

PARKING OCCUPANCY IN WINDSOR CENTER

TOWN OF WINDSOR, CONNECTICUT

REPORT

JUNE 2017



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BACKGROUND

The Town of Windsor anticipates an increased number of commuters utilizing the Hartford Line as part of the New Haven-Hartford-Springfield Rail Program. The line will begin service in 2018, and Windsor should see, on average, 80 additional commuters per day according to a study conducted by the Connecticut Department of Transportation. This influx of commuters will likely result in a significant increase in the number of parking spaces occupied near the train station, and town employees must decide on the best way to manage this increase in parking occupancy.

This survey of parking occupancy was created and performed at the request of the Town Manager to guide his decision making in how to best address Windsor Center's potential parking challenges. Options to manage this include creating new parking spaces and installation of signage that will guide commuters to parking areas with low levels of occupancy. The results of the survey provide insight into the appropriateness of these various decisions and present data to support any decisions made related to this issue.

The same survey was also performed in June of 2016, so this replication allowed for results that could be comparable over time that would strengthen the conclusions based on the data gathered in 2017. Two new on-street parking zones and one off-street parking lot were included in this year's study. Additionally, while the survey took place on one Tuesday (6/14) and one Thursday (6/16) in 2016, the survey was completed on two Thursdays (6/8 and 6/15) in 2017. Further explanation of these intentional changes will be included later in this report.

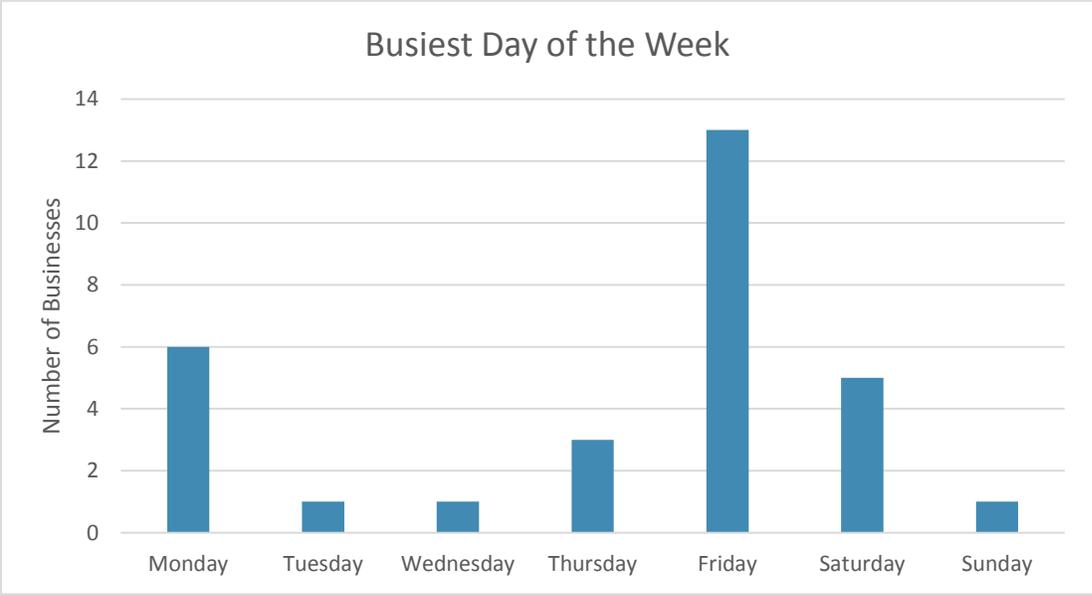
The commonly-accepted standard for optimal parking utilization is 85%. Parking occupied below this threshold may be considered underutilized, while parking occupancy above this threshold will discourage drivers from parking and represents a shortage. Thus, reaching 85% occupancy for any lot in Windsor Center would demonstrate well-matched parking supply and demand; though, any increase in occupancy over this number could present issues for local businesses.

OTHER RELEVANT DATA

In early June, 2017, town staff completed an inventory survey of businesses in Windsor Center with the goal of attaining data on basic business information (e.g. hours of operation, number of employees, peak hours) that may assist town staff in predicting the impact of new activity in the town center such as the increase in rail commuters expected in 2018. Based on this data, staff found that most businesses are open between 9:00 in the morning and 5:00 in the afternoon Monday-Friday, while fewer are open at night and on the weekends. This raises some concerns related to the sharing of parking spaces in the downtown area once there are more commuters as the business hours of operation overlap with the times that commuters will be parked in the area. However, another question in the business inventory survey asked about peak business days, and this provided greater insight into the behavior of customers patronizing these businesses. Figure 1 shows that businesses in Windsor Center are busiest on Fridays, Mondays, and Saturdays. Despite the fact that most businesses are open during normal business hours Monday-Friday in Windsor Center, their busiest days vary. Parking could be a more significant issue on

Fridays, for example, than on Tuesdays. This should be kept in mind when implementing strategies to deal with the anticipated influx of commuters in 2018.

Figure 1.



For additional support in the decision making process, data was collected from the Connecticut Department of Transportation on traffic counts on Broad Street in Windsor Center from August, 2016. The data from the traffic counts can be seen in Table 1 on the next page.

Table 1.

Route 159 - 3.62 mi		South of Maple Avenue	
	03-Aug Wed	04-Aug Thu	
12:00am		42	
01:00am		22	
02:00am		17	
03:00am		19	
04:00am		24	
05:00am		62	
06:00am	270		
07:00am	723		
08:00am	759		
09:00am	660		
10:00am	671		
11:00am	719		
12:00pm	814		
01:00pm	689		
02:00pm	743		
03:00pm	945		
04:00pm	1041		
05:00pm	992		
06:00pm	677		
07:00pm	459		
08:00pm	392		
09:00pm	240		
10:00pm	156		
11:00pm	83		
Totals	11033	186	

The data shows peaks in the number of drivers on Broad Street between 7:00am and 8:00am, at 12:00pm, and between 3:00pm and 6:00pm with the greatest number of cars driving through around 4:00pm. This falls in line with common commuter patterns and does not necessarily imply that these drivers are stopping and parking in Windsor Center. They are likely driving through the area to reach their final destinations. This assertion is supported by the results of the parking occupancy study, which will be discussed later in this report, as peak parking hours did not mirror the peak traffic counts shown above.

PARKING SURVEY DESIGN

Two basic data components were required for this survey- parking supply and parking demand. Supply was determined as the total number of parking spaces in Windsor Center, while parking demand was determined as the total number of occupied spaces in Windsor Center.

The following methods were designed and implemented to collect this supply and demand data.

PARKING SUPPLY INVENTORY

To determine the total number of parking spaces in Windsor Center, a team of field staff was dispatched to record the number and type of parking spaces in each facility or area. Spaces were put into on-street and off-street categories. For off-street parking, the inventory included municipal and private business lots. For on-street parking, the inventory included streets that have parallel spaces and spaces perpendicular to the curb available for public use. Because parallel parking spots are not marked on many streets, the team calculated the approximate number of spaces that could fit into a given section of the road by, first, determining the length of the section of road and, second, utilizing the New York City standard for the length of parallel parking spaces (24 feet) to calculate the number of spaces that could fit within that area.

Separate inventories were collected for handicapped and non-handicapped parking spaces.

Because the inventory had already been completed in 2016, field staff were dispatched to ensure that the parking counts were still accurate, and any changes to the total number of spots were made accordingly. However, three new parking areas were included in the study for 2017: two on-street and one off-street. The single off-street parking area that was not included last year, Area 21 (see Appendix A for map of studied parking areas), was left out because of the presence of worker vehicles which were there as a result of the construction of the Windsor Station Apartments. The team believed that this would skew the results, so this area was not counted in 2016. However, the apartments had been completed in the time between the two surveys, so the decision was made to include this area in the 2017 survey.

One on-street parking zone, Area 26, was not included in the 2016 survey because of the presence of signage on that section of Broad Street that specified hours when parking was prohibited. However, after further discussion, the team decided that data should be collected for this section in 2017, and the hours when parking is prohibited (4:00pm-6:00pm) would simply be noted in the report.

The other on-street parking area, Area 27, was not included in the 2017 survey because it was not considered to be a significant parking zone in Windsor Center. However, after further discussion, the team decided that it should be included in the 2017 survey despite the perception that few, if any, vehicles are parked there regularly.

In total, the team counted 1,311 non-handicapped parking spaces, up from 1,226 spaces in 2016. The 42 handicapped spaces in Windsor Center remained the same between 2016 and 2017.

PARKING DEMAND SURVEY

Parking occupancy studies were carried out for designated off-street parking facilities and on-street parking areas in Windsor Center. The field team was sent into Windsor Center to count the number of vehicles occupying spaces in the designated study areas. The surveys were conducted at the times of 9:30am, 11:00am, 12:30pm, 2:00pm, 4:00pm, and 5:30pm in an effort to collect data at many different points in the day.

The surveys were conducted on two Thursdays (6/8 and 6/15) in June. In 2016, data was collected on one Tuesday and one Thursday. However, the decision was made that having the ability to compare parking occupancy on the same day of the week was an important level of control in the study. Thus, two Thursdays were chosen as study days.

SURVEYED LOCATIONS

The area that was surveyed included public and private lots on Broad Street from Sycamore Street to Poquonock Avenue, as well as most of Mechanic Street, Union Street, and Central Street. Small portions of Maple Avenue, Bloomfield Avenue, Elm Street, and Poquonock Avenue closest to the Windsor Green were also included in the survey area. This area includes various land uses such as residential, retail, office, commercial, restaurant, and government, community, and public services.

OFF-STREET PARKING LOTS

There are seven public and nine private off-street parking lots in the downtown area that were surveyed:

- **Lot 1: 340 Broad Street Lot-** This private lot is located east of Broad Street, north of Sycamore Street, and south of Geissler's Supermarket. It contains 80 parking spots, including one handicapped spot.
- **Lot 2: Geissler's Supermarket Lot-** This private lot is located east of Broad Street, between Sycamore Street and Elm Street. It contains 183 parking spots, including nine handicapped spots. Spots adjacent to Windsor Ace Hardware and Subway were included in the count.
- **Lot 3: Windsor Federal Savings Lot A-** This private lot is located east of Broad Street, directly north of Elm Street. It contains 50 parking spots, including two handicapped spots.
- **Lot 5: Windsor Federal Savings Lot B-** This private lot is located east of Broad Street, directly south of Maple Avenue, and it is adjacent to the north of Windsor Federal Savings Lot A. It contains 24 parking spots, including two handicapped spots.
- **Lot 7: 216, 226, & 240 Broad Street Lot-** This lot, which contains both public and private spaces, is located directly north of Maple Avenue and directly west of Broad Street. It includes the residential parking spots behind the former location of The Bean @226 and Taste of India. It contains 32 parking spots, including one handicapped spot. Several spots are reserved for tenants of the apartments above the lot's adjacent buildings.
- **Lot 9: 176, 186, 190, & 208 Broad Street and 31 & 35 Court Street Lot-** This private lot is located between Broad Street and Court Street, from the former location of the Bank of America Financial Center to the end of the parking spots behind Webster Bank. It contains 120 parking spots, including four handicapped spots. Between four and eight spots are occupied at any given time by vans for the local business, Community Enterprises. Also of note, Webster Bank, another business adjacent to this lot, has hired a security guard to ensure proper usage of its parking spots.
- **Lot 11: 148-162 Broad Street Lot-** This private lot is located directly north of the intersection of Palisado Avenue and Poquonock Avenue. It contains 152 parking spots, including four handicapped spots.
- **Lot 12: Track 139 Lot-** This private lot is located directly east of the intersection of Palisado Avenue and Union Street. It contains 42 parking spots, including 2 handicapped spots.

- **Lot 15: Union and Central Block Lot-** This private lot encompasses all parking spots within the block created by Union Street, Central Street, Broad Street, and Palisado Avenue. It contains 59 parking spots, including one handicapped spot.
- **Lot 17: CVS Lot-** This private lot is located west of Broad Street and directly south of Central Street. It contains 59 parking spots, including three handicapped spots.
- **Lot 18: 45 Central Street Lot-** This public lot is located directly north of the intersection of Central Street and Mechanic Street. It does not include the numbered spots belonging to the nearby residential buildings. It contains 16 parking spots, including one handicapped spot.
- **Lot 19: Post Office Lot-** This public lot is located on the west side of the Windsor Green, directly south of Maple Avenue. It contains 22 parking spots, including three handicapped spots. The spots reserved for USPS mail trucks were not included in the count.
- **Lot 21: Commuter Lot near Windsor Station Apartments-** This public lot is located at the north end of Mechanic Street, behind the Town Hall parking lot. It contains 85 parking spots, none of which are designated as handicapped.
- **Lot 22: Chamber of Commerce Lot-** This public lot is located on the west side of the Windsor Green, south of Maple Avenue, and adjacent to the Post Office parking lot. It contains 11 parking spots, none of which are designated as handicapped.
- **Lot 23: Town Hall Lot-** This public lot is located behind Town Hall on the west side of the Windsor Green, adjacent to the Post Office and Chamber of Commerce parking lots. It contains 144 parking spots, including four handicapped spots.
- **Lot 25: Public Library Lot-** This public lot is located west of Broad Street and directly north of Batchelder Road. It contains 43 parking spots, including three handicapped spots. The row of six spots on the side of Grace Episcopal Church were not included in the count.

ON-STREET PARKING AREA

On-street parking was divided into eleven zones within distinct geographical areas:

- **Lot 4: Broad Street Zone C-** This zone is comprised of parallel parking spots along the portion of Broad Street from Maple Avenue to Elm Street. It contains 14 parking spots.
- **Lot 6: Maple Avenue Zone-** This zone is comprised of parallel parking spots along the portion of Maple Avenue from Broad Street to Court Street. It contains 16 parking spots.
- **Lot 8: Broad Street Zone B-** This zone is comprised of parallel parking spots along the portion of Broad Street from Poquonock Avenue to Maple Avenue. It contains 18 parking spots.
- **Lot 10: 29 Bloomfield Avenue Zone-** This zone is located directly south of the intersection of Poquonock Avenue and Bloomfield Avenue. It contains 11 parking spots.
- **Lot 13: Union Street Zone A-** This zone is comprised of parallel parking spots along the portion Union Street that runs perpendicular to Palisado Avenue. It contains 17 spots.
- **Lot 14: Union Street Zone B-** This zone is located along the portion of Union Street that runs parallel to Broad Street. It contains 17 parking spots, including two handicapped spots.
- **Lot 16: Broad Street Zone A-** This zone is located along the east side of the Windsor Green on Broad Street between Maple Avenue and Palisado Avenue. It contains 32 parking spots.

- **Lot 20: Mechanic Street Zone-** This zone is located along Mechanic Street, directly south of the Windsor Art Center. It contains 14 parking spots.
- **Lot 24: Broad Street Zone D-** This zone is comprised of parallel parking spots along the Broad Street loop to the north of the Windsor Public Library and the west of Grace Episcopal Church. It contains nine parking spots.
- **Lot 26: Broad Street Zone E-** This zone is comprised of parallel parking spots along the west side of Broad Street between the entrance to Broad Street Zone D and the entrance to the Town Hall parking lot. It contains 23 parking spots.
- **Lot 27: Elm Street Zone-** This zone is located on both sides of Elm Street between Broad Street and the end of Lot 3 (Windsor Federal Savings Parking Lot A). It contains 18 parking spots.

Note: Broad Street between Poquonock Avenue and Maple Avenue (Lot 8) has a parking ban in effect on its west side from 6:00am until 9:00am. Broad Street Lots 4 and 26 have parking bans in effect from 4:00pm until 6:00pm. These bans may impact utilization.

PARKING SURVEY RESULTS

The results of the parking occupancy study are summarized in the following sections:

- Off-Street Parking Profiles
- On-Street Parking Profiles
- Handicapped Parking Profiles
- Overall Parking Utilization

The raw data from the study can be viewed in Appendix B.

OFF-STREET PARKING PROFILES

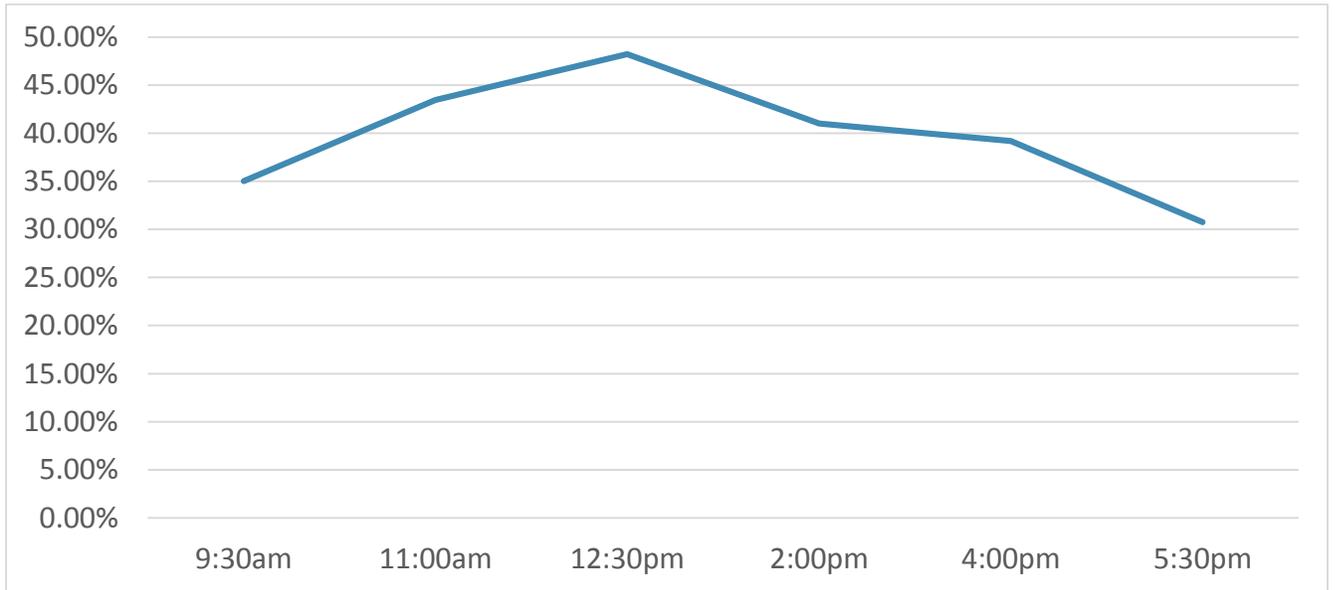
The results of the occupancy surveys for the off-street parking lots are summarized below, with cells in Table 2 on the following page shaded where utilization rates of 85 percent or greater were observed. The utilization rates were determined by taking the average of the occupancy rates for both survey days.

Table 2.

Parking Lot		Total Parking Spaces	Utilization Rates					
Lot No.	Name		9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
1	340 Broad St	80	35.63%	41.88%	36.88%	41.88%	8.75%	18.75%
2	Geissler's Supermarket	183	35.79%	41.26%	47.54%	28.14%	33.06%	28.14%
3	Windsor Federal Savings Lot A	50	83.00%	85.00%	73.00%	80.00%	83.00%	17.00%
5	Windsor Federal Savings Lot B	24	25.00%	37.50%	22.92%	20.83%	29.17%	35.42%
7	216, 226, & 240 Broad St	32	34.38%	42.19%	68.75%	45.31%	43.75%	23.44%
9	176, 186, 190, & 208 Broad St and 31 & 35 Court St	120	43.33%	44.17%	47.50%	50.42%	46.67%	38.33%
11	148-162 Broad St	152	17.43%	24.01%	33.88%	24.34%	26.97%	27.63%
12	Track 139	42	4.76%	15.48%	55.95%	39.29%	23.81%	38.10%
15	Union & Central Block	59	27.12%	44.07%	84.75%	61.02%	65.25%	89.83%
17	CVS	59	27.12%	32.20%	33.90%	35.59%	35.59%	31.36%
18	45 Central St	16	31.25%	40.63%	34.38%	68.75%	34.38%	50.00%
19	Post Office	22	38.64%	68.18%	38.64%	43.18%	27.27%	11.36%
21	Commuter Lot near Windsor Station	85	2.94%	5.29%	1.76%	1.76%	5.29%	7.06%
22	Chamber of Commerce	11	13.64%	50.00%	50.00%	50.00%	36.36%	18.18%
23	Town Hall	144	66.32%	75.35%	73.26%	63.89%	53.82%	25.35%
25	Public Library	43	34.88%	75.58%	74.42%	58.14%	68.60%	54.65%

The overall trend for off-street parking utilization is pictured below in Figure 2, with the peak of utilization around midday reaching 48.22%.

Figure 2.



ON-STREET PARKING PROFILES

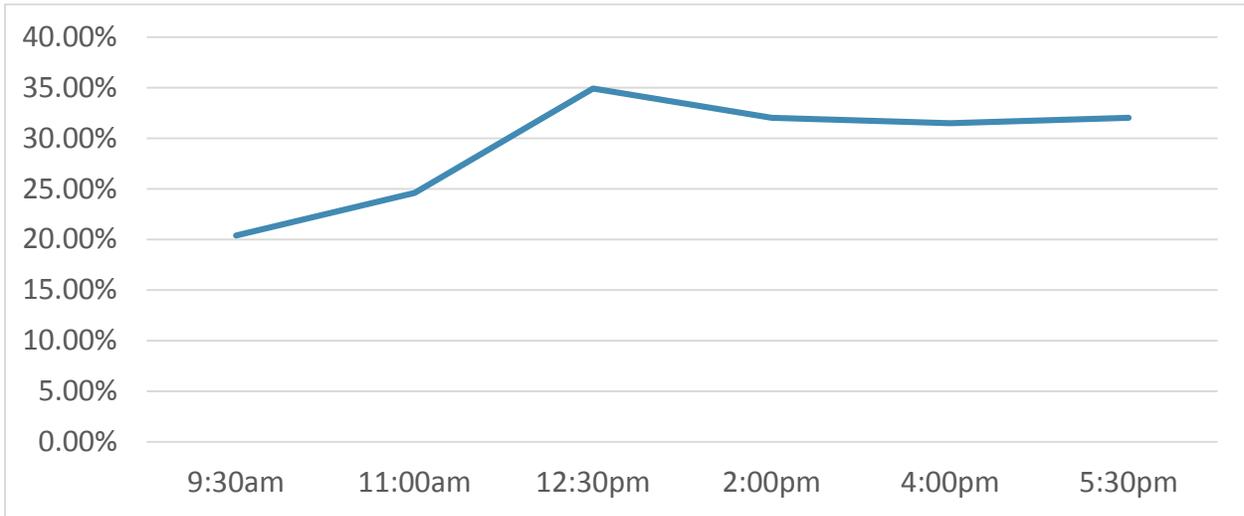
The results of the utilization surveys for the on-street parking zones are summarized in Table 3 below, with cells in the table shaded where utilization rates of 70 percent or greater were observed.

Table 3.

Parking Zone		Total Parking Spaces	Utilization Rates					
Lot No.	Name		9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
4	Broad St Zone C	14	0.00%	0.00%	3.57%	0.00%	7.14%	7.14%
6	Maple Ave	16	9.38%	15.63%	37.50%	34.38%	18.75%	21.88%
8	Broad St Zone B	18	16.67%	19.44%	50.00%	25.00%	19.44%	27.78%
10	29 Bloomfield Ave	11	81.82%	72.73%	81.82%	72.73%	45.45%	31.82%
13	Union St Zone A	17	0.00%	0.00%	20.59%	14.71%	23.53%	35.29%
14	Union St Zone B	17	55.88%	55.88%	88.24%	76.47%	82.35%	88.24%
16	Broad St Zone A	32	31.25%	35.94%	50.00%	53.13%	64.06%	62.50%
20	Mechanic St	14	14.29%	28.57%	10.71%	21.43%	17.86%	10.71%
24	Broad St Zone D	9	22.22%	61.11%	50.00%	55.56%	44.44%	38.89%
26	Broad St Zone E	23	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%
27	Elm St Zone	18	5.56%	11.11%	5.56%	11.11%	11.11%	8.33%

The overall trend for on-street parking utilization is pictured in Figure 3 on the next page, with the peak of utilization around midday reaching 34.92%, but remaining relatively steady through 5:30pm.

Figure 3.



HANDICAPPED PARKING PROFILES

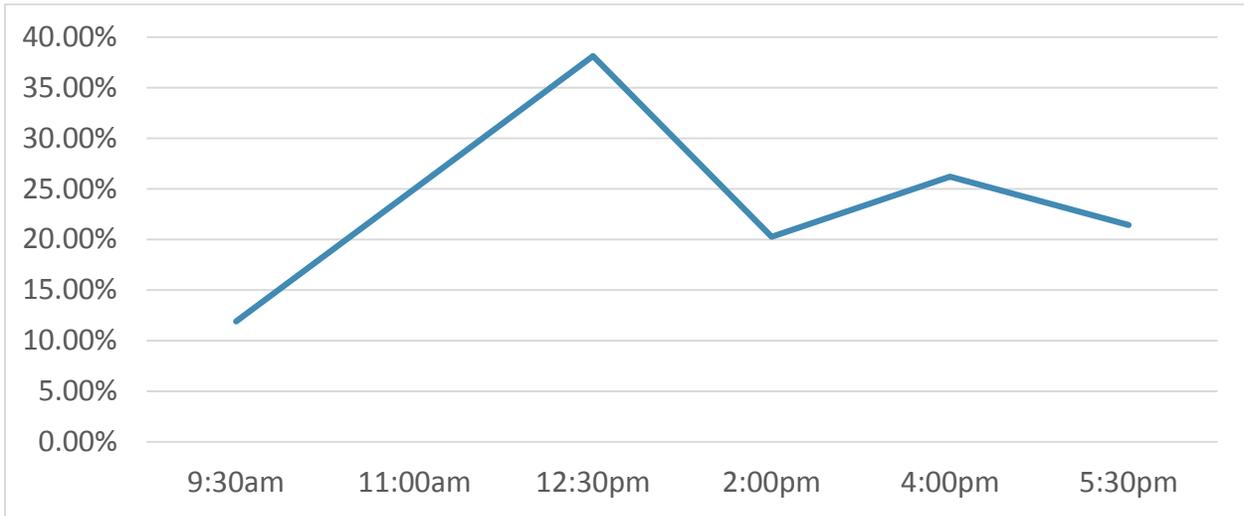
The results of the utilization surveys for the handicapped parking spots are summarized on the following page in Table 4, with cells in the table shaded where utilization rates of 70 percent or greater were observed.

Table 4.

Parking Lot		Total Handicapped Spaces	Utilization Rates					
Lot No.	Name		9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
1	340 Broad St	1	0.00%	50.00%	0.00%	0.00%	0.00%	50.00%
2	Geissler's Supermarket	9	16.67%	44.44%	66.67%	27.28%	27.78%	27.78%
3	Windsor Federal Savings Lot A	2	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
5	Windsor Federal Savings Lot B	2	0.00%	0.00%	25.00%	0.00%	0.00%	0.00%
7	216, 226, & 240 Broad St	1	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%
9	176, 186, 190, & 208 Broad St and 31 & 35 Court St	4	50.00%	50.00%	75.00%	37.50%	75.00%	62.50%
11	148-162 Broad St	4	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	The Whistle Stop	2	0.00%	0.00%	50.00%	75.00%	25.00%	25.00%
14	Union St Zone B	2	25.00%	0.00%	25.00%	25.00%	50.00%	50.00%
15	Union & Central Block	1	0.00%	0.00%	50.00%	50.00%	50.00%	50.00%
17	CVS	3	16.67%	16.67%	83.33%	33.33%	33.33%	16.67%
18	45 Central St	1	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
19	Post Office	3	16.67%	16.67%	16.67%	16.67%	16.67%	0.00%
23	Town Hall	4	0.00%	12.50%	0.00%	0.00%	0.00%	0.00%
25	Public Library	3	0.00%	66.67%	50.00%	16.67%	50.00%	33.33%

The overall trend for handicapped parking utilization is pictured in Figure 4 on the following page, with the peak of utilization around 12:30pm reaching 38.10%.

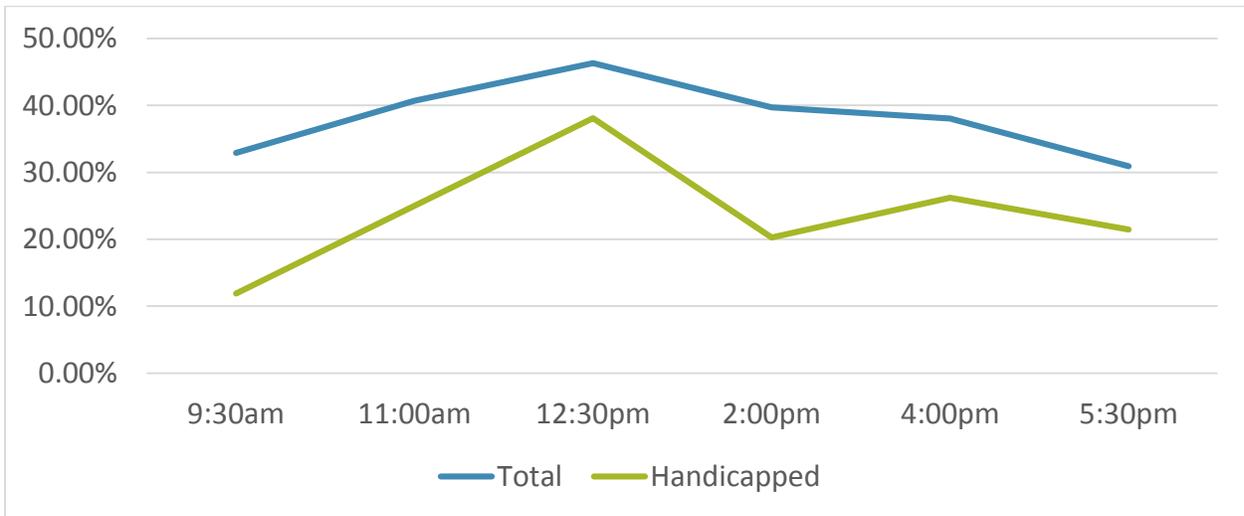
Figure 4.



OVERALL DOWNTOWN PARKING UTILIZATION

The trend for Windsor Center parking overall is pictured below in Figure 5, with peak utilization occurring around lunchtime for both handicapped and non-handicapped parking spaces. However, even during peaks, overall utilization was not over 50.00%.

Figure 5.



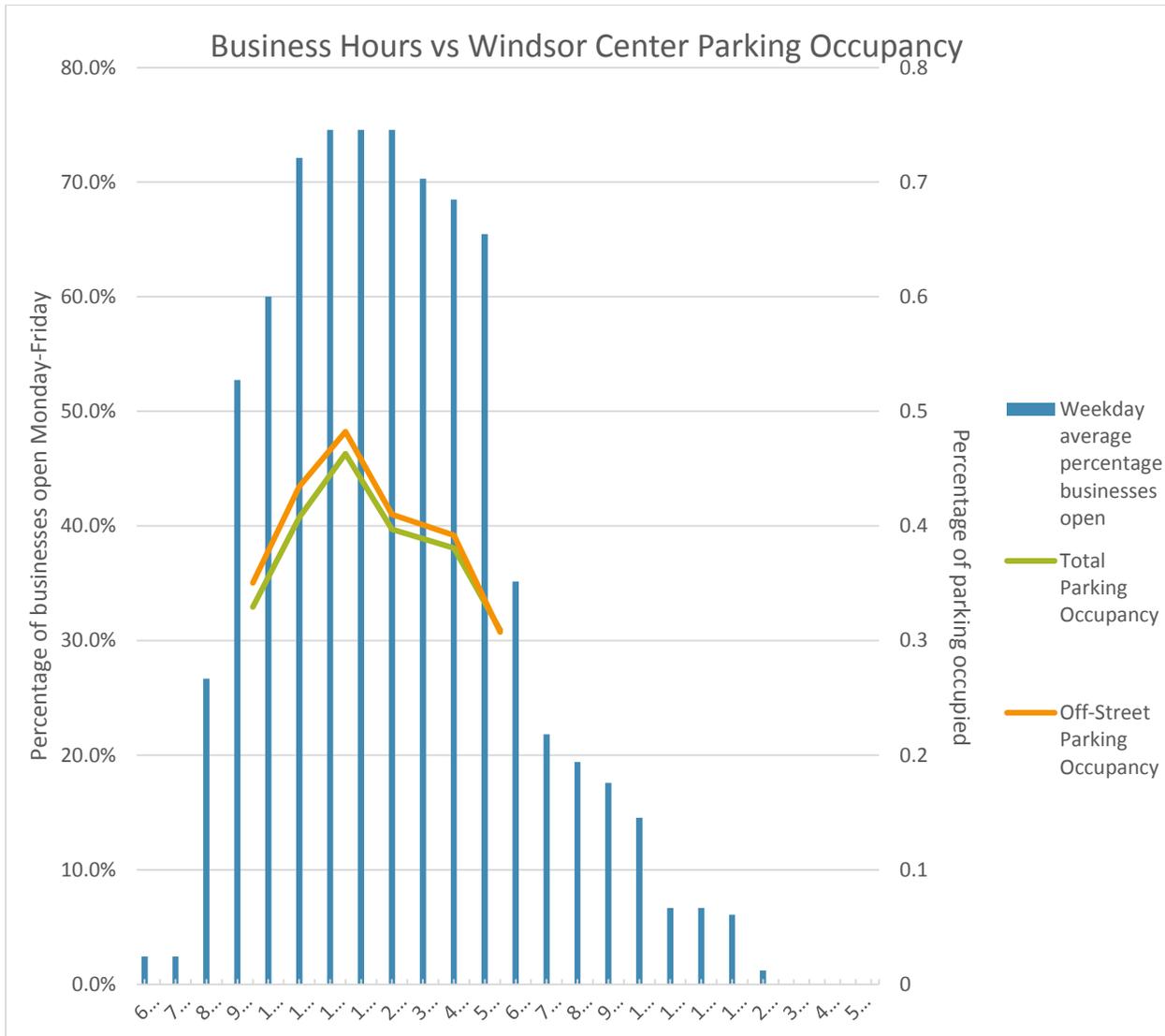
OBSERVATIONS AND CONCLUSIONS

Below are some of the key findings of the parking occupancy study:

- During peak periods, in most cases, there is sufficient off-street and on-street parking to meet demand.
- Most on-street and handicapped parking areas have very low weekday occupancy rates overall.
- Off-street parking lots generally experience higher occupancy rates than on-street parking zones, but the majority still fall around or below 50.00% utilization during peaks.
- The lots at 270 Broad Street and 29 Bloomfield Avenue consistently have the highest occupancy rates. The likely reason for this is that employees of Windsor Federal Savings occupy many of the spots for the Broad Street lot, and employees of Community Enterprises occupy many of the spots for the Bloomfield Avenue lot.
- Average occupancy in Lot #15, Union and Central Block, reaches the 85% threshold at 12:30 and 5:30. Further, the nearby on-street parking zone, Union St. Zone B, reaches similar levels at 12:30 and 5:30. Because these areas are near the train station, the additional 80 commuters expected may drive up occupancy rates and present a problem for businesses that rely on them for their customers.
- Signage for on-street parking along Broad Street should be reviewed. Missing and/or confusing signs may be discouraging use (see Appendix D for examples of confusing signage).
- A previous study done for the Town of Windsor by Nelson/Nygaard Consulting Associates (see Appendix C) shows similar results and reinforces the conclusions of this study.
- If 80 additional cars were parked in Windsor Center every day, as projected by the Department of Transportation study, there should still be sufficient parking in the area.
- Given that the expanded commuter service will utilize the existing station until a new station is constructed in the future, there will be the need to manage where and how commuters park. At a minimum, this will require wayfinding signage guiding drivers to the commuter lot (Lot #21) and guiding pedestrians from the lot to the station. It will also be necessary to discourage commuter use of private lots near the existing station.
- Even with the parking spaces from the designated rail commuter lot (Lot #21) removed, the average occupancy rate is only 40.47%. Thus, there is still sufficient commuter parking even if this lot were to not be utilized.

Additionally, the team linked rates of parking occupancy to the hours of operation of establishments in Windsor Center based on data collected in the business inventory survey that was performed prior to the parking occupancy study. This relationship shows how much parking is demanded based on the percentage of businesses that are open at various times during the week. The chart illustrating this relationship can be seen in Figure 6 below.

Figure 6.



This figure shows that parking utilization lies below the percentage of businesses open in Windsor Center at all points at which parking data was recorded. Although there is parking for all businesses in Windsor Center, all parking for these businesses is not utilized during their hours of operation. This suggests that methods of utilizing these open spaces in a more efficient manner should be explored, and a separate report will examine options for public and private actions to prepare for expanded commuter

rail service. It is also important to remember, however, that the data above simply represents parking averages and that parking may be an issue for certain lots on an individual basis.

APPENDIX A: WINDSOR CENTER PARKING MAP



APPENDIX B: RAW DATA

Lot No.	Total Spots	6/8/2016											
		Number Occupied						Percentage Occupied					
		9:30 am	11:00 am	12:30 pm	2:00 pm	4:00 pm	5:30 pm	9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
19	22	8	16	8	10	4	2	36.36%	72.73%	36.36%	45.45%	18.18%	9.09%
23	144	94	124	125	97	81	37	65.28%	86.11%	86.81%	67.36%	56.25%	25.69%
22	11	0	5	6	6	4	1	0.00%	45.45%	54.55%	54.55%	36.36%	9.09%
25	43	15	32	31	20	29	25	34.88%	74.42%	72.09%	46.51%	67.44%	58.14%
1	80	26	29	25	31	24	15	32.50%	36.25%	31.25%	38.75%	30.00%	18.75%
2	183	65	82	83	54	60	45	35.52%	44.81%	45.36%	29.51%	32.79%	24.59%
3	50	49	42	37	39	42	10	98.00%	84.00%	74.00%	78.00%	84.00%	20.00%
5	24	8	10	5	5	10	11	33.33%	41.67%	20.83%	20.83%	41.67%	45.83%
11	152	24	37	48	36	50	44	15.79%	24.34%	31.58%	23.68%	32.89%	28.95%
12	42	4	7	19	18	12	26	9.52%	16.67%	45.24%	42.86%	28.57%	61.90%
15	59	8	24	54	23	38	57	13.56%	40.68%	91.53%	38.98%	64.41%	96.61%
17	59	16	21	22	24	24	20	27.12%	35.59%	37.29%	40.68%	40.68%	33.90%
18	16	4	6	5	8	5	9	25.00%	37.50%	31.25%	50.00%	31.25%	56.25%
9	120	59	54	56	61	55	42	49.17%	45.00%	46.67%	50.83%	45.83%	35.00%
7	32	10	13	24	14	14	5	31.25%	40.63%	75.00%	43.75%	43.75%	15.63%
10	11	10	9	9	8	5	3	90.91%	81.82%	81.82%	72.73%	45.45%	27.27%
13	17	0	0	3	2	4	6	0.00%	0.00%	17.65%	11.76%	23.53%	35.29%
16	32	9	10	15	16	20	20	28.13%	31.25%	46.88%	50.00%	62.50%	62.50%
20	14	3	2	0	2	3	0	21.43%	14.29%	0.00%	14.29%	21.43%	0.00%
14	17	11	11	15	11	13	15	64.71%	64.71%	88.24%	64.71%	76.47%	88.24%
6	16	0	2	9	4	3	4	0.00%	12.50%	56.25%	25.00%	18.75%	25.00%
8	18	3	4	10	6	5	5	16.67%	22.22%	55.56%	33.33%	27.78%	27.78%
4	14	0	0	1	0	2	1	0.00%	0.00%	7.14%	0.00%	14.29%	7.14%
24	9	3	7	5	5	1	5	33.33%	77.78%	55.56%	55.56%	11.11%	55.56%
21	85	3	4	0	2	4	4	3.53%	4.71%	0.00%	2.35%	4.71%	4.71%
26	23	1	0	0	0	0	0	4.35%	0.00%	0.00%	0.00%	0.00%	0.00%
27	18	1	2	1	1	2	2	5.56%	11.11%	5.56%	5.56%	11.11%	11.11%
Total	1,311	434	553	616	503	514	414	33.10%	42.18%	46.99%	38.37%	39.21%	31.58%

Lot No.	Total Spots	6/15/2016											
		Number Occupied						Percentage Occupied					
		9:30 am	11:00 am	12:30 pm	2:00 pm	4:00 pm	5:30 pm	9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
19	22	9	14	9	9	8	3	40.91%	63.64%	40.91%	40.91%	36.36%	13.64%
23	144	97	93	86	87	74	36	67.36%	64.58%	59.72%	60.42%	51.39%	25.00%
22	11	3	6	5	5	4	3	27.27%	54.55%	45.45%	45.45%	36.36%	27.27%
25	43	15	33	33	30	30	22	34.88%	76.74%	76.74%	69.77%	69.77%	51.16%
1	80	31	38	34	36	22	15	38.75%	47.50%	42.50%	45.00%	27.50%	18.75%
2	183	66	69	91	49	61	58	36.07%	37.70%	49.73%	26.78%	33.33%	31.69%
3	50	34	43	36	41	41	7	68.00%	86.00%	72.00%	82.00%	82.00%	14.00%
5	24	4	8	6	5	4	6	16.67%	33.33%	25.00%	20.83%	16.67%	25.00%
11	152	29	36	55	38	32	40	19.08%	23.68%	36.18%	25.00%	21.05%	26.32%
12	42	0	6	28	15	8	6	0.00%	14.29%	66.67%	35.71%	19.05%	14.29%
15	59	24	28	46	49	39	49	40.68%	47.46%	77.97%	83.05%	66.10%	83.05%
17	59	16	17	18	18	18	17	27.12%	28.81%	30.51%	30.51%	30.51%	28.81%
18	16	6	7	6	14	6	7	37.50%	43.75%	37.50%	87.50%	37.50%	43.75%
9	120	45	52	58	60	57	50	37.50%	43.33%	48.33%	50.00%	47.50%	41.67%
7	32	12	14	20	15	14	10	37.50%	43.75%	62.50%	46.88%	43.75%	31.25%
10	11	8	7	9	8	5	4	72.73%	63.64%	81.82%	72.73%	45.45%	36.36%
13	17	0	0	4	3	4	6	0.00%	0.00%	23.53%	17.65%	23.53%	35.29%
16	32	11	13	17	18	21	20	34.38%	40.63%	53.13%	56.25%	65.63%	62.50%
20	14	1	6	3	4	2	3	7.14%	42.86%	21.43%	28.57%	14.29%	21.43%
14	17	8	8	15	15	15	15	47.06%	47.06%	88.24%	88.24%	88.24%	88.24%
6	16	3	3	3	7	3	3	18.75%	18.75%	18.75%	43.75%	18.75%	18.75%
8	18	3	3	8	3	2	5	16.67%	16.67%	44.44%	16.67%	11.11%	27.78%
4	14	0	0	0	0	0	1	0.00%	0.00%	0.00%	0.00%	0.00%	7.14%
24	9	1	4	4	5	7	2	11.11%	44.44%	44.44%	55.56%	77.78%	22.22%
21	85	2	5	3	1	5	8	2.35%	5.88%	3.53%	1.18%	5.88%	9.41%
26	23	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
27	18	1	2	1	3	2	1	5.56%	11.11%	5.56%	16.67%	11.11%	5.56%
Total	1,311	429	515	598	538	484	397	32.72%	39.28%	45.61%	41.04%	36.92%	30.28%

Lot No.	Total Handi-capped Spots	6/8/2016											
		Number Occupied						Percentage Occupied					
		9:30 am	11:00 am	12:30 pm	2:00 pm	4:00 pm	5:30 pm	9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
19	3	1	0	0	1	0	0	33.33%	0.00%	0.00%	33.33%	0.00%	0.00%
23	4	0	1	0	0	0	0	0.00%	25.00%	0.00%	0.00%	0.00%	0.00%
25	3	0	3	2	1	2	1	0.00%	100.00%	66.67%	33.33%	66.67%	33.33%
1	1	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2	9	2	2	7	2	1	1	22.22%	22.22%	77.78%	22.22%	11.11%	11.11%
3	2	0	1	0	0	0	0	0.00%	50.00%	0.00%	0.00%	0.00%	0.00%
5	2	0	0	1	0	0	0	0.00%	0.00%	50.00%	0.00%	0.00%	0.00%
11	4	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	2	0	0	0	1	1	1	0.00%	0.00%	0.00%	50.00%	50.00%	50.00%
15	1	0	0	1	0	0	1	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%
17	3	0	0	3	1	0	1	0.00%	0.00%	100.00%	33.33%	0.00%	33.33%
14	2	1	0	1	1	1	1	50.00%	0.00%	50.00%	50.00%	50.00%	50.00%
18	1	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9	4	2	2	3	2	3	4	50.00%	50.00%	75.00%	50.00%	75.00%	100.00%
7	1	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total	42	6	9	18	9	8	10	14.29%	21.43%	42.86%	21.43%	19.05%	23.81%

Lot No.	Total Handi-capped Spots	6/15/2016											
		Number Occupied						Percentage Occupied					
		9:30 am	11:00 am	12:30 pm	2:00 pm	4:00 pm	5:30 pm	9:30am	11:00am	12:30pm	2:00pm	4:00pm	5:30pm
19	3	0	1	1	0	1	0	0.00%	33.33%	33.33%	0.00%	33.33%	0.00%
23	4	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
25	3	0	1	1	0	1	1	0.00%	33.33%	33.33%	0.00%	33.33%	33.33%
1	1	0	1	0	0	0	1	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%
2	9	1	6	5	3	4	4	11.11%	66.67%	55.56%	33.33%	44.44%	44.44%
3	2	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5	2	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
11	4	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12	2	0	0	2	2	0	0	0.00%	0.00%	100.00%	100.00%	0.00%	0.00%
15	1	0	0	0	1	1	0	0.00%	0.00%	0.00%	100.00%	100.00%	0.00%
17	3	1	1	2	1	2	0	33.33%	33.33%	66.67%	33.33%	66.67%	0.00%
14	2	0	0	0	0	1	1	0.00%	0.00%	0.00%	0.00%	50.00%	50.00%
18	1	0	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
9	4	2	2	3	1	3	1	50.00%	50.00%	75.00%	25.00%	75.00%	25.00%
7	1	0	0	0	0	1	0	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
Total	42	4	12	14	8	14	8	9.52%	28.57%	33.33%	19.05%	33.33%	19.05%

APPENDIX C: NELSON/NYGAARD CONSULTING ASSOCIATES DATA

Lot No.	Count 11:30	Count 1:30	Count 4:30
1	0	25	0
2	0	66	0
3	0	40	0
5	0	5	0
7	0	11	0
9	0	49	0
10	0	9	0
11	0	37	0
15	0	34	0
14	0	10	0
18	4	0	6
20	2	0	1
17	0	18	0
23	0	119	0
24	0	6	0
25	0	18	0
8	0	3	0
6	0	1	0
4	0	0	0

APPENDIX D: CONFUSING SIGNAGE ON BROAD STREET



