

Discussion Paper: Traffic Management in Relation to Land Use

1.0 Introduction

- 1.1 This paper is the second in a series of discussion documents on potential changes to the Operative Otorohanga District Plan. The Council embarked on its review of the Plan in May 2006 by consulting key organisations, running open days in September 2006, and taking part in meetings at Marae and the information days and workshops of the Shore Futures Project from the end of 2006 to March 2007-- a joint project with Environment Waikato, the Department of Conservation, and the territorial authorities surrounding the Kawhia and Aotea harbours.
- 1.2 This initial consultation period revealed some of the gaps and errors in the Operative Plan that should be corrected in this review. The Council is undertaking further research on specific issues such as landscape, coastal hazards, capacities for on-site disposal of storm water and waste water, hazards such as flooding and erosion, potential structure planning for townships, and the protection of significant trees. The research papers will feed into later discussion papers on how the plan should be changed.
- 1.3 The Council is continuing to consult specific groups and also to initiate improved dialogue with hapu and iwi in the area particularly about the protection of taonga and waahi tapu. Concurrently the Shore Futures project is working towards comprehensive draft environmental policies for the area which is due to be available in early 2008. These policies on the two harbour areas will be taken into account in how the district plan review is shaped and the discussion papers on subdivision and land development that will follow.
- 1.4 The Council has decided to retain the current format of the Operative Plan. As an effects-based plan, it is easy for people to understand. Applicants follow a series of questions to find the parts of the plan that affect their development proposals. The changes made under the review will continue to use this framework as the means to assess the effects of proposals to subdivide and develop land.
- 1.5 This paper discusses issues relating to traffic management in relation to land use as well as subdivision. The standards required in the plan are outlined according to the type of effects area – rural, urban services, and urban limited services.

2.0 Background to this paper

- 2.1 The primary focus of traffic management is to ensure safe use of the road network. How traffic is managed affects the usability and accessibility of a site as well as affecting the mobility of people and resources around and through the District. District plans consider both onsite and offsite aspects associated with traffic management including:
- on-site and off-site parking requirements,
 - the safety of accesses both in regard to its placement on a road and its design,
 - the use of Right of Ways, and
 - the volume of traffic generated from a site and the necessary safety provisions to be put in place, whether temporary or permanent.
- 2.2 District plan provisions that address the above considerations can be tailored to the characteristics of a particular environment, distinguishing between urban and rural, as well as distinguishing between roads with high and low volumes of traffic.

Consultation and Council experience in administering the Operative Plan has highlighted that it does not adequately address the following matters:

2.2.1 Property access criteria

The issue: Appendices 11 and 12 contains criteria for the placement and location of property access onto the road network where traffic volumes using the property will increase, as a result of a land use change. The criteria use sight distances and design standards to minimise adverse effects to road user safety, and to protect the integrity of the road in line with the road network. The criteria forms part of the assessment to differentiate between a permitted and discretionary activity.

- Sight distances are required for vehicles leaving an access as well as those vehicles travelling towards the access from either direction. Distances are correlated to the assessed speed of the road, such that higher the speed, the greater the distance.
- Design standards for vehicle entranceways are provided to ensure that all entranceways are designed to ensure safe access to and from the site in relation to the assessed speed of the road.

Concern was raised as to the practicality and accuracy of the distances and standards provided in Appendices 11 and 12. Further concern was raised in regards to the practicality of including these appendices in the Plan, an alternate being to reference another document outside of the Plan. This later option was seen to allow for site specific consideration.

Reference: Standard 2A, page 58 of District Plan and
Appendix 11 and 12, page 141 – 143 of District Plan

Discussion: There is unanimous agreement amongst staff that using distances and standards is a practical way of providing for access and road user safety. However no information was found that justified the actual distances and standards currently used in Appendices 11 and 12. Working with the sight distances as prescribed by the Plan has proved to be impractical as sight distances are considered excessive, especially given the nature of the roads within the District and that they are not consistent with current technical publications.

Council has worked with a number of other Councils in the Waikato to collectively define distances and standards that address New Zealand and in particular local driving conditions. These have been collated within the *Hamilton City Development Manual*. The District Plans' of each of these Councils incorporate and use the figures from the *Hamilton City Development Manual* that best suits the nature of the road network within their District. Inclusion of this material (see Appendix 1) provides certainty and clarity for the community when ascertaining Council's requirements on these matters.

Omitting the distances and standards from the Plan allows Council staff to undertake site specific consideration of vertical alignment, horizontal alignment, sight lines, assessed speed of the road, and entrance way design and orientation.

While this has benefits, case law shows that referencing a separate non-statutory document in such a way that the implementation of a rule is reliant on the information in that document, is considered to be *ultra vires*. It is seen that non-statutory documents do not undergo the same rigour and consultation as required for plans and policies drafted under the Resource Management Act 1991 such as the District Plan. Omitting the distances and standards from the Plan also does not provide guidance, certainty or clarity for the community.

2.2.2 **Number of vehicle movements**

The issue: Where a change in land use increases vehicle movements to and from a site, Land Use Rule 2.3 requires assessment of the predicted number of vehicles against standard 2B of the Plan. Standard 2B provides a threshold for Vehicle Movements per Day, based on the Road Order of the road the site accesses. If the predicted number of vehicles per day exceeds the thresholds provided in standard 2B, the activity becomes a restricted discretionary activity. Councils' discretion is restricted to the location, design and construction of traffic safety improvements required by way of consent conditions.

Concern was raised that insufficient guidance was provided to inform and enable Plan users to undertake Traffic Movement Assessments without needing professional assistance. The concern being that all land use changes, including small scale activities would require a professional Traffic Movement Assessment and thus in many of these cases unnecessarily increase the cost to an applicant for small scale activities.

Reference: Standard 2B and Explanation
Rule 2.3, Page 58 of District Plan

Discussion: The explanation contained in the Land Use chapter, section 2, provides information to guide and assist Plan users by defining counts in relation to different vehicle movements. The relationship and application of this information to Rule 2.3 and Standard 2B can be made more explicit which will make the Plan more practical and provide clarity and assistance to Users of the Plan in regard to preparing traffic movement assessments for small scale activities.

Council also considered that the information, as presented, does not provide for all types of vehicle movements and therefore Council seeks to amend the definition so that this information is consistent with definitions contained within the Land Transport Act 1998. Reference to "*truck*" to be replaced by insertion of "*heavy vehicle*" as well as the insertion of the following definition into the Plan.

Heavy motor vehicle means a motor vehicle having a gross laden weight exceeding 3500 kg.

Larger scale activity, primarily commercial type activities, would be expected to provide professional Traffic Movement Assessments to satisfy information requirements due to the greater complexity of these activities. This is appropriate given the type and scale of impacts of these activities in relation to the respective Road Order and the road network.

Further to this issue, currently the Plan does not require assessment of predicted vehicle movements associated with subdivision activity as part of the Subdivision section. Staff identified the need to have a consistent approach to managing traffic generation issues in both the Land Use and Subdivision chapters of the Plan. Including a new section into the Subdivision chapter that addresses issues relating to traffic generated as a result of subdivision. Rules and standards can be drafted that are consistent with and complementary to rules 2.1 and 2.3 and standard 2B of the Land Use chapter.

2.2.3 **Minimum requirements for car parking spaces**

The issue: Current requirements for car parking spaces within a site are seen to be too restrictive in application and that this degree of restriction does not provide for consideration of the full range of options given differences of site such as, topography, useable open space and layout of open space in relation to structures on site such as, dwellings and garaging.

Reference: Standard 3B, page 60 of the District Plan
Appendix 10, page 140 of the District Plan

Discussion: There is consensus amongst staff for the incorporation of minimum requirements for parking within the Plan. Consideration was given to relevant Australian and New Zealand standards. Australian standards were not considered appropriate due to differences in vehicle size and turning radius between New Zealand and Australia. Council worked with a number of other Councils in the Waikato to collectively define agreed parameters that address New Zealand vehicles and conditions. Adoption of these parameters as contained in the *Hamilton City Development Manual* is seen to be the most current and relevant information available for application in the Plan (see Appendix 2).

2.2.4 Avoidance of reverse manoeuvring on to roads from properties

The issue: Currently the Plan requires, by way of a standard, that all parking and loading spaces shall be designed to avoid the need for reverse manoeuvring of vehicles onto or from a road. Where there is non-compliance the activity changes from a permitted activity to a discretionary activity. The application of this standard across the district is questioned as being excessive, where targeted application is considered to be more appropriate.

Reference: Standard 3B ii. page 60 of the District Plan

Discussion: Currently the standard applies across the district to all roads. The application ensures sufficient space for vehicles to turn within a site, allowing forward moving access from a property onto a road. The standard recognises the greater safety afforded to vehicles that enter the road system in a forward movement rather than a backward movement, due to better sight and mobility. The increased safety is particularly noticeable on roads of medium to high volumes of traffic purely due to having higher volumes of traffic. Application of the standard to lower traffic volume roads provides a degree of future proofing, where over time, these roads experience potential increases in traffic volumes and changes to road network. It would benefit those exiting properties and road users, to have the necessary manoeuvring space within the property.

One approach would be to retain the current standard that applies to all roads. Another option would be to have a targeted approach, where the standard would differentiate between roads, based on traffic volumes which have a direct correlation to Road Order numbers. This can be given effect by amending the current standard so that it does not apply to Road Order 3 roads and *cul de sacs*.

The primary focus of such provisions is to ensure the safety of road users. The current provision adequately provides for road user safety resulting in no changes to this provision in the Plan. The option to amend the provision provides a higher degree of detail which is not considered necessary to ensure the safety of road users.

2.2.5 Limit on number of lots using Right of Way access to road network

The issue: Currently the Plan has no provision to control the number of lots using a specific Right of Way (ROW). Instances have occurred where the number of lots accessing and therefore the number of vehicles using a ROW exceeds the capacity for which the ROW was designed. This has placed pressure on the state and condition of the ROW as well as the users of the ROW where safety of vehicles and occupants using the ROW is jeopardised.

The Plan also lacks any design standards to guide the construction and layout of ROW's necessary to ensure safe use of the ROW. This has resulted in an *ad hoc* approach to the design and installation of ROW's across the District.

Reference: Subdivision Chapter Section 3, page 99 and,
Land Use Chapter Section 3, page 59 of the District Plan

Discussion: This issue would need to be addressed at the time of subdivision as consideration of accesses for proposed lots would occur at this stage of the application. It would also be appropriate at that time to ensure the necessary agreements are in place in regard to installation and on-going maintenance as required. A new standard could be inserted into the Plan to target the use of ROW's as part of an application, at both the time of subdivision and the land use consent applications.

Staff have identified the need to place a limit on the number of lots using the ROW as well as differentiating design standards for ROW's with a low number of lots using it, compared to ROW's with a higher number of lots. A limit of 10 lots using a ROW has been put forward by staff where any greater number of lots would need to be considered as a new road.

The standard would require compliance with design standards that would be inserted into the Appendices of the Plan. The *Hamilton City Development Manual* sets out recommended design standards to be adopted in addressing this issue. The above manual refers to household units instead of lots as defined in the Local Government Act 1974 Section 270. It is recommended that the Plan for the sake of consistency does the same in that the two design standards would be used to differentiate requirements for ROW's with accesses between 1 - 5 household units and those with access for 6 - 10 household units. Main aspects to be addressed by design standards are sealing requirements, site gradient and mandatory maintenance agreements (see Appendix 3).

2.2.6 Financial contribution in lieu of providing sufficient onsite parking

The issues: Currently the Plan requires that for each onsite car parking space which is not provided for in accordance with Standard 3A a financial contribution of \$1,000 plus GST is payable to Council. The use of this term was questioned in regard to the amount required.

Reference: Term 3I, page 60 of the District Plan

Discussion: The Plan endeavours to ensure that all effects of an activity are kept within the site, and where this is not possible that adequate mitigation or remedy is provided to address such effects. In this instance the issue is adequate provision of onsite car parking. The Plan by way of Standard 3A requires onsite car parking be provided, however the Plan recognises that in rare occasions this standard may not be met. This method ensures that where onsite parking can not be provided that the cost of providing such parking is at the expense of the applicant of the proposal, not the general rate payer.

The amount of the financial contribution, being \$1000.00, was assessed by staff against the expected costs of Council providing and installing a car parking space in town on Council land. This assessment showed that the figure used correlates well to those expected costs at today's costs. The figure does not address the purchase of land by Council in order to provide the parking space.

However, an issue with this figure being included in the Plan, is that it does not allow for the consideration of costs that increase over the life time of the Plan for instance the cost of the land. Costs may increase significantly over this period placing the burden of the extra cost above \$1000 on the general rate payer and defeating initial purpose of the Term.

It is recommended to remove the term from Plan and to include the charge for providing such a service in Councils' Fees and Chargers Manual. This deletion will need to be complimented by a reference to the Fees and Charges Manual on instances of non-compliance with the Standard. This will allow more responsive management of changes in cost for Council to provide this service.

3.0 In summary, the recommended changes to the district plan are:

3.1 Replace the standards and design requirements contained in Appendices 11 and 12 of the Plan with the standards and design requirements contained in the Hamilton City Development Manual. (See Appendix 1).

3.2 Amend vehicle movement counts as provided in the Land Use Chapter Section 2, Explanation, so that reference to "truck" is replaced by reference to "heavy vehicle" as well as inserting following definition into the Definition Chapter of the Plan.

Heavy motor vehicle means a motor vehicle (other than a motorcar that is not used, kept, or available for the carriage of passengers for hire or reward) having a gross laden weight exceeding 3500 kg.

3.3 Provide greater guidance and stronger linkages between information in the Land Use Section 2, Explanation and Standard 2B to assist Plan Users in the development of Traffic Movement Assessment.

3.4 Incorporate into the Subdivision chapter, a new section that addresses issues relating to Rural Subdivision. Rules and standards to be drafted that are consistent with and complementary to rules 2.1 and 2.3 and standard 2B of the Land Use chapter.

3.5 Replace standards and measurements currently in Appendix 10 of the Plan with the standards and measurements contained in the Hamilton City Council Development Manual. (See Appendix 2).

3.6 Delete Term 3I for financial contributions in lieu of providing in site parking, and insert reference to Fees and Charges Manual for instances of non-compliance.

3.7 Insert a new standard into section 3 of the Subdivision chapter and section 3 of the Land Use chapter that limits the number of household units using a ROW to 10. This standard to also refer to a new Appendix which provides design standards for ROW's that services between 1 – 5 households units as well as design standards for ROW's that services between 6 – 10 households units. (See Appendix 3).

4.0 Please send your comments to:

Otorohanga District Council
Attention: Reginald Proffit
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Otorohanga

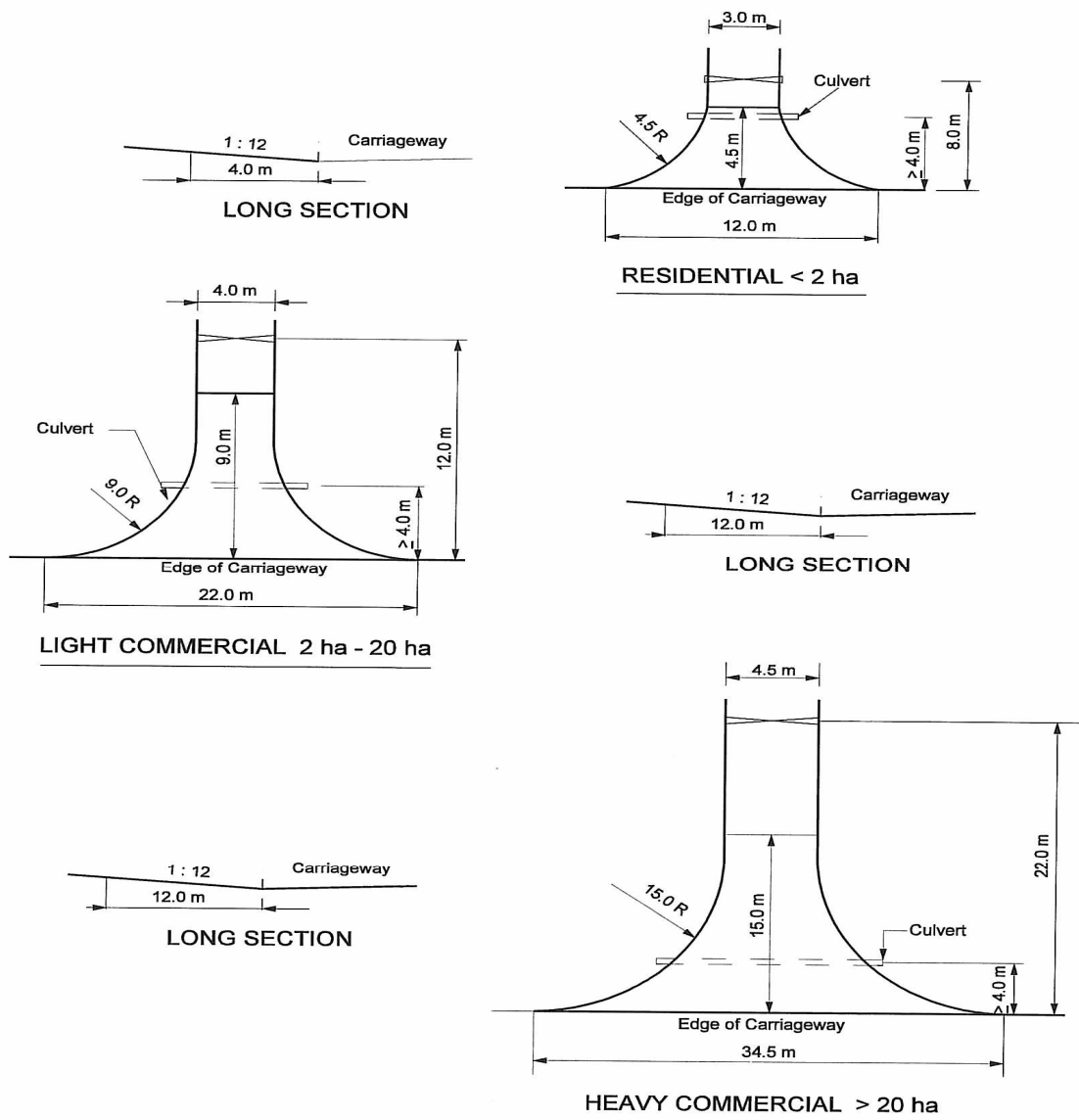
Email: districtplanreview@otodc.govt.nz

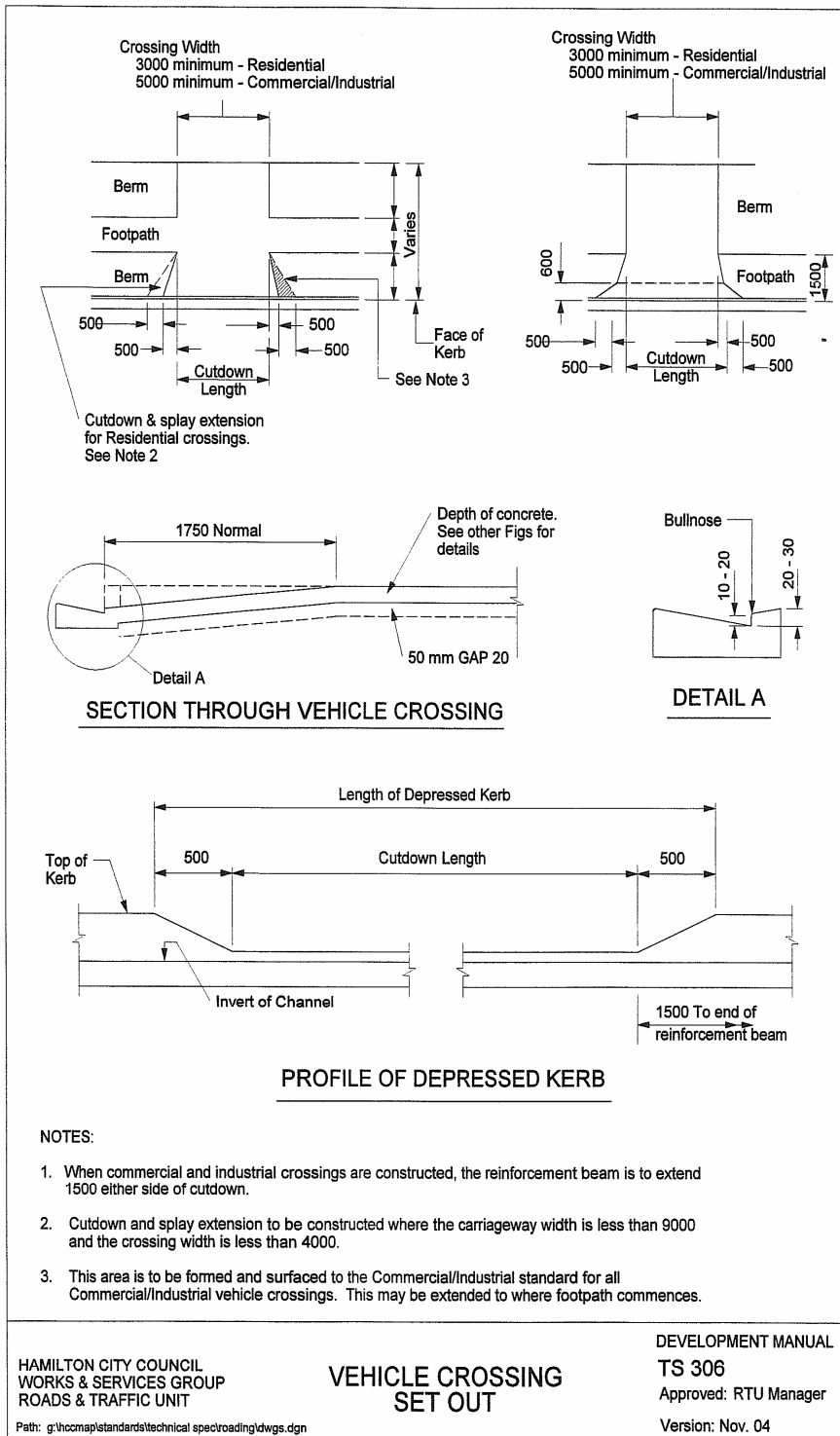
Appendix 1 – Amendments to Appendices 11 and 12 of the Plan

The following Table to replace Table 1 in Appendix 11 of the Plan.

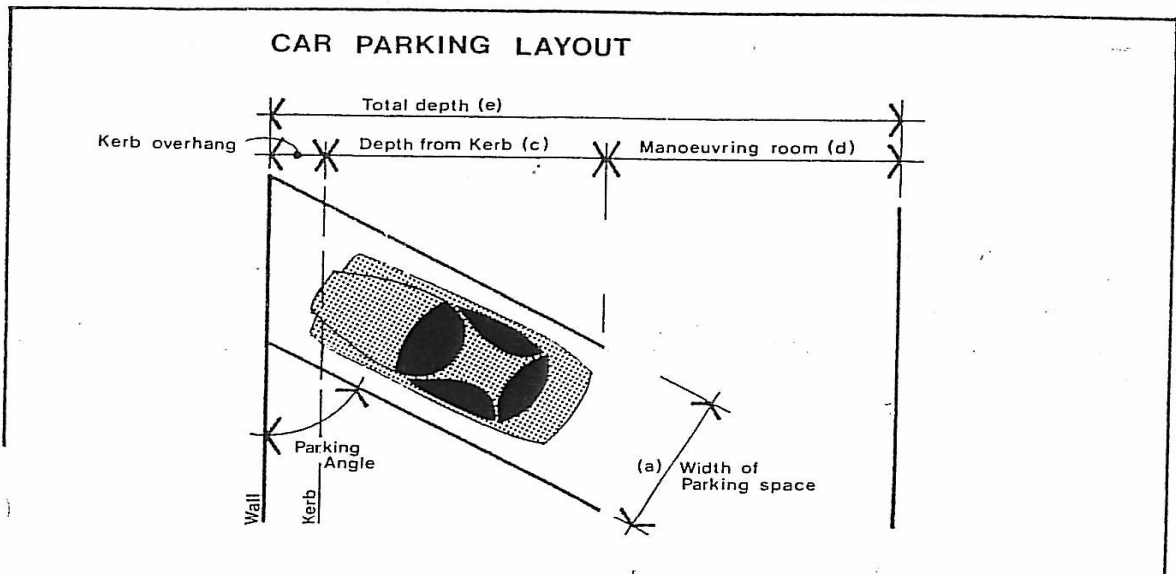
Posted Speed (km/hr)	Minimum Sight Distance to and from Access - 1	Distances between crossings (m) - 5
50	44	15
60	63	20
70	86	40
80	115	100
100	170	200

The following diagrams to replace diagrams 1 – 4 in Appendix 12 of the Plan.





Appendix 2 – Replace Appendix 10 of the Plan



Type of Parking		Stall Width (a)	Stall Depth		Manoeuvre Width (d)	Total Depth (e)	
Parking Angle	Type		from wall (b)	from kerb (c)		one row	two rows
ALL MEASUREMENTS ARE IN METRES							
90°	Nose in	2.4	5.1	4.1	7.9	13.0	18.1
		2.5			7.6		
		2.6			7.2		
		2.7			6.8		
75°	Nose in	2.4	5.4	4.4	6.4	11.8	17.2
		2.5			5.8		
		2.6			5.2		
		2.7			4.6		
60°	Nose in	2.4	5.4	4.5	4.5	9.9	15.3
		2.5			4.2		
		2.6			3.9		
		2.7			3.6		
45°	Nose in	2.4	5.0	4.2	3.6	8.6	13.6
		2.5			3.5		
		2.6			3.4		
		2.7			3.3		
30°	Nose in	2.4	4.3	3.7	3.0	7.3	11.6
		2.5					
		2.6					
		2.7					
0°	Parallel	2.5	Stall length 6.0m		3.7	6.2	8.7

1. Parallel parking spaces (Parking angle = 0) shall be 6.0m long, except where one end of the space is not obstructed, in which case the length of a space may be reduced to 5.0m.
2. Minimum aisle and accessway widths shall be 3.0m for one way flow, and 5.5m for two way flow. Recommended aisle and accessway widths are 3.5m for one way flow, and 6.0m for two way flow.
3. Maximum kerb height = 150mm.

<p>CITY OF HAMILTON</p> <p>CAR MANOEUVRING AND PARKING SPACE DIMENSIONS</p>	<p>APPENDIX</p> <p>4</p>
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Appendix 3 - Minimum Design Standards for ROW's

Rural

Classification	Hierarchy	Area served	Traffic Volume	Design speed	Min Centreline radius	Minimum widths					Minimum pavement (subgrade CBR = 7)		Max gradient
						Sealed traffic lane	Roadway width	Formation width	Verge	Road	Subbase	basecourse	
Private access	ROW	1-5 Hu	10-30 VPD	30 kph	20m	3.0m	3.5m	5.0m	1.0m	6.0m		200mm GAP 40	1 in 5
	ROW	6-10 Hu	30-100 VPD	30 kph	20m	5.0m	6.0m	8.0m	1.0m	10.0m		200mm GAP 40	1 in 8

Urban

Classification	Hierarchy	Area served	Traffic Volume	Design speed	Min Centreline radius	Minimum widths					Minimum pavement (subgrade CBR = 7)		Max gradient
						Traffic lane width	Parking lane	Roadway width	Road	Footpath	Subbase	basecourse	
Private access	ROW	1-5 Du	10-30 VPD	30 kph	20m	3.0m		3.0m	4.0m			200 mm GAP 40	1 in 5
	ROW	6-10 Hu	30-100 VPD	30 kph	20m	5.0m		5.0m	10.0m			200 mm GAP 40	1 in 8

i) Hu = household unit as defined in the Local Government Act 1974 Section 270