



SECTION 2 ANALYSES

2.1 Contextual Background

Over the past several years, Cary has been developing and defining a broader contextual vision for the entire downtown area. Seen as a cultural, commercial and service center for the broader community of Cary, the planning and policies set into place are also considered in the preparation of this 2007 parking study.

The Cary Streetscape Master Plan prepared with the assistance of the Urban Resource Group specifically identifies parking related 'Guiding Principals'. The statement (below) is consistent with modern thinking or 'best-practices' for parking development in urban cores where increased density and pedestrian activity are desirable.

"Parking should be provided on-street or in parking decks situated within the interior of blocks so as not to consume street frontage. Alternatively, provide limited on-site parking tucked behind the buildings that face the street"

Rich and Associates also adopts a philosophy that parking should support the community's greater vision for economic activity by being adequate, but not a surplus beyond the existing and potential need. Specifically, our approach is to consider parking allocation, location, design, multi-modal opportunities and operating efficiency in conjunction with necessary expansion.

2.2 Analysis Introduction

This section of the report is an assessment of how the existing parking is operating and how much new parking may be required based on current and anticipated future developments. For the analysis, Rich and Associates used turnover and occupancy data, parking and building inventories, business owner surveys and previous experience with parking to refine and determine the report's analysis.

The process consisted of a two-part analysis. The first part of the analysis included a calculation of parking demand by block based on a building inventory and parking generation factors per 1,000 square feet of gross floor space. The demand was netted from the available supply and the resulting surplus or deficit determined on a block-by-block basis.

The second part of the analysis involved comparing the parking surplus and deficit patterns to the turnover and occupancy data. This comparison offered a benchmark, by which the surplus and deficit data was calibrated.



2.3 Parking Inventory

Table 2A summarizes the existing parking supply in the primary study area in downtown Cary. There are a total of approximately 3,464 parking spaces in the study area. Of these 280 are on-street spaces and 1,009 are off-street public spaces. Except for the on-street parking, Town Hall complex and the Train Station, the Town has no true public parking in the study area.

Of the 1,009 public off-street spaces, 826 spaces are located at the Town Hall, 50 at the Library (public, but reserved for Library patrons and employees) and 133 at the train station. There are 2,175 private parking spaces in the core downtown focus area. The percentage comparison is as follows:

Table 2A – Public/Private Parking Comparison

	Public	Private
On-Street (280 stalls)	8%	0%
Off-Street (3,184 stalls)	29%	71%
Totals (3,462 stalls)	37%	63%

The importance of comparing the public to private ratio is that greater amounts of public parking allow for expanded shared use opportunities, reducing the overall amount of parking needed to service an equivalent amount of building space.

Similarly, public control over a majority amount of parking allows for the Town to effectively implement policy driven strategies with the parking. This allows the Town to be able to respond to development scenarios and opportunities in a timely and effective manner with parking provision.

Table 2B on **page 4** is a detailed parking supply listing types and durations of parking by each block and is followed by **Map 2**, which is a spatial view of the parking supply. In cases where parking spaces were not marked, the numbers of parking spaces were estimated. For the purpose of the study any parking marked reserved or privately owned was designated as private parking.

Of the 1,897 spaces in the core (south of the tracks) the Town of Cary manages and controls only the on-street parking which is about 14 percent of the parking in the downtown core. Based on Rich and Associates' experience and best practices, we have found that to successfully manage municipal parking it is desirable for the municipality to have control of at least 50 percent of the parking supply. This allows the municipality to effectively manage the parking in terms of allocation, changing demand, market pricing, and allows the parking to be enforced with greater efficiency. Cary falls short of this benchmark.



In general, on-street parking spaces are not striped or marked and signage is not always clear with respect to time restrictions. There is only one off-street lot that has time restrictions (Ashworth Village Lot has two hour restricted parking).

The parking supply table breaks down the parking supply into general categories. While there are no rules regarding the ratio of on-street to off-street parking, on-street parking always works best for customers and visitors in a downtown setting.

The definitions associated with **Table 2B** are as follows:

- Not Signed – no sign limiting the time a vehicle may park.
- 15 minute – signed 15 minute parking.
- One hour – signed 1 hour parking.
- Public – Town owned parking.
- Private – Privately owned parking.
- Loading Zone- spaces marked for loading
- ADA- signed barrier free spaces

In general, Rich and Associates recommends that the Town endeavor to control a greater percentage of the parking. Specifically, the Town should consider limiting new private parking, particularly surface lots that have a tendency to reduce building density and pedestrian activity.

Reduced density and reduced pedestrian activity both contribute to a need for more parking. Conversely, higher density and greater amounts of pedestrian activity have a tendency to reduce needed parking. Specific recommendations dealing with this are detailed in **Section Four**.

Employee parking and long-term parking for customers and visitors should always be encouraged in off-street locations. Employees in particular are more willing to walk greater distances. **Rich and Associates typically recommends 350 feet as a benchmark distance for customer and visitor walking distance and 650 feet for employee walking distance to and from parking areas.**

Map Two on page 5 illustrates graphically the available parking supply in the study area.



Table 2B – Downtown Focus Area Parking Supply Summary

Block >	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Summary
On-Street																								
Not Signed		32	33		21	34	17		5							27	35		5					209
15 Minute					4																			4
One Hour							10	25							5	10								50
Loading Zone							5	3								2								10
Barrier Free (Handicap)			1				2	2											2					7
SUB TOTAL	0	32	34	0	21	38	34	30	5	0	0	0	0	0	5	39	35	0	7	0	0	0	0	280
																TOTAL ON-STREET								280
Off-Street																								
Public	0	50																	826	133				1009
Private		6	124	56	131	101	110	259	179	37		86	48	102	72	145	196				133	151	100	2036
Barrier Free (Handicap)		3	3	3	6	1		15	3	2		2	1		3	1	3		14	12	2	6		80
Time Restricted	0							55																55
Loading	0							4																4
	0																							
SUB TOTAL	0	59	127	59	137	102	110	333	182	39	0	88	49	102	75	146	199	0	840	145	135	157	100	3184
																TOTAL OFF-STREET								3464
TOTAL SUPPLY	0	91	161	59	158	140	144	363	187	39	0	88	49	102	80	185	234	0	847	145	135	157	100	3464

On-Street Parking Totals	280
Off-Street Parking Totals	1009
Public Parking Totals	1289
Private Parking Totals	2175
Total Parking in Study Area	3464

Block 19 includes the 486 stall Town Hall Parking Structure.
Source: Rich and Associates Fieldwork, September 2007



2: Parking Supply



2.3 Turnover and Occupancy Study

A turnover and occupancy study was undertaken in the downtown study area over the course of a typical business day, Thursday, August 30th, 2007. The turnover portion of the analysis included the on-street spaces and the off-street spaces in the Ashworth Village lot (where posted as a two-hour time limit). This was done to determine how long specific vehicles were parked in certain spaces and if parkers were moving their vehicles to different spaces to avoid being cited for overtime parking.

Turnover only applies to a portion of the parking stalls in the study area, as it is a measure specific to 'short-term' parking. In all other spaces, in off-street lots (and the Town's parking structure), the number of parking spaces occupied were. Occupancy is a measure used to examine the level of utilization of parking and is calculated for all of the parking examined in the study area.

Occupancy is an important aspect of parking because it helps us to understand the dynamic of how parking demand fluctuates throughout the day. Likewise, the occupancy can be used to illustrate how parking demand is impacted by events in the downtown area. Overall, the occupancy data is used by Rich and Associates to calibrate the parking demand model. **Tables 2C, 2D** and **Map 3** are the summary results of the turnover findings.

2.3.1 Observations

- The turnover and occupancy analysis took place on Thursday, August 30th, 2007 from 9:00 A.M. until 5:00 P.M. The analysis covered public and private parking in the downtown area.
- This typical business day was selected to look at parking utilization and its impact on overall parking operations and efficiency.
- On-street parking averaged 38 percent occupancy, with the peak time from 1:00 P.M. to 3:00 P.M. (45 percent occupancy). Block faces that had the highest occupancies were 3D (S. Academy between Dry Ave. and Park Street) 85 percent occupancy, and 7A (E. Chatham between S. Academy and S. Walker) 88 percent occupancy.
- Off-street parking achieved the highest occupancy from 1:00 P.M. to 3:00 P.M. (40 percent occupancy) and averaged 36 percent occupancy.
- Off-street parking south of the rail tracks had peak occupancy of 39 percent from 1:00 P.M. to 3:00 P.M. The average occupancy in this area was 33 percent.
- Considering both on and off-street parking in the study area south of the tracks, the peak occupancy (41 percent) time was from 1:00 P.M. to 3:00 P.M. The average occupancy of the on and off-street parking in this area was 34 percent.
- For the one-hour on-street spaces; 73 percent stayed two hours or less, 12 percent stayed between two and four hours, five percent stayed between four and six hours, and 10 percent stayed six to eight hours.



- For the on-street spaces with no time limit; 67 percent stayed two hours or less, 10 percent stayed two to four hours, 10 percent stayed four to six hours and 13 percent stayed six to eight hours.
- For the Ashworth Village lot which has posted two-hour parking; 81 percent stayed two hours or less, 15 percent stayed two to four hours, and four stayed four to six hours. No vehicle was parked over six hours.
- In the Ashworth Village lot, there were two vehicles that moved spaces in the lot during their stay. Those two vehicles actually stayed eight hours if you consider the time their vehicle was parked in the lot.

Table 2C – Observed Occupancy (On-Street)

Block # and Face	Est. # of Spaces	Space Type	9:00 am to 11:00 pm	%Occ.	11:00 am to 1:00 pm	%Occ.	1:00 pm to 3:00 pm	%Occ.	3:00 pm to 5:00 pm	%Occ.
On-Street										
Block 8A	7	1 hour	0	0%	3	43%	3	43%	3	43%
Block 8B	18	1 hour	6	33%	8	44%	12	67%	9	50%
	2	ADA	0	0%	0	0%	0	0%	0	0%
	3	LZ	0	0%	0	0%	0	0%	0	0%
Block 2A	16	No limit	5	31%	4	25%	3	19%	3	19%
Block 2B	16	No limit	7	44%	7	44%	5	31%	9	56%
Block 3A	20	No limit	3	15%	3	15%	3	15%	3	15%
Block 3D	13	No limit	7	54%	11	85%	11	85%	9	69%
	1	ADA	1	100%	0	0%	0	0%	0	0%
Block 5A	21	No limit	7	33%	5	24%	5	24%	3	14%
Block 6A	25	No limit	16	64%	17	68%	19	76%	8	32%
Block 6D	9	No limit	0	0%	2	22%	2	22%	1	11%
	4	15 min.	0	0%	0	0%	1	25%	1	25%
Block 7A	10	1 hour	6	60%	3	30%	5	50%	2	20%
Block 7C	17	No Limit	14	82%	13	76%	15	88%	7	41%
	1	ADA	1	100%	1	100%	1	100%	1	100%
	5	LZ	3	60%	3	60%	3	60%	0	0%
Block 7D	1	ADA	0	0%	0	0%	0	0%	0	0%
Block 8A	7	1hour	0	0%	3	43%	3	43%	3	43%
Block 8B	18	1 hour	6	33%	9	50%	10	56%	8	44%
	2	ADA	0	0%	0	0%	0	0%	0	0%
	3	LZ	0	0%	0	0%	0	0%	0	0%
Block 15C	5	1 hour	0	0%	1	20%	3	60%	0	0%
Block 16A	25		8	32%	7	28%	8	32%	9	36%
Block 16C	10	1 hour	4	40%	3	30%	7	70%	4	40%
Block 17A	35		13	37%	15	43%	15	43%	7	20%
Block 19D	5	Regular	3	60%	0	0%	2	40%	2	40%
	2	ADA	0	0%	0	0%	1	50%	0	0%
Sum	301		110	37%	118	39%	137	46%	92	31%



Table 2D – Observed Occupancy (Off-Street)

Block # and Face	Est. # of Spaces	Space Type	9:00 am to 11:00 pm	%Occ.	11:00 am to 1:00 pm	%Occ.	1:00 pm to 3:00 pm	%Occ.	3:00 pm to 5:00 pm	%Occ.
Off- Street										
Block 2										
Library Lot										
Staff Lot	5		4	80%	4	80%	4	80%	3	60%
Public Lot	45		14	31%	25	56%	28	62%	20	44%
Handicapped Stalls	3		0	0%	3	100%	3	100%	0	0%
Block 3										
Private Lot	15		11	73%	11	73%	11	73%	9	60%
Private Lot	14		0	0%	0	0%	0	0%	0	0%
Private 315 Lot	15		8	53%	10	67%	13	87%	11	73%
Private Lot	15		6	40%	10	67%	5	33%	4	27%
Private 301 Lot	29		15	52%	17	59%	20	69%	19	66%
Block 5										
BB&T Building Lot	81		18	22%	27	33%	29	36%	21	26%
Block 6										
Post Office Lot (Academy)	17		2	12%	5	29%	6	35%	6	35%
Back PO Lot	18		3	17%	3	17%	3	17%	2	11%
Ashworth Overflow Parking Lot	28		9	32%	10	36%	11	39%	7	25%
Methodist Dirt Lot	36		1	3%	1	3%	0	0%	0	0%
Block 7										
Kitchen Design (across sidewalk)	14		3	21%	3	21%	1	7%	1	7%
Kitchen Design Side Lot	15		7	47%	7	47%	11	73%	8	53%
Lot R	6		2	33%	3	50%	0	0%	1	17%
Lot L	19		12	63%	13	68%	10	53%	6	32%
Private Lot	8		4	50%	5	63%	7	88%	7	88%
Block 8										
Baptist Church/Old Pet Store Lot	209		24	11%	66	32%	29	14%	16	8%
Lot/Old Cary overflow	44		16	36%	16	36%	9	20%	18	41%
Private Lot 135	11		12	109%	13	118%	12	109%	11	100%
Private Lot 125	8		3	38%	3	38%	3	38%	3	38%
Private Lot	4		0	0%	4	100%	4	100%	3	75%
Ashworth Parking Lot	55	Regular	14	25%	24	44%	52	95%	18	33%
Handicap Stalls	2	ADA	0	0%	0	0%	1	50%	0	0%
Loading Stalls	4	LZ	0	0%	2	50%	4	100%	3	75%
Church Office Lot	8		4	50%	5	63%	4	50%	1	13%
Block 9										
Shopping Lot	17		4	24%	7	41%	8	47%	9	53%
"	8		2	25%	2	25%	4	50%	3	38%
"	12		0	0%	3	25%	4	33%	7	58%
Parkside Building Lot	31		7	23%	14	45%	13	42%	17	55%
Old Cary Lot	53		6	11%	11	21%	23	43%	23	43%
Baptist Lot	44		0	0%	0	0%	0	0%	0	0%



Table 2D (con't) – Observed Occupancy (Off-Street)

Block # and Face	Est. # of Spaces	Space Type	9:00 am to 11:00 pm	%Occ.	11:00 am to 1:00 pm	%Occ.	1:00 pm to 3:00 pm	%Occ.	3:00 pm to 5:00 pm	%Occ.
Off- Street										
Block 13										
Mustang Lot	12		7	58%	6	50%	6	50%	4	33%
Chocolate Lot	31		6	19%	15	48%	13	42%	14	45%
Block 14										
Paint Store Lot	58		5	9%	10	17%	11	19%	7	12%
House of Lights Lot	30		13	43%	12	40%	13	43%	11	37%
Block 15										
Fidelity Bank Lot	65	Regular	16	25%	19	29%	19	29%	22	34%
	3	ADA	2	67%	2	67%	2	67%	1	33%
Lot 111	6		2	33%	3	50%	3	50%	3	50%
Private Lot	1		2	200%	2	200%	1	100%	1	100%
Block 17										
Food Factory Lot	64		31	48%	40	63%	59	92%	38	59%
Block 19										
City Hall A Lot	18		18	100%	18	100%	18	100%	17	94%
City Hall B Lot	19	Regular	9	47%	7	37%	20	105%	13	68%
	6	ADA	1	17%	2	33%	1	17%	1	17%
City Hall C Lot	15		15	100%	15	100%	15	100%	12	80%
City Hall D Lot	230	Regular	83	36%	74	32%	71	31%	63	27%
	6	ADA	1	17%	1	17%	1	17%	1	17%
City Hall E Lot	14	Regular	9	64%	12	86%	15	107%	7	50%
City Hall F Lot										
City Hall G Lot	34	Regular	11	32%	6	18%	8	24%	7	21%
	2	ADA	0	0%	0	0%	0	0%	0	0%
City Hall H Lot	10	Regular	1	10%	1	10%	1	10%	0	0%
Block 20										
Amtrak Lot	133	Regular	51	38%	66	50%	56	42%	42	32%
	12	ADA	0		0		0		0	
Block 21										
203 Harrison Lot	47		22	47%	33	70%	21	45%	17	36%
Pure Gold Lot	56		10	18%	26	46%	26	46%	22	39%
Block 22										
315 Academy Lot	57		16	28%	21	37%	20	35%	20	35%
	3		0	0%	0	0%	1	33%	1	33%
Chamber	80		5	6%	8	10%	5	6%	4	5%
Block 23										
Northside Station Lot	100		21	21%	38	38%	35	35%	23	23%
	2005		568	28%	764	38%	773	39%	608	30%
Sum	2306		678	29%	882	38%	910	39%	700	30%

Map 3 illustrates the observed parking occupancies at a peak hour in the downtown focus area. This map is used to cross reference the calculated parking demand to determine if blocks with shortages actually have full or nearly full parking areas. The peak hour occupancy time occurred between 1:00 P.M. and 3:00 P.M.



Map 3



Table 2E (below) demonstrates the relationship between on-street and off-street parking. The shape of the curve, peaking around noon, is typical for a downtown with a diverse economic base including retail, offices and restaurants. On-street parking has a tendency to be better utilized since it is preferred by customers and visitors. However, the off-street parking is virtually as well utilized, indicating that customers in Cary are also using the off-street parking resources.

Employees sometimes present an issue to parking system. Requiring parking that is reasonably close; employees may have a tendency to use on-street parking if the threat of receiving a ticket is low or if the fine rate is too low. **Rich and Associates advocates for consistent daily routine enforcement with a market based fine rate that will deter parking infractions by employees.**

Table 2E – On-Street versus Off-Street Parking

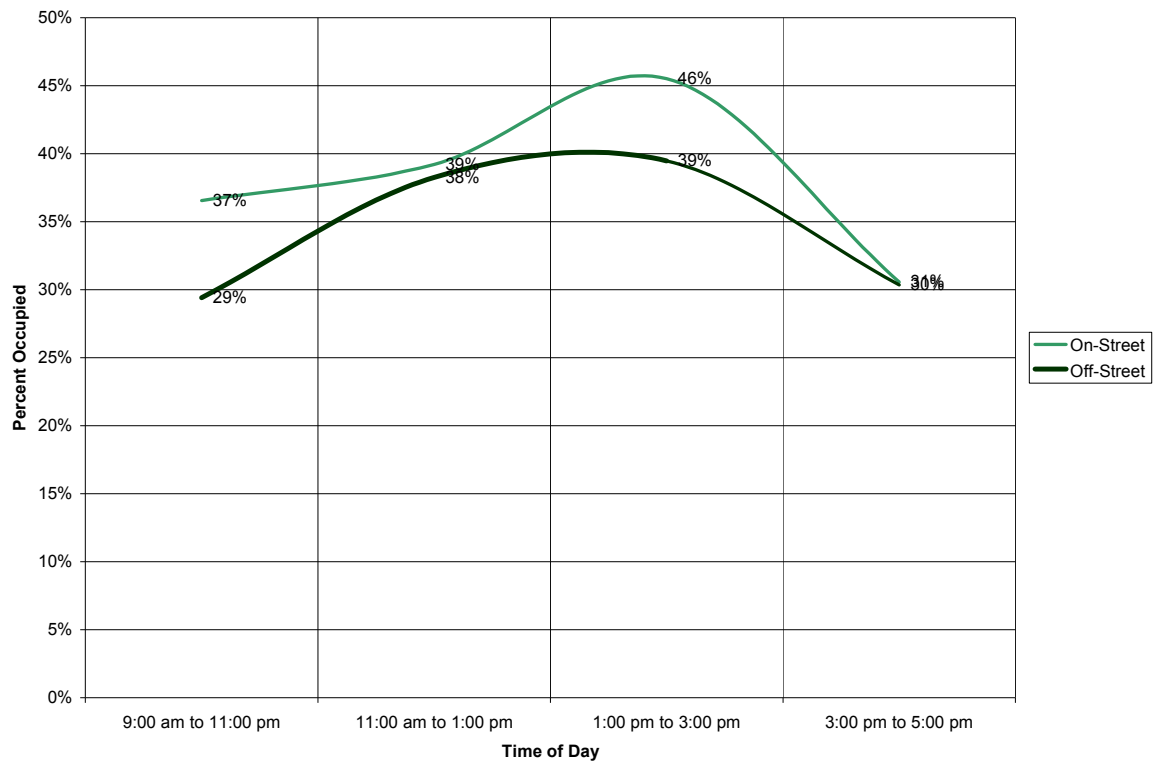


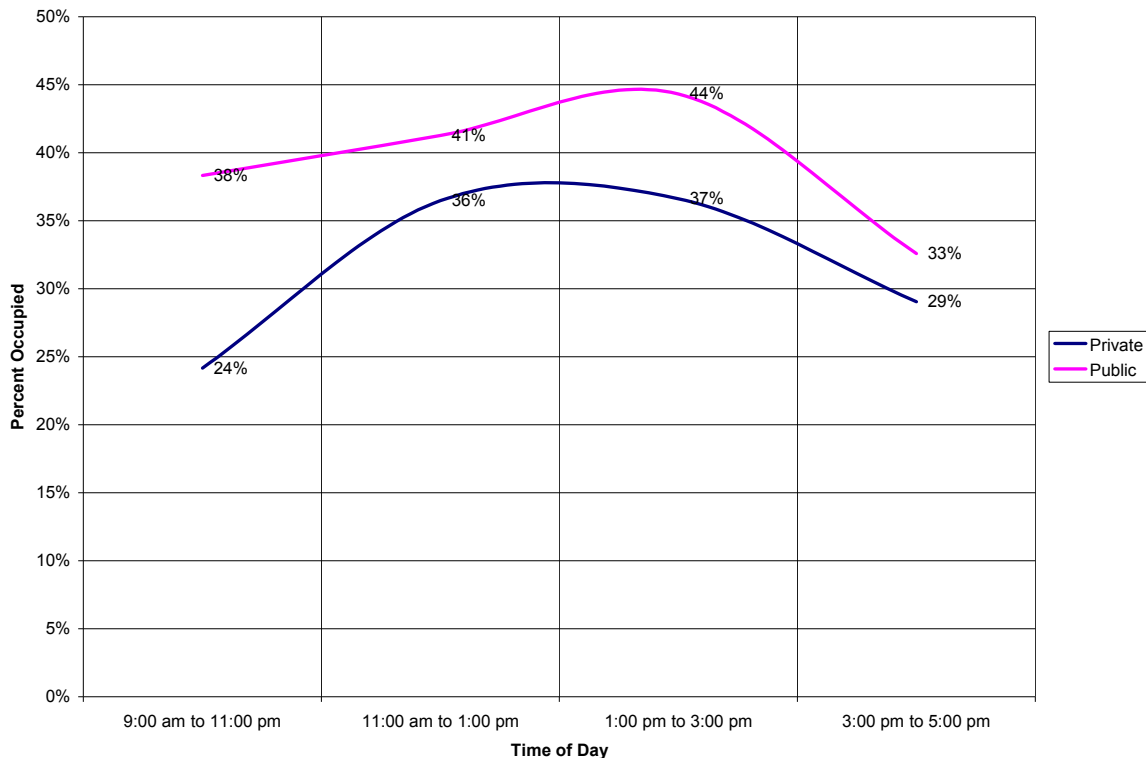


Table 2F (below) demonstrates the relationship between public and private parking. Important here is the demonstration that private parking experiences less overall occupancy than public parking, demonstrating the shared use nature of public parking. Private parking is typically reserved for a specific group of users. Whether the designated users of private parking are specific customers, employees or business owners, the key is that when those individuals are not using the parking it typically sits vacant.

Public parking on the other hand is open and available for a multitude of users, usually only differentiated by the amount of time needed for parking. Long-term parking is usually encouraged in more remote locations, in order to preserve shorter term parking close to the streets and businesses or other destinations.

Cary should endeavor to have as much public parking as possible to take advantage of the increased occupancy and shared use. Public parking serves a greater amount of building space due to shared use than private parking. The reduced amount of land and other valuable resources dedicated to parking is both more fiscally responsible on the part of the community and helps communities that strive for greater sustainability from an environmental perspective.

Table 2F – Public versus Private Parking





2.4 Parking Demand Calculation

Analyses were performed to determine the current and future parking demands and needs for the study area. The data collected and compiled by Rich and Associates to calculate the parking demand included:

- An inventory of the study area on and off-street parking supplies.
- Turnover and occupancy studies for public and private on and off-street parking areas.
- Block-by-block analysis of the square footage and use of every building in the core study area.

Specific parking demand generation ratios are used to calculate parking demand for each block. These ratios are assigned according to the type of use present in the buildings. The parking generation ratios were established from surveys distributed to managers, business owners and employees throughout the downtown area and on Rich and Associates past experience. The surveys helped establish how many people were in a given business at various times of the day, how they arrived and how much parking was necessary to support each business type. (Note: Manager and Employee Surveys are pending and adjustments to the parking ratios based on the results of these surveys may be applicable for future report editions).

The demand factors for each land use type include an estimate for employees and patrons to that particular land use. The overall effect is that each type of downtown visitor, whether an employee, business owner or resident is accounted for in the demand model for Cary. Once parking demand has been calculated for both current and future conditions, a comparison with the existing supply of parking is made. The resulting figures are parking surplus or deficit figures for each block.

The survey method of establishing parking generation ratios customizes the parking generation model specifically to the study area. The ratios are used in conjunction with information from the Institute of Transportation Engineers (ITE) and the Urban Land Institute (ULI). These two sources are the generally accepted standards for parking generation.

Once a parking generation model is developed that illustrates the surpluses and deficits of parking numerically and graphically, we then compare the model with actual field observations, specifically the turnover and occupancy counts. The comparison serves as a test of the demand model and allows Rich and Associates staff to make further revisions or adjustments where necessary to ensure accuracy, as well as to fully understand the overall parking dynamic in the downtown area.



The assumptions used for the parking demand calculations are:

Assumption 1: It was assumed that parking demand per block was dependent on the gross floor area contained in the block. Parking demand computed for one block was not affected by the amount of gross floor area available on surrounding blocks. Therefore, a block with surplus parking supply is not used to offset shortfalls on adjacent blocks.

Assumption 2: The parking demand calculations were derived under the assumption that currently occupied properties would remain occupied at existing, or higher than existing levels, into the future.

Assumption 3: Parking demand is not affected by parking availability, use, location and price.

Table 2G, below, illustrates the specific ratios used for determining parking need. The ratios are compared with ITE standards as well as Cary Zoning to demonstrate how parking ratios can vary. Please note that the ratios indicated are preliminary and subject to review based on survey data currently being collected.



2.4.1 Parking Demand

The following are issues that are considered when developing the number of parking spaces needed:

- Building size, purpose and special use conditions,
- Socioeconomic characteristics of the downtown populations and visitors of the downtown.
- Alternative modes of transportation, which include availability, use, attractiveness and policy impacts.
- Proportion of the downtown trips that are multiple-use or linked.
- Vehicle traffic.

The demand factors developed for each land use reflect the peak daytime conditions. This correlates with the observed needs within the downtown.

The gross square footage of individual buildings was collected and then sorted by land use categories (**Table G**, on the following page). The different land uses for each block are in general multiplied by a parking generation factor of parking spaces required per 1,000 square feet. The resulting number of parking spaces demanded is deducted from the available parking supply on each block and a surplus or deficit for each block is then calculated. Summary tables for the different scenarios are located in **Table 2G** through **K** and illustrated in **Maps 4, 5 & 6**.



Table 2G – Existing Building Inventory

Block	Mixed Use	Rest. (1)	FTB	Hotel	Light Ind.	Retail	Service	Specialty (2)	Bank	Office	Gov.	Med. Off.	Church	Community	Post Off.	Vacant
Daytime	3.25	6.87	14.81	0.85	0.75	2.38	2.19	2.99	2.95	2.65	3.90	3.50	0.67	0.55	2.49	3.25
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	4,200	0	3,384	0	0	0	11,379	0	0
3	0	0	0	0	0	0	0	0	0	15,878	0	10,848	0	0	0	0
4	0	0	0	0	0	1,763	10,366	0	0	6,000	0	0	2,500	0	0	0
5	0	0	0	0	0	0	1,750	5,400	25,975	0	0	0	0	0	0	4,000
6	0	0	0	0	0	0	0	0	0	2,700	0	0	0	0	6,900	0
7	2,750	2,200	0	0	0	24,693	5,064	3,000	0	0	0	0	95,000	0	0	4,200
8	56,421	0	0	0	0	13,208	5,400	14,262	0	5,804	0	5,000	114,169	0	0	0
9	5,175	0	0	0	0	25,800	1,050	19,700	0	0	0	0	0	0	0	0
10	0	0	8,100	0	0	7,754	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	4,037	0	0	0	0	0	0	0	0	0	0
12	0	1,925	0	0	7,747	0	9,973	0	0	0	0	0	0	3,873	0	0
13	12,600	0	0	0	0	0	7,500	3,600	0	0	0	0	0	0	0	0
14	21,000	0	0	0	7,754	4,037	16,900	1,500	0	1,400	0	0	0	1,400	0	0
15	0	0	0	0	0	12,400	0	0	16,349	0	0	0	0	0	0	6,300
16	0	0	0	5,984	0	4,000	3,935	19,674	0	0	5,200	0	0	0	0	3,340
17	0	7,000	0	0	12,450	19,000	0	0	0	25,235	0	0	0	2,650	0	3,900
19	0	0	0	0	0	0	0	0	0	0	149,100	0	0	37,507	0	0
20	0	0	0	0	0	0	0	0	0	0	3,535	0	0	0	0	0
21	0	13,096	0	0	0	8,434	0	0	0	8,100	0	0	0	0	0	0
22	0	0	0	0	18,656	0	0	0	0	27,712	0	0	0	0	0	0
23	16,958	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sum	114,904	24,221	8,100	5,984	46,607	125,126	61,938	71,336	42,324	96,213	157,835	15,848	211,669	56,809	6,900	21,740

Notes:

(1) - Some restaurants uses located in buildings with other use types present are listed under mixed use.

(2) - Specialty retail and service shops, slightly higher intensity than regular retail.

(3) - Amtrak total Boardings+Alightings for Cary in FY2006 = 20,682 or 56.6 passengers/day on average (0.32 x 56.6 = 18.1 or 19 parking stalls).

FTB -Fraternal and other banquet facilities.



Table 2H – Parking Surplus/Deficit Calculation Worksheet

Block	Demand	Future	5 yr.	10 yr.	Parking	Surplus/	Surplus/	Surplus/
	(current)	Adjust.	Peak	Peak	Supply	Deficit	Deficit	Deficit
Daytime		*	Demand	Demand		(current)	(5 years)	(10 years)
1	0	0	0	0	0	0	0	0
2	28	0	28	28	91	63	63	63
3	80	0	80	80	161	81	81	81
4	44	0	44	44	59	15	15	15
5	97	0	97	97	158	61	61	61
6	24	0	24	24	140	116	116	116
7	167	0	167	167	144	-23	-23	-23
8	379	0	379	379	363	-16	-16	-16
9	139	0	139	139	187	48	48	48
10	138	0	138	138	39	-99	-99	-99
11	10	0	10	10	0	-10	-10	-10
12	43	0	43	43	88	45	45	45
13	68	0	68	68	49	-19	-19	-19
14	130	0	130	130	102	-28	-28	-28
15	78	0	78	78	80	2	2	2
16	102	0	102	102	185	83	83	83
17	171	0	171	171	234	63	63	63
19	602	0	602	602	847	245	245	245
20	32	0	32	32	145	113	113	113
21	132	0	132	132	135	3	3	3
22	87	0	87	87	157	70	70	70
23	55	0	55	55	100	45	45	45
Sum	2,606	0	2,606	2,606	3,464	858	858	858
	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)



Map 4 – Existing Surplus & Deficit Map



Table 2I – Future Building Inventory

Block	Mixed	Rest.	FTB	Hotel	Light Ind.	Retail	Service	Specialty	Bank	Office	Gov.
	Use	(1)						(2)			
Daytime	3.25	6.87	14.81	0.85	0.75	2.38	2.19	2.99	2.95	2.65	3.90
1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	4,200	0	82,641	0
3	0	0	0	0	0	0	0	0	0	27,809	0
4	0	0	0	0	0	1,763	10,366	0	0	6,000	0
5	0	0	0	0	0	0	1,750	5,400	25,975	0	0
6	34,517	0	0	0	0	0	0	0	0	28,588	0
7	39,038	2,200	0	0	0	20,693	1,650	0	0	21,771	0
8	56,421	0	0	0	0	13,208	5,400	14,262	0	42,022	0
9	5,175	0	0	0	0	25,800	1,050	19,700	0	34,304	0
10	0	0	8,100	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0
12	0	1,925	0	0	7,747	0	9,973	0	0	0	0
13	12,600	0	0	0	0	0	7,500	3,600	0	0	0
14	63,056	0	0	0	0	0	0	0	0	39,792	0
15	33,846	0	0	0	0	0	0	0	16,349	27,077	0
16	72,693	0	0	0	0	0	0	0	0	54,520	5,200
17	0	7,000	0	0	12,450	19,000	0	0	0	25,235	0
19	0	0	0	0	0	0	0	0	0	0	149,100
20	0	0	0	0	0	0	0	0	0	0	3,535
21	65,039	13,096	0	0	0	0	0	0	0	75,879	0
22	36,591	0	0	0	18,656	0	0	0	0	58,303	0
23	16,958	0	0	0	0	0	0	0	0	0	0
Sum	435,934	24,221	8,100	0	38,853	80,464	37,689	47,162	42,324	523,941	157,835

Notes:

(1) - Some restaurants uses located in buildings with other use types present are listed under mixed use.

(2) - Specialty retail and service shops, slightly higher intensity than regular retail.

(3) - Amtrak total Boardings+Alightings for Cary in FY2016 = 41,364 or 113.2 passengers/day on average (0.32 x 113.2 = 36.22 or 37 parking stalls).

FTB -Fraternal and other banquet facilities.



Table 2I (con't) – Future Building Inventory

Block	Med. Off.	Church	Community	Library	Post Off.	Amtrack	Arts
Daytime	3.50	0.67	0.55	3.18	2.49	(3) 0.32	Center 0.49
1	0	0	0	0	0	0	0
2	0	0	0	38,954	0	0	0
3	0	0	0	0	0	0	127,964
4	0	2,500	0	0	0	0	0
5	0	0	0	0	0	0	0
6	0	0	0	0	6,900	0	0
7	0	95,000	0	0	0	0	0
8	5,000	114,169	0	0	0	0	0
9	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	3,873	0	0	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	2,650	0	0	0	0
19	0	0	37,507	0	0	0	0
20	0	0	0	0	0	114	0
21	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0
Sum	5,000	211,669	44,030	38,954	6,900	40	127,964
						Pass.	

Notes:

(1) - Some restaurants uses located in buildings with other use types present are listed under mixed use.

(2) - Specialty retail and service shops, slightly higher intensity than regular retail.

(3) - Amtrak total Boardings+Alightings for Cary in FY2016 = 41,364 or 113.2 passengers/day on average (0.32 x 113.2 = 36.22 or 37 parking stalls).

FTB -Fraternal and other banquet facilities.



Table 2J – Future Parking Surplus/Deficit Calculation Worksheet (Daytime)

Block	Future Demand	Demand (current)	Change In Parking	10 yr. Peak	20 yr. Peak	Parking Supply	Change In Parking	Surplus/Deficit	Surplus/Deficit
Daytime		*	Demand	Demand	Demand	(approx.)	Supply	(10 years)	(20 years)
1	0	0	0	0	0	0	0	0	0
2	355	28	328	192	355	91	0	-101	-264
3	136	80	56	108	136	161	0	53	25
4	44	44	0	44	44	59	0	15	15
5	97	97	0	97	97	158	0	61	61
6	205	24	181	115	205	140	0	25	-65
7	316	167	150	241	316	144	0	-97	-172
8	475	379	96	427	475	312	-51	-115	-163
9	230	139	91	185	230	187	0	2	-43
10	120	138	-18	129	120	39	0	-90	-81
11	0	10	-10	5	0	0	0	-5	0
12	43	43	0	43	43	88	0	45	45
13	68	68	0	68	68	49	0	-19	-19
14	310	130	181	220	310	102	0	-118	-208
15	230	78	152	154	230	80	0	-74	-150
16	401	102	299	252	401	39	-146	-213	-362
17	171	171	0	171	171	234	0	63	63
19	602	602	0	602	602	847	0	245	245
20	50	32	18	41	50	145	0	104	95
21	502	132	371	317	502	135	0	-182	-367
22	287	87	200	187	287	157	0	-30	-130
23	55	55	0	55	55	100	0	45	45
Sum	4,700	2,606	2,094	3,653	4,700	3,267	-197	-386	-1,433
	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)



Table 2K – Future Parking Surplus/Deficit Calculation Worksheet (Evening)

Block	Future Demand	Demand (current)	Change In Parking	10 yr. Peak	20 yr. Peak	Parking Supply	Change In Parking	Surplus/Deficit	Surplus/Deficit
Evening		*	Demand	Demand	Demand	(approx.)	Supply	(10 years)	(20 years)
1	0	0	0	0	0	0	0	0	0
2	192	28	164	110	192	91	0	-19	-101
3	703	80	623	391	703	161	0	-230	-542
4	37	44	-8	41	37	59	0	18	22
5	35	97	-62	66	35	158	0	92	123
6	81	24	57	53	81	140	0	87	59
7	407	167	241	287	407	144	0	-143	-263
8	490	379	112	435	490	312	-51	-123	-178
9	130	139	-10	135	130	187	0	52	57
10	120	138	-18	129	120	39	0	-90	-81
11	0	10	-10	5	0	0	0	-5	0
12	67	43	24	55	67	88	0	33	21
13	45	68	-23	57	45	49	0	-8	4
14	129	130	-1	129	129	102	0	-27	-27
15	85	78	7	81	85	80	0	-1	-5
16	159	102	56	130	159	39	-146	-91	-120
17	187	171	16	179	187	234	0	55	47
19	214	602	-388	408	214	847	0	439	633
20	4	32	-28	18	4	145	0	127	141
21	393	132	261	262	393	135	0	-127	-258
22	100	87	13	94	100	157	0	63	57
23	27	55	-28	41	27	100	0	59	73
Sum	3,604	2,606	998	3,105	3,604	3,267	-197	162	-337
	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)



Map 5 – Future Surplus & Deficit Map (Daytime)



Map 6 – Future Surplus & Deficit Map (Evening)



2.4.2 Conclusions

(Conclusions and additional text pending review of building inventory and future projection.)