



## Engineering & Planning, Inc.

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November, 2020

Mr. Clyde Cuffy  
Engineering Department  
121 SW Port St. Lucie Boulevard, Building B  
Port St. Lucie, FL 34984

Re: Verano South PUD 1, North and South Pod A  
Parking Justification

MacKenzie Engineering and Planning, Inc. (MEP) prepared this Parking Justification for the proposed two bedroom attached Villas. The applicant proposes one garage parking space and one driveway parking space.

This request is in-line with the existing City of Port St. Lucie code *Sec. 158.221.C.7.A* for dwelling units without a garage providing two spaces per dwelling unit with two or more bedrooms. Additionally, The ITE's report, *Parking Generation Manual (5<sup>th</sup> Edition), Multi-Family Housing (Low-Rise)* provides parking data for multi-family housing. The 85<sup>th</sup> percentile peak period parking demand per bedroom is 0.88 spaces per bedroom.

The applicant proposes a parking rate of 1 space per bedroom.

Based on the parking rate of 1 space per bedroom, the proposed Villas are projected to have an adequate parking supply.

## Land Use: 220 Multifamily Housing (Low-Rise)

### Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with one or two levels (floors) of residence. Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), and affordable housing (Land Use 223) are related land uses.

### Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand (1) on a weekday (10 study sites) and a Saturday (11 study sites) in a general urban/suburban setting and (2) on a weekday (three study sites) and a Saturday (three study sites) in a dense multi-use urban setting.

Hour Beginning	Percent of Peak Parking Demand			
	General Urban/Suburban		Dense Multi-Use Urban	
	Weekday	Saturday	Weekday	Saturday
12:00–4:00 a.m.	100	93	86	100
5:00 a.m.	97	100	100	94
6:00 a.m.	90	98	94	91
7:00 a.m.	77	96	81	85
8:00 a.m.	56	92	58	79
9:00 a.m.	45	80	56	76
10:00 a.m.	40	78	53	71
11:00 a.m.	37	71	58	74
12:00 p.m.	36	68	56	68
1:00 p.m.	36	66	53	68
2:00 p.m.	37	65	47	68
3:00 p.m.	43	68	56	56
4:00 p.m.	45	70	53	59
5:00 p.m.	55	73	61	53
6:00 p.m.	66	77	81	50
7:00 p.m.	73	81	67	56
8:00 p.m.	77	82	61	65
9:00 p.m.	86	86	64	74
10:00 p.m.	92	87	75	85
11:00 p.m.	97	92	86	91

## Additional Data

In prior editions of *Parking Generation*, the low-rise multifamily housing sites were further divided into rental and condominium categories. An investigation of parking demand data found no clear differences in parking demand between the rental and condominium sites within the ITE database. As more data are compiled for future editions, this land use classification can be reinvestigated.

The average parking supply ratios for the study sites with parking supply information are shown in the table below.

Setting	Proximity to Rail Transit	Parking Supply Ratio	
		Per Dwelling Unit	Per Bedroom
Dense Multi-Use Urban	Within ½ mile of rail transit	0.6 (12 sites)	0.4 (10 sites)
	Not within ½ mile of rail transit	0.9 (18 sites)	0.6 (18 sites)
General Urban/Suburban	Within ½ mile of rail transit	1.5 (10 sites)	0.9 (10 sites)
	Not within ½ mile of rail transit	1.7 (52 sites)	1.0 (52 sites)

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Colorado, District of Columbia, Maryland, Massachusetts, Oregon, Pennsylvania, Texas, Washington, and Wisconsin.

*It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e. number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.*

## Source Numbers

72, 124, 152, 154, 209, 215, 216, 218, 219, 255, 257, 314, 414, 419, 432, 437, 505, 512, 533, 535, 536, 537, 544, 545, 577, 578, 579, 580, 584, 585, 587

# Multifamily Housing (Low-Rise) (220)

## Peak Period Parking Demand vs: Bedrooms

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 6:00 a.m.

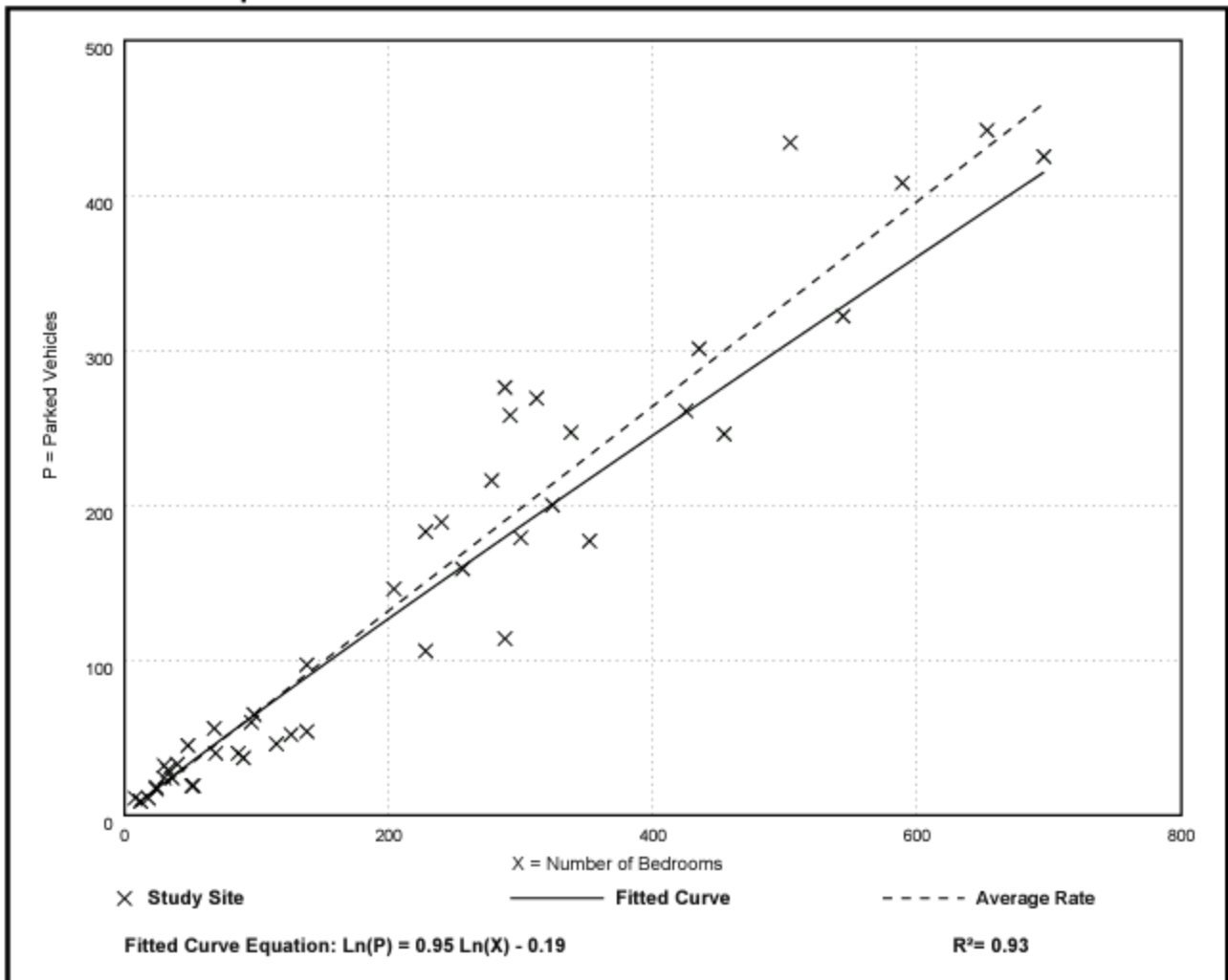
Number of Studies: 45

Avg. Num. of Bedrooms: 215

## Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.66	0.37 - 1.38	0.61 / 0.86	0.62 - 0.70	0.15 ( 23% )

## Data Plot and Equation



# Multifamily Housing (Low-Rise) (220)

Peak Period Parking Demand vs: Bedrooms

On a: Saturday

Setting/Location: General Urban/Suburban (no nearby rail transit)

Peak Period of Parking Demand: 11:00 p.m. - 7:00 a.m.

Number of Studies: 5

Avg. Num. of Bedrooms: 356

## Peak Period Parking Demand per Bedroom

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
0.80	0.70 - 0.88	0.82 / 0.88	***	0.08 ( 10% )

## Data Plot and Equation

Caution – Small Sample Size

