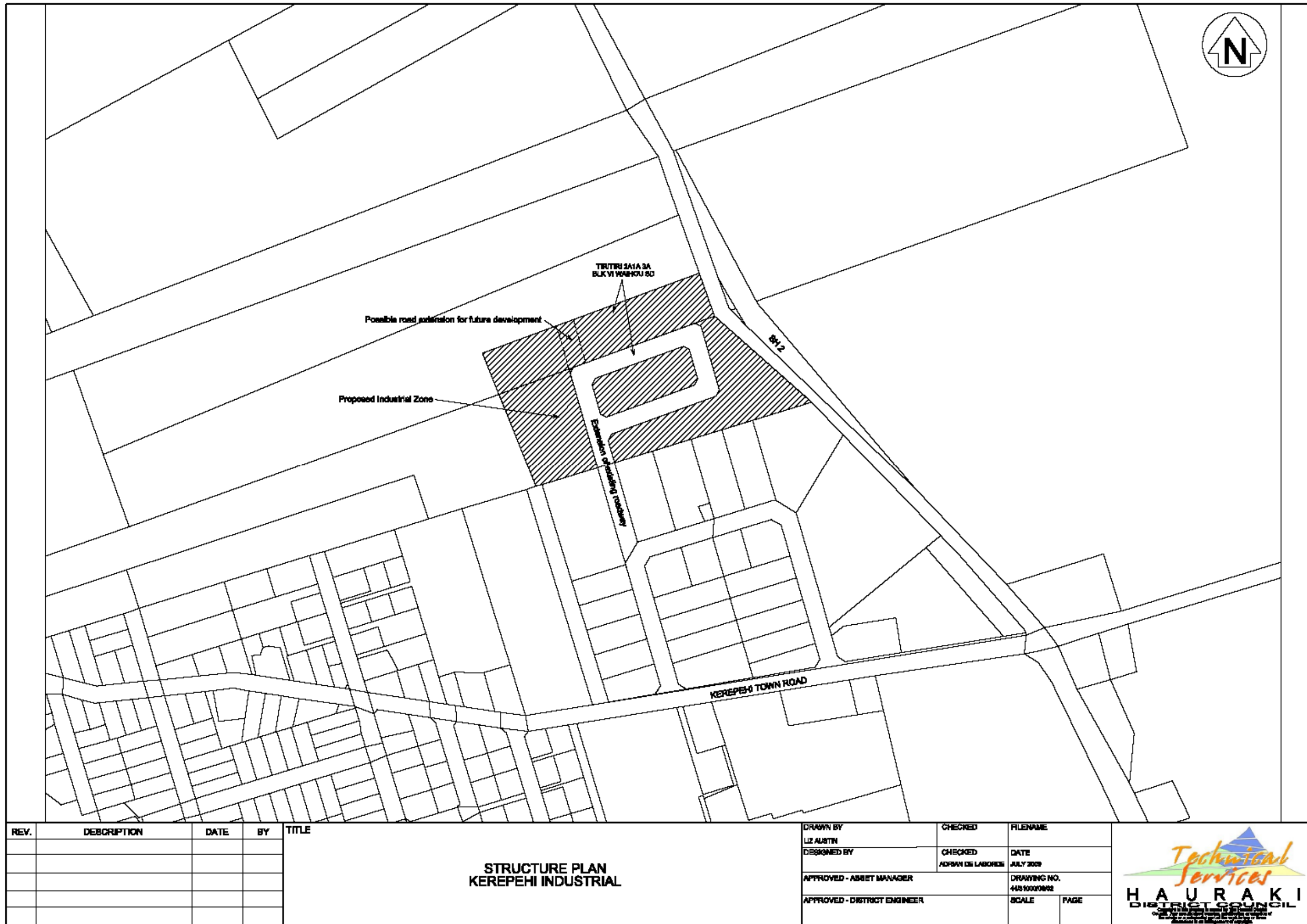
Sanitary sewer to be reticulated into the existing public sewer.

(4) **Stormwater**

A storm water management system may be required.

#### FINANCIAL CONTRIBUTIONS

All individual lots created will be subject to development contributions in accordance with the contribution amounts current at time of subdivision.



REV.	DESCRIPTION	DATE	BY	TITLE

**STRUCTURE PLAN  
KEREPEHI INDUSTRIAL**

DRAWN BY LIZ AUSTIN	CHECKED ADRIAN DE LABORDRE	FILENAME
DESIGNED BY	CHECKED	DATE JULY 2009
APPROVED - ASSET MANAGER	DRAWING NO. 442100010002	
APPROVED - DISTRICT ENGINEER	SCALE	PAGE

Technical Services  
HAURAKI DISTRICT COUNCIL