



CITY COUNCIL STAFF REPORT

MEETING DATE:	26 August 2015
APPLICANT:	Duaine Rasmussen
PROJECT NUMBER:	T-15-010
REQUEST:	Amendment to the Parking, Access and Circulation Requirements
PREPARED BY:	Michael Florence

SYNOPSIS: Mr. Rasmussen is petitioning the Planning Commission for a recommendation to amend Title 17.27 regarding Parking, Access and Circulation. Mr. Rasmussen is the developer of the Lofts of Meadowbrook Apartments that are currently under construction at 3808 S. West Temple. The Lofts at Meadowbrook has recently purchased the property abutting them to the West for a second phase and they are seeking to have the East Streetcar parking ratios adopted to the general parking ordinance. The phase two development shares a property line with the 3900 S. Trax Station. Specifically, the section proposed to be amended is section 17.27.060 (E)(4) concerning the 25% reduction in parking stall requirements in the Transit Oriented Development District.

SUMMARY:

- The proposal is to use the same parking ratios that were established for the East Streetcar District for the TOD Core District. The Core district was recently created by the Planning Commission and City Council for those properties that are within one-quarter (1/4) mile of a Trax station.
- The parking ratios were developed in conjunction with a transportation engineer that the City hired to review parking calculations for developments around the country.
- Mr. Rasmussen also had his own parking study completed for the proposal and a letter from his management company.
- The proposed ratio starts at 1.5 stalls per unit and can be reduced down to a minimum 1.2 by providing certain amenities
- Staff is proposing as part of the change to allow for a 20% reduction for commercial buildings in the Transit Oriented Overlay Corridor. The thought is that in the Core area (1/4 mile around a Trax Station) has an allowable reduction of 25%. Anywhere in the City a developer can request a 15% reduction through a traffic study. What staff proposes is that in the corridor area (those areas still in the TOD but not the area a ¼ mile around a trax Station) that the reduction would be 20% as an incentive for developing in the corridor. There are standards that are carried over in the ordinance that require the developer to provide incentives to employees to use transit.
- The Planning Commission recommended approval of the amendment to the Council

STAFF ALTERNATIVES/RECOMMENDATION

A recommendation to the City Council to amend Title 17.27 to allow for a reduction in the parking ratio for Transit Oriented Developments:



CITY COUNCIL STAFF REPORT

1. The proposed ordinance is consistent with the General Plan goal of establishing off-street parking requirements for new development to provide parking for the occupants of the structure and requirements that reduce housing costs. LU-2.0
2. The proposed ordinance is consistent with the General Plan goal of establishing off-street parking requirements in areas where alternative transit options are available to reduce automobile reliance- Goal LU-2.1
3. The proposed ordinance is consistent with the General Plan goal of adopting a new off-street parking ordinance that accurately reflects the parking need for the associated use. LU-2.1.2

Current Ordinance

4. Transit Oriented Development Modification.

a. At the discretion of the land use authority, transit oriented developments may receive up to a twenty-five (25) percent reduction in parking. For a development to qualify for the parking reduction it must be located within one-quarter mile of a light rail stop and meet, at a minimum, one additional requirement as follows:

i. Development consists of two or more land uses that have different parking patterns and peak parking demand hours. Regulations for shared parking shall be followed as found in subsection (F) of this section except for the following provisions specific to TOD areas: For mixed use developments, no one use may consist of less than twenty (20) percent of the building square footage. Mixed use buildings that contain residential uses shall be a minimum fifty (50) percent of the building square footage.

ii. Provisions are made that increase light rail ridership through the use of transit passes or other transit incentives.

iii. Provisions are made for long term bicycle storage for residential tenants or business employees. Long term storage shall consist of facilities such as lockers, indoor parking areas or other secure areas designated for parking.

iv. Alternative proposals approved by the land use authority that will encourage and provide for increased transit ridership.

Proposed Ordinance

4. Transit Oriented Development Modification.

a. Residential Parking in the Transit Oriented Development Core District

- i.
- ii.
 - i. Site Plan Approval Required. Parking quantities, design, and layout shall be approved through the development application process and meet the standards of the current parking chapter with the following exception:
- iii.
- iv.
 - ii. The standard requirement for residential parking is 1.5 stalls per unit. The land use authority may consider increases or reductions to standards outlined in the accompanying table, up to 20% of the standard requirement.
 - iii. Dedicated visitor parking. Developers shall clearly indicate the location of dedicated visitor parking through directional signage, marked stalls, or other means to be determined in site plan review.
 - iv. Parking Spillover Management Plan. For developments requiring a conditional use permit, the land use authority may require a parking spillover management plan for peak demand periods.

Eligible Parking Rate Reductions	
Amenity	Recommended Reduction (Stalls/Unit)
Care Share (limit 1 car/100 units)	0.05
Unbundled Parking (100%)	0.1
Bike Share	0.05
Bike Lockers/Storage	0.05
Development Supplied Transit Passes	0.15
Senior Housing	0.2
Student Housing (<.25 miles from campus)	0.1

b. Commercial Parking

- i. Commercial use transit oriented developments may receive up to a twenty-five (25) percent reduction in parking when located within the Transit Oriented Development-Core Overlay District. Uses within the Transit Oriented Development Overlay District may receive up to a twenty (20) percent reduction. For a development to qualify for the parking reduction it must meet, at a minimum, one additional requirement as follows:
- ii. Development consists of two or more land uses that have different parking patterns and peak parking demand hours. Regulations for shared parking shall be followed as found in subsection (F) of this section except for the following provisions specific to TOD areas: For mixed use developments, no one use may consist of less than twenty (20) percent of the building square footage. Mixed use buildings that contain residential uses shall be a minimum fifty (50) percent of the building square footage.
- iii. Provisions are made that increase light rail ridership through the use of transit passes or other transit incentives.

iv. Provisions are made for long term bicycle storage for residential tenants or business employees. Long term storage shall consist of facilities such as lockers, indoor parking areas or other secure areas designated for parking.

v. Alternative proposals approved by the land use authority that will encourage and provide for increased transit ridership.

Attachments

1. East Streetcar parking study
2. Developer provided parking study
3. Letter from developers management company

MEMORANDUM

Date: August 5, 2014
To: South Salt Lake
From: Ryan Hales, PE, PTOE, AICP
Subject: **Street Car Adjacent Apartments Parking Study**

UT14-624

Multi-family Parking Demand Rates (Salt Lake Valley)

In an effort to identify an existing / acceptable parking demand rate for multi-family projects, Hales Engineering studied sixteen projects within the Salt Lake Valley to better understand the parking supply and demand at these locations and to draw conclusions about parking rates near the Streetcar line in South Salt Lake. Twelve of these sites are typical apartment complexes, while four were identified as "Transit Friendly" sites. Data was collected at study locations in South Salt Lake on Wednesday August 6, 2014 and Thursday, February 20, 2014, Herriman on June 19, 2014, and around the Salt Lake Valley on early Thursday, November 1, 2012. The data collection times were all between 12:00 am and 4:00 am, as this is the time when the majority of tenets are home for the night and parking demand is at its greatest according to the Institute of Transportation Engineers (ITE), *Parking Generation*, 4th Edition, 2010.

Data Collection / Study Locations

Timbergate Apartments

The Timbergate apartments are located at 5605 West 11830 South in Herriman, Utah and consist of 176 two-bedroom units, and 112 three-bedroom units for a total of 288 units (see Figure 1). During our data collection, it was observed that 402 parking stalls were occupied, 177 were empty, 6 cars were parked on the street, and there were no garages within this project, for a parking supply of 579 spaces.

The following conclusions can be made:

1. Supply (striped parking stalls or carports on-site) = 2.01 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.46 stalls / occupied unit
3. 289 stalls were covered of the 579 stalls on site = 50% covered stalls



Figure 1: Timbergate Apartments – Herriman, Utah

Farmgate Apartments

The Farmgate apartments are located at 5675 West 11840 South in Herriman, Utah and consist of 96 one-bedroom units, 272 two-bedroom units, and 128 three-bedroom units for a total of 496 units (see Figure 2). During our data collection, it was observed that 665 parking stalls were occupied, 206 were empty, there were 25 cars parked on the street, and there were 121 garages within this project, for a parking supply of 992 spaces.

The following conclusions can be made:

1. Supply (striped parking stalls or carports on-site) = 2.00 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.72 stalls / occupied unit
3. 476 stalls were covered of the 992 stalls on site = 48% covered stalls



Figure 2: Farmgate Apartments – Herriman, Utah

Mission Meadowbrook Apartments

The Mission Meadowbrook apartments are located at 820 West Timbercreek Way in South Salt Lake, Utah and consist of 365 one-bedroom units and 47 two-bedroom units for a total of 412 units (see Figure 3). During our data collection, it was observed that 427 parking stalls were occupied, 361 were empty, there were no cars parked on the street, and there were eight (8) functioning garages that were closed.

The following conclusions can be made:

1. Supply (striped parking stalls or carports on-site) = 1.93 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.10 stalls / occupied unit
3. 421 stalls were covered of the 788 stalls on site = 53% covered stalls



Figure 3: Mission Meadowbrook Apartments – South Salt Lake, Utah

Mountain Shadows Apartments

The Mountain Shadows apartments are located at 3825 South 700 West in South Salt Lake, Utah and consist of 80 one-bedroom units, 132 two-bedroom units, and 50 three-bedroom units for a total of 262 units (see Figure 4). During our data collection, it was observed that 313 parking stalls were occupied, 229 were empty, and there were six (6) cars parked on the street.

The following conclusions can be made:

1. Supply (striped parking stalls or carports on-site) = 2.09 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.28 stalls / occupied unit
3. 217 stalls were covered of the 542 stalls on site = 40% covered stalls



Figure 4: Mountain Shadows Apartments – South Salt Lake, Utah

Egate Apartments

The Egate apartments are located at 2292 W. Ruddy Way in West Valley City, Utah within the Salt Lake Valley, and consist of 128 two-bedroom units and 176 three-bedroom units for a total of 304 units (see Figure 5). During our data collection, it was observed that 468 parking stalls were occupied, 83 were empty and there were 13 vehicles parking adjacent to the curb within the complex. An additional off-site overflow parking area was located close to the project and 22 vehicles were parked within this lot when counted.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 1.81 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.73 stalls / occupied unit
3. 127 stalls were covered of the 551 stalls on site = 23% covered stalls

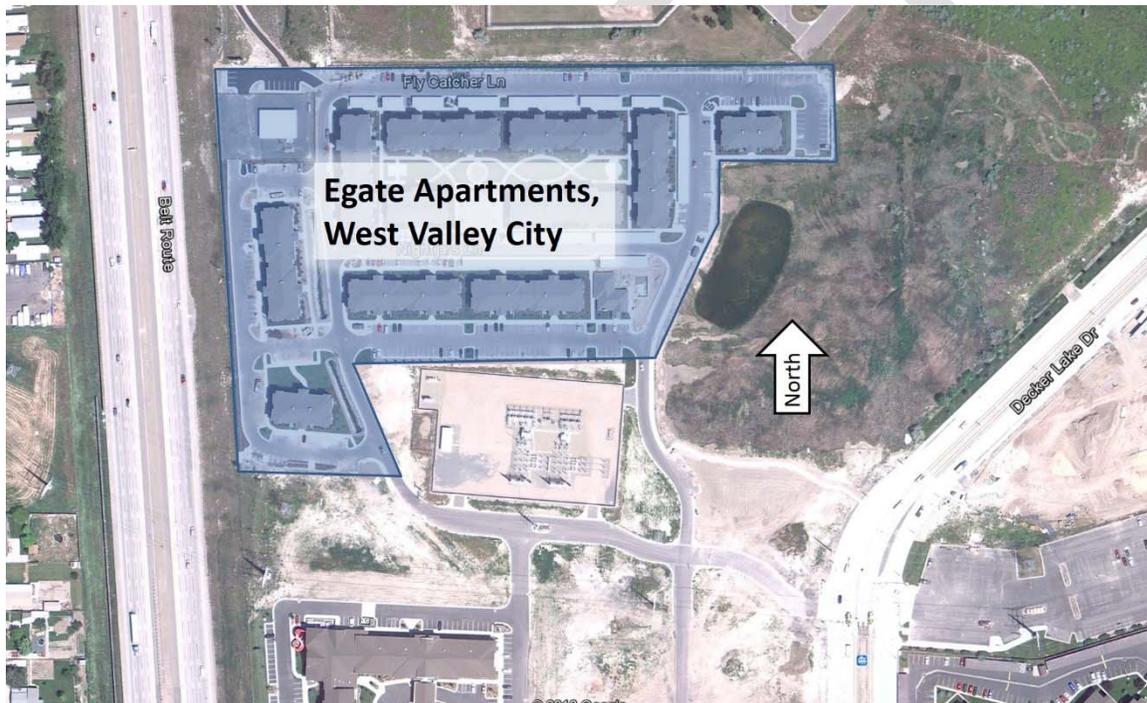


Figure 5: Egate Apartments – West Valley City, Utah

San Marino Apartments

The San Marino apartments are located at 776 West Grande Rose Way, South Jordan, Utah within the Salt Lake Valley, and consist of 112 one-bedroom units, 187 two-bedroom units and 21 three-bedroom units for a total of 320 units (see Figure 6). During our data collection, it was observed that 335 parking stalls were occupied, 145 were empty and there were 87 garages with 23 vehicles parked in the driveways and 9 vehicles parking adjacent to the curb within the complex.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.04 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.48 stalls / occupied unit
3. 308 stalls were covered of the 567 stalls on site = 54% covered stalls



Figure 6: San Marino Apartments – South Jordan, Utah

San Moritz Apartments

The San Moritz apartments are located at 7625 S. Ropekey Drive, Midvale, Utah within the Salt Lake Valley, and consist of 168 one-bedroom units, 195 two-bedroom units and 21 three-bedroom units for a total of 390 units (see Figure 7). During our data collection, it was observed that 334 parking stalls were occupied, 140 were empty and there were 154 garages with 51 vehicles parked in the driveways and 80 vehicles parking adjacent to the curb within the complex.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.01 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.74 stalls / occupied unit
3. 364 stalls were covered of the 628 stalls on site = 58% covered stalls



Figure 7: San Moritz Apartments – Midvale, Utah

San Tropez Apartments

The San Tropez apartments are located at 11747 South Siracus Drive, South Jordan, Utah within the Salt Lake Valley, and consist of 88 one-bedroom units, 141 two-bedroom units and 21 three-bedroom units for a total of 250 units (see Figure 8). During our data collection, it was observed that 234 parking stalls were occupied, 93 were empty and there were 93 garages with 39 vehicles parked in the driveways and 21 vehicles parking adjacent to the curb within the complex.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.05 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.68 stalls / occupied unit
3. 275 stalls were covered of the 420 stalls on site = 65% covered stalls



Figure 8: San Tropez Apartments – South Jordan, Utah

Liberty Bend

The Liberty Bend apartments are located at 1048 East Liberty Bend Lane, Sandy, Utah within the Salt Lake Valley, and consist of 93 units, 36 apartments and 57 townhome units (see Figure 10). During our data collection, it was observed that 66 parking stalls were occupied, 27 were empty, and there were 82 garages with 2 vehicles parked in the driveways, and 25 vehicles parking adjacent to the curb near the complex.

The following conclusions can be made:

1. Supply (parking stalls on-site) = 2.23 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.94 stalls / occupied unit



Figure 10: Liberty Bend Apartments / Townhomes – Sandy, Utah

Liberty Commons Apartments

The Liberty Commons apartments are located at 2785 S. Winstead Way, West Valley City, Utah within the Salt Lake Valley, and consist of 209 units (see Figure 8). During our data collection, it was observed that 131 parking stalls were occupied, 81 were empty and there were 185 garages with 0 vehicles parked in the driveways and 70 vehicles parking adjacent to the curb within the complex.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.20 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.40 stalls / occupied unit



Figure 11: Liberty Commons Apartments – West Valley City, Utah

Lionsgate Apartments

The Lionsgate apartments are located at 136 W Fireclay Avenue, Murray, Utah within the Salt Lake Valley, and consist of 400 units (see Figure 12). During our data collection, it was observed that 522 parking stalls were occupied, 114 were empty and there were no garages and 242 vehicles parking adjacent to the curb within or near the complex.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 1.59 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 2.03 stalls / occupied unit

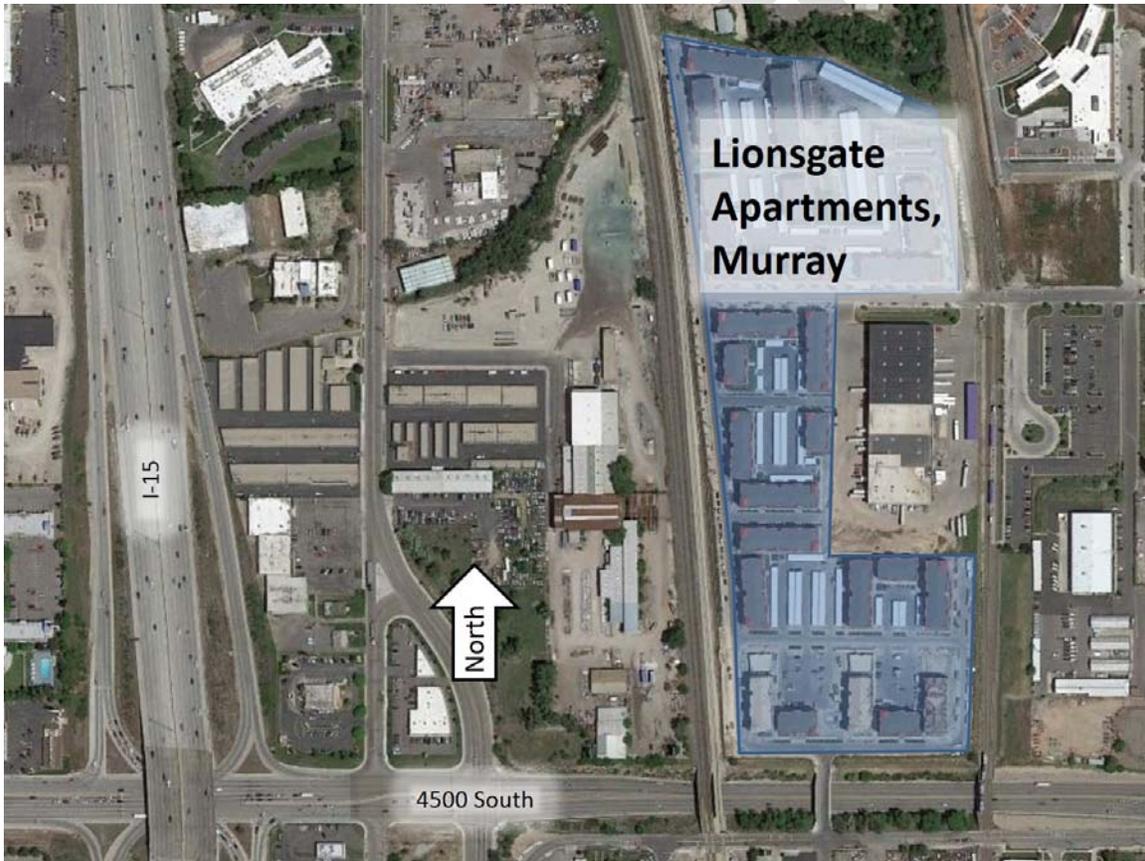


Figure 12: Lionsgate Apartments – Murray, Utah

Data Collection Summary

Within the Farmgate, Mission Meadowbrook, Coppergate, San Marino, San Moritz, San Tropez, Liberty Bend and Liberty Commons projects, each had closed garages that could not be counted. In order to provide a conservative estimate it was assumed that every garage space was being used for a vehicle. The following demand at the various apartment complexes was calculated:

Timbergate parking demand =	1.46
Farmgate Parking demand =	1.72
Mission Meadowbrook parking demand =	1.10
Mountain Shadows parking demand =	1.28
Egate parking demand =	1.73
San Marino parking demand =	1.48
San Moritz parking demand =	1.74
San Tropez parking demand =	1.68
Coppergate parking demand =	1.42
Liberty Bend parking demand =	1.94
Liberty Commons parking demand =	1.94
Lionsgate parking demand=	<u>2.03</u>
	1.63 Average parking demand / occupied unit (12)

Transit Friendly Parking Rates

The sites detailed above are typical apartment complexes across the Salt Lake Valley. The following sites were identified as being "Transit Friendly" by being located near transit stations and encouraging alternative modes of transportation. These sites include the Birkhill Apartments, 21 and View, Brickstone Apartments, and 2550 South Main.

Birkhill Apartments

The Birkhill apartments are located at 16 Gilbride Avenue, Murray, Utah within the Salt Lake Valley, and consist of 202 units (see Figure 13). During our data collection, it was observed that 250 parking stalls were occupied, 117 were empty and there were 26 garages with 2 vehicles in the driveways and 64 vehicles parking adjacent to the curb within or near the complex. The project appears to be over-parked as 65 additional units are under construction and will be rented by Aug. 2014. The Murray North (4400 South) TRAX Station is located nearby along with the 200, 205, 45, 47 and 228 bus lines.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.87 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 2.48 stalls / occupied unit

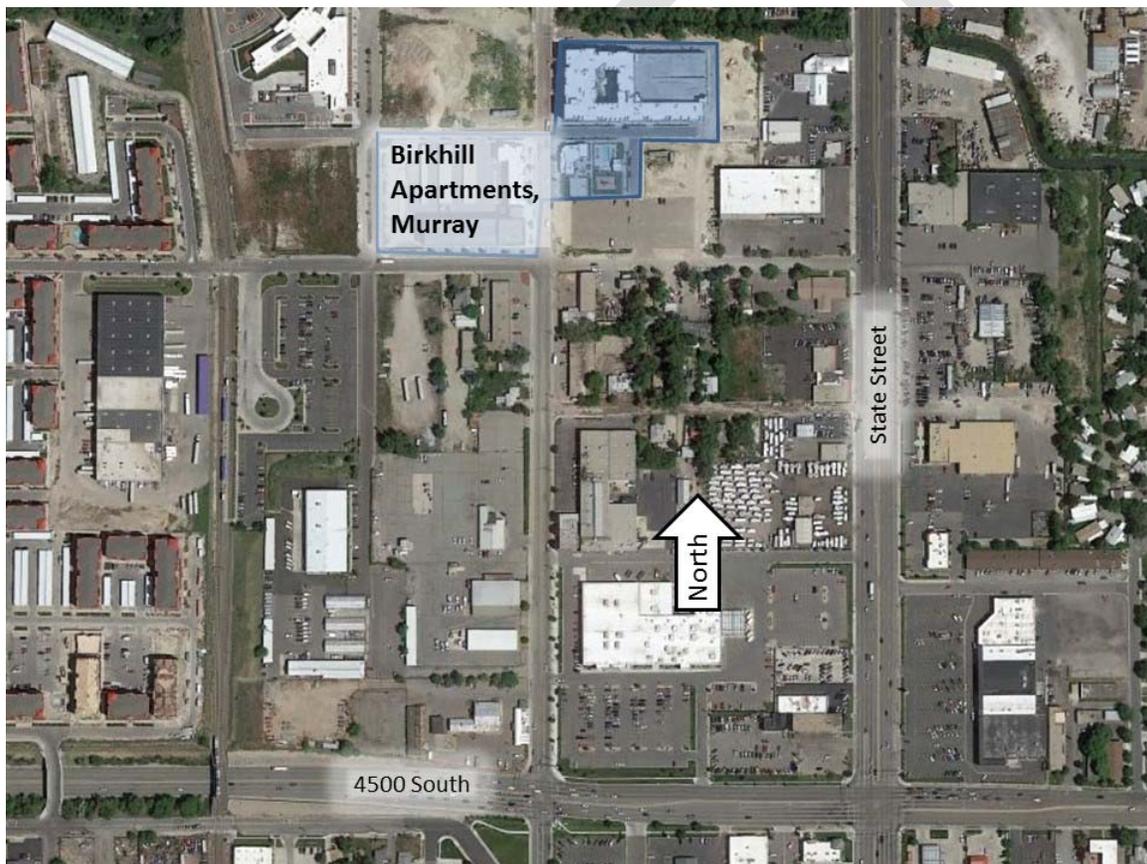


Figure 13: Birkhill Apartments – Murray, Utah

Due to the current construction of 64 additional units (and no additional parking stalls) at the Birkhill apartments, this location was not used in the average rate calculation of “Transit Friendly” sites. Parking conditions will change as the units become available, so the parking rates here would not reflect the actual conditions.

21 and View Apartments

The 21 and View apartments are located at 2070 South View Street, Salt Lake City, Utah within the Salt Lake Valley, and consist of 29 units (see Figure 14). During our data collection, it was observed that 38 parking stalls were occupied, 10 were empty and there were no garages and 0 vehicles parking adjacent to the curb within or near the complex. Although curb parking was occupied, it appeared to be used by the adjacent restaurant. The 220, 21, and 213 bus lines run near the site and the end of the street car line is a few blocks away.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 1.66 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.36 stalls / occupied unit



Figure 14: 21 and View Apartments – South Salt Lake, Utah

Brickstone Apartments

The Brickstone apartments are located at 220 East 3300 South, South Salt Lake, Utah within the Salt Lake Valley, and consist of 100 units (see Figure 15). During our data collection, it was observed that 76 parking stalls were occupied, 84 were empty and there were 60 garages and 0 vehicles parking adjacent to the curb within or near the complex. The manager estimated that approximately 50% of the garages were used for parking and the other 50% were used for storage. The Millcreek (3300 South) TRAX station is about 0.65 miles to the west and the 200, 205, and 33 bus lines run near the development.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.20 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.40 stalls / occupied unit



Figure 15: Brickstone Apartments – South Salt Lake, Utah

2550 South Main

The apartments at 2550 South Main, South Salt Lake, Utah are located within the Salt Lake Valley, and consist of 112 units (see Figure 15). During our data collection, it was observed that 78 parking stalls were occupied, 24 were empty and there were 68 garages with 34 vehicles parked in the driveway outside of the garage. There were 10 vehicles observed parking on-street adjacent to the complex. The 200 bus line runs near the development. The Central Pointe (2100 South) TRAX station is located less than a mile away.

The following conclusions can be made:

1. Supply (striped parking stalls on-site) = 2.13 stalls / unit
2. Demand (total parked vehicles on-site and off-site) = 1.71 stalls / occupied unit

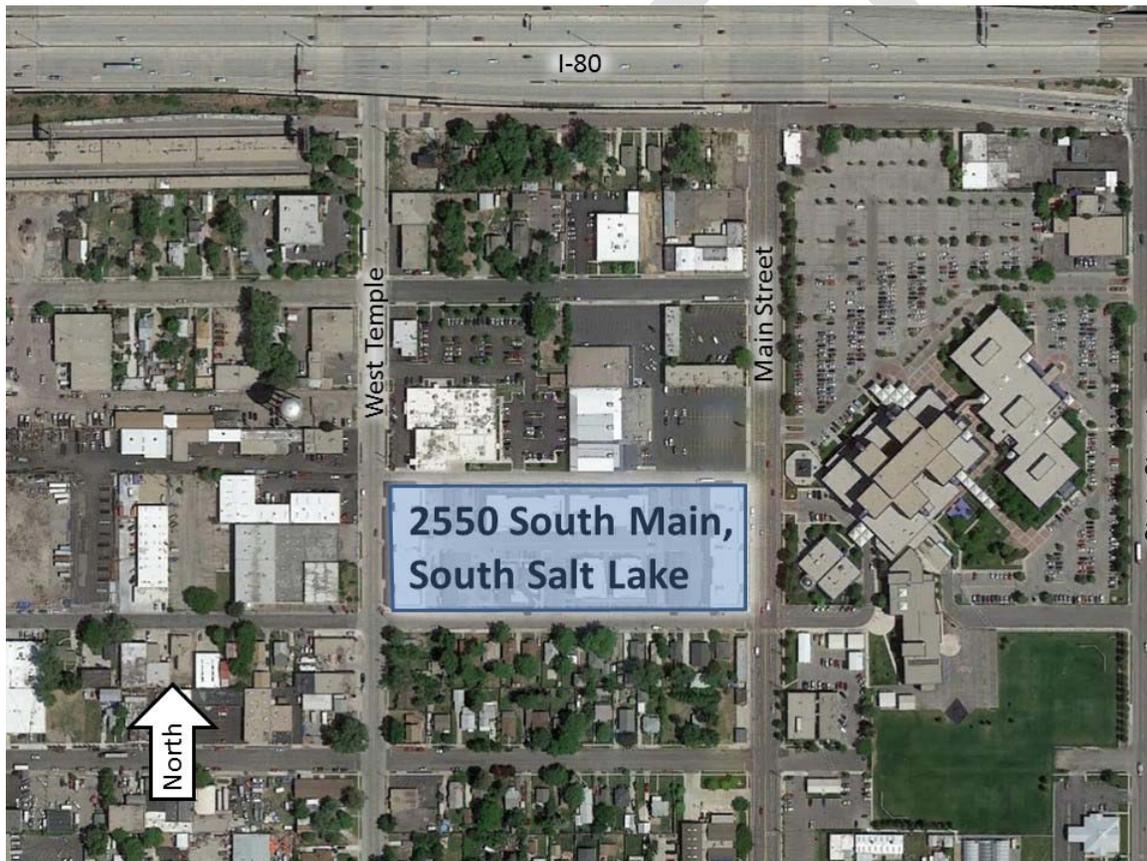


Figure 15: 2550 South Main – South Salt Lake, Utah

“Transit Friendly” Data Collection Summary

The following demand at the various “Transit Friendly” apartment complexes was calculated:

21 and View parking demand =	1.36
Brickstone parking demand =	1.40
2550 South Main parking demand =	<u>1.71</u>
	1.49 Average parking demand / occupied unit (3)

National Parking Rate Summary

Hales Engineering conducted a review of parking studies and city codes specific to Transit-Oriented Developments (TODs) across the country. Studies included locations in California, Oregon, Wisconsin, Minnesota, and Virginia. Parking rates at these sites ranged from 0 stalls / unit to 1.59 spaces / unit. Other cities offer a percent reduction for a TOD, ranging from 10 – 22.8 percent. Provo city code allows a parking rate of 0.70 stalls / student tenant south of BYU campus. Additionally, Provo city code states that in a TOD zone, only 50 percent of the parking that is typically required within the municipal code is needed at a TOD site. Parking for residential uses on a fifth and sixth story may be reduced to 25 percent of the parking otherwise required. Provo also does not require parking for the first 2,500 square feet of retail or restaurant uses located in a building that consists of at least 50 residential units in a TOD zone.

There are several locations in Portland, Oregon where developments were allowed a 0 stalls / unit parking rate. These developments rely solely on transit or bicycle travel. Numerous sites studied in California showed a demand of only 1.07 stalls / unit. The parking studies are summarized in the appendix.

Additional amenities may also be defined as a way to reduce parking. For example, supplying a car share or a bike share on site may allow for a parking reduction. Another more aggressive parking reduction strategy would be to unbundle parking from the unit. Unbundled parking is when a tenant pays a fee or “buys” a parking stall separate from the unit. This incentivizes tenants to not use parking, or attracts tenants that do not rely on cars for transportation.

Conclusions and Recommendations

Hales Engineering recommends that a parking rate of 1.4 stalls / unit be used for sites near transit (such as the streetcar in South Salt Lake). Parking counts collected throughout the Salt Lake Valley show that the parking demand at apartment complexes near transit stations are lower than a typical apartment complex. Additionally, studies throughout the Country confirm that parking demand near transit stations is lower.

Additionally, parking reductions could be considered for additional amenities. Some examples of amenities that could result in a reduction in required parking are shown in Table 1. A

reduction for proximity to transit is not included in the table because the “transit friendly” rate of 1.4 already accounts for a transit reduction.

As mentioned, unbundled parking is when a tenant pays a fee or “buys” a parking stall separate from the unit. It is recommended that this reduction only be given if 100 percent of the tenant parking is unbundled.

An additional amenity that was considered was compact car parking. However, it was determined that a compact car is still a vehicle and requires a parking stall, therefore, no reduction in parking is recommended.

Project controlled on-street parking is when a development is allowed to utilize and enforce on-street parking adjacent to the project. This may be permit parking only or something similar.

Table 1: Amenities and parking rate reductions

Possible Parking Rate Reductions	
Amenity	Recommended Reduction (stalls / unit)
Car Share (limit 1 car / 100 units)	0.1
Unbundled Parking (100%)	0.15
Bike Share	0.05
Bike Lockers / Storage	0.05
Development Supplied Transit Passes	0.25
Senior Housing	0.2
Student Housing (< 1/4 mile from campus)	0.1
Project Controlled On-street Parking	0.1
Hales Engineering, 2014	

Hales Engineering also recommends that adjacent on-street parking be provided at complexes where the lower parking rates are applied. This provides a factor of safety in case parking demands are higher than expected. It is also recommended that this table and the reductions applied become dynamic, so that as projects are constructed and after studies are completed, adjustments can be made to the reduction factors to reflect the actual field application. In addition, as areas in South Salt Lake continue to urbanize around the street car line, the younger generations who are less auto dependent, will likely cause a change in the future parking rates.

If you have any questions with this study please feel free to call us.

Appendix

DRAFT

National Parking Study Review

Location	Rate or Reduction	Source
California (26 sites)	Average supply of 1.41 spaces/unit	Willson, Richard. 2005. Parking Policy for Transit-Oriented Development: Lessons for Cities, Transit Agencies, and Developers. Journal of Public Transportation, Vol 8, No. 5.
East Bay Area, CA (16 sites)	Average supply of 1.59 spaces/unit. Average demand of 1.20 spaces/unit.	Cervero, R, Adkins, A, and Sullivan, C. 2009. Are TODs Over-Parked? UCTC Research Paper No. 882. University of California Transportation Center.
Portland, OR (15 sites)	Average supply of 1.52 spaces/unit. Average demand of 1.07 spaces/unit.	Cervero, R, Adkins, A, and Sullivan, C. 2009. Are TODs Over-Parked? UCTC Research Paper No. 882. University of California Transportation Center.
San Diego, CA	0.25 spaces/unit reduction for TOD	Tumlin, Jeffrey and Millard-Ball, Adam. 2006. Parking for Transit-Oriented Development. Institute of Transportation Engineers, Annual Meeting.
Milwaukee, WI	15% parking reduction for TOD	Tumlin, Jeffrey and Millard-Ball, Adam. 2006. Parking for Transit-Oriented Development. Institute of Transportation Engineers, Annual Meeting.
Minneapolis, MN	10% parking reduction for residential units in a TOD	Tumlin, Jeffrey and Millard-Ball, Adam. 2006. Parking for Transit-Oriented Development. Institute of Transportation Engineers, Annual Meeting.
Milpitas, CA	20% parking reduction for TOD	Tumlin, Jeffrey and Millard-Ball, Adam. 2006. Parking for Transit-Oriented Development. Institute of Transportation Engineers, Annual Meeting.
Arlington, VA	1.125 spaces/unit (at least 1.0 spaces/unit reserved and 0.125 spaces/unit shared) along BRT	Tumlin, Jeffrey and Millard-Ball, Adam. 2006. Parking for Transit-Oriented Development. Institute of Transportation Engineers, Annual Meeting.
Portland, OR	0.33 spaces/unit for TOD with more than 50 units	Portland City Code, Chapter 33.266
Various (17 sites)	Average supply of 1.21 spaces/unit (Philadelphia, Portland, San Francisco, and Washington DC). Also, 50% average reduction from ITE Trip Generation rates	Arrington, GB and Cervero, Robert. 2008. Effects of TOD on Housing, Parking, and Travel. TCRP Report 128.
Various (80 sites)	Average allowable parking reduction of 22.8% for TOD written into city zoning codes	Cervero, R, Adkins, A, and Sullivan, C. 2009. Are TODs Over-Parked? UCTC Research Paper No. 882. University of California Transportation Center.
San Francisco, CA	Average demand of 1.13 spaces/unit when parking is unbundled	FHWA. 2012. Contemporary Approaches to Parking Pricing: A Primer.
San Francisco, CA	Average demand of 0.76 spaces/unit when parking is unbundled and there is an on-site car sharing vehicle.	FHWA. 2012. Contemporary Approaches to Parking Pricing: A Primer.
Provo, UT	Parking requirements of 0.7 stalls per tenant near BYU. Only 50 percent of the parking that is typically required is needed at a TOD site. Parking for residential uses on a fifth and sixth story may be reduced to 25 percent of the parking otherwise required. Provo also does not require parking for the first 2,500 square feet of retail or restaurant uses located in a building that consists of at least 50 residential units in a TOD zone.	Provo City Code 14.23.12

To: Russell Harris
Duaine Rasmussen
Castlewood Development



From: John Dorny, PE
Daniel Thurgood

Date: May 21st, 2015

Subject: The Lofts Development Parking Review

Introduction

Thank you for allowing Horrocks to perform this parking review for you. Horrocks was established over 45 years ago and now has 300 employees in 9 offices in the west. Our headquarters in Pleasant Grove has over 200 employees; many of which are solely dedicated to traffic engineering. I have worked in both the private and public sectors during my 16-year career and have performed numerous parking studies of various sizes, including a complete downtown Reno, NV study that contained over 15,000 parking stalls and areas such as Newpark Development in Park City with 100's of stalls. Horrocks has learned that the growing west is getting more creative in balancing the use of land appropriately for development and open space/recreation. The new direction of parking and transit is to help encourage sustainability and to best utilize land.

Study Results

The purpose of this memorandum is to present our findings of a review of the parking stall demand for The Lofts development. The project is located at 3800 South and West Temple in Salt Lake City, Utah and is adjacent to the TRAX Meadowbrook train station. The project has been built or proposed in phases. Our review includes parking for both Phase I and II of the project. A summary of the development by dwelling unit type is shown in **Table 1**.

Table 1. Unity Type Summary

Unit Type	Phase I	Phase II	Total
Studio	19	16	35
1 Bedroom	43	33	76
2 Bedroom	18	9	27
Total Units	80	58	138
Parking Stalls	116	49	165

Table 1 above shows that there will be a total of 165 private parking stalls proposed with the project for a ratio of a proposed ratio of **1.20 parking stalls per unit**. Of the 165 stalls, six of them are reserved for disability parking.

The Institute of Transportation Engineers (ITE) *Parking Generation Manual* was used to estimate the parking demand for the project. The most applicable Land Use for the development was ITE Code 221

Low/Mid-Rise Apartment. The **Low/Mid-Rise Apartment** land use description in the *Parking Generation Manual* includes rental dwelling units located within the same building with at least three other dwelling units and have one to four levels. The average peak period parking demand for in urban areas is 1.20 vehicles per dwelling unit. The urban site data used in the database showed the average size of dwelling units was 1.9 bedrooms with an average parking supply ratio of 1.0 stalls per bedroom. Additionally, study sites with an average of less than 1.5 bedrooms per dwelling unit reports peak parking demand at 92 percent of the average peak parking demand which translates into a peak parking demand of 1.1 vehicles per dwelling unit. The average number of bedrooms per dwelling unit for the proposed development is 1.20, slightly over the minimum of 1.1 stalls per unit.

In order to ensure that the parking is used for the tenants of The Lofts only, a security/access gate will be installed. No visitor parking will be allowed within the parking area of the proposed site.

Additionally, each unit will have an assigned stall (or two stalls for some two bedroom units). Tenants will only be allowed to parking in their respective stalls.

Being part of a Transit Oriented Development, or TOD, the project further has the likelihood for a reduced parking need. The project is near a transit station and other uses that is not calculated in the *Parking Generation Manual*.

Summary of Results/Recommendations

- The proposed parking stall ratio per unit is 1.2 stall per unit.
- Using nationally accepted practices and standards, the ITE Trip Generation Manual estimates the demand for projects of this type and size to be 1.1 stalls per unit.
- Each unit will have an assigned stall (or two in some cases).
- A security gate will be installed to only allow current tenants to occupy the parking facilities. By only allowing tenant's access to the project parking area, this ensure that there will be no residual parking from adjacent facilities. This also ensures each tenant will have their dedicated parking spot open to them.
- The proximity of the transit station and being part of a TOD further reduces the need for parking that is not quantified in the Parking Generation Manual.
- Based on the TOD's Horrocks have worked on and the changing dynamics for stacked apartments, it is our opinion that this project will be successful based on the combination of residential unit size, the provided on-site parking, proximity to the train station, adjacent complementary uses, and restrictions via a gated access.

Land Use: 221 Low/Mid-Rise Apartment

Description

Low/mid-rise apartments are rental dwelling units located within the same building with at least three other dwelling units: for example, quadplexes and all types of apartment buildings. The study sites in this land use have one, two, three, or four levels. High-rise apartment (Land Use 222) is a related use.

Database Description

The database consisted of a mix of suburban and urban sites. Parking demand rates at the suburban sites differed from those at urban sites and, therefore, the data were analyzed separately.

- Average parking supply ratio: 1.4 parking spaces per dwelling unit (68 study sites). This ratio was the same at both the suburban and urban sites.
- Suburban site data: average size of the dwelling units at suburban study sites was 1.7 bedrooms, and the average parking supply ratio was 0.9 parking spaces per bedroom (three study sites).
- Urban site data: average size of the dwelling units was 1.9 bedrooms with an average parking supply ratio of 1.0 space per bedroom (11 study sites).

Saturday parking demand data were only provided at two suburban sites. One site with 1,236 dwelling units had a parking demand ratio of 1.33 vehicles per dwelling unit based on a single hourly count between 10:00 and 11:00 p.m. The other site with 55 dwelling units had a parking demand ratio of 0.92 vehicles per dwelling unit based on counts between the hours of 12:00 and 5:00 a.m.

Sunday parking demand data were only provided at two urban sites. One site with 15 dwelling units was counted during consecutive hours between 1:00 p.m. and 5:00 a.m. The peak parking demand ratio at this site was 1.00 vehicle per dwelling unit. The peak parking demand occurred between 12:00 and 5:00 a.m. The other site with 438 dwelling units had a parking demand ratio of 1.10 vehicles per dwelling unit based on a single hourly count between 11:00 p.m. and 12:00 a.m.

Four of the urban sites were identified as affordable housing.

Several of the suburban study sites provided data regarding the number of bedrooms in the apartment complex. Although these data represented only a subset of the complete database for this land use, they demonstrated a correlation between number of bedrooms and peak parking demand. Study sites with an average of less than 1.5 bedrooms per dwelling unit in the apartment complex reported peak parking demand at 92 percent of the average peak parking demand for all study sites with bedroom data. Study sites with less than 2.0 but greater than or equal to 1.5 bedrooms per dwelling unit reported peak parking demand at 98 percent of the average. Study sites with an average of 2.0 or greater bedrooms per dwelling unit reported peak parking demand at 13 percent greater than the average.

For the urban study sites, the parking demand data consisted of single or discontinuous hourly counts and therefore a time-of-day distribution was not produced. The following table presents a time-of-day distribution of parking demand at the suburban study sites.

Land Use: 221 Low/Mid-Rise Apartment

Based on Vehicles per Dwelling Unit (Suburban)	Weekday	
	Percent of Peak Period	Number of Data Points*
Hour Beginning		
12:00–4:00 a.m.	100	14
5:00 a.m.	96	14
6:00 a.m.	92	14
7:00 a.m.	74	1
8:00 a.m.	64	1
9:00 a.m.	–	0
10:00 a.m.	–	0
11:00 a.m.	–	0
12:00 p.m.	–	0
1:00 p.m.	–	0
2:00 p.m.	–	0
3:00 p.m.	–	0
4:00 p.m.	44	1
5:00 p.m.	59	1
6:00 p.m.	69	1
7:00 p.m.	66	9
8:00 p.m.	75	9
9:00 p.m.	77	10
10:00 p.m.	92	14
11:00 p.m.	94	14

* Subset of database

Parking studies of apartments should attempt to obtain information on occupancy rate and on the mix of apartment sizes (in other words, number of bedrooms per apartment and number of units in the complex). Future parking studies should also indicate the number of levels contained in the apartment building.

Additional Data

- Apartment occupancy can affect parking demand ratio. In the United States, successful apartment complexes commonly have a vacancy rate between 5 and 10 percent.¹

Study Sites/Years

Canada:

Central City, Not Downtown:
Brooks, AB (1998)

Puerto Rico:

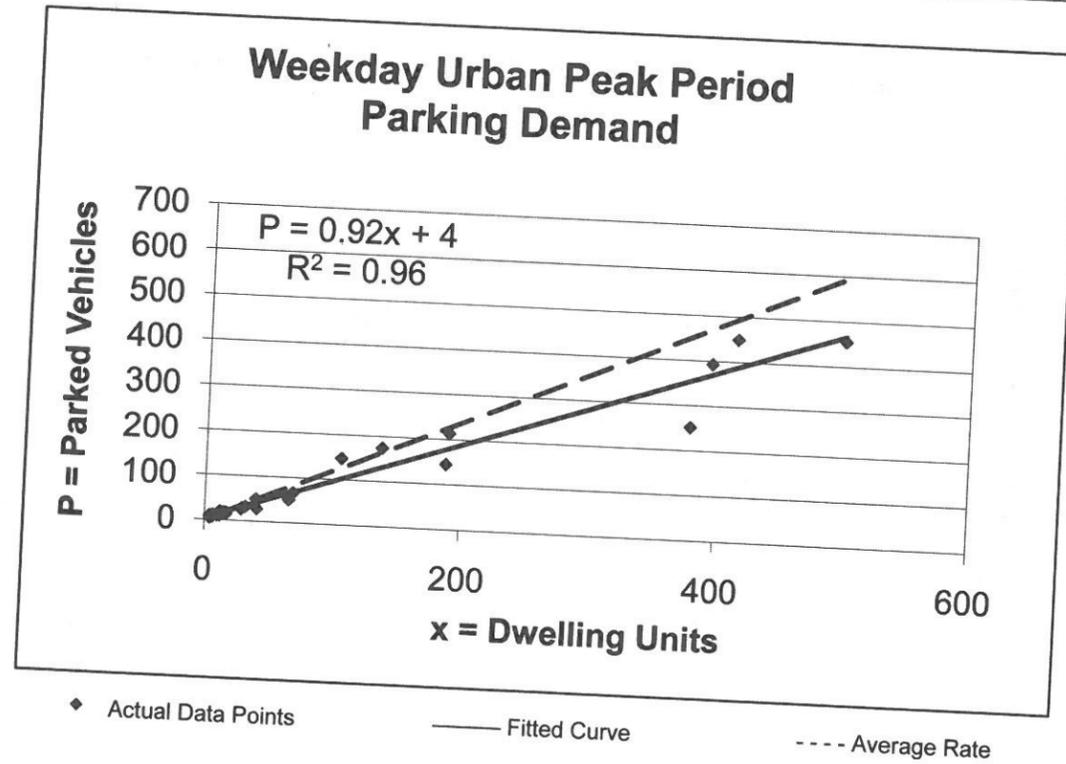
Central City, Not Downtown:
Mayaguez, PR (2007)

¹ Rental and Homeowner Vacancy Rates for the United States: 1960 and 1965 to 2009, U.S. Census Bureau. <http://www.census.gov/hhes/www/housing/hvs/qtr309/q309tab1.html>

Land Use: 221 Low/Mid-Rise Apartment

Average Peak Period Parking Demand vs. Dwelling Units
On a: Weekday
Location: Urban

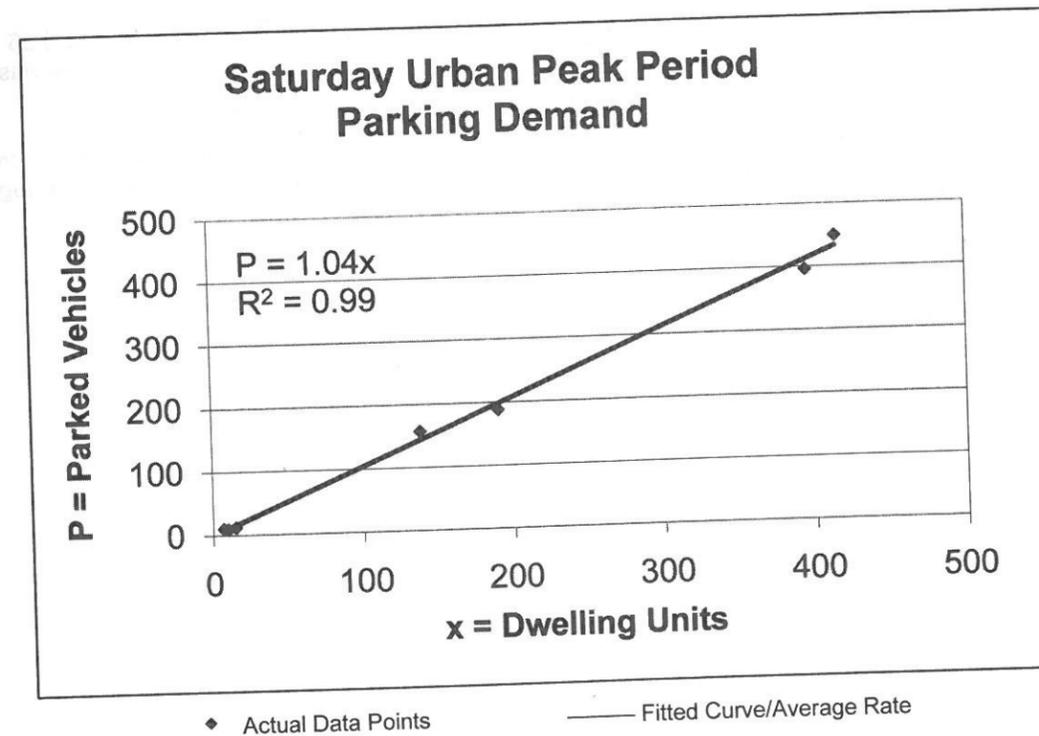
Statistic	Peak Period Demand
Peak Period	10:00 p.m.–5:00 a.m.
Number of Study Sites	40
Average Size of Study Sites	70 dwelling units
Average Peak Period Parking Demand	1.20 vehicles per dwelling unit
Standard Deviation	0.42
Coefficient of Variation	35%
95% Confidence Interval	1.07–1.33 vehicles per dwelling unit
Range	0.66–2.50 vehicles per dwelling unit
85th Percentile	1.61 vehicles per dwelling unit
33rd Percentile	0.93 vehicles per dwelling unit



Land Use: 221 Low/Mid-Rise Apartment

Average Peak Period Parking Demand vs. Dwelling Units
On a: Saturday
Location: Urban

Statistic	Peak Period Demand
Peak Period	No clear peak period emerged from the data; likely to fall between 10:00 p.m. and 6:00 a.m.
Number of Study Sites	8
Average Size of Study Sites	147 dwelling units
Average Peak Period Parking Demand	1.03 vehicles per dwelling unit
Standard Deviation	0.19
Coefficient of Variation	19%
Range	0.80–1.43 vehicles per dwelling unit
85th Percentile	1.14 vehicles per dwelling unit
33rd Percentile	0.93 vehicles per dwelling unit





June 2, 2015

To the City of South Salt Lake:

We have been contracted to manage and lease the Lofts at Meadowbrook Station. We have reviewed the site plan, parking and living quarters. Based on our analysis, we believe providing 1 parking stall for every bedroom at the community works well. This is a normal urban development's parking ratio. Since this site is a Transit Oriented Development, we know it attracts residents who already use public transportation, and other non-automobile resources for transportation. Some won't have an automobile at all.

We currently manage sites with similar parking ratios that have been successful in meeting the resident's parking needs. The Residences at Fairbourne Station in West Valley is on a Trax stop (similar to Lofts at Meadowbrook Station) and has 1.15% parking ratio. Dry Creek at East Village of Sandy is also on a Trax stop (similar to Lofts at Meadowbrook Station) and has multiple residents living there without an automobile.

Managing the parking will be necessary in making this parking ratio work well.

- At the Lofts at Meadowbrook Station, we plan to assign parking stalls as part of each lease. For those that do not have an automobile, they will not be "automatically assigned" a spot that will sit vacant month over month. Instead, we will be managing the supply and demand of parking. We believe since the site is mostly Studio and One-Bedroom apartment homes, with a limited amount of Two-Bedrooms, we will have enough supply for our demand.
- Our gated access will prevent unwelcomed automobiles from using our parking spaces.
- We do not allow vehicles to be "stored" onsite, so no space will be under-utilized.

We believe the current design of the development and parking will work well or this project.

Please feel free to contact me with any further questions you have.

Travis Baker, Regional Manager

Alliance Residential Company