Johnson Street Business District
Parking Study

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Parking Study for the Johnson Street Business District and the Surrounding Neighborhood

By Jeff Rosenberg

May 28, 2006

Prepared for the Audubon Neighborhood Association, with support from the Center for Urban and Regional Affairs at the University of Minnesota.

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Executive Summary

The Johnson Street Business District, in the Audubon Park neighborhood of Minneapolis, is a thriving, neighborhood-scale commercial node. In the next several years, it is poised to see the development of a number of new businesses, most notably the revitalization of the Hollywood Theater. With those new developments will come a large increase in the demand for parking.

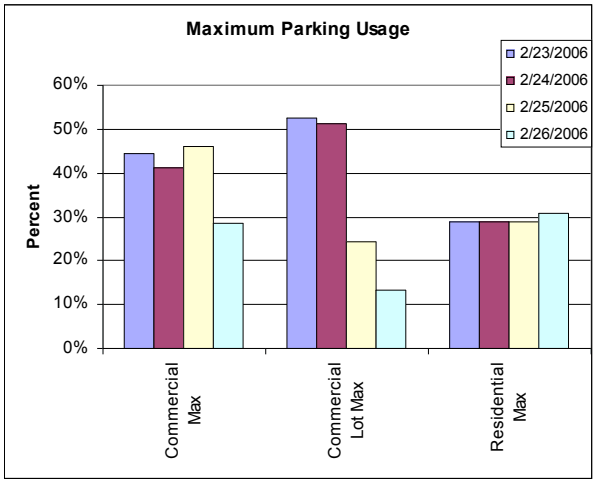
In anticipation of the new development, this study was commissioned by the Audubon Neighborhood Association, through a grant from the Center for Urban and Regional Affairs. It aims to understand the parking situation for the business district and its impact on the surrounding residential streets. To this end, the study:

- Inventories existing parking supply.
- Records current parking usage along Johnson Street, and in the neighborhood immediately surrounding the business district.
- Determines whether demand for parking currently outstrips supply, and if excess commercial parking spills onto residential streets.
- Forecasts changes to the above once new businesses open.

Type of Parking	Available Spaces
Commercial On-Street	63
Commercial Lot	135
Non-Commercial On-Street	902

The study area centered on the Johnson Street Business District: the 2800 block of Johnson Street, several businesses just north of the block, and one just south. It also encompassed the blocks within approximately a one-quarter mile radius—between Hayes and Buchanan Streets N.E., and 30th and 27th Avenues N.E. The business district has approximately 200 spaces available, and the surrounding residential blocks have approximately 900 on-street spaces, not including alley parking and garages.

Currently, there is ample parking available for both the business district and residential blocks. In most cases, less than 50 percent of available parking is used (see graph). Spaces are also available on both sides of the district, so patrons almost always have a very short walk to their destination. There is no evidence that commercial parking is spilling onto residential blocks.



The revitalization of the Hollywood Theater will greatly increase demand for parking during peak movie-going times. During events where the theater is filled to capacity, patrons could require as many as 208 parking spaces. With both the Hollywood and other new business operating at full capacity, parking demand could reach as high as 275 spaces. Because there are only 198 spaces of available commercial parking, this would result in spillover onto adjacent streets.

Available Parking Spaces	Maximum Spaces Currently Used	Potential Maximum Usage—During peak demand for Hollywood Theater and other businesses
198	92	275

This peak demand situation, though it would be rare, could potentially occur on occasional Friday or Saturday evenings. However, even in this case, there should not be any significant strain on parking along the blocks surrounding the theater. The shortfall could be handled entirely by blocks which have little overnight parking. The overnight parking indicates that they have little residential parking; thus, and increase in parking would cause no disruption to current parking patterns. Ulysses and Lincoln Streets, especially between 28th and 29th Avenues, may also see some spillover parking, but it should not be enough to disrupt residents' typical parking patterns.

Distance from Theater	Street	Block	Potential spillover parking	Overnight parking (indicates amount of residential parking)
⅛ mile	28th Ave	1500	20	0
	28th Ave	1600	16	2
⅛ – ¼ mile	Johnson St.	2700	33	5
	28th Ave	1700	21	1
¼ mile	28th Ave.	1400	21	3
	Johnson St.	2900	32	11
Total			*143*	*22*

To mitigate potential spillover, a shared-parking arrangement between the Hollywood Theater and other local businesses will be important. Without access to local parking lots, there will be a potential spillover of approximately 157 cars, as compared to 77 with shared parking.

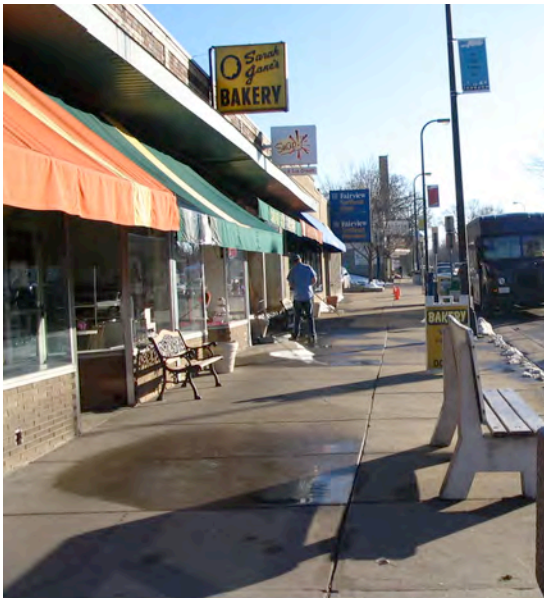
With the opening of new businesses, the Johnson Street Business District may see an end to its current situation of easy parking. However, the increase in demand should not create so many parking problems that it will be a detriment to local business or residents. The neighborhood can lessen the impact of new businesses through careful planning, including shared parking and well-placed parking restrictions.

Introduction

The Johnson Street Business District in Northeast Minneapolis, located on Johnson Street Northeast between 28th and 29th Avenues Northeast, is a thriving, neighborhood-scale commercial node in the heart of the Audubon neighborhood. It is home to several trendy restaurants, shops, and services; it has also retained traditional neighborhood-scale uses such as clinics, a pharmacy, a convenience store, a drycleaner, and more.

The business district's success, though, has also led to greater demand for parking. Like many commercial nodes in Minneapolis, the Johnson Street Business District has limited parking resources (see Table 3, pg. 10). As it has grown, its clientele has expanded, and most clients drive to Johnson Street businesses. As a result, some residents living nearby are concerned that parking is becoming strained and may begin to overflow onto residential streets.

Pop!, Sarah Jane's Bakery, and Snap!, on the Northeastern corner of the district



The node is continuing to grow. Pending developments will have a significant impact on the parking situation. The historic Hollywood Theater on Johnson Street, currently vacant, will soon be refurbished and restored to use as a movie theater. Across the street in a large vacant lot, Master Engineering is proposing a development of 16,000 square feet of commercial space and 6 live-work units.[1] Lastly, one of the few remaining houses on Johnson Street is for sale. It is zoned for commercial use, but has not yet sold. These developments will add new businesses and attract new customers to the Johnson Street node, but they will also bring more cars to the node, and with them further demand for parking.

This study, commissioned by the Audubon Neighborhood Association (ANA) with support from the Center for Urban and Regional Affairs, was conducted from January through May of 2006 and is an effort to meet several objectives:

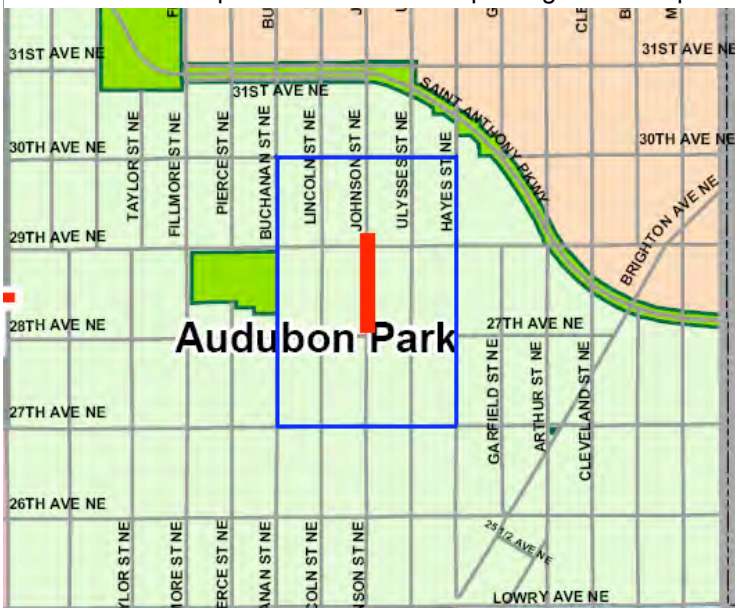
- Inventory existing parking supply.
- Record current parking usage along Johnson Street, and in the neighborhood immediately surrounding the business district.
- Determine whether demand for parking currently outstrips supply, and if excess commercial parking spills onto residential streets.
- Forecast future parking demand once new businesses open.

Methodology

The focus of the study, the Johnson Street Business District, is almost entirely contained within the 2800 block of Johnson St. NE.* A turnover study was performed on the business district itself (Figure 1, red area). A parking inventory and parking accumulation study were performed for both the business district and a larger study area, in order to capture a sense of the business district's impact on the surrounding residential streets. Blocks within approximately one-quarter mile radius of the 2800 block of Johnson St. were included in the study area, resulting in the following boundaries: between 30th Ave NE on the North and 27th Ave NE on the South, and Buchanan St. on the West and Hayes St. on the East (Figure 1, blue area).

Figure 1: Parking study area

Source: ci.minneapolis.mn.us/about/maps/neighborhood.pdf



Parking inventory study

The parking inventory measured the current availability of parking throughout the study area. Each block face† in the study area was counted.

Spaces available in parking lots were counted and notated. Because none of the on-street parking is marked, it was not possible to simply count the number of spaces. Parking was estimated by dividing the amount of curb space on each block by a predetermined figure to represent the amount of space taken up by each car. On residential blocks, one space was estimated at 23 feet per space;[2] on commercial blocks, it was estimated at 25 feet per space.[3] Remainders were simply rounded to the nearest whole number. Though parallel parkers typically leave room on all sides of them, those parking next to one of the above "interruptions" should be able to fit into a much smaller space.

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* Several businesses extend further north: Washburn-McCreavy Funeral Chapel, Johnson St. Medical Clinic, Dinsmore Cleaners, and Perlick Auto Body. These businesses were all included in the Parking Demand study and the Turnover study. One business extends further south: Jennifer Bong Fotos, which was included in the Parking Demand study but not the turnover study.

† A *block face* is the smallest unit used for gathering parking accumulation data. Most often, it is one side of a street between two intersections. For the purposes of this study, parking lots are also considered to be block faces; a parking lot is its own separate block face. Block faces are named with three parameters: the previous cross-street, the street it is located on, and the side of the street. For instance, *28 Johnson E.*

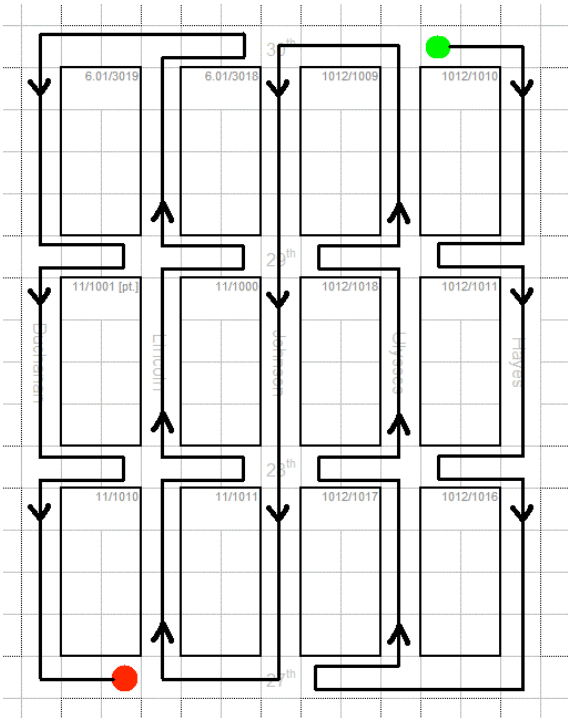
The boundaries of usable curb space on each block were estimated by sight by the research assistant; the length was then measured using a measurement wheel. This result, expressed in feet, was divided by the appropriate figure to arrive at an estimate of the number of available spaces. Most blocks, however, are interrupted by driveways, alleys, or other obstructions. In these cases, the block was divided into sections, with each obstruction to the curb face marking the end of one section and the beginning of the next. The number of spaces available was calculated for each section separately. The obstruction itself, which is unusable for parking, was not counted in the length of either section.

Parking accumulation study

Combined with the parking inventory, counting the number of cars parked throughout the day provides a comprehensive view of the intensity of parking usage. Parking accumulation was measured throughout the study area on four successive days, from Thursday, February 23rd, 2006, through Sunday, February 26th, 2006. Counts were taken at three-hour intervals during the study period.*

Parking accumulation was measured by counting the number of cars parked at each block face. Each count was done by the research assistant, on foot. Generally, two block faces, on opposite sides of the street, were tallied at once. To create as standard a process as possible, the research assistant followed a predetermined route (Figure 2). Furthermore, each block face was measured at a specific number of minutes after the hour each time (Table 17, Appendix).

Figure 2: Parking accumulation walk route



Turnover study

The parking accumulation study, which presented data at the aggregate block level every three hours, did not provide the level of detail needed for commercial block-faces. The turnover study allows more detailed analysis, with data that shows where cars are parked

* 2 a.m. and 5 a.m. counts for all four days were taken at 1 a.m. on Friday, February 24, in accordance with the suggestion in Currin 2001 that all counts from 1 a.m. to 5 a.m. be considered static. Similarly, Thursday's 11 p.m. count was assumed to be the same as Sunday's (by virtue of the next day being a weekday), and Friday's was assumed to be the same as Saturday's (by virtue of the next day being a weekend). Thus, 11 p.m. counts were taken only Thursday and Friday evenings.

on each block face, aggregate totals at 15-minute intervals, and the capability to determine how long specific cars remain parked.

The study was performed on a Friday, May 26th, during three time periods: 7:30 to 9:00 a.m., 11:00 a.m. to 1:00 p.m., and 6:00 to 8:00 p.m.* At 15-minute intervals, the research assistant traveled a predetermined route, encompassing the 2800 block and a portion of the 2900 block of Johnson Street and the 1500 and 1600 blocks of 29th Avenue. Along the route, the research assistant took snapshots of the cars parked along the curb and in parking lots. Snapshots overlapped slightly to make sure all parked cars were captured. These snapshots were then reviewed to create a spreadsheet showing, for each interval, which spaces had parked cars, and how long each car had been parked.

Definition of *block types*

For the purposes of analyzing parking usage, the study area was divided into five different types of uses. Each block face was classified separately, according to the number of residences and whether it is used for business parking (Table 1).

Table 1: Description of types of use

Type	Description
Commercial†	A block face of a public street which is primarily used for business parking‡
Commercial Lot	A parking lot (not part of a public street) which is primarily used for business parking
Non-Commercial Lot	A parking lot (not part of a public street) which is not primarily used for business parking
Non-Residential	A block face of a public street which is not primarily used for business parking and which does not contain at least 2 residential addresses
Residential	A block face of a public street which is not primarily used for business parking and which contains at least 2 residential addresses

* Because this was the beginning of Memorial Day weekend, numbers from the turnover study—especially those during the evening—are artificially low. Several earlier dates were attempted, but had to be cancelled due to weather.

† Because the term "commercial on-street" is cumbersome, "commercial" is used in the database to denote on-street commercial parking. This usage appears in several tables and graphs. In written sections of the report, "commercial" is used to denote the total of both on- and off-street commercial parking, and on-street parking is labeled as such.

‡ The major commercial block of the study area, the 2800 block of Johnson, does have residential uses. However, all of the parking for those units is located in the alley or on other streets; the overnight parking count on Johnson is 0 for all block faces.

Existing Conditions

Neighborhood characteristics

Audubon Park has low vehicle ownership compared to the rest of the metropolitan area. The majority of neighborhood households have less than two cars, and only ten percent have more than two. On the other hand, it has slightly higher rates of vehicle ownership that the city as a whole (Table 2).

Residents of the Audubon neighborhood make extensive use of their alleys. Many homes have been retrofitted with two-car garages on the alley, providing a more functional garage for the average family today than the standard Minneapolis one-car garage. While some park on the street, a substantial portion of parking is in alley-accessed garages or parking spaces.

The study area has a population of slightly over 438 people, over 200 households, and over 201 housing units.* The majority of the housing consists of single-family homes, with some duplexes and a few small apartment homes (Figure 3).

Figure 3: Study area land use

Source: Minneapolis Neighborhood Profiles

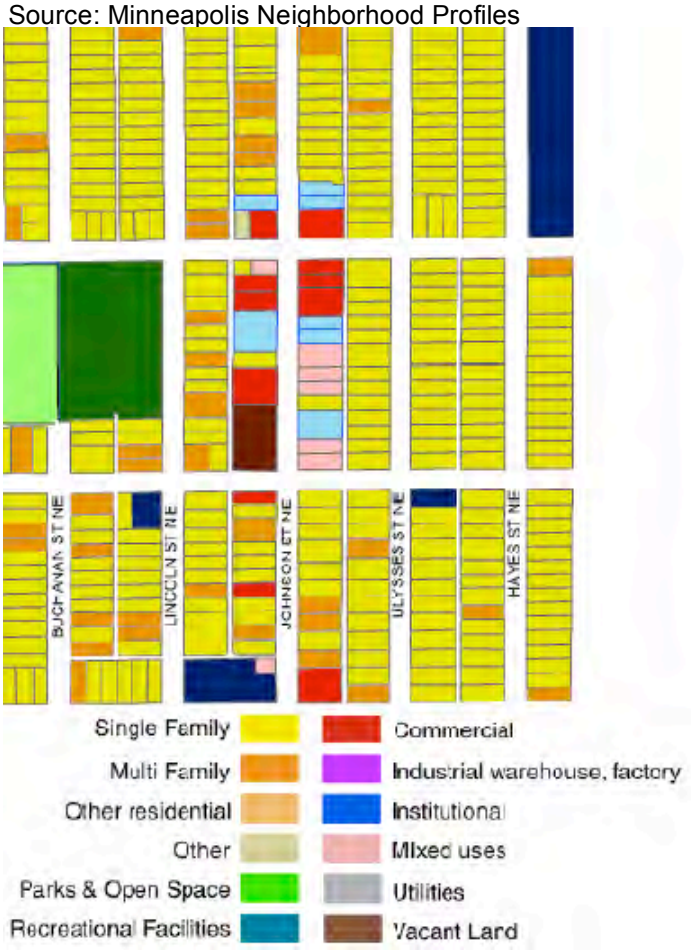


Table 2: Vehicle availability

Source: Minneapolis Neighborhood Profiles, U.S. Census 2000 (Percentages may not add to 100 because of rounding)

Vehicles Available	Audubon Park	Minneapolis	Minneapolis-St. Paul MSA
None	14%	20%	8%
1 vehicle	42%	43%	32%
2 vehicles	35%	28%	43%
3 or more vehicles	10%	9%	18%

* Because the U.S. Census Bureau does not provide data down to the block-face level, it is not possible to get numbers that match the study area exactly. The numbers in this paragraph do not count the eastern block faces of Hayes St. or the western block faces of Buchanan St..

The Johnson Street Business District has one feature which is fairly unique for an urban commercial node: the 44-space Merchants' Association parking lot, which provides free parking for employees and patrons of local businesses. This adds substantially to the amount of free, public parking within the business district boundaries. Table 3 shows the inventory of parking spaces within the entire study area. Usage of those spaces is discussed further below.

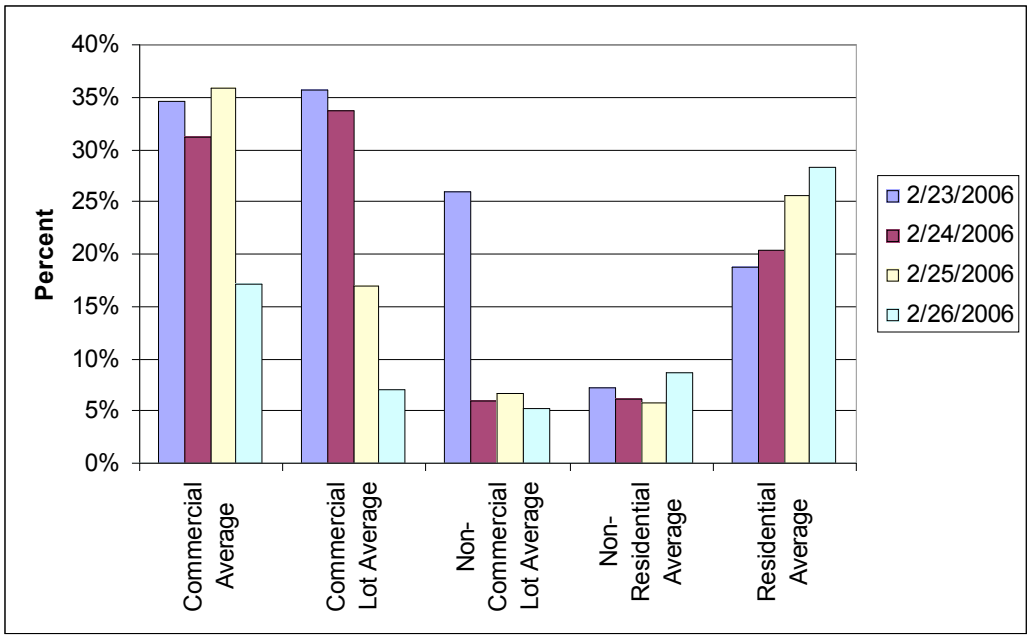
Table 3: Available spaces by parking type

Type	Total Spaces
Commercial	63
Commercial Lot	135
Non-Commercial Lot	27
Non-Residential	248
Residential	654

Current parking usage

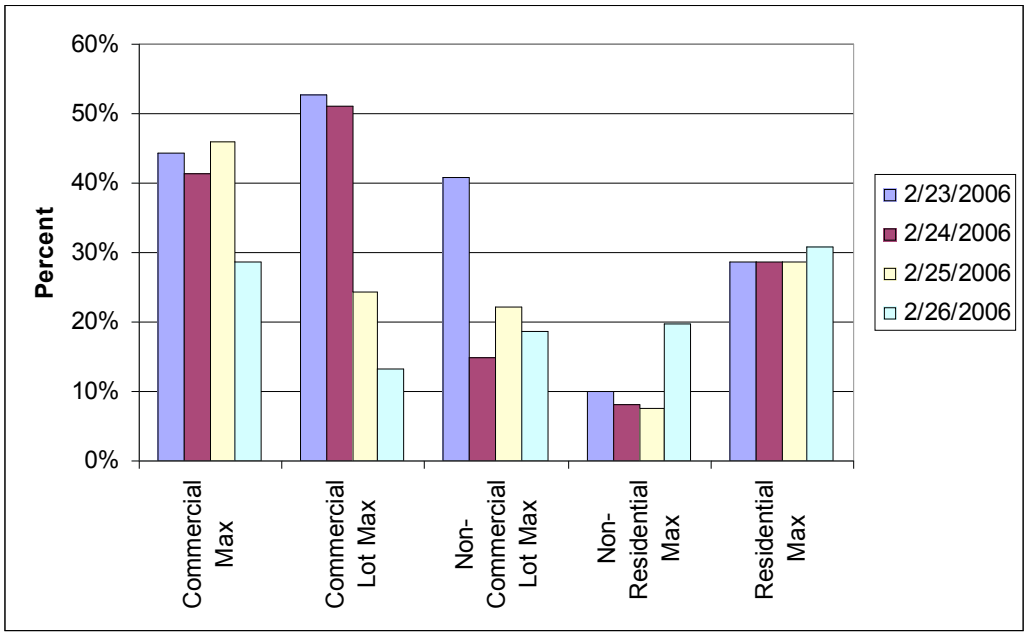
Rates of parking use vary greatly by time and location, but in the vast majority of cases, there is plentiful parking for all uses. Average usage of parking within the study area did not exceed 40 percent on any day, for any category (Figure 4).

Figure 4: Average percentage of available parking used by day*



* Averages are from 8:00 AM – 8:00 PM. Because businesses have limited hours, taking the average for the whole day significantly lowers percentages for commercial uses. The whole-day average would be more appropriate to represent residential uses; however, this only results in a three-percentage point rise for Feb-23 and Feb-24.

Figure 5: Maximum percentage of available parking used by day



Maximum parking usages, though substantially higher, indicate that even during peak parking periods, there is still plenty of space available (Figure 5). Only in two instances is over half of the parking of a particular type used.

Commercial parking is lightly used. Aside from the maximum parking usage, the turnover study shows an even lower percentage of vehicle-minutes used (Table 4). This indicates that, because of high turnover, parking is even more readily available than it appears from the accumulation study.

Table 4: Parking load of commercial spaces

	7:30-9:00	11:00-1:00	6:00-8:00
29th Ave	4%	9%	12%
Johnson St	22%	34%	10%

Parking in the commercial node is not quite as easy the data appear to indicate, though. Only 55 percent of parking for the business district is public—that is, not restricted to patrons of a particular business. The other 45 percent is in private lots. Because of this, many empty parking spaces are not necessarily available to people looking for general parking.

With the current level of parking demand, however, there is an adequate amount of public parking. Though it is sometimes scarce in places, there are spaces available. Indeed, there are usually spaces available on every block-face, allowing visitors to find parking within a half-block of their destination. Out of seven block-faces for public commercial parking,

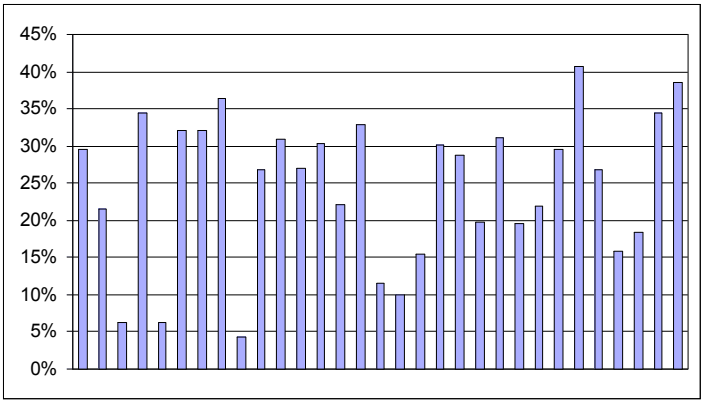
each measured 24 times, only one single block-face, during only one time period, was ever 100-percent full.

Because the data reflects parking for an entire block, the specific location of available spaces may not be optimal. It is possible that visitors may have to park at the opposite end of the block from the business they wish to attend. However, all respondents to a survey distributed by the research assistant indicated that they believed their customers were able to park close to their business. In addition, data from the turnover study shows that there are consistently vacant spaces at both ends of the business district. Thus it appears that, not only is parking available on every block-face, it is usually even available within the immediate vicinity of a visitor's destination.

Parking on residential blocks is readily available. These blocks have, on average, 1.87 available parking spaces per dwelling unit. Based on an average of 1.4 cars per dwelling unit,[*4] there is enough on-street parking available to satisfy all residents' demands, with excess space remaining. In addition, alley usage appears to be high, lowering demand for parking on-street. In is not surprising, then, that the average accumulation on all blocks was well under 50 percent; only in one instance was it even above 40 percent (Figure 6; see full data for more detail).Though there is some asymmetry in the way parking is distributed, parking availability is ample on all residential blocks. In general, parking should be available in front of each resident's house. The typical lot width in the study area is approximately 40 feet, which provides room for almost 2 cars in front of each lot.

Residential parking was never observed 100-percent full on any block-face. On two occasions, a block-face had 83 percent of its available spaces in use during a particular time period, but in all other cases, the maximum usage was less than 70 percent. Such peaks are a natural occurrence, perhaps due to a social gathering at a house on that block. Overnight, which is both the peak parking time for residential uses in aggregate and the time least likely to see a variation from a one-time event, the maximum accumulation on any block face was 56 percent.

Figure 6: Average accumulations for residential blocks



Non-residential blocks add additional excess parking.

[*] This data item is not available for individual blocks; it was assumed that vehicle ownership in the study area closely matches that of the neighborhood as a whole. The study area may be slightly higher than the neighborhood average, because incomes generally decrease further west toward Central Avenue. However, census tract 1012, which includes the eastern portion of the study area, only averaged 1.55 vehicles per household.

Because these blocks have few or no homes fronting them, they are seldom parked on. However, they represent a substantial number of available parking spaces if the need for those spaces should ever arise: 248 spaces throughout the study area. With the addition of these block-faces, the average number of spaces available per dwelling unit in the study area rises from 1.87 to 5.95.

Peak parking times

Residential and commercial parking experience their peaks at different times. On-street residential parking in the neighborhood is at its peak overnight, while commercial lot parking peaks between 2 and 5 p.m., and commercial on-street peaks at 8 p.m. on Fridays and Saturdays (Figure 7).

Parking in the other two identified uses, non-residential blocks and non-commercial lots, does not have a substantial impact on the neighborhood. The maximum usage for non-residential blocks is 20 percent, on Sunday at peak churchgoing time; with that time excluded, the maximum drops to only 10 percent. Non-commercial spaces represent a tiny fraction of available parking in the neighborhood (2 percent). 20 out of 27 of these are in the Audubon Park lot; because their usage is dependent on events being held at the park and community center, they are fairly unpredictable.

Figure 7: Percent of parking used by type

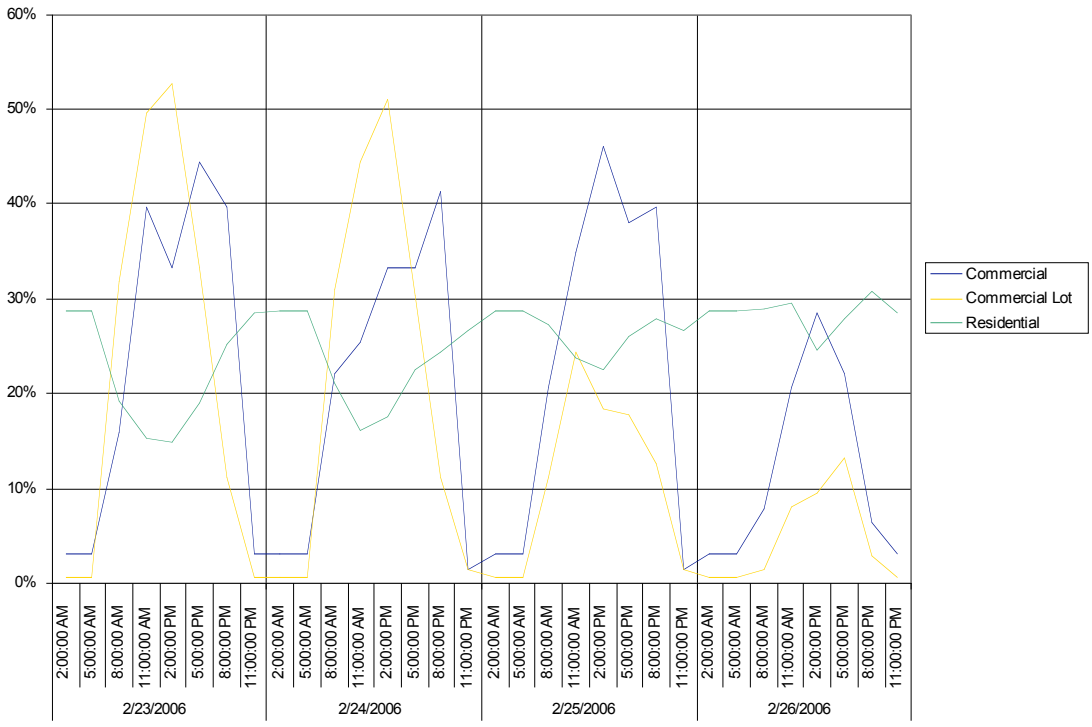


Table 5: Peak parking usage by type

Type	Peak Time	Total Usage	Most-Used Block Face
Commercial	Sat. Feb. 25, 2 pm	46%	16 29th S – 78%
Commercial Lot	Thur. Feb. 23, 2 pm	53%	28 Johnson B – 84%
Residential	Sun. Feb. 26, 8 pm	31%	14 29th N – 67%
Residential*	Overnight	29%	29 Ulysses W – 56%

Table 5 shows the time of peak usage for commercial (on-street), commercial lot, and residential block faces, along with the percent of spaces used at that time. Even at the time of peak usage, approximately half of existing parking remains available for commercial uses, both in lots and on-street; even more remains available for residential uses.

Table 6 and Table 6 provide more detail on peak parking for commercial uses. These two tables show data for each block face during the peak parking period. Both show that visitors to Johnson Street are typically able park at whichever block face they want. During the peak period, for both on-street and off-street parking, every block face had spaces available. Throughout the entire study period, only two block faces were ever 100 percent full.

Table 6: Commercial (on-street) peak parking

Block	During peak time – 2:00 p.m. Saturday	Highest usage during study
15 29th N	14%	29%
15 29th S	14%	43%
16 29th N	57%	100%
16 29th S	78%	89%
28 Johnson E	67%	67%
28 Johnson W	42%	58%

Table 7: Commercial lot peak parking

Block	During peak time – 2:00 p.m. Thursday	Highest usage during study
16 29th A	67%	100%
28 Johnson A	7%	21%
28 Johnson B	84%	84%
28 Johnson C	60%	60%
29 Johnson A	35%	53%
29 Johnson B	23%	42%

Because on- and off-street parking have slightly different peak periods (Figure 7), the maximum amount of commercial parking during the study period was less than half (46 percent). On average, approximately one quarter of commercial parking was used between 8 a.m. and 8 p.m. (Table 8).

Though the total usage of commercial parking appears low, there are a large number of spaces in proprietary lots which, while unused, are not available to the general public. The Washburn-McCreavy lot (29 Johnson B) and EZ Way foods lot (28 Johnson A) both receive minimal use. The two account for almost 30 percent of existing spaces (19.2 and 9.6 percent, respectively). They thus have a large effect on the peak usage percentage for commercial lots.

Indeed, private parking is much less heavily used than public. On average, public parking is used almost twice as intensely as private parking: 32 percent for public versus 17

* Though the highest number of cars parked on a residential street occurred on Sunday at 8 p.m., this appears to be a spike not conforming to the observed pattern of residential parking. The typical peak is overnight, so overnight data is presented here as well as the data for Sunday at 8 p.m.

percent for private (Table 8). Furthermore, because some lots are substantially underused, the maximum usage of private lots is only 38 percent, as opposed to over 50 percent for public spaces (Table 8).

Table 8: Commercial parking usage

	Spaces Available	Maximum Use		Average Use*	
		Vehicles	*Percent*	*Vehicles*	*Percent*
Total Commercial	198	92	46%	50	25%
On-Street	63	29	46%	19	30%
Off-Street (lots)	135	71	53%	32	24%
Public	107	60	56%	34	32%
Private	91	35	38%	16	17%

Is there currently spillover into residential neighborhoods?

There is no evidence that business parking is currently affecting streets other than those block faces labeled "commercial" in this study. As can be seen above, parking on commercial block faces seldom reaches 100 percent (Figure 5, Table 8), and even if one block face were 100-percent full, there would still be spaces available on adjacent faces.

80 percent of businesses responding to the survey indicated that they had sufficient parking for their needs. The demand for business parking has not reached the point where patrons are unable to find parking, nor has parking begun to overflow onto adjacent residential streets.

29th Avenue NE receives a substantial amount of parking between Lincoln and Ulysses streets; this may be perceived by some residents as traffic filtering onto residential streets. However, those four block faces combined have only 2 residences, and are immediately adjacent to the heaviest uses in the business district. Parking for commercial uses does not appear to spread past these blocks onto named streets (as opposed to numbered avenues).

All evidence suggests that, currently, the Johnson Street Business District has ample available parking, and surrounding residential streets do not experience spillover parking. Impending developments, though, will add substantially to parking demand on Johnson Street. The rest of this report will discuss the changes that can be expected.

* 8 a.m. to 8 p.m. only; see footnote, pg 10.

Forecasts

Though commercial block-faces should still be able to accommodate most parking needs, residential block-faces may experience some spillover in the future. This is largely due to the impact the Hollywood Theater when it opens, but spillover should only occur when several Johnson Street businesses, including the theater, experience peak demand at the same time. While such a situation would require parking than is available on those blocks labeled "commercial" by this study, the parking could still be handled easily, and with relatively little disruption to residents' standard parking patterns.

Proposed development on Johnson Street

Master's pending development at 28th Avenue N.E. and Johnson Street N.E., currently in a preliminary design phase, is proposed to contain some 16,000 square feet of commercial space, along with 6 live-work units. It will provide approximately 27 parking stalls with alley access.[5]

A house at 2819 Johnson Street, currently for sale, will most likely be used for commercial purposes after it is sold. Though there has not yet been a purchase agreement, rumors suggest that the site may become a restaurant. This would be the most intense use likely for the location. Therefore, in the interest of possibly overstating potential growth in parking demand, rather than understating it, this report will assume that a restaurant will eventually be opened on that site.

The Hollywood Theater, when it opens, will have between 700 and 800 seats; its developer will try to maximize that number. The theater will show second-run movies; it will also have approximately one live event a week on a Friday or Saturday evening. These events will feature musical acts, speakers, comedians, and other similar entertainment.[6] The Hollywood will not be a unique institution in Minneapolis. There are already several neighborhood theaters in the city, including some that bear close resemblance to the Hollywood. A look at these theaters and their environs can provide some insight into the way the Hollywood might function in the neighborhood.

Neighborhood theaters in Minneapolis

The Riverview Theater, in the Howe neighborhood at 38th St. E. and 42nd Ave. S, has a location very similar to the Hollywood's. It is in a small, neighborhood commercial node surrounded by low-density residential uses—mostly single-family homes and duplexes. While there is a bit of business-related parking at this node, the theater does not have any of its own parking; almost all patrons park on residential streets. Indeed, there is even less commercial parking available for the Riverview; because of the width of the street, the north side of 38th Street is off-limits for parking at all times.

Residents of the area seem to coexist peacefully with the theater. Indeed, a staff person at the Longfellow Community Council (of which the Howe neighborhood is a part) said she had never heard complaints from neighborhood residents about on-street parking around the Riverview.[7] On the other hand, the same dynamic cannot reasonably be expected in Audubon Park because of one important difference: the Riverview Theater has been operated continuously since 1949. Residents who have bought houses in the Howe neighborhood, therefore, have expected certain on-street parking difficulties during peak theater times. Some have adapted by making heavy use of their alleys. A quick walk through Howe-neighborhood alleys shows a telltale sign that much residential parking is in the rear: landscaped paths from the alley to the back door (see photo).

A portion of a Howe neighborhood alley

Another similar theater is the Parkway Theater, in the Field neighborhood at 48 St. E and Chicago Ave. S. The business node the theater is part of is larger than those in Audubon and Howe; it contains banks, a veterinary clinic, and several popular restaurants. Many businesses in the vicinity of the Parkway have their own parking lots. Yet there are also numerous similarities to the Hollywood Theater site. Most importantly, the Parkway has no parking of its own, and is surrounded by residential streets.

Despite the number of parking lots in this node, the primary concern of residents is business parking. Parking for the theater filters onto residential streets and is a source of tension for residents. In an effort to cope with the lack of parking supply, some businesses along Chicago Avenue allow their parking lots to be used by the Parkway when their businesses are closed.[8]

The different experiences of the Howe and Field neighborhoods show that, with the addition of a neighborhood theater into the Audubon Park neighborhood, any outcome is likely. By the Riverview theater, residents have reported no parking complaints; by the Parkway, it is the residents' top complaint. The impact of the Hollywood Theater is most

likely to be similar to that of the Riverview. Analysis of parking on and around Johnson Street suggests that residents of the Audubon neighborhood should not experience many parking difficulties.

Increases to peak parking demand

Master's new development should not create more parking demand than the number of spaces it will provide. Though it is a large project in comparison to the current uses on Johnson Street, it will house low-intensity uses.[9] Development standards enforced by Minneapolis's department of Community Planning and Economic Development (CPED) will ensure that all parking demand generated by the project will be met with supply on-site.[10]

At 2819 Johnson, the most intensive use, and the one that is rumored to be most likely for the site, would be a full-service restaurant, similar to "Pop!" at 2859 Johnson. If a new building was constructed which covered the entire lot, it could be as large as 5,480 square feet, compared to 2,200 square feet at "Pop!". Using the entire length of the lot is rare for a commercial development today, as they usually devote some space to parking.

In this situation, a new restaurant could fit approximately 150 seats, resulting in a demand from 27 to 92 parking spaces, depending on the model used to produce the forecast. However, this would be an extreme situation. More likely would be a restaurant similar to "Pop!", which has 60 seats and 2200 square feet, according to a survey distributed by the research assistant. A 60-seat restaurant would produce a demand from 11 to 38 spaces. If desired by the neighborhood, it may be possible to require the parking demand to be met off-street (see "New restaurant," page 27).

By far, the largest increase in parking demand will come from the revitalized Hollywood Theatre. With a 700-800-person capacity, it will easily eclipse the number of patrons using other Johnson Street businesses.

Forecasts for the Hollywood are based on statistics from the Institute of Transportation Engineers (ITE) and on other local neighborhood theaters. Parking demand statistics from the ITE's *Parking Generation* are shown below (Table 9).* Though the Hollywood will

Table 9: Parking demand for movie theaters and live theaters

Source: Institute of Transportation Engineers, *Parking Generation*

	Movie Theater with Matinee	Live Theater
Avg. Peak Parking Demand	.26 vehicles per seat	.23 vehicles per seat
Standard Deviation	.12	.11
Range	.11-.46 vehicles per seat	.18-.42 vehicles per seat

* The reliability of the ITE's numbers is unclear, as there are not enough data points to provide strong conclusions. Further, they are mostly focused on suburban megaplexes. However, they are the most conclusive numbers available.

be used both as a movie theater and as a live theater, these statistics show no substantial difference in demand between the two. Accepting the ITE's average of 0.26 vehicles per seat, an 800-seat Hollywood Theater would generate a peak parking demand of approximately 208 seats.

Currently, the most similar business in Minneapolis to the proposed Hollywood Theater is the Riverview Theater (described above on page 16). The Hollywood will be somewhat different, because it will offer more live performances. Nevertheless, the Riverview is the most accurate comparison available.* Peak moviegoing time at the Riverview is the evening show on Fridays and Saturdays. The number of moviegoers on a Friday or Saturday evening varies widely depending on the film showing, but can reach a peak of 500 to 600 people.[11] It is expected that the Hollywood will have its peak demand at the same time. For movies, it will probably draw a similar number as the Riverview, but it may draw up to a full 800 for live events.

The opening of these new businesses will have a substantial impact on parking demand along Johnson Street. At 8 p.m. on Fridays and Saturdays, the observed parking was 41 vehicles on Friday and 42 on Saturday. This is approximately 21 percent of available commercial parking spaces. The projected demand with the increase generated by the theater, however, would exceed the current parking availability, rising to as much as 141 percent of available commercial spaces. The excess demand would be met on other block faces.

Table 10: Forecast demand during peak theater parking

	Current Demand			**Available Spaces**		**Projected Demand**†	**Shortfall**
	Total	*On-Street*	*Off-Street*	*Total*	*Public*		
Saturday, 8 pm	42	25	17	198	107	275	77-157

The shortfall will be substantially more severe without a shared-parking arrangement between local merchants. Without access to proprietary lots, as many as 91 more cars could spill over onto residential streets; at the same time, 91 available spaces would sit empty on Johnson Street (See "Spillover onto residential streets", pg. 21).

It must be noted, however, that this projection pertains only to a *full* theater. Theater-related parking, even during the peak period, will vary widely, depending on the movie or live act that is scheduled.[12] Though there will be a shortfall on high-demand evenings, there may also be Fridays and Saturdays when there is no shortfall at all, particularly when movies are shown as opposed to live events.

With the impact of the theater, the peak parking-demand period for commercial parking can be expected to shift from afternoon to evening. Currently, commercial on-street

* The Ritz theater, a sister theater to the Hollywood, will be opening in May 2006 at 345 13th Ave NE as a home for Ballet of the Dolls. As updates to this study are done, the Ritz will be another useful comparison.
† Current demand (42) plus 208 for the Hollywood Theater, plus 25 for a new restaurant (the midpoint of the possible demand for a restaurant similar to "Pop!"

parking sees its peak on Saturdays around 2 p.m. This should be expected to change to Friday or Saturday at around 8 p.m. Commercial lots have peaks on weekdays at 2 p.m., which might also change, depending on whether or not lots are used for theater parking.

Because of the current peak in on-street parking around 2 p.m. on Saturdays, it might appear that this is another time for concern about the availability of parking. However, data for that time period, as compared to 8 p.m., the forecast time of peak theater parking, show that there is not currently a large difference in demand between those two periods (Table 11). Because parking demand for the theater will be substantially lower, few problems are forecast during Saturday afternoons. Because the Hollywood will be a one-screen theater, there may be Saturdays where particularly popular movies are showing, which would increase demand; in general, though, there should not be substantial parking problems at this time.

Table 11: Saturday parking demand, 2 p.m. vs. 8 p.m.

	Current Demand		
	Total	*On-Street*	*Off-Street*
Saturday, 2 pm	54	29	25
Saturday, 8 pm	42	25	17

In some instances, population change in a neighborhood can have an impact on the parking situation. This is not forecast to be the case in Audubon Park. There is plenty of residential parking available, as detailed above. Further, population increases are forecast to be small enough that they will not have a large effect on the business node.

Population in the Audubon Park neighborhood has been falling for the past 20 years (Table 12). It is forecast to rise slightly by 2010, but by 2030 it may be lower than the population in 2000. Minneapolis's population forecasts as made by Traffic Analysis Zone (TAZ) rather than by neighborhood. Table 12 details historical data and city projections for TAZ #443, which contains the Audubon Park and Waite Park neighborhoods. These data show that the two neighborhoods will see a combined addition of over 400 people by 2010, but continual losses after that. These temporary gains, representing about 4 percent of the current population, are not expected to have much impact on Johnson Street.

Table 12: Population trends in TAZ #443, Audubon Park and Waite Park neighborhoods

Source: Minneapolis Neighborhood Profiles; Thavisack Silaphet[13]

	Audubon Park	Waite Park	Total, TAZ #443
1980	5,924	6,192	12,116
1990	5,667	5,707	11,374
2000	5,256	5,205	10,461
2010 (projected)	N/A	N/A	10,900
2020 (projected)	N/A	N/A	10,500
2030 (projected)	N/A	N/A	10,100

Finally, parking forecasts are all dependent on the success of the Johnson Street Business District as a whole. Recently, the node has been increasingly popular, but there are no

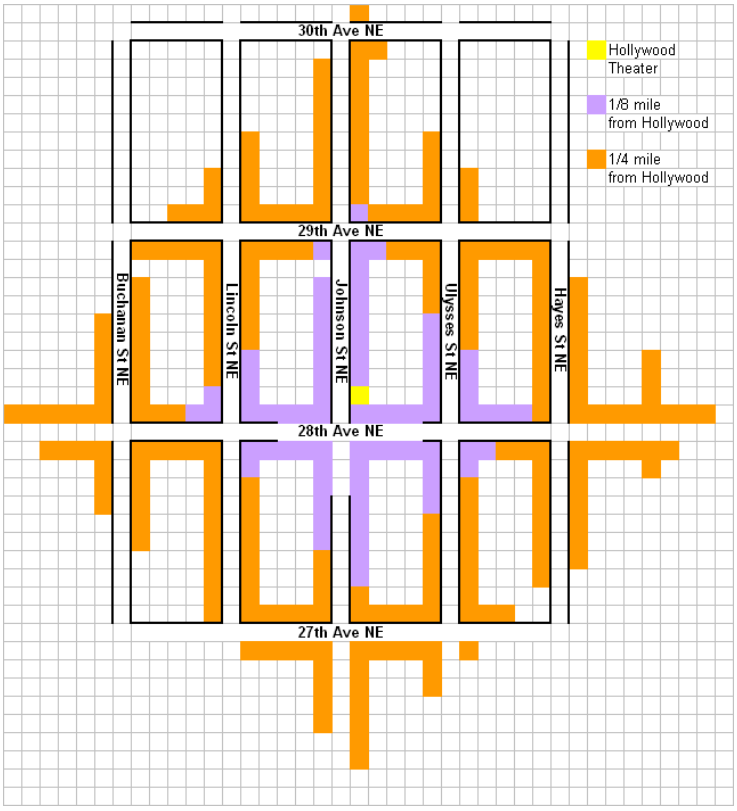
market studies available to predict whether it remain in fashion in the future. Its popularity will determine the demand for parking to a large degree. For this reason, occasionally measuring parking during peak times is important. These measurements can be taken be neighborhood volunteers, focusing on peak times, rather than the more comprehensive methods of this study.

Spillover onto residential streets

During the peak movie-going times, Friday and Saturday nights at 7:00 p.m., all commercial parking will most likely be used once the theater is open. In addition, when the theater is full for a popular movie or a live event, the demand for parking will exceed the supply in the Johnson Street commercial core. Public commercial parking provides 107 spaces; if sharing agreements can be worked out, private lots can provide approximately an additional 91 spaces. However, the estimated demand may be as high as 275 spaces (see Table 10, pg. 19). Parking demand not satisfied by available commercial spaces can be expected to use nearby residential streets.

Though there will be spillover onto adjacent streets, it should not be overwhelming for Audubon residents. Almost all spillover parking could potentially be accommodated on streets that are currently lightly parked, particularly Johnson Street and 28th Avenue. Indeed, if the neighborhood so desired, parking on Ulysses and Lincoln Streets, the two residential streets closest to the theater, could be restricted without causing problems for the theater (see "Parking restrictions on other streets", pg. 27). Regardless, parking on Ulysses and Lincoln streets should be light enough that there will be no major disruptions to those blocks.

Figure 8: Parking within a ⅛ mile and ¼ mile radius of the Hollywood Theater



All of the demand for Hollywood Theater parking can be satisfied within a radius of one-quarter mile from the theater (Figure 8).

Table 13 shows the blocks most liable to be used for parking, approximately in the order they would likely

be used.* Generally, spaces closest to the theater should be expected to fill up most quickly. The table omits most of the residential streets within a quarter-mile radius of the theater, as the demand can be met with existing spaces closer to the theater. However, if ever needed for some reason, much more parking is available. Because of the number of streets within walking distance, parking needs can be met without overwhelming a single residential block.

Table 13: Non-commercial blocks handling Hollywood Theater parking

Distance from Theater	Block	Spaces available	Spaces used Saturday, 8 p.m.	Potential spillover parking	Overnight parking
⅛ mile	15 28th	20	0	20	0
	16 28th	18	2	16	2
⅛ – ¼ mile	27 Johnson	36	3	33	5
	17 28th	21	0	21	1
	28 Ulysses	52	12	40	10
	27 Ulysses	49	15	34	20
	28 Lincoln	49	14	35	13
¼ mile	14 28th	21	0	21	3
	29 Johnson	38	6	32	11
Total		*304*		*252*	
Total, excluding Ulysses and Lincoln Sts.		*154*		*143*	

On a typical Friday or Saturday evening, most spillover parking should go to 28th Avenue and the residential blocks of Johnson Street. These are natural choices for theater patrons, allowing a short walk along a well-lit street. Because few residents park on these streets (Table 13), they will not cause disruption to current residential parking patterns.

With the opening of the Hollywood Theater and the Master project, neighborhood residents should expect 28th Avenue to become a more heavily-used street. Currently, the business district is heavily centered around the intersection of Johnson and 29th Avenue. However, it will stretch as the southern portion of the block becomes more heavily used. As shown above, 28th will also become a major source of parking for the theater. It is likely, then, that it will begin to acquire a more commercial feel, similar to 29th Avenue.

Parking on the "non-residential" block faces along 28th Avenue will likely be perceived as a problem by current residents within the study area. Though these blocks are called "non-residential" according to the terms of this analysis, they are outside of the Johnson Street Business District's commercial core, and thus perceived to be part of the broader "residential neighborhood" surrounding the businesses. Residents will probably be concerned about parking outside of the Johnson Street commercial core, but some spillover is inevitable.

* Blocks are shown here rather than block faces. It is unlikely that one side of a block would be parked on and another not, just because of a small distance between them; rather, the side of a block parked on is more likely to be determined simply by the direction someone is driving.

The most effective way to reduce spillover onto neighboring streets, as shown above (Table 8, Table 10), is shared parking in commercial lots. At times of increased demand for parking, the 45 percent of commercial parking spaces which are privately-owned will cause substantial inefficiency if they continue to be reserved for the patrons of the business that owns them. Because peak movie-going time is after business hours, almost all private spaces (91 total) would go unused. Allowing these proprietary lots to be used for theater parking would greatly reduce the amount spillover onto residential streets.

Conclusions

Current parking

Parking is currently easy throughout the study area. Commercial block-faces, whether on- or off-street, are rarely full. It is thus easy for business patrons to park close to their destination. Residential block-faces are never completely full, and on average, are less than 30 percent full. Residents are thus able to park on-street near their house if they desire, though many appear to park in the alley. In addition, there are a large number of unused spaces constantly available on non-residential streets. There is currently no evidence of spillover from commercial parking onto residential streets.

Impending impacts to parking

Master's new development at the Northeastern corner of Johnson Street and 28th Avenue is not projected to add to parking demand, because it should cover its own demand with a new parking lot on the alley. The Hollywood Theater and a potential new restaurant at 2819 Johnson, though, will add substantially to demand. With the opening of these new businesses, parking demand could climb to as high as 275 spaces on a Friday or Saturday night, as compared to 42 during the study, and 198 available spaces—of which only 107 are public. This situation would cause spillover onto adjacent streets.

However, this estimate should be considered a maximum. In the interest of estimating too high as opposed to too low, this analysis assumes that both the Hollywood Theater and 2819 Johnson will maximize their development potential. Indeed, there are currently no plans for 2819 Johnson—a restaurant was assumed in this report largely because it would maximize parking demand for that property. In addition, even if these estimates prove to be correct, the forecasted 275 spaces would occur during peak occupancy, not as a normal occurrence.

Spillover parking will be handled easily within a one-quarter mile radius of the business district. Depending on the parking demand, it is possible that it could be handled within a smaller radius. Spillover could also be handled exclusively on streets with low residential parking through parking restrictions, if the neighborhood wishes to do so (see "Parking restrictions on other streets" below)

Shared parking

As shown above (Table 13), there are enough available parking spaces within a quarter mile to accommodate parking for the Hollywood Theater even without a shared-parking agreement between Johnson Street businesses. However, some sort of public usage of proprietary lots could drastically reduce pressure on nearby streets. Of the 91 spaces in these lots, only 11 were used on Saturday at 8 p.m. during the accumulation study. Shared parking, then, could reduce spillover onto non-commercial streets by approximately 80 vehicles, cutting it in half

Existing bus stops

A sizable portion of the 28 Johnson W block face is currently taken up by a bus stop. This stop is abnormally large, though: at 130 feet, it takes up over one-fifth of the entire block face. This curb spaces could add substantially to on-street parking; uninterrupted, it could add five spaces of additional on-street parking in the vicinity of the new businesses that will be opening. The parking lot for the Master development will be accessed through the alley, and will not need a curb cut onto Johnson Street like most parking lots.[14] Discussions with Metro Transit to move the stop to the south side of 29th Ave, or at least to shorten the no-parking zone, could add several extra on-street spaces to the supply on Johnson Street. However, gaining the full five spaces would require moving the stop in front of another business, Jennifer Bong Foto, and might negatively impact residents in the houses immediately south of that building.

There is some disagreement between local businesses about the bus stop on the east side of that block, at the intersection with 29th Avenue N.E. Some would like to see it moved to the north side of 29th Avenue, while others would like to see it remain. Moving the stop to the north would improve parking for some businesses. However, those businesses do not currently have a parking problem with the bus stop in place, and moving the stop would place it directly in front of a funeral chapel, where it could be disruptive.

The turnover study shows heavy demand for parking near "Pop!" restaurant. Currently, due to the existing bus stop, combined with the handicap transfer zone, there are few parking spots available outside the businesses on the northeast corner of the 28 Johnson block (see photo, next page). Parking demand for "Pop!" and the other businesses, then, is on the 16 29th block, which is parked heavily for lunch and dinner. Conversely, there appears to be little demand for parking outside the funeral chapel.*

* The research assistant has not witnessed a heavily-attended funeral at the chapel, and so is unable to include peak usage of the chapel in this analysis.

The string of parking restrictions on the northeast corner of the 28 Johnson block

Restricted parking on Johnson Street

Johnson Street has a number of parking restrictions in addition to the bus stops, including 90-minute parking and a handicap transfer zone outside Fairview Clinic. For the most part, these restrictions work well. There is always on-street parking available, and turnover is frequent, allowing many patrons to use a fairly small number of spaces.

Some members of the Audubon Neighborhood Association board of directors have suggested that a further restriction of parking, perhaps changing the 90-minute zone to a 15-minute zone, could improve the current parking situation. Due to the number of available spaces recorded on commercial blocks during the accumulation study, and the high turnover observed on those blocks, it does not appear that this change is necessary. During the turnover study, the average turnover remained well below the 90-minute mark (Table 14).

Table 14: Average parking duration for commercial spaces

	7:30-9:00	11:00-1:00	6:00-8:00
29th Ave	48.75	48.67	62.73
Johnson St	37.36	50.83	34.57

Once new businesses open and lead to increased demand, however, there will be a need to ensure turnover on commercial blocks. As discussed further below, this can be achieved by extending the current parking restrictions to later hours.

Maintaining parking availability for non-theater patrons

Currently, Johnson St. visitors are able to easily find parking near the businesses they are patronizing. As has been shown above (Table 6, pg. 8), all block faces have available parking at almost all times. With the large increase in parking expected to come from the Hollywood Theater, access to parking adjacent to Johnson St. businesses will become much more difficult. If a substantial number of businesses will be open during peak theater hours, a mechanism should be considered which would allow some commercial parking to continue turning over during this time, thus maintaining access for non-theater patrons.

Maintaining turnover on Johnson Street during peak theater times could be achieved by extending existing parking restrictions, which currently expire at 6 p.m., until 9 or 10 p.m. However, any spaces which are restricted in this way would not be available to theater patrons, thus adding to spillover onto non-commercial streets.

One logical place to extend parking restrictions would be the 1500 and 1600 blocks of 29th Avenue. These blocks provide access to the core of the Johnson St. node, and should not be a top priority for theater-goers. During the accumulation study, 42 vehicles were parked in commercial spaces on Saturday at 8 p.m, 11 of which were in proprietary lots. Assuming this remains approximately the same, the 30 spaces on 29th Avenue would accommodate most of the current demand. Restricting a single row of the Johnson St. Merchants' lot would provide a total of 41 spaces to non-theater patrons, as well as providing a location closer to businesses on the southern portion of the block. Additional spaces could potentially be made available if needed to accommodate demand for a new restaurant at 2819 Johnson. Within a narrow range, there is room to adjust parking restrictions to provide optimal parking for both groups of patrons (Table 15).

Table 15: Effect of parking restrictions

Block	Spaces available	Potential theater parking	Parking reserved for other businesses
29th Ave.	30	---	30
Johnson St.	33	31	---
Private lots	91	80	---
Public lot, excluding restricted parking	33	33	11
Non-commercial	*304*[*]	*252*	---
Non-commercial, exc. Ulysses/ Lincoln	*154*	*143*	---
Total	491	396	41
Total, exc. Ulysses/ Lincoln	341	287	41

With these restrictions in place, relatively easy access to businesses for non-theater patrons should be maintained, while simultaneously allowing plenty of parking for the

[*] Plus additional spaces, further out but still within ¼ mile radius

theater. Restricting some parking along Johnson Street for smaller-scale businesses should not cause problems for theater patrons. Unlike most Johnson Street businesses, which are neighborhood-scale, a theater is regional in scale. Patrons should be willing to endure a longer walk to the Hollywood than they would to most other local businesses, making it important to maintain access to those neighborhood-scale shops.

While using this model could provide an important benefit to the business district by maintaining easy access to shops, it must be remembered that if restricted spaces are not used, they could lead to parking inefficiency and greater spillover. Monitoring the usage of restricted spaces could help to ensure that too many spaces are not provided.

Parking restrictions on other streets

As shown above (Table 13), theater parking could most likely be accommodated without the use of the neighborhood's major residential streets. In this case, theater parking would be relegated mostly to Johnson Street and 28th Avenue, with some parking potentially on 29th Avenue as well. Theater parking could be barred from residential streets through the use of permit-only parking. This option could help to ensure that residents do not see major changes in parking patterns upon the opening of the new theater. However, it would remove a large number of spaces available to theater patrons, resulting in longer walks and the possible perception that parking is not available.

Spillover parking on Ulysses and Lincoln streets is not expected to pose a major difficulty for residents, and spillover is unlikely on Hayes and Buchanan streets. Except for the 2700 block of Ulysses, which should receive low spillover, overnight parking on these blocks is low (Table 13, pg. 22). This indicates that few residents on these blocks park on street in front of their homes; large numbers of cars would have to use Ulysses and Lincoln for spillover parking for residents to experience a disruption to their typical parking patterns.

New restaurant

By working with the eventual purchaser of 2819 Johnson St. NE, the Audubon Neighborhood Association will have the ability to minimize on-street parking demand for that property if it so desires. Currently, "Pop!" is one of Johnson Street's most successful businesses. Because it relies mostly on on-street parking, it required a parking variance in order to operate. However, its situation differs from a potential new restaurant that would open at 2819 Johnson St. "Pop!" operates out of a building that was built in 1926, when the Audubon Park area would have been a streetcar suburb. The building has only a small parking lot, shared between several businesses.

The current structure at 2819 Johnson St. is a single-family house. Similar structures have been used to house restaurants, such as "Duplex" at 2516 Hennepin Ave in Minneapolis's Uptown area. However, such a setting would limit a new restaurant to approximately

1400 square feet. If the purchaser were to construct a new building, it could be required to provide off-street parking, thus potentially limiting the building's impact on on-street parking. This would provide the neighborhood association some measure of control over spillover during peak times. However, it is important to balance providing adequate parking with maintaining a vibrant pedestrian environment, which can be hampered by large parking lots.

Future research

This study provides a baseline measurement of parking around the Johnson Street Business District. In the future, the Audubon Neighborhood Association and neighborhood volunteers should strive to keep the data updated. In addition, some studies in this project did not provide reliable data; if possible, improving upon them would provide a more accurate depiction of parking trends.

The utility of the parking accumulation study can be maximized by updating it every two years. This would show changing patterns of use. Also, compared to the baseline accumulation study, it would show whether parking demand has increased, decreased, or remained roughly constant. Subsequent data collection by neighborhood volunteers cannot be as comprehensive as data collected by a paid research assistant. In order to provide the most focused analysis possible with limited resources, collection should be limited to peak parking periods. The time periods listed in Table 16 should be the priorities for future data collection.

Table 16: Order of importance of data collection by neighborhood volunteers

NOTE: at least the first three time periods must be collected to analyze increases in peak parking.

Priority	Time Period
1	8:00 p.m., Friday or Saturday
2	8:00 a.m., Sunday
3	2:00 p.m., Thursday or Friday
4	11:00 a.m., Saturday
5	5:00 p.m., Thursday
6	11:00 a.m., Sunday

The turnover study done for this project did not achieve the most accurate results possible. Because it was conducted on the Friday before Memorial Day weekend, parking was light. If a volunteer were willing to repeat it, the new data would likely be superior to that presented in this study. Like the accumulation study, the turnover study should be repeated by neighborhood volunteers every two years, or even every year.

A comprehensive roster of Johnson Street businesses, complete with their square footage and capacity, would allow more accurate estimates of the amount of parking required. Square footage, number of seats, and other measurements could be plugged into frameworks from the ITE's *Parking Generation* and the Minneapolis Zoning Code to

produce these estimates. During this project, the research assistant distributed a survey which included these questions, and received 10 responses. If the ANA or the Johnson Street Merchants' Association could gather this data on the remaining local businesses, and then keep the roster updated, it would help to generate a clearer picture of parking demand.

Appendix

Parking accumulation study

Table 17: Schedule of parking accumulation measurements by block face

Block	Street	Face	Minutes	Block	Street	Face	Minutes
17	30th	N	:00	28	Johnson	A	:28
17	30th	S	:00	28	Johnson	B	:28
29	Hayes	W	:00	28	Johnson	C	:28
29	Hayes	E	:00	27	Johnson	W	:31
17	29th	N	:00	27	Johnson	E	:31
17	29th	S	:03	27	Johnson	A	:31
28	Hayes	W	:03	15	27th	N	:35
28	Hayes	E	:03	15	27th	S	:35
17	28th	N	:03	27	Lincoln	W	:35
17	28th	S	:06	27	Lincoln	E	:35
27	Hayes	W	:06	15	28th	S	:35
27	Hayes	E	:06	15	28th	N	:38
17	27th	N	:06	28	Lincoln	W	:38
17	27th	S	:06	28	Lincoln	E	:38
16	27th	N	:10	15	29th	S	:38
16	27th	S	:10	15	29th	N	:41
27	Ulysses	W	:10	29	Lincoln	W	:41
27	Ulysses	E	:10	29	Lincoln	E	:41
16	28th	S	:10	15	30th	N	:41
16	28th	N	:13	15	30th	S	:41
28	Ulysses	W	:13	14	30th	N	:45
28	Ulysses	E	:13	14	30th	S	:45
16	29th	S	:13	29	Buchanan	W	:45
16	29th	A	:13	29	Buchanan	E	:45
16	29th	N	:16	14	29th	N	:45
29	Ulysses	W	:16	14	29th	S	:48
29	Ulysses	E	:16	14	29th	A	:48
16	30th	N	:16	28	Buchanan	W	:48
16	30th	S	:16	28	Buchanan	E	:48
29	Johnson	W	:20	14	28th	N	:48
29	Johnson	E	:20	14	28th	S	:51
29	Johnson	A	:23	27	Buchanan	W	:51
29	Johnson	B	:23	27	Buchanan	E	:51
28	Johnson	W	:25	14	27th	N	:51
28	Johnson	E	:25	14	27th	S	:51

Parking inventory

Table 18: Parking spaces and spaces per dwelling unit by block face

Block	Street	Face	Parking Spaces	Housing Units	Spaces per Dwelling Unit	Block	Street	Face	Parking Spaces	Housing Units	Spaces per Dwelling Unit
14	27th	N	11	7	1.57	27	Buchanan	E	24	15	1.60
14	27th	S	11	5	2.20	27	Buchanan	W	25	15	1.67
14	28th	N	11	0	11.00	27	Hayes	E	26	14	1.86
14	28th	S	10	1	10.00	27	Hayes	W	25	13	1.92
14	29th	A	19	0	19.00	27	Johnson	A	5	0	5.00
14	29th	N	6	6	1.00	27	Johnson	E	18	13	1.38
14	29th	S	11	0	11.00	27	Johnson	W	18	14	1.29
14	30th	N	9	0	9.00	27	Lincoln	E	25	12	2.08
14	30th	S	10	0	10.00	27	Lincoln	W	25	11	2.27
15	27th	N	9	1	9.00	27	Ulysses	E	25	11	2.27
15	27th	S	10	5	2.00	27	Ulysses	W	24	14	1.71
15	28th	N	10	0	10.00	28	Buchanan	E	6	3	2.00
15	28th	S	10	1	10.00	28	Buchanan	W	4	0	4.00
15	29th	N	7	0	7.00	28	Hayes	E	26	15	1.73
15	29th	S	7	1	7.00	28	Hayes	W	26	14	1.86
15	30th	N	9	0	9.00	28	Johnson	A	13	0	13.00
15	30th	S	9	0	9.00	28	Johnson	B	42	0	42.00
16	27th	N	5	0	5.00	28	Johnson	C	22	0	22.00
16	27th	S	7	0	7.00	28	Johnson	E	19	11	1.73
16	28th	N	9	0	9.00	28	Johnson	W	12	4	3.00
16	28th	S	9	0	9.00	28	Lincoln	E	24	17	1.41
16	29th	A	9	0	9.00	28	Lincoln	W	25	6	4.17
16	29th	N	7	0	7.00	28	Ulysses	E	26	13	2.00
16	29th	S	9	1	9.00	28	Ulysses	W	26	12	2.17
16	30th	N	10	0	10.00	29	Buchanan	E	25	13	1.92
16	30th	S	9	0	9.00	29	Buchanan	W	23	13	1.77
17	27th	N	11	0	11.00	29	Hayes	E	24	0	24.00
17	27th	S	11	0	11.00	29	Hayes	W	25	15	1.67
17	28th	N	9	1	9.00	29	Johnson	A	16	0	16.00
17	28th	S	12	0	12.00	29	Johnson	B	25	0	25.00
17	29th	N	10	2	5.00	29	Johnson	E	19	11	1.73
17	29th	S	10	0	10.00	29	Johnson	W	19	19	1.00
17	30th	N	10	0	10.00	29	Lincoln	E	26	16	1.63
17	30th	S	10	0	10.00	29	Lincoln	W	25	14	1.79
						29	Ulysses	E	25	13	1.92
						29	Ulysses	W	25	16	1.56

Turnover study

Order of photos to be taken:

1. Laundrette building
2. 1514 29th Ave
3. Rest of 15-29th-S block
4. West half of 15-29th-N block
5. Perlick Auto Body
6. Dinsmore Cleaners (29th Ave side)
7. Johnson St. Clinic Lot
8. Washburn-McCreavy (Johnson side)
9. Dinsmore lot
10. Washburn-McCreavy lot (Johnson side)
11. Pop!
12. Pop lot (curb + front row)
13. McCreavy lot (29th Ave side)
14. Rest of 16-29th-S block
15. East half of 16-29th-N block
16. Pop lot (back row)
17. Washburn McCreavy (29th Ave side)
18. Laundrette through Audubon Coffee
19. Audubon Neighborhood Assoc. through JSMA lot
20. JSMA lot through EZ Way lot
21. Fairview lot (2 per row)
22. EZ Way curb + lot
23. Rest of 28-Johnson-W block
24. Nick's through Foiled Again
25. Hollywood Theatre
26. 2819 Johnson through Jung's Chow Mein
27. Ed's through Fairview lot
28. JSMA lot
29. Fairview lot through handicap parking
30. Rest of 28-Johnson-E block

Business survey

Jeffrey Rosenberg
Audubon Neighborhood Association
2848 Johnson St. NE
Minneapolis, MN 55418

[BUSINESS NAME/ADDRESS HERE]

Dear Johnson Street business owner,

As part of our efforts to foster the continuing improvement of local properties and businesses, the Audubon Neighborhood Association is currently engaged in a parking study of the Johnson Street Business District and the surrounding residential area. This project will provide helpful information on parking usage to the neighborhood association, business owners, and residents. The study has several purposes:

- Count the number of parking spaces available for Johnson Street businesses, both on- and off-street.
- Determine how much of available parking is being used.
- Forecast the potential effect of the opening of new businesses, including the Hollywood Theatre, in the next several years.

In the process of figuring out the parking needs of Johnson Street businesses, we'd like to ask for your cooperation in filling out a short questionnaire about your business. This survey will take less than five minutes, and your answers are an important piece of the study.

If you have any questions, please feel free to contact Jeff Rosenberg at (612) 720.7798.

Thank you for your help with this important study.

Sincerely,

Jeffrey Rosenberg
Audubon Neighborhood Association Intern

Name of person filling out survey:_____
Business name: Phone: _____
Address:

1. During which of the following time periods are you open? (please check all that apply)

	5-8 a.m.	8-11 a.m.	11 a.m.-2 p.m.	2-5 p.m.	5-8 p.m.	8-11 p.m.
Monday-Thursday	_____	_____	_____	_____	_____	_____
Friday	_____	_____	_____	_____	_____	_____
Saturday	_____	_____	_____	_____	_____	_____
Sunday	_____	_____	_____	_____	_____	_____

1a. Are you closed any days from Monday to Thursday? (circle) M T W Th

2. How many people work in your business during the following time periods?

	5-8 a.m.	8-11 a.m.	11 a.m.-2 p.m.	2-5 p.m.	5-8 p.m.	8-11 p.m.
Monday-Thursday	_____	_____	_____	_____	_____	_____
Friday	_____	_____	_____	_____	_____	_____
Saturday	_____	_____	_____	_____	_____	_____
Sunday	_____	_____	_____	_____	_____	_____

3. What do you consider to be your peak business hours?

_____
_____

4. Of the time periods below, which would you classify as your busiest?

	5-8 a.m.	8-11 a.m.	11 a.m.-2 p.m.	2-5 p.m.	5-8 p.m.	8-11 p.m.
Mon-Thurs (check one)	_____	_____	_____	_____	_____	_____
Friday (check one)	_____	_____	_____	_____	_____	_____
Saturday (check one)	_____	_____	_____	_____	_____	_____
Sunday (check one)	_____	_____	_____	_____	_____	_____

[CONTINUED ON NEXT PAGE]

5. What is the total square footage of your business space (including both public and private space)? If you don't know, please provide your best estimate. _____ sq. ft.

[ASK ONLY IF CAPACITY IS RELEVANT TO PARKING REQUIREMENTS]
5a. How many seats [OR OTHER MEASURE] does your business have?_____

6. Typically, how many customers/clients does your business serve in each of the following time periods?

	5-8 a.m.	8-11 a.m.	11 a.m.-2 p.m.	2-5 p.m.	5-8 p.m.	8-11 p.m.
Mon-Thurs	_____	_____	_____	_____	_____	_____
Friday	_____	_____	_____	_____	_____	_____
Saturday	_____	_____	_____	_____	_____	_____
Sunday	_____	_____	_____	_____	_____	_____

7. To the best of your knowledge, what percentage of your customers walk to your business?

	5-8 a.m.	8-11 a.m.	11 a.m.-2 p.m.	2-5 p.m.	5-8 p.m.	8-11 p.m.
Mon-Thurs	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+
Friday	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+
Saturday	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+
Sunday	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+	____ 0-25% ____ 25-50% ____ 50-75% ____ 75%+

8. Is there an adequate amount parking for your business? (please circle one)

Yes No

If not, how much more do you feel you need? _____

[CONTINUED ON NEXT PAGE]

9. Are your customers able to park close to your business?

Yes No

10. What parking changes would benefit your business?

_____
_____
_____
_____

11. Do you share parking with any other businesses? (other than the Johnson St. Merchants' lot)

Yes No

If so, which business(es)?_____

12. To the best of your knowledge, where do most of your customers park? (please check one)

_____ **My own lot (if applicable)**
_____ **Johnson St. Merchants' lot**
_____ **Some other lot**
_____ **On-street—Johnson**
_____ **On-street—other streets**

13. To the best of your knowledge, where do your employees park? (please check one)

_____ **My own lot (if applicable)**
_____ **Johnson St. Merchants' lot**
_____ **Some other lot**
_____ **On-street—Johnson**
_____ **On-street—other streets**

[CONTINUED ON NEXT PAGE]

14. Please share any other information you think is important regarding Johnson St. parking below.

Thank you for your help with this study!
Please return this questionnaire to:

Audubon Neighborhood Association
2848 Johnson St. NE
Minneapolis, MN 55418

Responses may be mailed or dropped off at the office.

Project deliverables

Table 19: Resources to delivered upon project completion (in electronic form)

File Name	Description
ANAParkingStudy_2006.pdf	This report in .pdf format
ParkingStudy.mdb	Database containing most of the data gathered from parking study. Includes: Table 17 (schedule) above, weather conditions, descriptions of each block face, Table 1 (types of use) above, and detailed accumulation data; also includes several queries used to create the analyses in this report.
SurveyResponses.xls	Spreadsheet detailing responses to the business survey
ParkingInventory.xls	Spreadsheet used to calculate spaces per dwelling unit.
CommercialParking.xls	Spreadsheet with detailed calculations of commercial parking

Notes

[1] Charlie Nestor, Master Development, personal communication April 13, 2006
[2] This figure represents one car length plus a typical amount of space left between cars. It was derived from H. Douglas Robertson, ed., *Manual of transportation engineering studies* (Englewood Cliffs, N.J.: Prentice Hall, 1994), ch 10; and Derrick Larson, Minneapolis Public Works, personal communication Feb. 10 2006.
[3] Figure derived from Derrick Larson, Minneapolis Public Works, personal communication Feb. 10 2006.
[4] City of Minneapolis, *Minneapolis Neighborhood Profiles*, accessed February 2006 from: http://www.ci.minneapolis.mn.us/citywork/planning/Census2000/maps/housing/audubonpark.xls; U.S. Bureau of the Census, Census 2000, QT-H11, Vehicles Available and Household Income in 1999.
[5] Charlie Nestor
[6] Royce Jackson, personal communication April 28, 2006.

[7] Longfellow Community Council, personal communication February 15, 2006.
[8] Field-Regina-Northrop Neighborhood Group, personal communication April 13, 2006.
[9] Charlie Nestor.
[10] Sharrin Bassi, Minneapolis Community Planning and Economic Development, personal communication May 1, 2006.
[11] Loren Williams, Riverview Theater, personal communication April 6, 2006.
[12] Loren Williams.
[13] Thavisack Silaphet, Minneapolis Community Planning and Economic Development, e-mail communication May 16 2006.
[14] Charlie Nestor.

Additional Sources consulted:

City of Minneapolis. (n.d.). *Minneapolis Neighborhood Profiles*. Online: Accessed Feb 2006 at http://www.ci.minneapolis.mn.us/neighborhoods/

Currin, T. R. (2001). *Traffic Engineering: A Manual for Data Collection and Analysis*. Pacific Grove, CA: Brooks/Cole.

Institute of Transportation Engineers. (2004). *Parking Generation, 3rd edition*. Washington, D.C.: Institute of Transportation Engineers.

Robertson, D. R. (1994). *Manual of Transportation Engineering Studies*. Englewood Cliffs, N.J.: Prentice Hall.