	Interim Advice Note		Section		Design	
			Status		Issue for Use	
			Reference		PMC-IAN-DES-009	
			Revision	2A	Date	6 March 2014

INTERIM ADVICE NOTE LR&DP 009 – PARKING Amendment to DMM (Sept 2013)

Project: Local Roads and Drainage Programme

IAN#: PMC-IAN-DES-009

Date: 06/03/2014

To: *All Contractors and General Engineering Consultants*

SUMMARY

This Interim Advice Note is an amendment to Chapter 10 – PARKING of Vol. 2 (Section 1) of the Design Management Manual dated September 2013 for Local Road and Drainage Programme (LR&DP) projects. This Interim Advice Note provides guidance on acceptable locations for the provision of on-street parking along residential access and other low speed local roads. This guidance reflects existing parking provisions on the local streets of Qatar and is consistent with international standards and practices.

INSTRUCTIONS FOR USE

This Interim Advice Note takes immediate effect. It is applicable on all candidate LR&DP projects and all managed LR&DP projects currently in design that have not yet achieved Gateway 3 approval for tender. It also provides guidance for all projects in tender or construction that received Gateway 3 approval from PWA conditional on Designer re-evaluation of on-street parking provisions in the tender package during the construction phase.

Manager of Road Design Department

Attachment

Appendix A: Amendment to DMM, Section 10


Received by Design Consultant / Contractor

Organization _____

Contact Person _____

Signature _____

Date: / /

 <p>Local Roads & Drainage ASHGHAL PROGRAMME DELIVERY</p>	Interim Advice Note			Section	Design	
				Status	Issue for Use	
	Reference	PMC-IAN-DES-009				
	Revision	2A	Date	6 March 2014		

1. Introduction


- 1.1. This Interim Advice Note (IAN) clarifies the standards and defines acceptable locations for on-street parking in proximity to intersections and driveways for Local Road and Drainage Programme (LR&DP) projects.
- 1.2. The standards and guidance provided in this IAN reflect current practice on the local street network throughout Qatar. This IAN provides a mechanism for Designers to compare the adequacy of the on-street parking provision with the current and future (maximized) parking demand.
- 1.3. The standards and guidance provided in this IAN are consistent with current international practices for parking provision on local streets as reflected in Dubai Municipality, Australasian, North American and European standards.
- 1.4. This IAN does not conflict with any IAN's issued by the Expressway Programme.

2. Withdrawn / Amended Standard

This IAN is an Amendment to, and replaces in its entirety Chapter 10 – PARKING of Vol. 2 (Section 1) of the Design Management Manual dated September 2013 for Local Road and Drainage Programme (LR&DP) projects.

3. Implementation

- 3.1 The IAN is to be used with immediate effect on projects as follows:
 - All LR&DP projects in Concept Design Stage (pre-Gateway 2).
 - All LR&DP projects in Preliminary/Detailed Design Stage (pre-Gateway 3)
 - Other LR&DP projects specifically directed by PWA, including projects approved conditionally by PWA at Gateway 3, contingent on Designer re-evaluation of parking provisions during tender/construction.
- 3.2 Appropriate implementation of this guidance for on-street parking provisions relies on the Designer understanding of the local neighbourhood environment as the basis to identify existing and future traffic generators (both vehicular and pedestrian) that will contribute to locations of high parking demand. This analysis is to be performed as part of a coordinated transportation impact assessment for the project area and should form part of the Traffic Assessment Report.
 - Angle parking and off-street parking provisions shall be considered in locations of identified high parking demand and as part of a coordinated strategy for delivery of enhanced public realm designs.
 - Parking provisions shall be evaluated on the basis of local context and demand, tailored to provide opportunities for enhanced public realm in all road corridor widths, and not arbitrarily imposed based on a template approach.
 - MMUP approval of customized road Cross Sections may be necessary to incorporate angle parking and other strategies for implementation on specific projects.
 - The arrangement and configuration of on-street parking provisions shall be considered in conjunction with other streetscape design elements in coordination with the Public Realm Design Consultant.
- 3.3 If in doubt, GECs should seek guidance from the Ashghal LR&DP PMC (PB), on a project-by-project basis.

	Interim Advice Note	Section	Design		
		Status	Issue for Use		
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		Revision	2A	Date	6 March 2014

4. Contact for Technical Queries

4.1 All technical queries on this IAN should be directed to the PMC Technical Director at the following address:

Parsons Brinckerhoff
 Floor 5, Faisal Tower 2, West Bay
 P.O. Box 23103
 Doha, Qatar
henke@pbworld.com

Appendix A
**AMENDMENTS/ADDITIONS TO
LR&DP Design Management Manual, Volume 2, Section 10**

Delete the existing Section 10 – Parking in its entirety and replace with the following:

10 PARKING

10.1 REFERENCES

The *TMPQ Part 1.16 Parking Design Guidelines* provides general guidance regarding the provision of on-street parking within urban neighbourhoods of Qatar for the following design elements:

- Design vehicle characteristics and dimensions
- On-street parking
- Off-street parking
- Design of parking modules, circulation roadways and ramps and access facilities to off-street parking areas
- Design requirements for car parking structures
- Bus and truck parking requirements, including truck service areas and manoeuvring clearances, access driveways and circulation roadways for commercial vehicles
- Facilities for pedestrians in parking areas
- Signage, marking and lighting
- Designing for safety
- Parking facilities for public transportation interchanges (park & ride).

The *QHDM* and the *Guidelines for Residential Road Layouts* also provide limited design guidance and standards for on-street parking provisions. There are inconsistencies and conflicts between these documents; in addition the documents do not reflect current Qatar practice or international standards for the provision of on-street parking along low speed, local access urban roads.

For this reason, the following sections provide guidance and outline the standards to be applied for determining acceptable locations for on-street parking across the local roadway network that comprises the LR&DP.

10.1.1 Implementation:

Appropriate implementation of this guidance for on-street parking provisions relies on the Designer understanding of the local neighbourhood environment as the basis to identify existing and future traffic generators (both vehicular and pedestrian) that will contribute to locations of high parking demand. This analysis is to be performed as part of a coordinated transportation impact assessment for the project area and shall form part of the Traffic Assessment Report.

- Angle parking and off-street parking provisions shall be considered in locations of identified high parking demand and as part of a coordinated strategy for delivery of enhanced public realm designs.
- Parking provisions shall be evaluated on the basis of local context, tailored to provide opportunities for enhanced public realm in all road corridor widths, and not arbitrarily imposed based on a template approach.

- MMUP approval of customized road Cross Sections may be necessary to incorporate angle parking and other strategies for implementation on specific projects.
- The arrangement and configuration of on-street parking provisions shall be considered in conjunction with other streetscape design elements in coordination with the Public Realm Design Consultant.

10.2 ON-STREET PARKING PROVISION

On-street parking shall not be provided on urban roads with posted speed of 80 kph or greater, i.e. Expressway, Arterial, or Collector-Distributor classifications, unless explicitly approved by PWA. If parking is required within these types of road corridors, the on-street parking provision should be along lower speed service roads.

On-street parking should not generally be provided on rural roads. MMUP standard Cross Sections for rural roads do not have any on-street parking provision; however, there may be special circumstances at a community, recreation or other facility where on-street provision along a local, low speed access road in a rural area with a posted speed of less than 80 kph where parking consideration may be warranted.

The PWA and MMUP have identified the need for adequate on-street parking provision for all LR&DP Projects. As part of the necessary parking needs assessment for every project; the Designer is required to estimate a maximum parking demand based on land use quantum for the various plots within their project area utilizing the Dubai Trip Generation and Parking Manual (the MMUP's approved relevant reference).

In addition, the number of parking spaces shall be re-estimated using a PWA figure of four (4) cars per house. For plots greater than 1000 square metre in size, the Designer should assume each plot will contain two (2) houses in order to consider the subdivision of plots that commonly occurs throughout residential neighbourhoods of Doha.

The calculated requirements, based on the MMUP and PWA criteria shall be compared to the sum of the Designer's proposed parking provision for on-street parallel parking and the parking provision inside of the plots (initially estimated at one car per house, and adjusted, based on GEC evaluation of observed existing parking demand and land use).

Should this comparison indicate a shortfall in provision compared to calculated needs based on both the MMUP and PWA methodology, the Designer will identify how the shortfall is addressed through additional on-street parking, including possible provision of angle parking stalls where corridor widths and adjacent buffer areas allow. Should on-street parking fail to meet the requirements, the Designer should consider solutions through off-street parking and identify suitable plots for this purpose to PWA.

For streets contained in heavily developed areas with apparent high parking demands, the Designer shall individually assess parking provision on one-way streets, streets within narrow or non-standard existing corridors, and potential conversion of two-way to one-way streets to identify opportunities for increasing parking.

The following standards are provided to maximize parking availability and establish consistency throughout the LR&DP projects. These standards reflect current practices in Qatar on collector and local roads with posted speed of less than 80 kph, and shall take precedence over the *QHDM* Section 5.8 and other referenced Standards including the

Transportation Master Plan – Qatar (TMPQ) and UK Design Manual of Roads and Bridges (DMRB).

10.3 PARKING AT JUNCTIONS

Where optimization of on-street parking is required, some encroachment of parking into the visibility splay will be acceptable (consistent with Manual for Streets 2, Section 10.7) and the following minimum criteria shall be utilized to identify acceptable parking locations.

10.3.1 Required parking setbacks at junctions:

Consistent with AASHTO Section 4.20 – *On-Street Parking* and the TMPQ guidelines, on local roads, on-street parking should not be provided within a nominal 6 m of the tangent point of any intersection. See Figure 10-1 for setback locations of parking bays, based on the 6m nominal dimension.

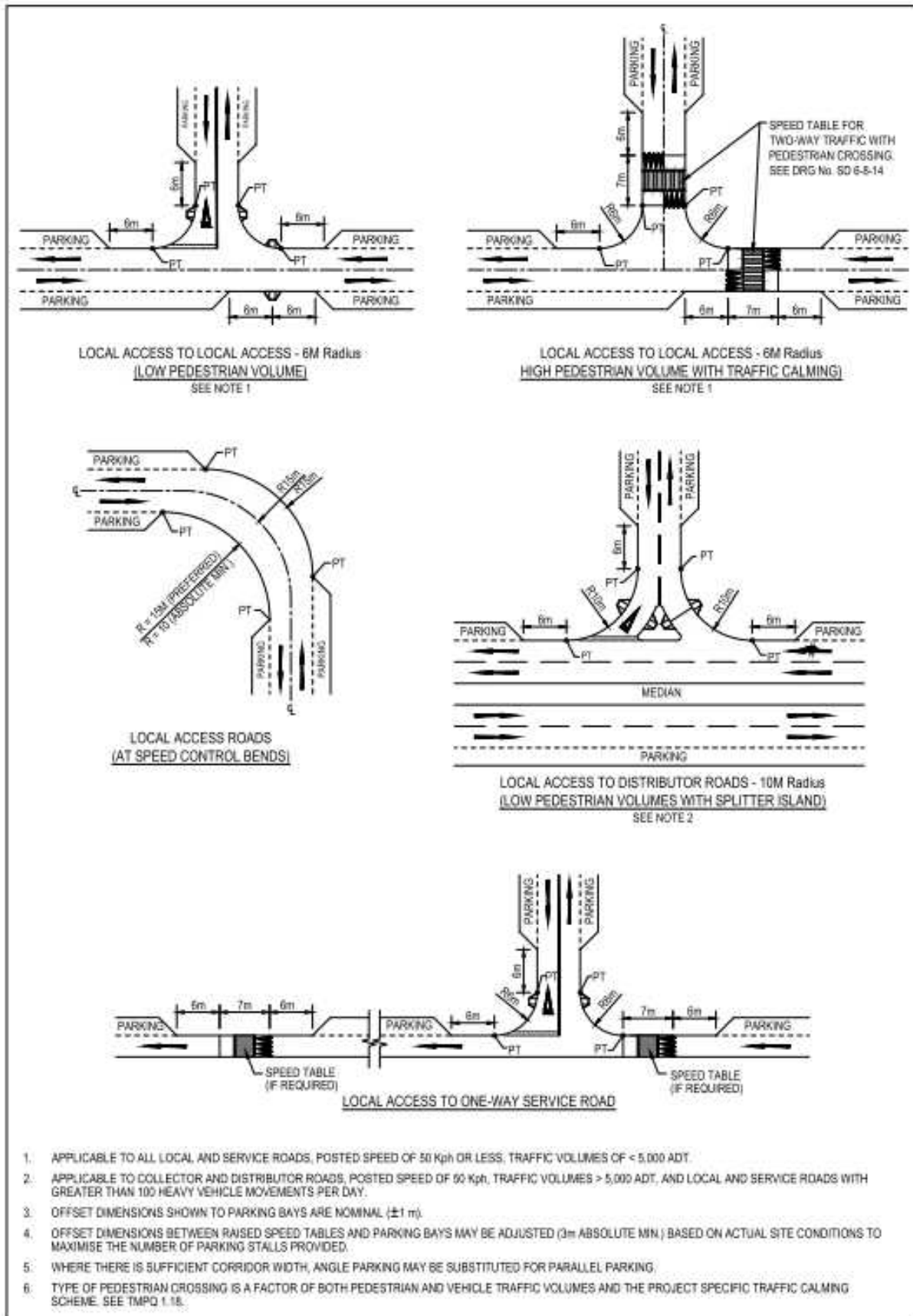
10.3.2 Parking provision within a T-Junction

On-street parking may be provided opposite the minor leg of a T-junction in accordance with the following conditions (refer to Figure 10-1):

- The junction is not signalized.
- Posted speed limits on both streets are less than 80 kph.
- Combined traffic volume is low, i.e. less than 5,000 ADT.
- Kerbed build-out(s) is provided to physically define/delineate pedestrian and bicycle crossings and parking should not be provided within 6m of the crossing.
- The junction is not located on a curve in which provision of the parking through the junction would adversely impact sight distance along the curve (see Speed Control Bend on Figure 10-1).

Provision of on-street parking through T-junctions is common and acceptable practice on local streets of Qatar. Figure 10-2 illustrates parking through a T-junction in a high density commercial neighbourhood of West Bay.

Figure 10-1: Typical Parking Set-backs for Local Roads



1. APPLICABLE TO ALL LOCAL AND SERVICE ROADS, POSTED SPEED OF 50 Kph OR LESS, TRAFFIC VOLUMES OF < 5,000 ADT.
2. APPLICABLE TO COLLECTOR AND DISTRIBUTOR ROADS, POSTED SPEED OF 50 Kph, TRAFFIC VOLUMES > 5,000 ADT, AND LOCAL AND SERVICE ROADS WITH GREATER THAN 100 HEAVY VEHICLE MOVEMENTS PER DAY.
3. OFFSET DIMENSIONS SHOWN TO PARKING BAYS ARE NOMINAL (± 1 m).
4. OFFSET DIMENSIONS BETWEEN RAISED SPEED TABLES AND PARKING BAYS MAY BE ADJUSTED (3m ABSOLUTE MIN.) BASED ON ACTUAL SITE CONDITIONS TO MAXIMISE THE NUMBER OF PARKING STALLS PROVIDED.
5. WHERE THERE IS SUFFICIENT CORRIDOR WIDTH, ANGLE PARKING MAY BE SUBSTITUTED FOR PARALLEL PARKING.
6. TYPE OF PEDESTRIAN CROSSING IS A FACTOR OF BOTH PEDESTRIAN AND VEHICLE TRAFFIC VOLUMES AND THE PROJECT SPECIFIC TRAFFIC CALMING SCHEME. SEE TMPO 1.18.

Figure 10-2: On-street parking through T-junctions is normal practice on the local streets throughout Qatar. Also evident is the nominal 6m setback from the tangent point to the start of parking on the right side of the street.



10.4 PARKING PROVISIONS NEAR DRIVEWAYS

On-street parking may be provided adjacent to driveways in accordance with the following conditions and as shown on Figure 10-3:

- Visibility criteria for junctions shall be applied at major high-volume driveways only, and not be applicable to accesses to private residences along local roadways.
- Major driveways are defined as private site accesses that functions as a junction providing for two-way traffic into and out of a site containing a multi-family compound, commercial, industrial, recreational or institutional facilities.
- The layout of on-street parking stalls will be based on restricting parking within 2m either side of the driveway in order to provide safe access in and out from the site (see Figure 10-3).
- The provision of private accesses directly onto collector or arterial roads shall be subject to the review and approval of PWA and MMUP on the basis of site-specific conditions; however, if permitted, any driveway entering a roadway with a posted speed of 80 kph or greater shall be treated the same as a junction.
- The use of kerbed build-outs at residential and other low volume driveway locations should be on an exception basis only, and may be justified at locations where there is a large difference in elevations between the existing gate level and the edge of carriageway. The build-out provides additional space for transitioning the grade differences and providing for a traversable footpath across the driveway. The use of kerbed build-outs may be recommended at major driveways servicing higher traffic volumes in order to provide for improved visibility and safety, and to create opportunities for local streetscape (landscape) improvements along the local street corridors.

10.5 PARKING STALL SIZE

The standard parallel stall size for on-street parking shall be a minimum 6m long by 2.5m wide. Parking lane widths along narrow residential roadway corridors and service roads may be reduced to 2.2m in accordance with MMUP Cross Sections and if approved by PWA.

Where parking is required on high volume (i.e. greater than 20,000 ADT) local or collector roadways with posted speed of less than 80 kph, a 0.5m clearance to the nearest trafficable lane is desirable for safety reasons. Provision of this clearance or buffer strip requires customization of the MMUP Cross Section and is subject to the approval of PWA and MMUP.

10.5.1 Angle parking provision

Angle parking should be considered in areas of identified high parking demand. The Designer recommendation regarding the provision of on-street angle parking should be based on an evaluation of the following:

- Corridor and carriageway widths
- Traffic volume and vehicle mix
- Travel speeds, characteristics and other operational considerations
- Parking need
- Adjacent land uses
- Pedestrian and non-motorized user characteristics
- Road safety

On-street angle parking may be considered on collector, local and service roads where the posted speed is less than 80 kph. On-street angle parking stalls shall have nominal dimensions of 2.5m wide by 5.5m long. In case of corridor width restrictions, the stall length may be reduced to 5.0m minimum with kerb overhang. The stall width of 2.5m should be considered a minimum; a wider stall width may be considered by the Designer based upon the specific site conditions, traffic volumes and characteristics of the parking demand. The preferred configuration for angled parking is perpendicular (90°), 45° or 60° to the roadway.

There is a need for adequate space for vehicles to manoeuvre into and out of stalls which requires the adjacent through lane to be widened from the standard carriageway width that would otherwise be provided as per the MMUP Typical Section. A 1.0m buffer strip between the edge of travelled way and the nearest part of the parking stall should also be provided. Wider buffer strips may facilitate parking manoeuvres but also encourage double parking; for this reason, the Designer should evaluate and justify provision of a wider buffer on the basis of site specific conditions only.

Setbacks from intersections and driveways to angled parking are the same as indicated for on-street parallel parking (refer to Figures 10-1 and 10-3).

Figure 10-3: Parking provisions at driveways

