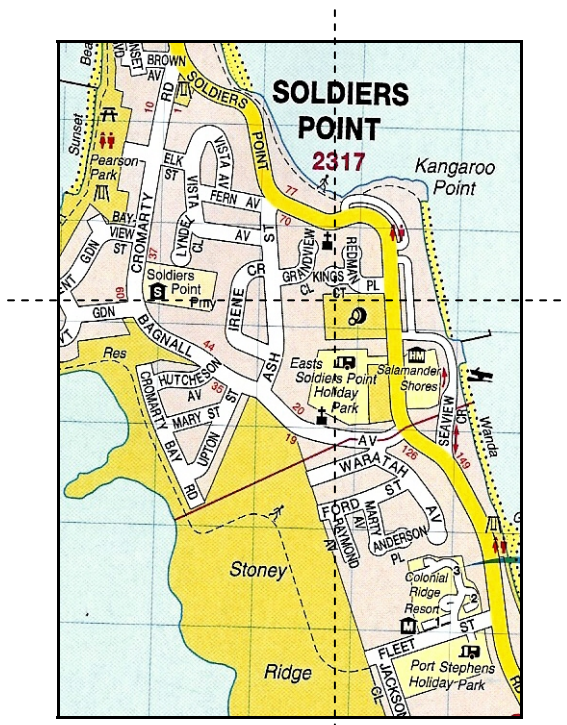


TRAFFIC ASSESSMENT REPORT

PROPOSED RETIREMENT VILLAGE DEVELOPMENT

**SOLDIERS POINT ROAD (Rear of Bowling Club)
SOLDIERS POINT**



Dec 2010

The Pacific Lifestyles Group
(Client)

Port Stephens Council Local Government Area

Prepared by
Terry Keating
Director
TPK & Associates Pty Ltd

C O N T E N T S

- 1 . I N T R O D U C T I O N
- 2 . E X I S T I N G C O N D I T I O N S
- 3 . G U I D E L I N E S
- 4 . P A R K I N G & S I T E A M E N I T Y
- 5 . R O A D N E T W O R K
- 6 . S U M M A T I O N

RETIREMENT VILLAGE

TRAFFIC ASSESSMENT

SECTION 1 - INTRODUCTION

1.1. – The Project

TPK & Associates Pty Ltd (TPK) were invited by The Pacific Lifestyles Group to undertake a traffic assessment of a proposal to develop a Retirement Village at the rear of Soldiers Point Bowling Club located on:

118A Soldiers Point Road, Soldiers Point

The general site location is highlighted on the cover page map.

1.2. – Task Description

The assessment and report focuses on the following objectives: -

- Road function and road environment around the site with a focus on road safety
- Confirmation that the proposed road network and on-site amenity will service all user needs in terms of road safety and traffic management
- Establish that appropriate road safety and traffic management guidelines and standards have been addressed by the proposal

This assessment report is a supplement to the development application.

1.3. – Project Representative

Mr. Terry Keating, Director, TPK & Associates Pty Ltd undertook the evaluation and preparation of the report. He has over 40 years experience in the road safety and traffic management profession, including the assessment of traffic generating developments.

1.4. - References

The assessment and report have been provided as an outcome of reference to:

- Port Stephens Council DCP Elements B3 & B9
- SEPP (SENIORS LIVING) 2004
- RTA Guide to Traffic Generating Developments
- Austroads Part 5 Intersections at Grade
- Project Plans provided by Snell Architects

SECTION 2 – EXISTING CONDITIONS

2.1. - Locality

The proposed development site is located off Soldiers Point Road, Soldiers Point at the rear of Soldiers Point Bowling Club.

The nearest intersection on Soldiers Point Road is Redman Place to the north of the Bowling Club.

The proposed retirement village will utilise the existing Bowling Club car park access to travel to/from the village.

An aerial view of the site is shown in Figure 1

2.2. – Road Network

Soldiers Point Road is the link road for the Soldiers Point peninsular; the route facilitates connectivity to Nelson Bay CBD and to the major routes providing travel to Newcastle and beyond.

Traffic Counter data from 2008 for Soldiers Point Road, south of Fleet Street was purchased from Port Stephens Council; extracts are provided in Appendix B of this report. The traffic flows are submitted to be representative of current traffic flows past the subject site.

2.3. – Traffic Management

The relevant traffic management facilities on Soldiers Point Road are:

- 50kph Urban Speed Limit
- Edgeline and Centreline roadmarking



FIGURE 1 – AERIAL VIEW

SECTION 3 – GUIDELINES

This traffic assessment will be completed for a proposed land use identified as:

RETIREMENT VILLAGE	100 Units
	19 x 1 Bedroom Units
	65 x 2 Bedroom Units
	16 x 3 Bedroom Units

3.1. – Road Network & Traffic Generation

3.1.1 – Traffic Generation Determination

The RTA Guide to Traffic Generating Developments suggests rates for a range of land use activities. The following provides the potential rates and outcomes for traffic generation associated with “Housing for aged and disabled” rates indicated in the guide and adopted for this assessment:

- Daily Vehicle Trips = 1 to 2 per dwelling
- Peak hour trips= 0.1 to 0.2 per dwelling

Therefore the potential traffic generation for this project based on the above is:

- 100 to 200 Daily Trips
- 10 to 20 Peak Hour Trips

3.1.2 – Traffic Distribution

The location of the site dictates that the predominant trip paths will be right out and left into the site to/from Soldiers Point Road.

3.2. – Parking

The reference guide for parking assessment adopted by TPK is Port Stephens DCP 2007, Elements B3 & B9.

Element B9 is the key to parking requirements; Principles B9.C15 & B9.C17 are applicable, they require:

- For self contained dwellings, 0.5 car parks are to be provided for each bedroom, with a minimum of 1 space per dwelling
- One visitor parking space must be provided for every 5 units or part thereof.

This equates to:

- 100 spaces for 100 units plus
- 8 additional spaces for the 16 units with a 3rd bedroom plus
- 20 visitor spaces

The total number of spaces required by the DCP is 128 spaces; the provisions for parking are discussed in detail in Section 4.

3.3 – Project Overview

A project summation of key site elements relevant to the parking layout is provided in Table 1.

TABLE 1 – PARKING & ACCESS ASSESSMENT

Ref. AS/NZS 2890.1-2004 (AS), AS2890.2 (AS2)-2002 and/or DCP 2007

CRITERIA	CLAUSE	ASSESSMENT or REQUIRED	PROVIDED	COMPLIES
Classification of Use	(AS) Table 1.1	Class 1A	NA	NA
Road Frontage type	(AS) Table 3.1	Soldiers Pt BC Access – Local Unit Car Park – BC Driveway	NA	NA
Number of Off Street Parking spaces	(AS) Table 3.1	101 to 300	128	Yes
Parking Bays	(AS) Figure 2.2	90° bays 5.4m x 2.6m	Minimum 5.4m x 2.6m	Yes
Parking Aisle	(AS) Figure 2.2	5.8m	Varies but minimum is 5.8m	Yes
Driveway Category & Design	(AS) Table 3.1 and 3.2	Soldiers Pt BC Access – 3 Units Car Parks – 2	3 2	Yes
Driveway location	(AS) Clause 3.2.3	Soldiers Pt BC Access – Mid Block Units Car Parks – Internal	Mid Block Internal	Yes NA
Sight distances	(AS) Figure 3.2	Soldiers Pt BC Access – 69m Unit Car Park – NA	+69m NA	Yes NA

The plans considered relevant to the traffic assessment are:

1. Site Plan
2. Ground Floor Plan
3. Second floor Plan

These plans are provided in Appendix A of this report.

SECTION 4 – PARKING AND SITE AMENITY

4.1 – Parking

The provisions for off street parking proposed on site are in accordance with AS2890.1 in terms of bay size and aisle widths; the proposed parking will comprise:

- 92 spaces on Ground Floor Level
- 36 spaces on Second Floor Level

The spaces are proposed to have widths ranging from 2.6m to 3.8m in an endeavour to provide site management with the opportunity to use space allocation relative to individual resident and visitor needs.

The ends of parking modules provide indented end, overhang space, wide bays or wide aisles to facilitate movement to/from the end spaces. Given there is the potential for space allocations on this project then the provision for end spaces is assessed as adequate.

4.2. – Site Access

The site access from the site, to connect with the public road network is proposed to be achieved by sharing the existing Bowling Club access to Soldiers Point Road.

The existing access provides a 4.5m exit width, 1m separation median and a 6m entrance width. The geometric layout is suitable for potential traffic demands, a photograph of the entry is provided below as P1.



P1 – EXISTING BOWLING CLUB ACCESS

The existing access at Soldiers Point Road has excellent sight lines in both directions and exceeds the driveway SSD requirements of AS2890.1 in terms of sight distance. Photographs P2 & P3 taken from access confirm the adequate sight lines.



P2 – LOOKING SOUTH

P3 – LOOKING NORTH

4.3. – Site Traffic Flow

The potential daily and peak hour trips generated by the development will not be significant and will not have an adverse impact on the site traffic flow.

Residents will travel along the main access corridor of the existing site but will not be required to penetrate the Bowling Club car park precinct.

4.4. – Service & Delivery

Larger vehicles will not have capacity to manoeuvre within the village car parks.

Service traffic will adapt to the site layout, for example:

- Waste collection, which is to be by private contractor will need to adapt their processes to recover the waste from the site and transfer it to the collection vehicle.
- Delivery traffic, which typically will not arrive at peak Bowling Club car park demand periods will need to transfer goods to/from a remote standing point in the existing car park.

Once the residents have settled into the village these delivery demands will not be significant and no adverse impact is anticipated on the Bowling Club car park users.

4.5. – Public Transport

Port Stephens Coaches runs regular bus services 7 days a week on Soldiers Point Road past the site frontage. The route map from the operator’s web site is provided below as Figure 2

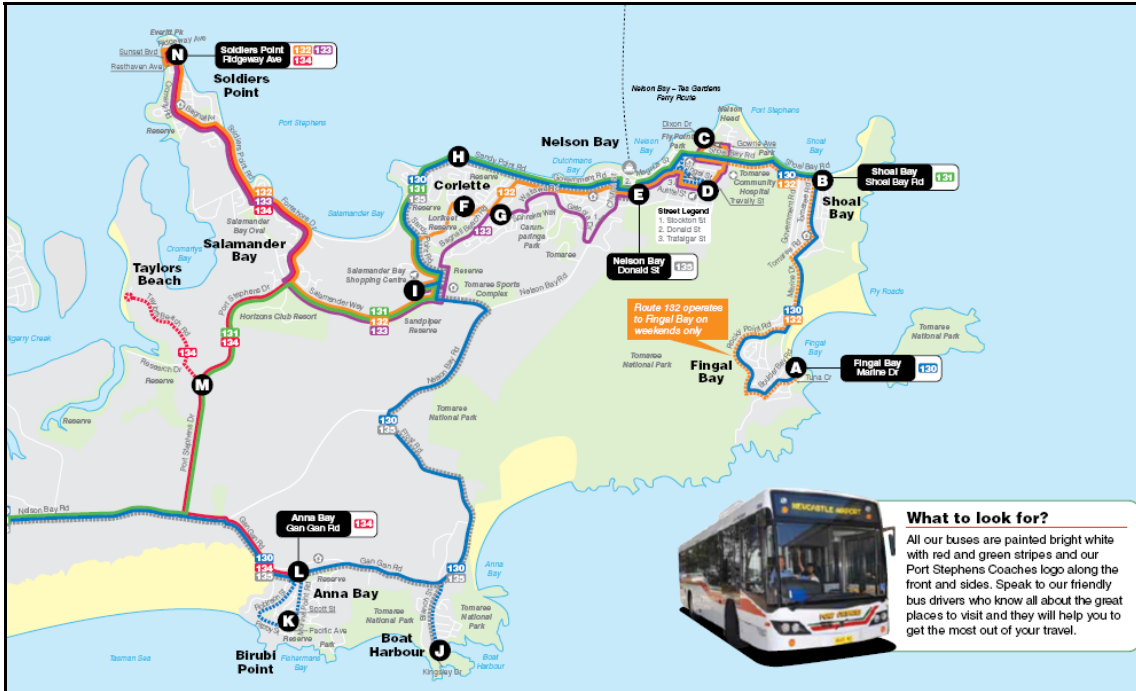


FIGURE 2 – LOCAL BUS ROUTES

The bus service includes travel to/from Newcastle providing connection to rail services in Newcastle and airlines at Williamtown Airport.

A local taxi service operates in the peninsula area.

SECTION 5 – ROAD NETWORK

The retirement village traffic is not driven by time in the sense that travel in the peak hours is essential to meet their needs. Typically the majority of travel is done outside the peaks unless specific appointments or connections require travel at that time.

The morning exit trips of the village will not coincide with the Bowling Club exit peak and conversely for village traffic arriving back to the site and Bowling Club arrivals.

Traffic exiting the site from the Village or the Bowling Club is unlikely to exceed 100vph in peak times; Austroads Intersections at Grade gives guidance on the need to undertake detailed analysis to confirm capacity. Table 4.1 is an extract from Austroads and indicates levels of traffic conflict that do not require detailed analysis to confirm intersection capacity.

The peak hours on Soldiers Point road do not exceed 650vph to any great extent and the exit traffic from the site will not exceed 100vph in the peak; TPK has assessed there was no requirement to undertake detailed modelling to confirm acceptable capacity and the Soldiers Point Road & Site Access intersection.

Table 4.1 — Intersection Capacity - Uninterrupted Flow Conditions

Major Road Type ¹	Major Road Flow (vph) ²	Minor Road Flow (vph) ³
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).
2. Major road design volumes include through and turning movements.
3. Minor road design volumes include through and turning volumes.

The additional traffic generated by the village in any one hour will not be above 20vph; this level of increase will not impact on the mid block capacity of Soldiers Point Road.

SECTION 6 – CONCLUDING STATEMENT

The assessment by TPK & Associates has concluded that:

- The development will not have an adverse impact on the public road network.
- The development can safely share the existing Bowling Club site access without impacting on the existing Bowling Club car park operation or capacity.
- The site proposes acceptable increase in parking capacity for residents and visitors without the need to impact on the Bowling Club car park.
- The site can be serviced and has acceptable access to public transport.

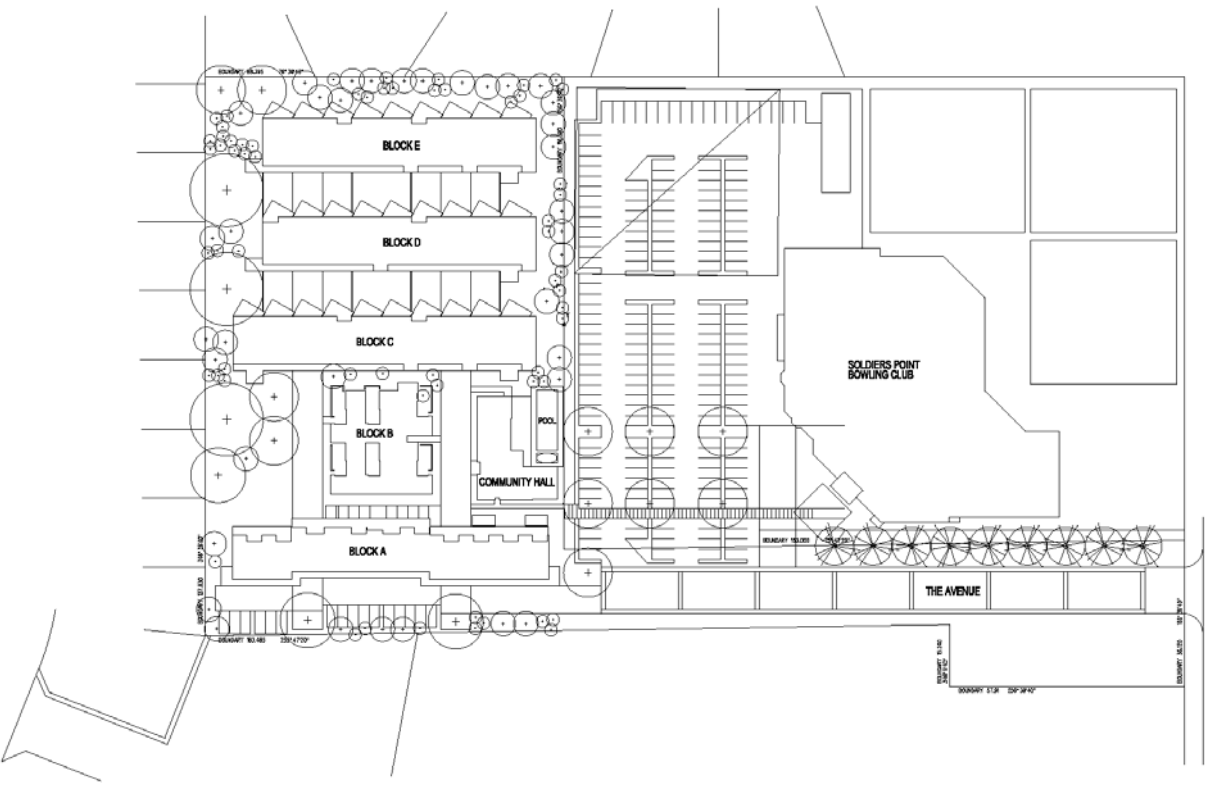
Prepared by

T Keating

Mr. T Keating
Director, TPK & Associates
8th April 2008

APPENDIX A
SITE PLANS

PROPOSED SITE PLAN



SOLDIERS POINT RESIDENTIAL

SNELL

YOUR BEST ARCHITECTURE
 YOUR BEST DESIGNERS
 YOUR BEST RESULTS
 YOUR BEST SERVICE
 YOUR BEST VALUE

NOTES
 ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE SPECIFIED
 ALL DIMENSIONS TO FACE UNLESS OTHERWISE SPECIFIED

ABBREVIATIONS

A1	APPROXIMATE	A2	APPROXIMATE
A3	APPROXIMATE	A4	APPROXIMATE
A5	APPROXIMATE	A6	APPROXIMATE
A7	APPROXIMATE	A8	APPROXIMATE
A9	APPROXIMATE	A10	APPROXIMATE

AUSTRALIAN STANDARDS
 AS 1100
 AS 1101
 AS 1102
 AS 1103
 AS 1104
 AS 1105
 AS 1106
 AS 1107
 AS 1108
 AS 1109
 AS 1110
 AS 1111
 AS 1112
 AS 1113
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 AS 1144
 AS 1145
 AS 1146
 AS 1147
 AS 1148
 AS 1149
 AS 1150

ENERGY EFFICIENCY NOTES
 1. APPROXIMATE ENERGY RATING TO BE OBTAINED
 2. APPROXIMATE ENERGY RATING TO BE OBTAINED
 3. APPROXIMATE ENERGY RATING TO BE OBTAINED
 4. APPROXIMATE ENERGY RATING TO BE OBTAINED

GENERAL NOTES
 1. APPROXIMATE ENERGY RATING TO BE OBTAINED
 2. APPROXIMATE ENERGY RATING TO BE OBTAINED
 3. APPROXIMATE ENERGY RATING TO BE OBTAINED
 4. APPROXIMATE ENERGY RATING TO BE OBTAINED

AMENDMENTS

DATE	GENERAL REVISION	ISSUE
08/01/2011	ISSUE NO. 1	A

TITLE SITE PLAN
PROJECT SOLDIERS POINT RESIDENTIAL
LOCATION 118A SOLDIERS POINT ROAD
CLIENT NPM& PTY LTD
SCALE 1:500 **DATE** NOV 2010
DRAWN WAS **APPROVED** .
PROJECT NO 458
DRAWING NO DA1888 **ISSUE NO** A

SNELL

APPENDIX B
TRAFFIC DATA

Soldiers Point Road – Northbound – Virtual Day

* **Virtual Day - Total=3348, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
12	5	5	6	8	11	45	109	233	214	239	256	268	252	272	289	296	297	216	128	76	58	34	20
4	1	1	1	3	1	6	21	37	48	62	62	71	63	60	66	75	79	59	39	22	15	10	5
3	1	1	1	2	2	7	21	49	53	58	63	69	67	62	69	75	74	56	32	20	16	9	6
3	1	2	1	1	3	12	29	67	52	56	64	67	64	70	78	73	74	52	31	18	15	9	5
2	1	1	2	2	5	20	38	80	61	62	67	61	57	81	76	73	71	49	26	16	13	6	4

AM Peak 1145 - 1245 (274), AM PHF=0.97 PM Peak 1530 - 1630 (305), PM PHF=0.97

Soldiers Point Road – Southbound – Virtual Day

* **Virtual Day - Total=3370, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300
14	4	5	8	12	37	97	172	289	306	271	242	223	250	249	290	237	191	155	118	71	63	41	25
4	1	1	1	2	4	13	33	57	87	72	64	60	59	62	94	65	52	48	37	20	15	12	6
4	1	1	1	2	9	17	38	60	71	74	59	55	64	60	65	60	48	37	30	15	17	11	7
2	1	1	3	4	11	29	46	81	73	66	60	53	61	66	66	56	47	37	28	18	18	11	6
3	1	1	3	4	13	38	55	92	75	59	59	54	65	62	65	56	44	32	22	19	14	7	5

AM Peak 0830 - 0930 (330), AM PHF=0.90 PM Peak 1500 - 1600 (290), PM PHF=0.77

VirtWeeklyVehicle-38 – Combined Directions

Site: Soldiers Pt Rd.0.NS
 Description: Soldiers Pt Rd - South of Fleet St
 Filter time: 9:00 Monday, 13 October 2008 => 9:00 Tuesday, 28 October 2008
 Scheme: Vehicle classification (AustRoads94)
 Filter: Cls(1 2 3 4 5 6 7 8 9 10 11 12) Dir(NESW) Sp(10,160) Headway(>0)

Hour	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Averages	
								1 - 5	1 - 7
0000-0100	10.0	9.0	14.0	15.0	15.0	54.5	70.5	12.3	25.7
0100-0200	7.5	4.0	5.0	2.0	3.5	16.0	30.5	4.4	9.4
0200-0300	7.0	5.0	7.0	4.5	6.5	17.5	20.0	5.9	9.3
0300-0400	11.5	11.3	11.5	9.0	16.0	22.5	12.0	11.8	13.3
0400-0500	28.0	18.0	20.5	24.5	25.0	14.5	11.0	22.7	20.1
0500-0600	62.0	55.7	46.5	45.0	55.5	40.0	29.0	53.2	48.2
0600-0700	164.5	156.7	165.5	151.5	162.5	92.0	94.5	159.8	142.1
0700-0800	328.0	323.7	301.0	271.5	276.0	200.0	244.5	302.2	280.9
0800-0900	589.0<	559.3	558.5<	563.0<	574.5	424.5	368.0	568.0<	522.2<
0900-1000	393.0	562.0<	524.0	525.0	583.0<	561.0	554.0	506.1	519.8
1000-1100	509.0	448.0	504.5	373.0	524.0	620.0	589.0	475.1	509.6
1100-1200	482.7	489.5	535.0	225.0	524.5	626.5<	612.5<	454.2	498.3
1200-1300	477.7	478.0	486.0	232.0	534.5	643.5<	589.0<	444.9	490.6
1300-1400	462.0	469.0	482.0	430.0	608.0	592.5	485.5	487.6	501.3
1400-1500	505.0	492.5	525.0	483.5	608.0	560.5	479.5	521.2	520.9
1500-1600	563.3<	563.5<	622.5<	593.5<	657.0<	552.5	507.5	596.6<	578.9<
1600-1700	542.7	490.0	562.5	541.0	620.5	508.0	467.5	550.5	533.8
1700-1800	483.0	456.0	461.5	485.0	601.5	551.5	385.0	496.1	488.7
1800-1900	381.0	317.0	327.0	359.5	465.5	452.0	285.0	371.0	370.3
1900-2000	191.0	186.0	263.5	270.5	330.0	297.5	205.0	243.0	245.2
2000-2100	122.7	126.0	134.0	158.5	207.0	179.5	117.5	147.2	147.5
2100-2200	125.3	96.0	99.0	140.0	162.5	151.5	76.0	124.6	121.7
2200-2300	65.0	42.0	53.0	66.0	129.0	125.0	54.5	70.5	75.6
2300-2400	21.7	19.5	36.5	38.0	87.5	97.5	22.0	38.9	44.5
Totals									
0700-1900	5716.3	5648.5	5889.5	5082.0	6577.0	6292.5	5567.0	5773.5	5815.2
0600-2200	6319.8	6213.2	6551.5	5802.5	7439.0	7013.0	6060.0	6448.2	6471.7
0600-0000	6406.5	6274.7	6641.0	5906.5	7655.5	7235.5	6136.5	6557.5	6591.8
0000-0000	6532.5	6377.7	6745.5	6006.5	7777.0	7400.5	6309.5	6667.8	6717.7
AM Peak	0800	0900	0800	0800	0900	1100	1100		
	589.0	562.0	558.5	563.0	583.0	626.5	612.5		
PM Peak	1500	1500	1500	1500	1500	1200	1200		
	563.3	563.5	622.5	593.5	657.0	643.5	589.0		