



**MEMORANDUM**

To: Gary Fuller  
City of Falls Church

Cc: Patrick Kearney  
Rushmark Properties LLC

From: Chad Baird  
Cheryl Sharp

Date: January 28, 2013

Subject: 301 W. Broad Street – Parking Assessment

The proposed 301 W. Broad Street development is to consist of a 60,000 square foot supermarket, 282 apartments and 3,470 square feet of ground-floor retail. The proposed development will be served by four site driveways. Access to the proposed development will be provided via two partial-access entrances along W. Broad Street, the westernmost of which will be a one-way right-out only access used exclusively for loading operations, trash collection, and service vehicle access. In addition, two full-access site entrances are proposed along W. Annandale Road. The site will be served by approximately 573 parking spaces within a three-level below-grade parking garage. Of those parking spaces, 368 will be dedicated to residential use and 205 for commercial use. The P1 level of the garage will house the 205 commercial parking spaces and will be accessed from both W. Broad Street and W. Annandale Road. Below P1, the P2 and P3 levels will contain 226 and 142 residential parking spaces; respectively, which will be accessed via W. Annandale Road. The retail and residential levels are disconnected and vehicles will not be able to travel internally between these levels. This memorandum supports the proposed amount of parking and aims to explain why the amount is both achievable and desirable.

**PARKING SUPPLY**

**Zoning Ordinance Requirement**

The parking requirement per Section 48-1004 of the City of Falls Church Zoning Ordinance is 1 space for every 250 square feet (1/250sf) of shopping center gross floor area. According to the *Zoning Code*, the parking requirements for multi-family residences are 1 parking space per efficiency unit, 1.5 parking spaces per each one bedroom unit, and 2 parking spaces for each two bedroom or larger unit. Since the site’s 282 proposed apartments breakdown to 38% (106 DU) two bedroom, 56% (158 DU) one bedroom and 6% efficiency (18 DU), the residential portion of this development requires approximately 467 spaces. With the City’s zoning ordinance requirements, the proposed development would require 254 spaces for the retail uses and 467 spaces for the residential use, for a total of 721 parking spaces.

However, another method of evaluating the City’s parking requirements for the retail portion of the site is to breakdown the building’s footprint further in order to isolate the retail portion of the grocery store from the storage, mechanical, and other uses found throughout the store. This breakdown is summarized in Table 1 and shows that based on the City of Falls Church’s parking rates, the site’s retail space requires 230 parking spaces, or 195 parking spaces when applying a 15% retail

internal capture reduction. This internal capture reduction applied to the retail parking demand calculations is used to account for sharing parking among the site’s retail uses; e.g. patrons attracted to the pharmacy, who also would be shopping at the deli, grocery, etc., and vice versa. These are both less than the 254 parking spaces required when calculating the parking requirements of the 60,000 square foot supermarket and 3,470 square feet of ground-floor retail based on assuming them as one shopping center, and the required parking spaces calculated using this method is much more consistent with the Institute of Transportation Engineers (ITE) parking demand analysis presented later.

**Table 1: Retail Parking Supply Breakdown**

Mix of Uses	Square Footage	Falls Church Parking Use Type	Parking Ratio	# of Spaces Required
Back of House/Freezers/Mechanical	11,200	Utility (Storage)	1/1000sf	12
Office/Staff	2,000	Professional Office	1/250sf	8
Pharmacy	600	Drugs	1/200sf	3
Deli	2,600	Food (Groceries, Meats)	1/200sf	13
Shelving/Display	9,000	Wholesale, Inventory, Sales, Storage	1/1000sf	9
Elevators/Escalators	800	N/A	N/A	0
Checkouts	560	Sales	1/1000sf	1
Retail (includes the 3,470 SF ground-floor retail space)	36,710	General Retail	1/200sf	184
<b>Total</b>	<b>63,470</b>			<b>230</b>
<i>Internal Retail Synergy Parking Reduction</i>	<i>15%</i>			<i>-35</i>
<b>Total w/ Internal Reduction</b>				<b>195</b>
Proposed 301 W. Broad Street	63,470		1/310sf	205
<b>Comparison</b>				<b>10</b>

**Proposed Supply**

The proposed development allows 573 parking spaces for the 60,000 square foot supermarket, 282 apartments and 3,470 square feet of retail. Of those 573 parking spaces, 368 will be for residential use and 205 for commercial use. The proposed number of spaces provided for the retail use results in a parking rate of 1/310sf. The effective parking rate for the residential use is 1.3/DU.

**PARKING DEMAND**

The market demand for parking has been studied by the applicant of this project to determine acceptable parking ratios for mixed-use developments.

**Local Jurisdictions**

Table 2 shows the parking ratios used in other Northern Virginia jurisdictions, both urban and suburban in nature, and the number of required spaces if the subject development were in that jurisdiction. According to Table 2, local jurisdictions that are more urban with higher opportunity for alternative modes of transportation (e.g. walking, biking, working from home, & transit) have lower parking rates than their suburban counterparts.

**Table 2: Local Jurisdiction Retail Parking Ratios**

Jurisdiction	Retail Use			Residential Use		
	Parking Ratio	# of Spaces	Comparison (Proposed minus Code)	Parking Ratio	# of Spaces	Comparison (Proposed minus Code)
Alexandria	1/230sf	276	-71	1.3/1-Bed; 1.75/2-Bed; 2.2/3-Bed or higher	415	-47
Arlington County	1/250sf	254	-49	1.125/DU + 1/DU after first 200 DUs	307	61
District of Columbia	1/750sf	85	120	1/DU	282	86
Fairfax County (General)	4.3/1000sf	273	-68	1.6/DU	452	-84
Fairfax County (Tysons)	75% x 4.3/1000sf	205	0	1.1-1.4/1-Bed; 1.35-1.7/2-Bed; 1.6-2.0/3-Bed	337-427	Within Range
Falls Church	1/250sf	254	-49	1/Eff.-Bed; 1.5/1-Bed; 2/2-Bed or higher	467	-99
Loudoun County	4/1000sf	254	-49	1.5/1-Bed; 2/2-Bed or higher	476	-108
Proposed 301 W. Broad	1/310sf	205	--	1.3/DU	368	--

**Other Developments - Parking Rate Adjustment**

The nearby new development named Falls Church Gateway, located at 500 N. Washington Street, was a special exception/rezoning application approved with a residential parking ratio of 1.31 spaces per unit (subject to Planning Commission approval at site plan). The 1.31 spaces per unit are broken down to approximately 1.2 spaces per one bedroom unit and 1.55 spaces per two bedroom unit.

**Industry Standards**

A parking demand assessment was prepared for the proposed 301 W. Broad Street redevelopment based on national parking demand rates from the ITE Parking Generation, 4<sup>th</sup> Edition. The ITE manual is compiled of research, data, and experiences of transportation engineering and planning professionals, and is the industry’s leading resource for determining parking demand. The results of the ITE parking demand analysis are shown in Table 3. The rates used for general retail represent the weekday (non-Friday) demand during December, the busiest shopping period of the year.

**Table 3: ITE Parking Analysis**

Land Use	Land Use Code	Size	Average Parking Rate	Total
Urban Supermarket	850	60.0 kSF	2.27 sp / 1,000 sf	137
Retail	820	3.470 kSF	3.76 sp / 1,000 sf	14
High Rise Apts	222	282 DUs	1.37 sp / DU	387
<b>Total Parking Demand</b>				<b>538</b>
<i>Parking Supply</i>				<i>573</i>
<i>Difference (Supply minus Demand)</i>				<i>+35</i>
<i>% Difference</i>				<i>+6.5%</i>

Based on the ITE Parking Generation manual, the proposed mixed-use development will have a parking demand of 538 spaces during the weekday peak parking period. The site’s 573-space parking supply will be adequate to meet the proposed demand. The method of calculating the City’s parking requirements for the site’s retail uses by breaking down the building’s footprint further in order to isolate the retail portion of the grocery store from the storage, mechanical, and other uses found throughout the store yields a parking demand much more consistent, although still much greater than, with ITE’s estimate.

**Shared Parking**

Though this is a mixed-use site, the Mixed Use Redevelopment (MUR) shared parking methodology employed by the City does not recognize the synergy between residential and retail uses, as both uses are required to park at 100% occupancy on a Saturday. Therefore, no reduction has been assumed for hourly or daily variations in peak parking demand.

The Traffic Impact Study (TIS) for the site notes an internal capture rate of 5% in the morning peak, 10% in the afternoon and Saturday peaks, and 15% over an entire weekday for trips generated by the development to account for synergy between the residential and retail uses. However, as the levels of the garage are separate, a reduction in parking due to internal capture was not taken.

**Transportation Demand Management**

The site will be subject to a Transportation Demand Management (TDM) program, of which certain aspects will have a direct impact on the number of parking spaces required for the site. TDM measures have many components that are specifically tailored to promote travel modes that have the least impact on the transportation network and other resources, such as the environment, and discourage those that have the greatest impact. TDM plans for residential have more impact on vehicle trips and less on parking, as residents leave their vehicles parked in the garage.

Parking management plan strategies that affect the retail uses, such as an adjustment to lower the parking ratio, may encourage neighborhood residents to walk to the store instead of drive. This would reduce trips and decrease the number of parking spaces demanded by the retail. However, since the Applicant cannot control how future patrons will arrive to the site, no parking reductions have been assumed to account for TDM measures.

**Similar Harris Teeter Locations**

There are currently other Harris Teeters in the Washington D.C. metropolitan area that feature exclusively structured parking, i.e. no surface parking, similar to the proposed store. The parking ratios for these stores are summarized in Table 4 below. The parking ratio proposed for the site’s retail uses is consistent with the parking ratio used for these nearby Harris Teeter stores that have successfully opened within the past couple of years (unless otherwise noted).

**Table 4: Similar Harris Teeter Parking Ratios**

Harris Teeter Store Location	Distance to Metro	Retail Square Footage	Parking Ratio	# of Spaces Provided
<u>The Citadel in Adams Morgan</u> - 1631 Kalorama Rd NW Suite 100, Washington, DC 20009	3,600'	38,477	1/308sf	125
<u>Jenkins Row</u> - East Capitol Hill - 1350 Potomac Ave SE, Washington, DC 20003	565'	52,888	1/282sf	187
<u>Constitution Square</u> - NoMa - 1201 1st St NE, Washington, DC 20002	625'	50,000	1/333sf	150
<u>The Village at Shirlington</u> - 4250 Campbell Ave, Arlington, VA 22206	18,400'	29,236	1/280sf	104
<u>Old Town North Alexandria</u> - 500 Madison St, Alexandria, VA 22314 (under construction)	2,700'	52,000	1/347sf	150
<u>Tysons Corner</u> - 8200 Crestwood Heights Drive, McLean, VA 22102	4,300'	69,561	1/316sf	220
<u>Proposed Store</u> - 301 W. Broad Street, Falls Church, VA 22046	6,430'	63,470	1/310sf	205
<b>Weighted Average</b>			<b>1/314sf</b>	

Note: All listed stores have multi-family residential units above the store except for The Citadel location.

## SUMMARY

The proposed 301 W. Broad Street development will be served by approximately 573 parking spaces within a three-level below-grade parking garage. Of those parking spaces, 368 will be dedicated to residential use and 205 for commercial use. The P1 level of the garage will house the 205 commercial parking spaces and will be accessed from both W. Broad Street and W. Annandale Road. Below P1, the P2 and P3 levels will contain 226 and 142 residential parking spaces, respectively, which will be accessed via W. Annandale Road. The retail and residential levels are disconnected and vehicles will not be able to travel internally between these levels.

The analysis contained herein reviewed the parking demand based on the City’s current requirements, ITE rates, and internal synergy of land uses, with results presented in Table 5. Finally, using the proposed urban parking rate of 1/310sf retail use and 1.3/DU, similar to other developments in the area and local jurisdictions with successful parking rates, the parking demand will be met with the parking spaces provided.

**Table 5: Parking Summary**

	Based on City Code Rates	Based on ITE Rates
<b><i>Parking Demand</i></b>		
Retail and Supermarket	254	151
Residential	467	387
<b>Total Parking Demand</b>	<b>721</b>	<b>538</b>
<b><i>Parking Supply</i></b>		
Provided Retail Spaces	205	205
Provided Residential Spaces	368	368
<b>Total Parking Supply</b>	<b>573</b>	<b>573</b>
<b>Comparison</b>	<b>-148 (-21%)</b>	<b>+35 (+6%)</b>

For the reasons contained above, the proposed parking rates of 1.3/DU and 1/310sf retail are proposed for the 301 W. Broad Street development and will accommodate the site’s anticipated parking demand.

## **APPENDIX**

## **APPENDIX A – OTHER JURISDICTION RETAIL/RESIDENTIAL RATES**

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## Sec. 8-200 - General parking regulations.

(A)

*Schedule of requirements.* The following number of parking spaces shall be provided for each use listed. In the case of any use not listed in this [section 8-200\(A\)](#), the requirements of the most similar listed use shall apply. The requirements of this [section 8-200\(A\)](#) may be reduced when special zoning allows parking reductions and the required approvals of the director and the director of transportation and environmental services have been obtained and the conditions of said approval are complied with.

(1)

*Single-family detached, two-family and row or townhouse dwellings:* two (2.0) spaces per dwelling unit for single-family detached, two-family, and townhouse dwellings.

(2)

*Multifamily dwellings.*

(a)

One and three-tenths (1.30) spaces for each unit up to and including one bedroom unit.

(b)

One and three quarters (1.75) spaces for each two bedroom unit;

(c)

Two and two-tenths (2.20) spaces for each three bedroom unit or larger.

(3)

*Boardinghouses and rooming houses:* one space for each four guest rooms; provided, that the number of off-street parking spaces for any rooming house or boarding house authorized by a special use permit granted by city council after December 12, 1987, shall be determined by council when granting, and shall be as set forth in, the special use permit.

(4)

*Tourist homes:* one space for each two guest rooms.

(5)

*Hotels or motels:* one space for each guest room or dwelling unit except that for buildings over three stories in height, one space for each two guest rooms or dwelling units; provided, that on sites for which preliminary site plans have been approved after July 6, 1966, one space for each guest room or dwelling unit plus one employee parking space for each 15 guest rooms or dwelling units or major fraction thereof. See also [section 8-200\(B\)\(21\)](#).

(6)

*Hospitals, nursing homes, sanitariums and convalescent homes:* one space for each two patient beds.

(7)

*Community buildings, fraternal organizations, civic clubs, lodges, museums, libraries and similar uses:* one space for each 200 square feet of floor area.

(8)

*Theaters, auditoriums, assembly halls and restaurants:* one space for each four seats except that for restaurants used to serve employees, but not the general public, of a multi-story office building of four stories or more in height and located entirely within such building with no direct ingress or egress to the restaurant from the exterior of the building except those required for service and emergency purposes and without any sign identifying such restaurant from the exterior of the restaurant or building: one space for each eight seats. Provided that this exception shall be permitted only with a special use permit.

(9)

*Clinics, medical or dental:* one space for each 200 square feet of floor area.

(10)

*Churches:* one space for each five seats in the principal auditorium or one space for each ten classroom seats, whichever is greater.

(11)

*Schools, elementary:* one space for each 25 classroom seats. *Schools, high:* one space for each ten classroom seats. *Schools, day nursery or nursery:* two spaces for each classroom. *Schools, commercial, including, but not limited to, secretarial, conservatories, art and craft and the like:* one space for each two seats.

(12)

*Automobile service stations:* one space for each gasoline pump.

(13)

*Amusement enterprises (indoor):* one space for each 200 square feet of floor area on all floors.

(14)

*Amusement enterprises (outdoor):* one space for each 400 square feet of lot area.

(15)

*Homes for the elderly:* one space per each two units plus one space for each two guest rooms, except for homes for the low income elderly, one space per each four units plus one space for each four guest rooms only with a special use permit.

(16)

*Retail uses:* the required number of parking spaces shall be determined by Table A.

(17)

*Nonretail uses, including, but not limited to, personal service shops, equipment and repair businesses and the like:* one space for each 400 square feet of floor area.

Retail uses: the required number of parking spaces shall be determined by the following table:

Total Floor Area in Square Feet per	Required Number of Parking Spaces per Given Square Feet of Floor Area
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- (10) *Church sanctuaries*: One (1) space for each five (5) sanctuary seats. Notwithstanding other sections of this ordinance, required parking for churches may be located on a parking lot which is accessory to another principal use which is not open or operating on the days of the week on which the church sanctuaries are regularly used if said lot is either located within six hundred (600) feet by the shortest route of effective pedestrian access, or within three-quarters (3/4) of one (1) mile by the shortest route of effective vehicular access, and regular and frequent shuttle bus service is provided between the lot and the church during any hours when the use for which the lot is provided is not open and operating and the lot is open to persons attending meetings at the church.
  - (11) *Hospitals, rest homes, nursing homes, sanitariums, convalescent homes and institutions*: One (1) space for each four (4) beds, plus one (1) space for each two (2) employees (other than staff doctors), plus one (1) space for each doctor assigned to the staff.
  - (12) *Libraries, art galleries, and museums, private and public*: One (1) space for each five hundred (500) square feet of floor area.
  - (13) *Intermediate care facilities*: One (1) space for each three (3) dwelling units, plus one (1) space per three (3) employees, plus one (1) space per doctor.
- b. Residential and Housing Uses:
- (1) (a) *One- and two-family dwellings, other than those one- and two-family dwellings fronting a cul-de-sac*: One (1) space for each dwelling unit.
  - (b) *One- and two-family dwellings fronting a cul-de-sac*: Two (2) spaces for each dwelling unit, improved in accordance with Section 33.B.1.
  - (c) *Town houses and stacked one-family dwellings*: Two (2) spaces for each dwelling unit, and one-fifth (1/5) additional parking spaces per dwelling unit for visitors. Additional parking spaces for visitors shall be located in a clearly marked and designated common area available to all visitors. Provided, however, that visitor parking spaces may be included within the required two (2) parking spaces per dwelling unit when at least fifty (50) percent of parking spaces needed to meet the requirement are located in a common area and are available for either residents or visitors.
  - (d) All of the above parking spaces shall be constructed and maintained in accordance with Section 33.A.
  - (2) *Dwellings, other than one- and two-family*: One and one-eighth (1 1/8) spaces for each of the first two hundred (200) dwelling units in any structure and one (1) space for each additional dwelling unit.
  - (3) *Establishments with sleeping accommodations other than dwellings, including tourist courts, tourist homes, lodging or rooming houses, motels and motor hotels*: One (1) space for each dwelling unit or guest room.
- c. Retail and Service Uses: One (1) space for each two hundred fifty (250) square feet of floor area on the first floor in a building, plus one (1) space for each three hundred (300) square feet of floor area located elsewhere in the building, except:
- (1) *Vehicle service establishment and vehicle body shop*: Three (3) standing spaces for each wash rack, lubrication rack, repair bay or similar facility for the servicing or repair of vehicles, not including said rack or bay as a space, plus one (1) parking space for each employee.
  - (2) *Bowling alley*: Four (4) spaces for each alley.
  - (3) *Car wash*: Twenty (20) standing spaces for waiting vehicles for each wash rack, plus one (1) parking space for each two (2) employees.
  - (4) *Drive-in banking and similar "drive-in service" establishments*: Five (5) standing spaces for each teller or customer window.
  - (5) *Furniture and appliance stores, furniture repair shops*: One (1) space for each four hundred (400) square feet of floor area.

- c. Over Six Thousand (6,000) Square Feet of Space for Offices and Personal Services Establishments, Including Prescription Filling, Out-patient Clinics and Schools, Not Adaptable for the Use of Retail Purposes: One (1) loading space.
- d. Over Three Thousand (3,000) Square Feet of Floor Area Designed or Adaptable for Retail Business Purposes: One (1) loading space; one (1) additional space for more than fifteen thousand (15,000) square feet; one (1) additional space for more than fifty thousand (50,000) square feet; and one (1) additional space for each one hundred thousand (100,000) square feet of such floor area.
- e. For all Wholesale and Manufacturing Uses: One (1) loading space; one (1) additional space for more than fifteen thousand (15,000) square feet of floor area and one (1) additional space for each fifty thousand (50,000) square feet of such floor area.

(Ord. No. 83-9, 3-19-83; Ord. No. 84-37, 11-17-84; Ord. No. 86-9, 5-17-86; Ord. No. 86-17, 6-28-86; Ord. No. 86-30, 6-1-87; Ord. No. 87-11, 5-2-87; Ord. No. 93-19, 10-9-93; Ord. No. 94-27, 11-19-94; Ord. No. 97-10, 5-17-97)

<p>gross floor area of the entire structure</p> <p><b><u>Optical Transmission Nodes:</u></b></p> <p>All Districts</p> <p><b><u>Retail or service establishment except gasoline service station and repair garage:</u></b></p> <p>C-1, C-2-A, C-3-A, C-M-1, M</p> <p>W, CR, C-2-B, C-2-C, C-3-B, C-3-C, C-M-2, C-M-3</p> <p>C-4</p> <p>C-5 (PAD)</p> <p><b><u>Gasoline service station:</u></b></p> <p>All districts</p> <p><b><u>Repair garage:</u></b></p> <p>All districts</p>	<p>1 for each 3,000 ft.2 of gross floor area</p> <p>In excess of 3,000 ft.2, 1 for each additional 300 ft.2 of gross floor area and cellar floor area</p> <p>In excess of 3,000 ft.2, 1 for each additional 750 ft.2 of gross floor area</p> <p>In excess of 30,000 ft.2, 1 for each additional 3,000 ft.2 of gross floor area</p> <p>No requirement</p> <p>1 for each 300 ft.2 of gross floor area, excluding any pump island canopy and any kiosk adjacent to the pumps used exclusively as an attendant's shelter</p> <p>4 plus 1 for each 200 ft.2 of gross floor area</p>
<p><b><u>Ball fields:</u></b></p> <p>All districts</p> <p><b><u>Basketball courts:</u></b></p> <p>All districts</p>	<p>5 spaces</p> <p>5 spaces</p>

<p><b><u>Apartment house or multiple dwelling:</u></b></p> <p>R-5-A, C-1</p> <p>R-5-B, C-2-A, C-3-A</p> <p>R-4, R-5-C, R-5-D, C-2-B, W, CR</p> <p>R-5-E, SP, C-2-C, C-3-B, C-3-C, C-4, C-5(PAD)</p> <p><b><u>Community-based residential facility:</u></b></p> <p>All districts other than C-3, C-4, C-5 (PAD):</p> <p>1 to 8 persons housed</p> <p>9 to 15 persons housed</p> <p>16 or more persons housed</p> <p>C-3, C-4, C-5 Districts</p> <p><b><u>Dormitory, sorority, or fraternity house not approved as part of a campus plan:</u></b></p> <p>All districts</p> <p><b><u>Flat:</u></b></p> <p>R-5-A</p> <p>All other districts</p> <p><b><u>One-family dwelling:</u></b></p> <p>All districts</p> <p><b><u>Publicly assisted housing, reserved for the elderly and/or handicapped:</u></b></p> <p>All districts</p> <p><b><u>Rooming or boarding house:</u></b></p> <p>All districts</p>	<p>1 for each dwelling unit</p> <p>1 for each 2 dwelling units</p> <p>1 for each 3 dwelling units</p> <p>1 for each 4 dwelling units</p> <p>1</p> <p>2</p> <p>As determined by the BZA</p> <p>1 for each 10 persons housed</p> <p>1 for each 5 beds</p> <p>1 for each dwelling unit</p> <p>1 for each 2 dwelling units</p> <p>1 for each dwelling unit</p> <p>1 for each 6 dwelling units</p> <p>1 plus 1 for each 5 rooming units</p>
<p><b><u>Child/Elderly Development Center:</u></b></p> <p>All districts</p>	<p>1 for each 4 teachers and other employees</p>

## FAIRFAX COUNTY ZONING ORDINANCE

conjunction with a rezoning and/or special exception application. The fee for a parking reduction set forth in Sect. 17-109 shall not be applicable.

### **11-103 Minimum Required Spaces for Residential and Lodging Uses**

Minimum off-street parking spaces accessory to the uses hereinafter designated shall be provided as follows:

1. Bed and Breakfast:

Two (2) spaces per single family dwelling, provided that only one (1) such space must have convenient access to a street, plus one (1) space per guest room in the bed and breakfast

2. Dormitory, Fraternity or Sorority House, or Other Residence Hall Located Off Campus:

One (1) space per two (2) sleeping accommodations based on the occupancy load of the building, plus one (1) additional space for each housemother, manager or employee

3. Dwelling, Single Family Detached:

Two (2) spaces per unit for lots with frontage on a public street and three (3) spaces per unit for lots with frontage on a private street, provided that only one (1) such space must have convenient access to a street

4. Dwelling, Single Family Attached:

Two and seven-tenths (2.7) spaces per unit, provided, however, that only one (1) such space must have convenient access to the street

5. Dwelling, Multiple Family:

One and six-tenths (1.6) spaces per unit

6. Hotel, Motel:

One (1) space per rental unit, plus four (4) spaces per fifty (50) rental units, plus such spaces as are required for eating establishments, assembly rooms and affiliated facilities as determined by the Director

7. Independent Living Facility

One (1) space per four (4) dwelling units, plus one (1) space per one (1) employee or staff member on the major shift, or such greater number as the Board may require

8. Mobile Home:

One and one-half (1.5) spaces per unit

FAIRFAX COUNTY ZONING ORDINANCE

Two (2) spaces per service bay, plus one (1) space per employee, but never less than five (5) spaces

22. Service Station/Mini-Mart, Combination Service Station and Quick-Service Food Store:

Two (2) spaces per service bay, plus six and one half (6.5) spaces per 1000 square feet of gross floor area devoted to the retail use

23. Shopping Center:

- A. 100,000 square feet of gross floor area or less: Four and three-tenths (4.3) spaces per 1000 square feet of gross floor area
- B. Greater than 100,000 but equal to or less than 400,000 square feet of gross floor area: Four (4) spaces per 1000 square feet of gross floor area
- C. Greater than 400,000 but less than 1,000,000 square feet of gross floor area: Four and eight tenths (4.8) spaces per 1000 square feet of gross floor area
- D. 1,000,000 square feet of gross floor area or more: Four (4) spaces per 1000 square feet of gross floor area

For purposes of determining whether Par. A, B, C or D above is applicable, the size of the shopping center shall be based on the definition of gross floor area as set forth in Article 20, and shall be inclusive of any gross floor area devoted to offices, eating establishments and hotels. The gross floor area calculation as qualified in Sect. 102 above shall then be used to determine the required number of parking spaces.

The off-street parking requirement set forth above shall be applicable to all uses in a shopping center, except that the area occupied by offices, eating establishments and hotels shall be parked in accordance with the applicable standards for such uses as set forth in this Section. For shopping centers subject to Par. A, B or C above, the area occupied by theaters shall be parked in accordance with the applicable shopping center requirement, provided that for theaters with more than 2000 seats, an additional three-tenths (0.3) space shall be provided for each seat above 2000 seats. For shopping centers subject to Par. D above, the area occupied by theaters shall be parked in accordance with the applicable shopping center requirement, provided that for theaters with more than 750 seats, an additional six (6) spaces shall be provided for each 100 seats above 750 seats.

In addition, for all shopping centers, stacking spaces as required by this Part shall be provided for those uses which have drive-in facilities.

24. Swimming Pool, Commercial:

One (1) space per four (4) persons lawfully permitted in the pool at one time, plus one (1) space per employee

25. Theatre, Auditorium or Stadium:

Three-tenths (0.3) space per seat or similar vantage accommodation

26. Vehicle Light Service Establishment:

- If sufficient off-site parking is not available, additional on-site parking may be provided on condition that TDM goals are not jeopardized and that once all phases are constructed, parking ratios for the total development will not exceed the maximum values in Table 6.
- Parking in excess of the parking ratios in Table 6 should be available to the public at appropriate parking fees where possible.

In Non-TOD Districts and for residential development within TOD Districts, a parking plan can be submitted along with a development application that justifies parking levels below the minimums indicated in Table 6. The parking plan should indicate the techniques to be applied to justify a lower level of parking.

**Table 6**  
**Parking Ratios for Tysons Corner**

Use	Parking Spaces Per Unit or Spaces Per 1,000 sq. ft.								
	Previous (2009)	< 1/8 mile Metro Station		1/8 - 1/4 mile Metro Station		1/4 - 1/2 mile Metro Station		Non-TOD	
	Min.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Townhouse	2.7	1.75	2.2	1.75	2.2	2.0	2.5	2.0	2.7
Multifamily									
0-1 bedroom	1.6	1.0	1.3	1.0	1.3	1.1	1.4	1.1	1.4
2 bedroom	1.6	1.0	1.6	1.0	1.6	1.35	1.7	1.35	1.7
3+ bedroom	1.6	1.0	1.9	1.0	1.9	1.6	2.0	1.6	2.0
Hotel/Motel	1.08	none	1.0	none	1.0	none	1.05	0.85	1.08
Office	2.6	none	1.6	none	2.0	none	2.2	2.0	2.4

Notes:

1. For retail and service uses located in TOD areas not listed in Table 6, minimum parking requirements enumerated in Sections 11-103, 11-104, 11-105, and 11-106 of the Zoning Ordinance should be used as maximum parking requirements; in non-TOD Districts, the minimum required parking should be 75% of the minimum parking requirement in the Zoning Ordinance and the maximum should be 110% of the referenced minimum.
2. To encourage convenient retail and service uses within walking distance of office and residential development, the first 5,000 square feet of accessory retail and service uses in any such building should have no parking spaces allocated in the parking plan, nor should it be counted toward the maximum parking requirement.

As the Tysons Corner area is developed, and the land use and transportation infrastructure matures, parking requirements should be examined to determine if they are adequate for the changing conditions. Rather than supplying parking for each individual use, parking should be treated as a common resource for multiple uses. Implementing this practice will reap many advantages in creating a more walkable environment. Providing transit service, an effective mix of uses, and an appropriate network of sidewalks will reduce automobile use and, consequently, the need to provide parking.

Additional methods listed below should be pursued to ensure the appropriate amount of parking is provided.

- Encouraging shared parking arrangements across parcel lines.

<i>Public Assembly</i>		
Amphitheaters, band shells, coliseums, stadiums	2	1 per 3 seats or six-foot benches
Auditoriums, assembly halls, community centers, dance halls, legitimate and motion picture theatres		
Fixed seats	1	1 per 4 seats based on maximum seating capacity in main assembly
Without fixed seats	1	1 per 60 sf of floor area
<i>Recreational Activity</i>		
Day camp, outdoors		1 per 10 pupils, plus 1 per staff member
Gymnasiums	1	1 per 4 seats
Sports activities		
Bowling		
Indoor		5 per alley
Outdoor		1 per 400 sf of designated site area
Riding stables		1 per every 2 stalls
Skating, ice and roller		
Indoor		1 per 60 sf of floor area or 1 per 4 seats, whichever is greater
Outdoor		1 per 200 sf of designated site area
Swimming pools		1 per 54 sf of water surface area
Tennis courts		2 per court
<i>Manufacturing</i>		
Assembly, distribution, fabrication, packaging, processing; bottling, canning, chemical, chipping, curing, cutting, electrical, extruding, milling, punching, stamping, thermal	2	1 per 500 sf of floor area
Industrial research, development and testing	1	1 per 300 sf of floor area
<i>Office</i>		
Business, general and governmental buildings	1	1 per 300 sf of floor area
Professional office buildings, mixed professional uses composing 50 percent or more of the total floor area	1	1 per 250 sf of floor area
<i>Residence</i>		
<i>Dwellings</i>		
One-family detached and two-family semidetached		1 per dwelling unit
Multifamily		1.0 per efficiency unit, no bedroom 1.50 per one bedroom unit  2 per two bedroom unit 2 per three or more bedroom unit
Townhouse		2.5 per dwelling unit
<i>Group quarters</i>		
Boardinghouse, lodginghouse, or roominghouse		1 per residence unit, plus two spaces for employees
Convalescent, human care, nursing or rest home, sanitarium	1	1 per 4 beds of maximum capacity, plus 1 for every fulltime staff member on the maximum shift, and 1 per attending physician
Dormitory, fraternity or sorority		1 per 2 beds, plus one per 200 sf of floor area
Foster home		1 per full or parttime staff member
Religious accommodations		1 per 10 beds with a minimum of 4 spaces
Home occupations		According to specific use type

Transient lodgings			
Hotel and motel	1	1 per guestroom, plus one employee space per ten guestrooms	
Tourist home		1 per guestroom, plus two spaces for employees	
Prenatal and infant care counseling center in an R-1A or R-1B district		As required by special use permit conditions	
<i>Service</i>			
Business services			
Advertising, adjustments and collections, bonding, consulting, consumer and mercantile credit, data processing, detective and protective, employment, stenographic, public relations		1 per 300 sf of floor area	
Blueprinting, delivery, duplicating, hand tool rental, mailing, office equipment leasing and sales, photocopying and finishing, printing, trading stamps	1	1 per 200 sf of floor area	
Warehousing and storage			
Indoor	4	1 per 1,000 sf of floor area	
Outdoor	2	1 per 2,000 sf of total site area	
Self storage warehouse	*	1 per 400 sf of office floor area, plus 2 spaces for employees	
Vehicle and wheeled equipment	1	1 per 1,000 sf of total site area	
Contract construction services	2	1 per 500 sf of floor area	
Educational services			
Day care and kindergarten		1 per 125 sf of floor area, plus 2 for employees	
Nursery		1 per 175 sf of floor area, plus two per employee	
Schools			
Instructional			
Arts, commercial, drafts, driving, physical culture, physically and mentally handicapped, professional		1 per 4 students of maximum capacity, plus 1 per classroom and 1 per fulltime staff member on maximum shift	
Parochial, private or public			
Elementary, intermediate or junior high	1	1 per teacher, employee or administrator whether full or parttime, if activities of personnel are conducted between 8:00 a.m. and 4:00 p.m.	
High school or college or preparatory	1	1 per teacher, employee or administrator whether full or parttime, plus one for every 10 students of maximum enrollment or capacity	
Finance, insurance and real estate services			
Banks, savings and loan associations		1 per 300 sf of floor area	
Drive-in		5 standing spaces, per teller window	
Insurance		1 per 300 sf of floor area	
Real estate		1 per 200 sf of floor area	
Governmental services			
Postal			
Window service	4	2 per employee, clerk or carrier on maximum shift	
Mail handling station with no window service	4	1 per employee, clerk or carrier on maximum shift	
Protection functions, fire, police		2 per fulltime employee on maximum shift	
Armed forces recruitment		1 per employee on maximum shift	

Personal services		
Apparel and accessory repair		1 per 200 sf of floor area
Barbershop, beauty salon		3 per 100 sf of floor area
Cemeteries		1 per 2,500 sf of total site area
Funeral home, crematory, mortuary	2	1 per four seats in chapels or parlors with fixed seats or one per 100 sf of floor area of assembly rooms without fixed seats for services, plus five for employees
Laundering, dry cleaning		
Automatic, self-service	1	1 per two cleaning or laundry machines
Depot	1	1 per 50 sf of floor area
On-premises finishing	1	1 per 200 sf of floor area
Other		1 per 200 sf of floor area
Professional services		
Architect, artist, attorney, engineer		1 per 300 sf of floor area
Medical		
Clinic, outpatient	1	1 per 200 sf of floor area
Dental office		1 per 300 sf of floor area
Life science laboratory and research	1	1 per 200 sf of floor area
Physician and surgeon		1 per 200 sf of floor area
Musician		1 per 300 sf of floor area
Other		1 per 300 sf of floor area
Veterinary		
Indoor	1	1 per 300 sf of floor area
Outdoor	1	1 per 500 sf of designated site area
Repair services		
Motor vehicle		
Maintenance and mechanical repair		2 per service bay for employee parking, 5 per bay for vehicle storage
Drive-through maintenance and mechanical repair		1 per service bay, plus 4 per bay for employee parking, 5 per bay for vehicle standing
Painting and bodywork		2 per service bay for employee parking, 10 per of first 3 bays for vehicle storage
Wash, full service		2 for employees, 10 spaces per service bay for vehicle standing
Wash, self service		5 per bay for vehicle standing
Note—Establishments offering a variety of motor vehicle repair and maintenance services shall be required to meet the requirements of this section per use type that will be present on site.		
General maintenance		
Indoor	1	1 per 400 sf of floor area
Outdoor	1	1 per 1,000 sf of total site area
Miscellaneous services		
Business and labor associations		1 per 100 sf of floor area
Churches, synagogues, temples and places of worship		1 per 4 seats in sanctuary
Civic, fraternal, political, private, religious and social, nonprofit associations		1 per 60 sf of floor area with a minimum of 10
Open air business and temporary stands not otherwise categorized by use type	1	1 per 200 sf of designated site area

Sign painters, cabinet, carpentry and refinishing	1	1 per 500 sf of floor area
Welfare and charitable centers		1 per 200 sf of floor area
<i>Trade</i>		
<i>Retail</i>		
Apparel and accessories		1 per 200 sf of floor area
<i>Automotive</i>		
Accessory sales		
Indoor	1	1 per 200 sf of floor area
Outdoor	1	1 per 1,000 sf of total site area with a minimum of 10 spaces
Dealership, New and Used		
Indoor	2	1 per 400 sf of floor area devoted to display
Outdoor	2	1 per 1,000 sf of total site area with a minimum of 10 spaces
Inspection stations		5 standing spaces
Gasoline service stations	1	2 standing spaces per fueling service bay, 3 vehicle storage spaces per service bay, 2 for employees, plus 1 employee space per service bay.
Note—Gasoline stations shall provide 1 per 100 sf of floor area dedicated to sale of food and non-auto oriented goods in addition to other requirements.		
Motorcycle and accessory sales	1	1 per 200 sf of floor area
Marine	2	1 per 400 sf of floor area or site area devoted to display
<i>Building materials, contractor supplies, hardware</i>		
Air conditioning, brick, concrete aggregates, electric, glass, heating, metals, plumbing, tile, wood		
Indoor	2	1 per 400 sf of floor area
Outdoor	2	1 per 1,000 sf of total site area
Hardware	1	1 per 400 sf of floor area
Storage of gravel, sand, etc., outdoors	2	1 per 1,000 sf of total site area
<i>Food</i>		
Automobile oriented convenience food store	1	1 per 100 sf of floor area
Baker, confectionery, dairy, delicatessen, groceries, meats, poultry, produce, seafood	1	1 per 200 sf of floor area
Furniture, home furnishings, household appliances, radio and television, rental, sales and service	1	1 per 400 sf of floor area
<i>Garden supplies, greenhouses and nursery stock</i>		
Indoor	1	1 per 200 sf of floor area
Outdoor	1	1 per 600 sf of designated site area
General merchandise, antiques, bicycles, books, department stores, drugs, dry goods, florist, jewelry, magazine, novelty, optical, pet, photographic, secondhand merchandise, sporting goods, stationery, tobacco, variety store and vending machine operation	1	1 per 200 sf of floor area
<i>Machinery sales</i>		
Indoor	1	1 per 500 sf of floor area minimum 5 spaces
Outdoor	1	1 per 1,000 sf of total site area
Restaurant, liquor outlet, tavern	1	1 per 100 sf of floor area
Restaurant Drive-through		12 standing spaces, or as determined by use permit

Shopping center	2	1 per 250 sf of floor area
Wholesale, inventory, sales, storage not otherwise classified	2	1 per 1,000 sf of floor area devoted to enclosed storage
<i>Transportation, Communication and Utility</i>		
Automobile parking, attendant, shelter		1 per employee on the maximum shift
Communications facilities, broadcasting studios, message centers, telephone exchange, transmitting stations and towers		1 per 300 sf of floor area
Motor vehicle transportation		
Bus equipment maintenance and garaging	2	2 per service bay or stall, plus 1 per vehicle storage space
Motor freight equipment maintenance and garaging	2	2 per service bay or stall, plus 1 per vehicle storage space
Taxicab		
Equipment maintenance and garaging	1	2 per service bay or stall, plus 1 per vehicle storage space
Convenience stands		2 standing spaces
Utility-Generation plants, refuse disposal, regulating substations, sanitary landfills, storage, solid waste disposal	1	1 per 1,000 sf of total site area
*Loading spaces for self storage warehouse-1 space per 20,000 sf of floor area.		
sf = square feet.		

(Code 1973, § 81-60; Code 1982, § 38-31(d)(2); Ord. No. 619; Ord. No. 790; Ord. No. 804; Ord. No. 811; Ord. No. 924; Ord. No. 960, 2-23-1981; Ord. No. 999, 2-22-1982; Ord. No. 1021, 8-9-1982; Ord. No. 1039, 2-28-1983; Ord. No. 1051, 6-13-1983; Ord. No. 1081, 9-10-1984; Ord. No. 1083, 9-24-1984; Ord. No. 1139, 5-27-1986; Ord. No. 1188, 5-26-1987; Ord. No. 1203, 10-13-1987; Ord. No. 1227, 6-13-1988; Ord. No. 1263, 5-22-1989; Ord. No. 1277, § 6, 10-10-1989; Ord. No. 1382, 11-25-1991; Ord. No. 1477, 5-9-1994; Ord. No. 1590, 10-14-1997; Ord. No. 1636, 3-8-1999; Ord. No. 1766, 9-13-2004)

## Sec. 48-1005. - Nonconforming uses.

- (a) *Created.* Uses which do not conform to all applicable requirements of this chapter shall, upon the effective date of the ordinance from which this division is derived, become nonconforming. No use which is made nonconforming by virtue of the adoption of the ordinance from which this division is derived shall be expanded, extended or enlarged in any way that would increase the off-street parking requirement unless and until such increased requirement is satisfied.
- (b) *Conformance schedule; exceptions.* Within three years from the effective date of the ordinance from which this division is derived, all uses shall conform to all applicable provisions of this division; except, the board of zoning appeals, under its powers, enumerated in [section 48-172\(3\)](#), may grant variance to these provisions upon proof of hardship. Within the intent of this division, proof of hardship shall be established by the following factors:
- (1) Inadequate lot size to physically provide any additional off-street parking spaces and the inability to combine the existing property with adjacent properties.
  - (2) Lack of availability of any adjacent properties having surplus or potential off-street parking spaces under the provisions of subdivision III of this division.
  - (3) Excessive and extraordinary financial burdens imposed in the acquisition of the use of additional off-street parking spaces utilizing the joint use provisions of [section 48-172](#). For the purposes of determining hardship, excessive and extraordinary financial burdens shall be considered to exist only in those instances where the projected cost of such agreements exceeds one-tenth the prevailing market purchase price of the lot area requisite for the satisfaction of the requirements of this division for each annual period of the projected agreement in the adjacent, similarly used area.
- (c) *Cessation of variance.* Variances granted by the board of zoning appeals under the provisions of subsection (b) of this section shall cease and be null and void at such time as the use for which they were granted ceases, the structure ceases to exist or the nonconformity permitted by variance ceases.

- (E) Such parking and loading regulations shall apply only to new construction or expansion of an existing use. In the case of an expansion of an existing use, only the expansion shall be required to meet these regulations. The existing use and parking areas shall be deemed to be exempt from said regulations.

Use	Parking Spaces Required	Loading Spaces Required
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Residential

Single Family Dwelling Unit	Detached	2/dwelling unit in agricultural districts; 3.0/dwelling unit in all other districts. Garage and driveway parking spaces count towards required spaces. Tandem parking i.e. one space behind another is permissible and both parking spaces count towards such required parking spaces.	None
Single Family Dwelling Unit	Attached	3.0/dwelling unit in all districts. Garage and driveway parking spaces count towards required spaces, except that at least .5 spaces/unit will be accommodated by off lot parking spaces. Tandem parking i.e. one space behind another is permissible and both parking spaces count towards such required parking spaces.	None
Multi/Family Dwelling Unit			
Studio		1.25/dwelling unit	None
1 bedroom		1.5/dwelling unit	None
2 or 3 bedrooms		2/dwelling unit	None
4 or more bedrooms		2.5/dwelling unit	None
Active Adult/Age Restricted Dwelling Unit		1.75/dwelling unit for buildings 4 stories or less in height 1.25/dwelling unit for buildings 4 stories or more in height	None
Elderly Housing/Independent Living Unit		.25/Independent living unit	None
Accessory Dwelling Unit		1/accessory apartment or dwelling unit	None
Sleeping Rooms		1/unit or room plus 2 for owners/managers	None

**Table 5-1102**

Use	Parking Spaces Required	Loading Spaces Required
Commercial Lodgings	2 for owners/managers plus 1/sleeping room or unit plus any spaces required for restaurant/restaurant/banquet and meeting rooms	As required for restaurant/lounge and meeting rooms; minimum one for lodgings with 50 or more rooms.
Congregate, Continuing Care & Nursing Homes Child Care Facilities	.25/resident plus 1.5/day shift employee .2/person in licensed capacity plus one per employee not residing on the premises	One  None
<u>Retail/Service</u>		
General and Convenience Retail	4/1,000 sq ft of GFA; minimum of 4 spaces per establishment	None for the first 10,000 sq. ft. then one/30,000 sq. ft. up to 70,000 sq. ft. plus one/ 80,000 sq. ft. thereafter
Wayside Stands/Christmas Tree Stands Nurseries/ Farm Markets	Any parking provided shall be on-site Minimum of 10 spaces shall be provided for the first five acres of outdoor sales area with one additional space for each ten acres over five acres. Off-site parking is prohibited.	None
Bed and Breakfast Homestay	2.5/dwelling unit 1/guest room	None
Bed and Breakfast Inn	2.5/dwelling unit 1/guest room 1/employee	None
Country Inn	1/guest room 15/1,000 sq. ft. of GFA for restaurants & kitchen area only	None
Service Retail	2.5/1,000 sq ft of GFA; minimum of 3 spaces per establishment	Same as general retail
Hard Goods Retail	3.5/1,000 sq ft of GFA interior sales space plus 1.5/1,000 feet of interior storage and/or exterior display/sales area; minimum of 4 spaces per establishment	Same as general retail
<u>Shopping Centers</u>		

**Table 5-1102**

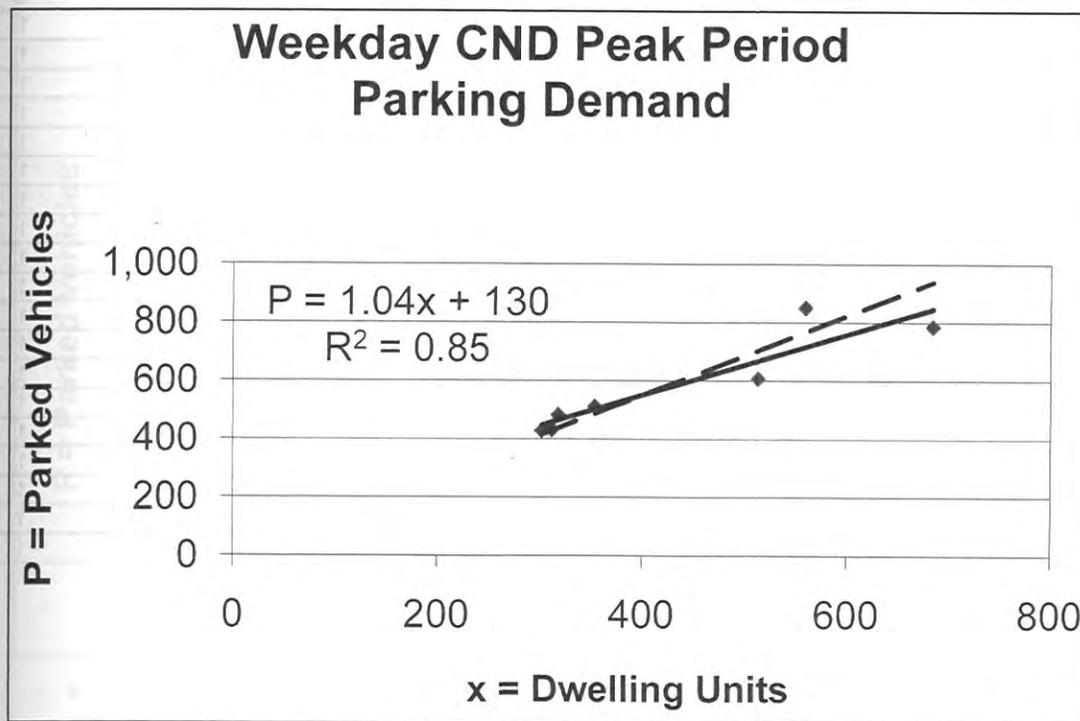
Use	Parking Spaces Required	Loading Spaces Required
Smaller Shopping Centers (Small strip-type centers)	6/1,000 sq. ft. of GFA for centers with up to 30,000 sq. ft.	1/50,000 sq. ft. up to 100,000 sq. ft. <b>plus</b> 1/100,000 sq. ft. up to
	5/1,000 sq. ft. of GFA for centers between 30,000 sq. ft. and 60,000 sq. ft.	500,000 sq. ft. <b>plus</b> 1/200,000 sq. ft. thereafter
Larger Integrated Shopping Centers (Non-enclosed centers) Shopping Centers (Mall-type centers)	4/1,000 sq. ft. of GFA for centers over 60,000 sq. ft.	
	3.5/1,000 sq. ft. of GFA for centers with up to 400,000 sq. ft.	
	3.8/1,000 sq. ft. of GFA for centers with 400,000 to 600,000 sq. ft.	
	4.25/1,000 sq. ft. of GFA for centers with over 600,000 sq. ft.	
Personal Care Services	1/treatment station but not less than 1/1,000 sq. ft. GFA	None
Coin Operated Laundries	1 space/ 2 machines	None
Other Retail/Service Uses	As determined by the Zoning Administrator	Same as general retail
Temporary Retail	As determined by the Zoning Administrator	None
Motor Vehicle Sales & Service	2.5/1,000 sq ft of GFA interior sales space plus 1.5/1,000 sq ft of external display (but not including stock areas not open to the public) plus 3/service bay	Same as industrial
<u>Food and Beverage</u>		
Restaurant	15/1,000 sq. ft. of GFA minimum of 1 space	1/40,000 sq ft of GFA;
Fast Food	20/1,000 sq. ft. of GFA kitchen, counter and waiting areas plus 0.5/seat provided	With indoor seating area, one; with no seating area; none
<u>Office and Business Services</u>		
General Offices and Medical Offices	4/1,000 sq. ft. of GFA for up to 30,000 sq. ft.; 3.3/1,000 sq. ft. of GFA thereafter	None for the first 30,000 sq ft then one/100,000 sq ft thereafter
Financial Institutions	2.5/1,000 sq. ft. of GFA; stacking space for drive-through windows to be determined by Zoning Administrator	None for the first 10,000 sq ft GFA then one/50,000 sq ft up to 10,000 sq ft plus one/10,000 sq ft thereafter

**APPENDIX B – ITE PARKING GENERATION, 4<sup>TH</sup> EDITION  
RETAIL/SUPERMARKET/RESIDENTIAL RATE**

# Land Use: 222 High-Rise Apartment

**Average Peak Period Parking Demand vs. Dwelling Units**  
**On a: Weekday**  
**Location: Central City, Not Downtown**

Statistic	Peak Period Demand
Peak Period	12:00–5:00 a.m.
Number of Study Sites	7
Average Size of Study Sites	435 dwelling units
Average Peak Period Parking Demand	1.37 vehicles per dwelling unit
Standard Deviation	0.15
Coefficient of Variation	11%
Range	1.15–1.52 vehicles per dwelling unit
85th Percentile	1.52 vehicles per dwelling unit
33rd Percentile	1.38 vehicles per dwelling unit

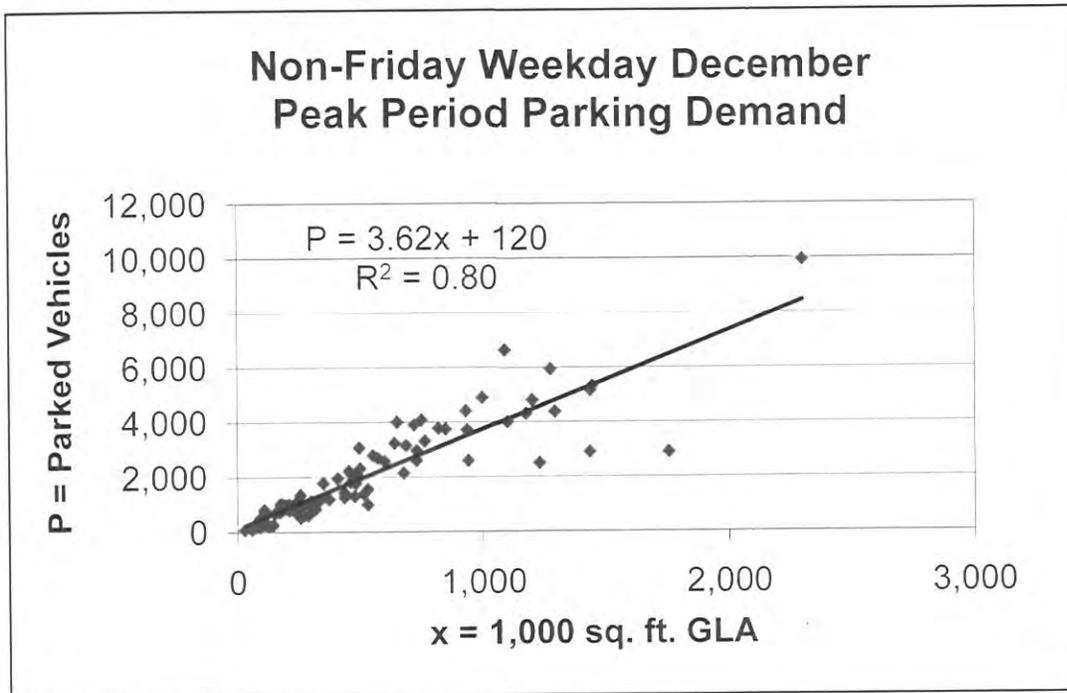


◆ Actual Data Points      — Fitted Curve      - - - Average Rate

# Land Use: 820 Shopping Center

## Average Peak Period Parking Demand vs. 1,000 sq. ft. GLA On a: Non-Friday Weekday (December)

Statistic	Peak Period Demand
Peak Period	11:00 a.m.–10:00 p.m.
Number of Study Sites	79
Average Size of Study Sites	556,000 sq. ft. GLA
Average Peak Period Parking Demand	3.76 vehicles per 1,000 sq. ft. GLA
Standard Deviation	1.28
Coefficient of Variation	34%
95% Confidence Interval	3.48–4.04 vehicles per 1,000 sq. ft. GLA
Range	1.44–7.37 vehicles per 1,000 sq. ft. GLA
85th Percentile	5.05 vehicles per 1,000 sq. ft. GLA
33rd Percentile	3.15 vehicles per 1,000 sq. ft. GLA



◆ Actual Data Points

— Fitted Curve/Average Rate

# Land Use: 850 Supermarket

Average Peak Period Parking Demand vs. 1,000 sq. ft. GFA  
On a: Weekday  
Location: Urban

Statistic	Peak Period Demand
Peak Period	1:00–2:00 p.m.; 3:00–6:00 p.m.
Number of Study Sites	8
Average Size of Study Sites	27,100 sq. ft. GFA
Average Peak Period Parking Demand	2.27 vehicles per 1,000 sq. ft. GFA
Standard Deviation	0.90
Coefficient of Variation	40%
Range	0.76–3.74 vehicles per 1,000 sq. ft. GFA
85th Percentile	2.83 vehicles per 1,000 sq. ft. GFA
33rd Percentile	1.87 vehicles per 1,000 sq. ft. GFA

