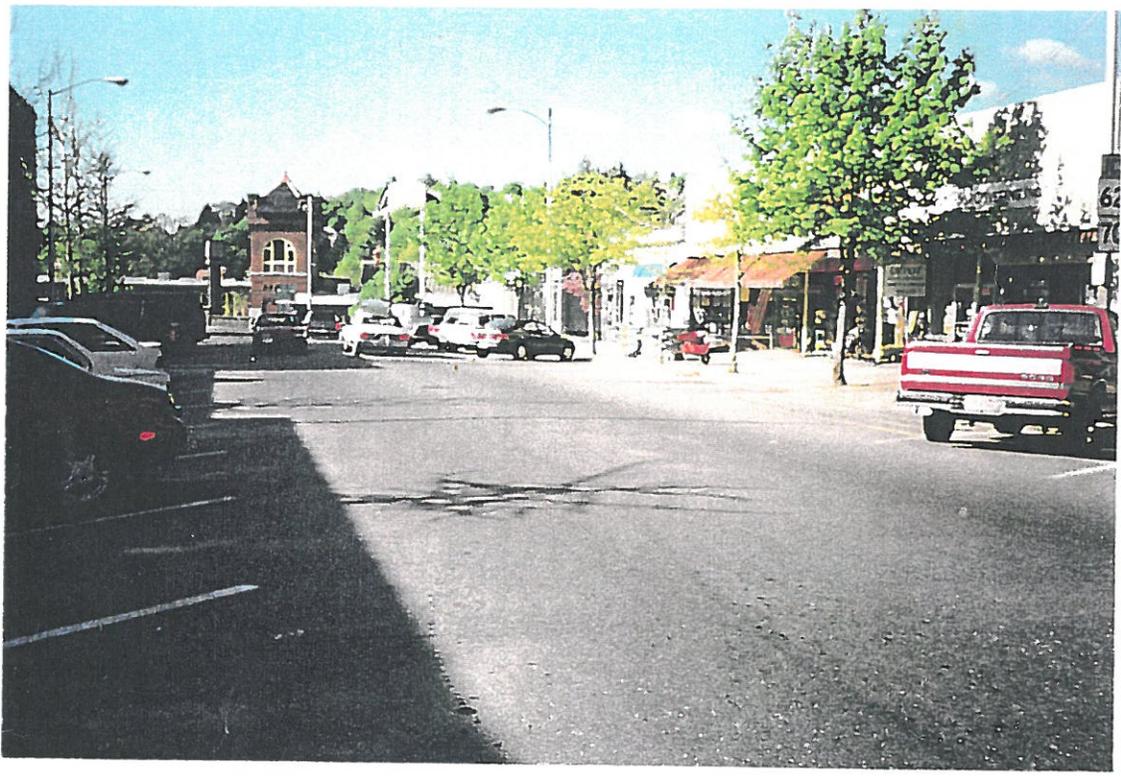


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1996

T e c h n i c a l R e p o r t

Downtown Clinton

Parking Study



VHB

Submitted to
UPTOWN, Inc. and
Town of Clinton, Massachusetts

.....

Submitted by
Vanasse Hangen Brustlin, Inc.
Watertown, Massachusetts

.....

Downtown Parking Study

Clinton,
Massachusetts

Prepared for **UPTOWN, Inc. and Town of Clinton, MA**
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Executive Summary

UPTOWN, Inc. retained Vanasse Hangen Brustlin, Inc. (VHB) to conduct a study of parking conditions in downtown Clinton, Massachusetts. The goals of the study are to assess the existing system, project future needs, and recommend actions to address existing issues and provide adequate parking and traffic circulation for future downtown development.

The downtown Clinton revitalization efforts commissioned by UPTOWN, Inc. combine two parallel planning efforts: a Streetscape Treatment Plan prepared by David E. Ross Associates; and a Downtown Market Analysis prepared by RKG Associates. The success of these efforts is contingent upon many factors including marketing the attractiveness and convenience of downtown shopping. The availability of adequate parking within close proximity to leasable floor space is a key factor in marketing the downtown.

Representatives from VHB and UPTOWN, Inc. conducted an inventory and field counts of the parking activity on High Street, Church Street, and in the Lincoln Plaza "upper" and "lower" parking lots on Wednesday, July 17, 1996. In addition, representatives from VHB observed off-street parking activity in all downtown off-street parking facilities on Tuesday, August 13, 1996. The following are findings resulting from this effort.

- The total parking supply in the downtown area is estimated at 732 on- and off-street spaces. Approximately 30 percent (220 spaces) are on-street and 70 percent (512 spaces) are off-street parking spaces. For typical small downtown areas, 60 to 75 percent of the parking is off-street.
- About 80 percent of the on-street parkers in downtown Clinton stay for a duration of less than 1 hour. This is typical for a downtown area.
- The angled on-street parking along High Street, from Union Street to Church Street, experiences a maximum occupancy of about 75 percent and averages 60 percent occupancy throughout the day. Parking demand on this portion of High Street greatly exceeds that of the remainder of High Street. Vehicle turnover is also high, with 90 percent of the vehicles leaving within 1 hour.

- The on-street parking along High Street, from Church to Water Street is underutilized, with an average occupancy at 30 percent of capacity. In general, utilization decreases significantly on High Street as it approaches Water Street. Vacant properties and decreased retail activity on the northern sections of High Street contribute to this low parking demand.
- For the entire High Street corridor from Union to Water Street, an average of 7 percent of the total daily parkers violate the two-hour parking limit. Fortunately, the majority of violators were parked on the underutilized portion of High Street, between Church Street and Water Street, and therefore had little effect on the overall parking availability.
- The Church Street corridor, from School to Walnut Street experiences the highest demand in the downtown, with a maximum occupancy of 90 percent. An average of 13 percent of the parkers violate the two-hour parking limit.
- The amount of handicap and senior citizen center reserved parking on High and Church Streets is adequate to meet the existing demand.
- The lack of loading zones along High Street force delivery vehicles to parallel park along vacant angled parking spaces. To alleviate this situation without installing loading zones throughout the downtown, businesses requiring large deliveries on a frequent basis should coordinate with the delivery service to arrange for off-peak delivery times, or provide an off-street delivery location.
- In general, the traffic volumes along High Street are below the minimums required to meet signal warrants at the intersection of High Street and Church Street.
- At least three volume-based signal warrants are met for the intersection of Union Street and High Street. The applicable warrants include those for 8-hour volumes and four hour volumes.
- Approximately four percent of the total daily traffic on High Street consists of heavy commercial vehicles. Most of these vehicles are school buses or delivery vehicles serving downtown businesses.
- The warrants for a heavy vehicle exclusion on High Street are not met because the percentage of trucks that would be subject to the heavy vehicle exclusion is too low. In place of a formal truck exclusion, the town could designate and sign a preferred alternative truck route, such as along Main Street.

The efforts to revitalize downtown Clinton have notable parking impacts. There are 12 currently vacant properties which are targeted for reuse and are expected to increase the demand for downtown parking spaces. To accommodate additional demand, the following recommendations outline opportunities to improve the existing parking facilities, and provide more convenient, attractive parking facilities in downtown Clinton.

- Improve the Walnut Street municipal parking lot
- Improve private parking facilities (Aubuchons/Saint Johns)
- Restripe all parking and other pavement markings throughout the study area
- Initiate a downtown parking signage improvement plan
- Reconstruct the Union Street/High Street and Union Street/Mechanic Street intersections
- Initiate parking education and promotion activities
- Increase the number of short-term spaces
- Construct additional off-street parking at two locations: between Duvarney Jewelers and Donut Shop Bakery, and adjacent to the vacant Maybarton Building
- Improve the Lincoln Plaza upper parking lot
- Construct curb extensions at striped no parking areas on High Street
- Consider reconstructing the High Street/Church Street intersection to include a traffic circle
- Improve existing and additional handicap parking spaces to include curb access and expanded parking areas

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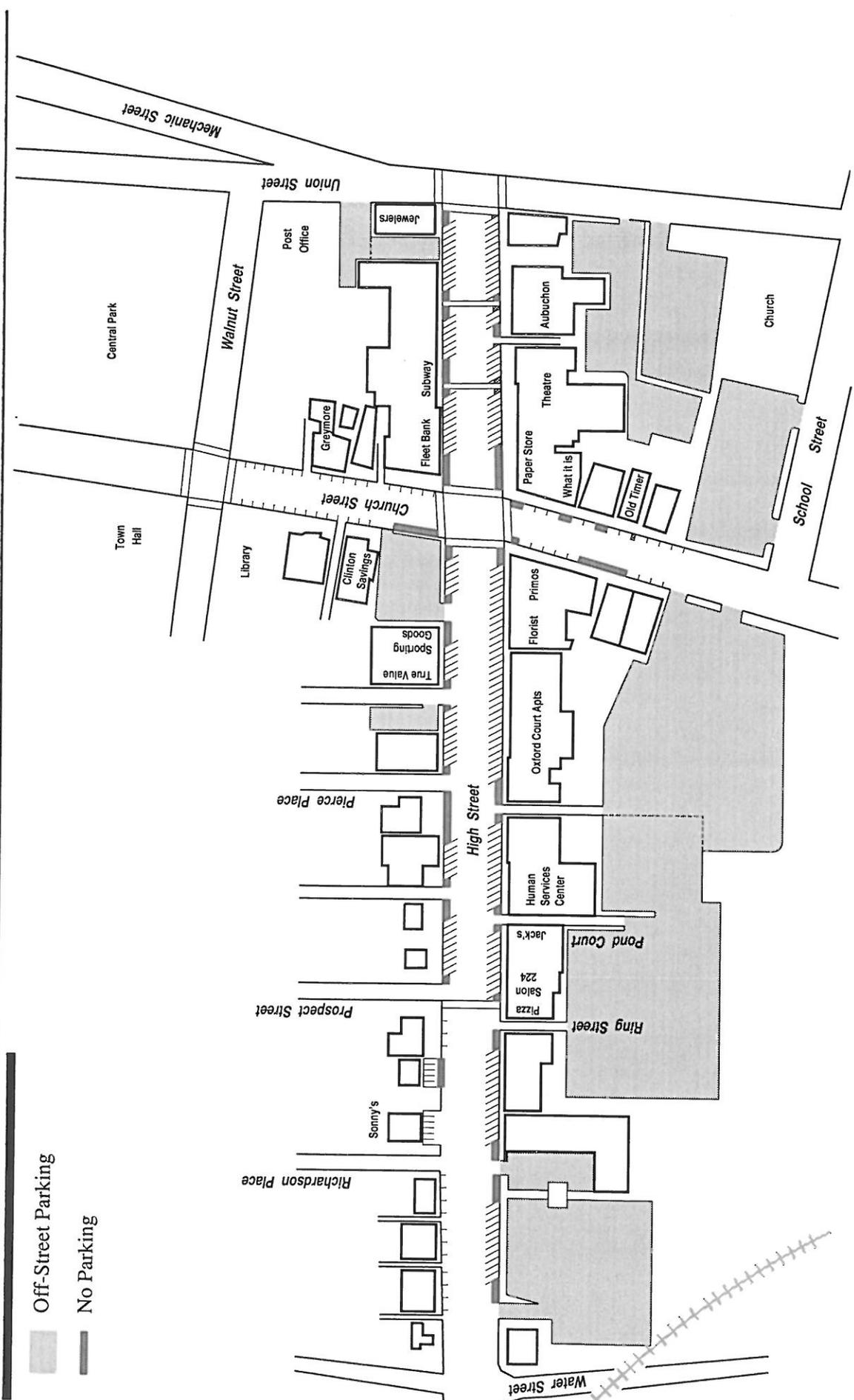
Introduction

UPTOWN, Inc. retained Vanasse Hangen Brustlin, Inc. (VHB) to conduct a study of parking conditions in the downtown area of Clinton Massachusetts. The goals of the study are to assess the existing system, project future needs with planned expansion, and recommend actions to address existing issues and provide adequate parking for future expansion. The study area, as shown in Figure 1, consists of High Street from Union Street to Water Street, and Church Street from School Street to Walnut Street.

The first phase of this study, *Existing Conditions Assessment*, includes an inventory of the existing parking supply, parking accumulation counts, turnover surveys of on-street parking, an analysis of the existing supply/demand relationship, and a review of traffic circulation conditions in downtown.

The second phase of the study, *Future Conditions Assessment*, involves the determination of parking space requirements to accommodate the reuse of vacant building space as part of the Downtown Market Analysis, identifying any planned changes in the parking supply resulting from the Streetscape Treatment Plan, and assessing the projected supply/demand relationship.

The final phase of the study involves developing recommendations to address existing issues and projected deficiencies resulting from revitalization efforts in the downtown area.



Vanasse Hangen Brustlin, Inc.

Figure 1
Study Area
Clinton, Massachusetts

Existing Conditions Assessment

The existing parking conditions in downtown Clinton are measured based on observations of parking supply, utilization and demand for parking. Vehicle accumulation and turnover surveys throughout the downtown present the foundation for identifying existing and potential parking needs necessary for the success of revitalization efforts.

Existing Downtown Development Characteristics

Figure 2 depicts the existing residential and retail uses in downtown Clinton. The Downtown Market Analysis¹ prepared by RKG Associates identified approximately 60 retail, entertainment and personal service businesses in downtown. Retail comprises almost 20 percent of the total utilization of downtown buildings. There are also more than 200 residential units comprising about 45 of the total utilization of downtown buildings. Office space comprises about 28 percent of the total utilization of downtown buildings.

According to the RKG study, there is presently over 2,000 daytime employment positions in and around the downtown study area. Retail sales have exceeded the rate of inflation over the past few years. The RKG study foresees opportunities to sustain the viability of downtown and supplement it by targeting compatible uses for some of the currently vacant space. The proposed uses of the vacant space are discussed in the *Future Conditions Assessment* section of this report and are the basis for the projection of future parking needs.

Existing Parking Inventory

A detailed inventory of parking facilities was conducted for the study area. Tables 1 and 2 present the inventory of on-street and off-street parking supply. The downtown contains 220 on-street parking spaces and approximately 512 off-street parking spaces. Off-street parking in Clinton comprises about 70 percent of the total supply.



¹ *Downtown Market Analysis, Town of Clinton, Massachusetts*, RKG Associates, Inc. and BRF&G Consulting Group, July 31, 1996.

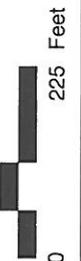
- Ⓢ Ground-Level Retail
- Ⓜ Ground and/or Upper Level Residential
- Ⓜ Office
- Ⓜ Ground and/or Upper Level Office
- Ⓜ Ground and/or Upper Level Vacancy



Total Utilization of Downtown Buildings

Upper Level Residential	41%
Ground Level Retail	19%
Ground Level Service/Office	17%
Upper Level Office	11%
Ground Level Vacancy	7%
Ground Level Residential	5%

Source: Downtown Market Analysis, July 31, 1996
 RKG Associates, Inc.



Vanasse Hangen Brustlin, Inc.

Figure 2
 Downtown Land Use
 Clinton, Massachusetts

All of the on- and off-street parking is unmetered. Meters did, at one time, exist on High Street. Most parking is subject to a two-hour time limit. Six spaces with a fifteen-minute time limit are located on Church Street, adjacent to the Fleet and Clinton Savings banks. Five handicap and five Senior Citizen Center parking spaces are designated along High and Church streets.

Table 1
On-street Parking Inventory

	Designated Parking				Total
	2-Hour	15-Min	HP ^a	SC ^b	
High Street, east side					
Union Street to Church Street	25				25
Church Street to Pierce Place	17		1		18
Pierce Place to Prospect Street	11			2	13
Prospect to Water Street	16				16
High Street, west side					
Union Street to Church Street	26		1		27
Church Street to Driveway North of Oxford Court Apts.	30		1		31
Driveway North of Oxford Court Apts to Ring Street	16		2	3	21
Ring Street to Water Street	24				24
Church Street, south side					
School Street to High Street	11				11
High Street to Walnut Street	11	4			15
Church Street, north side					
School Street to High Street	8				8
High Street to Walnut Street	9	2			11
Total on-street parking spaces	204	6	5	5	220

^a Handicap parking

^b Senior Citizen Center parking

The off-street parking is primarily used by residents and area employees. The largest off-street lots are the Oxford Courts lot, (221 spaces), the Saint John's School Street lot (70 spaces), the Lincoln Plaza "lower lot" (65 spaces), and the Aubuchon lot (50 spaces). The Oxford Courts parking lot is available for public parking between the hours of 9:00 AM and 5:00 PM.

Table 2
Off-street Parking Inventory

<u>Parking Lot</u>	<u>Spaces</u>
Aubuchon	50
St. John's (Union St.)	25
St. John's (School St.)	70
Oxford Courts Lot	221
Lincoln Plaza Upper Lot	24
Lincoln Plaza Lower Lot	65
Clinton Savings Bank Lot	16
Post Office Lot ^{a,b}	31
Maybarton Lot ^a	10
Total off-street parking spaces	512

^a Capacity is estimated since not all spaces are marked.

^b Includes unpaved portion.

Existing Parking Utilization

Field studies of parking accumulation and parking turnover were conducted on Wednesday, July 17, 1996 between 8:30 AM and 5:00 PM. On-street and off-street parking occupancy counts were collected. A turnover study of on-street parking along High Street and Church Street was performed. The full-day counts were supplemented by spot-checks by VHB personnel of downtown parking during peak hours on several other days in July and August. Figure 3 presents the results of the field studies.

The total parking supply exceeded the parking demand at the time the parking accumulation counts were conducted. The on-street parking demand reached about half the available capacity in the downtown. Off-street parking demand peaked at substantially less than half of capacity. Assessing the downtown as a whole, the parking supply is adequate to support the existing demand. The usage of parking spaces in the downtown, however, is not evenly distributed. Some spaces were heavily utilized for the majority of the day, while other spaces were never used.

On-street Parking Occupancy

Table 3 presents the peak on-street parking demand observed during the field survey. The half-hourly counts for the entire day are presented in the Appendix. There was never an instance in which the total accumulation of vehicles in the downtown exceeded the supply. From 8:30 AM through 5:00 PM, on-street parking occupancy for the entire study area remained at or below 54 percent of capacity. The

peak demand occurred at 12:30 PM, with 119 parked vehicles and 101 vacant spaces scattered throughout the study area. During the peak half hour, 54 percent of the on-street spaces were occupied. At 5:00 PM, when the survey was concluded, approximately 120 spaces were vacant.

Throughout the course of the survey, the majority of the vacant on-street spaces were located in the northern portion of High Street, near Water Street. In general, the number of vacant spaces on High Street decreased from the Water Street intersection to the Church Street intersection.

**Table 3
Observed On-street Parking Demand**

	<u>Capacity</u>	<u>Peak Demand</u>	<u>Percent Capacity</u>
<u>High Street, east side</u>			
Union Street to Church Street	25	21	84%
Church Street to Pierce Place	18	9	50%
Pierce Place to Prospect Street	13	8	62%
Prospect to Water Street	16	9	56%
<u>High Street, west side</u>			
Union Street to Church Street	27	20	74%
Church Street to Driveway North of Oxford Court Apts.	31	18	58%
Driveway North of Oxford Court Apts to Ring Street	21	17	81%
Ring Street to Water Street	24	12	50%
<u>Church Street, south side</u>			
School Street to High Street	11	10	91%
High Street to Walnut Street	11	10	91%
High Street to Walnut Street, 15 min spaces	4	3	75%
<u>Church Street, north side</u>			
School Street to High Street	8	8	100%
High Street to Walnut Street	9	9	100%
High Street to Walnut Street, 15 min spaces	2	2	100%

On-street Parking Turnover

The average number of different vehicles which occupy a particular parking space during a period of time is referred to as the *turnover rate*. Time limits on parking are intended to maximize the turnover of the most convenient, and therefore, most valuable spaces. Within downtown Clinton, as with any typical downtown area,

retail space comprises a considerable portion of the downtown area. The most convenient spaces should therefore be reserved for customers.

High Street previously had parking meters to control long term parking. Upon removal, a two-hour time limit was imposed on the majority of spaces on High Street and Church Street. The exception being several 15-minute parking spaces on Church Street adjacent to the Clinton Savings Bank and Fleet Bank. A very high turnover rate is typical for spaces adjacent to businesses such as banks, post offices, video stores, and convenience stores.

In conducting the turnover counts on High Street and Church Street, the location and license plate number of each parked vehicle were recorded at 30-minute intervals from 8:30 AM through 5:00 PM. These data were collected to help determine the average parking duration of each vehicle, and the average number of different vehicles which occupy a particular space during the course of the day. Table 4 presents the average duration and turnover for parked vehicles, as observed on the day of the survey.

Table 4
On-street Turnover and Duration

Location	Average Turnover^a	Average Duration^b
<u>High Street, east side</u>		
Union Street to Church Street	7.2	45 min
Church Street to Pierce Place	4.6	1 hour
Pierce Place to Prospect Street	4.6	1 hr 15 min
Prospect to Water Street	4.7	1 hr 15 min
<u>High Street, west side</u>		
Union Street to Church Street	8.9	45 min
Church Street to Driveway North of Oxford Court Apts.	3.6	1 hr 15 min
Driveway North of Oxford Court Apts to Ring Street	4.6	50 min
Ring Street to Water Street	3.2	1 hr 50 min
<u>Church Street, south side</u>		
School Street to High Street	5.7	1 hour
High Street to Walnut Street	3.1	1 hr 50 min
High Street to Walnut Street, 15 min spaces	6.7	NA
<u>Church Street, north side</u>		
School Street to High Street	5.9	1 hour
High Street to Walnut Street	3.1	1 hr 45 min
High Street to Walnut Street, 15 min spaces	9.5	NA

^a The turnover rate is the average number of vehicles per space over the course of the day.

^b The average length-of-stay for all parked vehicles.

NA Since the survey was conducted at 30 minute increments, average duration for the 15-minute spaces is not applicable.

The turnover rate is a function of the number of vehicles, parking duration, and the period of time for which the turnover rate is measured. Had all parking spaces been fully utilized during the 8.5 hours of the survey by vehicles parking the entire two-hour limit, the turnover rate would have been 4.25 (8.5 hours÷2 hours). This rate was exceeded in most locations in the downtown, sometimes by a considerable amount. For example, along the High Street segment between Union Street and Church Street the turnover rate was 7.2 on the east side and 8.9 on the west side. This indicates that turnover in the downtown was generally good and that time limits were being obeyed.

A few locations had comparatively low turnover rates of between 3.1 and 3.6. This was due to a combination of low demand for these spaces and vehicles parked in excess of the two-hour limit. The on-street spaces on High Street in front of the Oxford Court Apartments had a few long-term parkers. It can be assumed that these parkers are Oxford Court residents.

Throughout the study area, the two-hour time limit was violated by only 7 percent of the parkers. Even though these vehicles violated the time limit, they did not impact the parking available for others because most long-term on-street parking occurred where demand for these particular spaces was light or at times of the day other than the peak midday hours. For example, a few vehicles were parked in 15-minute spaces for durations between 2 hours and 4.5 hours, but other 15-minute spaces were always available. Although these instances of time limit violations do not pose a significant problem for downtown parking, these long-term parkers will affect the availability of convenient parking as parking demand increases.

On-street Parking Special Uses

The existing handicapped and senior citizen center parking in the downtown area is adequate to service the existing demand in that there was never an instance in which every space was occupied. On the day of the survey, the handicap spaces on the west side of High Street from Church Street to Water Street were utilized more frequently than any other handicap spaces in the downtown, although full occupancy was never reached. The handicap space on the west side of High Street, from Union Street to Church Street was only utilized once, from 1:30 PM to 2:00 PM. For the remainder of the day, this space was vacant.

There are no formally designated on-street loading zone areas in downtown Clinton. The lack of loading zones along High Street forced delivery vehicles to parallel park along vacant angled parking spaces. This would be a serious concern if the demand on these blocked spaces was considerably higher. One truck blocked five vacant spaces while loading, but other spaces were available nearby. Loading areas are available behind several businesses along High Street, however, use of these areas was not observed.

Parking Utilization Update

At the request of the Clinton Parking and Traffic Circulation Committee and Uptown Inc., VHB reviewed additional on-street parking data collected Monday, September 30, 1996 by Uptown Inc. These data showed a consistent five to ten percent increase in average daily parking activity throughout the study area as compared to the July 17, 1996 parking data. Peak demands along High Street between Union Street and Church Street were measured to be approximately 85 percent of capacity, representing an increase over the summer survey of about 8 percent. Similarly, the daily occupancy along this section of High Street increased by five percent to an average about 60 percent. Along Church Street the peak demand remained at 90 percent capacity while the daily average increased approximately ten percent. Overall, the parking demands measured in the study area during both the summer and fall of 1996 are below the capacity levels of the existing inventory. A summary of the September survey and analysis is provided in the technical appendix.

Off-street Parking Accumulation

The usage off-street parking downtown is primarily by residents and employees. Ten parking lots were observed to estimate the off-street parking demands throughout the day. Table 5 summarizes the peak demand and utilization rate for each lot surveyed.

Table 5
Observed Off-street Parking Demand

Location	Capacity	Peak Demand	Utilization Rate
Lincoln Plaza "Lower Lot"	65	28	43%
Lincoln Plaza "Upper Lot"	24	4	17%
Oxford Court Lot (South)	70	68	97%
Oxford Court Lot (North)	151	40	26%
Clinton Savings Bank Lot	16	8	50%
St. John's School Street Lot	70	25	36%
St. John's Union Street Lot	25	4	16%
Aubuchon Lot	50	17	34%
Post Office Lot ^a	31	16	52%
Maybarton Lot	10	4	40%

^a Capacity is estimated since not all spaces are marked. Includes unpaved portion.

As seen in Table 5, most lots are under utilized, except for the southern Oxford Court Lot. This lot is heavily utilized for the entire day and demand spills over to lots to the north.

A number of the lots in Table 5 are privately owned non-commercial lots that are presently being used by patrons of the downtown. For instance, the St. John's lot on School Street is mostly serving downtown employees. It is assumed that this lot serves as an overflow lot when the Oxford Court Lot becomes full. Similarly, long-term parkers were observed using the unpaved lot adjacent to the Post Office parking lot (between Duvarney Jewelers and the Donut Bakery Shop) and the unpaved lot adjacent to the vacant Maybarton Building at 151 High Street.

The field survey indicates that there is ample off-street parking for downtown employees and shoppers. Access and adequate signage of these facilities may be limiting their use. It is also not apparent whether all these parking facilities are formally allowable by the owners.

Traffic Circulation

High Street and Church Street define the primary business corridors of the downtown and provide the majority on-street parking that supports the downtown businesses. The designated public off-street parking, the Oxford Courts lot, is located off of Church Street. This off-street parking is located on the direct route between Main Street and High Street, and is also easily accessible by drivers arriving via High Street from other directions.

Traffic Volumes

The Montachusett Regional Planning Commission (MRPC) collected traffic volume data for High Street, Church Street and Union Street during August and September of 1996. Automatic traffic recorders were installed on each road to collect two-way traffic volumes for a 24-hour period. As shown in Table 6, two-way traffic volumes along High Street were approximately 8,000 vehicles per day (vpd). Traffic on Church Street and on Union Street was about 2,900 vpd and 12,200 vpd, respectively.

Table 6
Traffic Volumes

Location	Daily	Peak Hour
High Street, North of Union Street	8,000	600
Church Street, east of High Street	2,900	220
Union Street, west of High Street	12,200	990

Note: All volumes are two-way.

Figure 4 illustrates the variations in hourly traffic volumes. Union Street shows peaks in the morning and evening commuting periods. The highest hourly volume occurs from 5:00 PM to 6:00 PM. The hourly volumes for High Street and Union Street demonstrate a more consistent pattern. The peak hourly volume on both High Street and Church Street occurred from 3:00 PM to 4:00 PM.

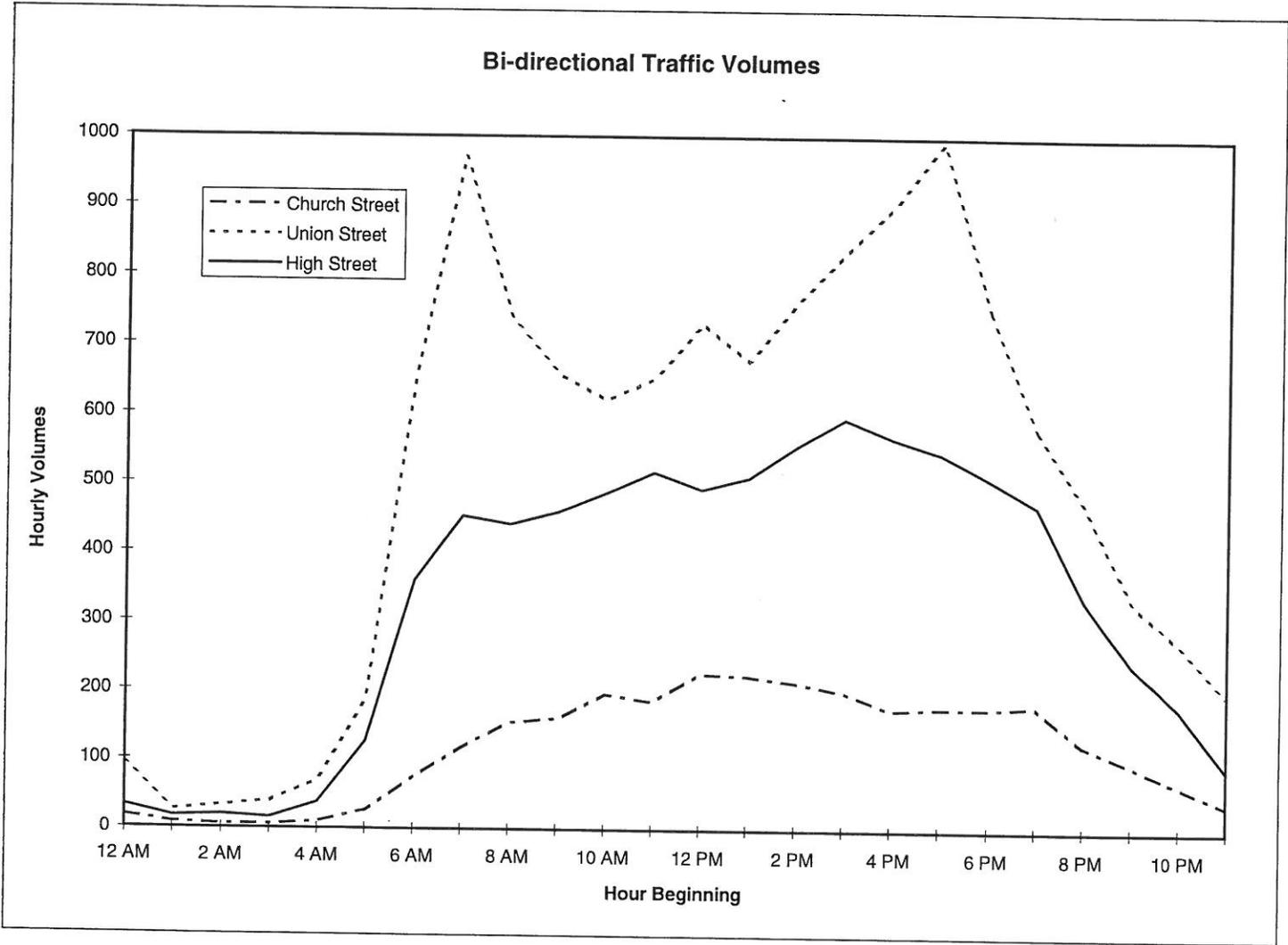
Traffic Signal Warrants

The Manual on Uniform Traffic Control Devices² (MUTCD) defines conditions when the signalization of an intersection may be considered. The MUTCD contains "warrants" for signalization, most of which involve minimum hourly traffic volumes on the intersecting roadways. Although the available traffic data is not precisely that required for a formal signal warrant study (one-way volumes on each approach are required), it is possible to use the two-way traffic data collected by the MRPC to make a general assessment of the potential for signal warrants to be met. Based on approximations using the available traffic count data, the following conclusions are likely.

- No volume-based warrants are met for the intersection of High Street and Church Street. In general, the traffic volumes along High Street are below the MUTCD minimums.
- At least three volume-based warrants are met for the intersection of Union Street and High Street. The applicable warrants include those for 8-hour volumes and four hour volumes.



² Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Washington, D.C., 1988.



Based on the available data, it appears that the intersection of Union Street and High Street would benefit from signalization. However, a formal traffic signalization study would be required before any final conclusions can be made.

Truck Activity

The environment of the downtown area is oriented towards pedestrians and slow-moving vehicles. Unnecessary through traffic, particularly by trucks, is undesirable. Accordingly, VHB investigated whether it was reasonable to prohibit heavy vehicles from High Street.

Guidelines have been established by the MHD to assess whether prohibitions of truck traffic can be implemented. For a community to establish a heavy vehicle exclusion, a suitable alternate route must be available within the boundaries of the community. This criterion is met as Main Street provides access around the downtown and connects to Union Street. Certain warrants must also be met, including truck volumes, in excess of five percent of the total vehicle traffic, which cause a substantial reduction in capacity or safety of the roadway.

Attempts to use automatic traffic recorders to determine the number of trucks traveling along High Street were unsuccessful due to inaccuracies attributable to the slow travel speeds and numerous parking movements on the street. Because of this, VHB performed a manual count of vehicle classifications on High Street. This count was made from 8:00 AM to noon on Thursday October 3, 1996. The data indicate that the percentage of heavy vehicle traffic along High Street is about four percent, and that over half of the trucks are not types which would be affected by a truck exclusion. Many of the heavy vehicles observed include school buses, garbage trucks and delivery vehicles servicing the businesses along High Street. On average, about two semi-trucks were observed along High Street per hour. Because the percentage of trucks that would be subject to the heavy vehicle exclusion is so low, the warrants for a heavy vehicle exclusion are not met.

There are some measures to discourage truck traffic on High Street that can be implemented even without a formal truck exclusion. An alternative truck route along Main Street could be designated and signed. Other measures include traffic calming techniques that promote slower travel speeds. For example, the landscaped island proposed for the north end of High Street as part of the streetscape plan, would help identify the area as a low-volume traffic area.

Future Conditions Assessment

Analysis of future conditions is based on projections of the existing conditions influenced by two parallel revitalization efforts: the Downtown Market Analysis and the Streetscape Treatment Plan. It is assumed that these efforts will be fully implemented within a 10-year time frame. The impacts to parking supply and demand are outlined below and serve as the foundation for determining improvements to parking and traffic circulation necessary to support the revitalization efforts.

Projected Parking Supply

The proposed streetscape plan impacts the amount of parking to be available in future years. It is expected that upon completion of the plan the amount of on-street parking within downtown Clinton will increase by 7 spaces to approximately 227 spaces; an increase of about 3 percent. The proposed streetscape improvements to High Street impact parking as follows:

- The installation of a median strip on High Street, from Ring Street to the Lincoln Plaza lower parking lot entrance impacts the parking supply since the angled parking on the west side of High Street from Ring Street to Water Street must be converted to parallel spaces to accommodate the construction of the median. A net loss of about 7 spaces will result. The existing demand on this portion of High Street is low, with peak usage only about 50 percent of the capacity. Therefore, the loss of parking supply is not significant.
- The overall supply of spaces on the east side of High Street, from Union to Church Street, increases from 25 spaces (no handicap) to 33 spaces (4 handicap). The overall supply of spaces on the west side of this portion of High Street increases from 27 spaces (1 handicap) to 33 spaces (4 handicap). The removal of the crosswalk in front of the theater, and the reconfiguration of the no parking zones on High Street, results in this net increase of valuable, high demand spaces.
- The streetscape plan proposes to improve the crosswalk facility by emphasizing their presence. The crosswalk improvements do not impact the supply of parking, but will improve the overall look of the downtown and improve safety for pedestrians.

- The construction of curb extensions and protected parking does not impact the supply of parking and improves the overall look of the downtown while improving safety for motorists. The curb extensions deter illegal parking/loading in these areas.

Projected Parking Demand

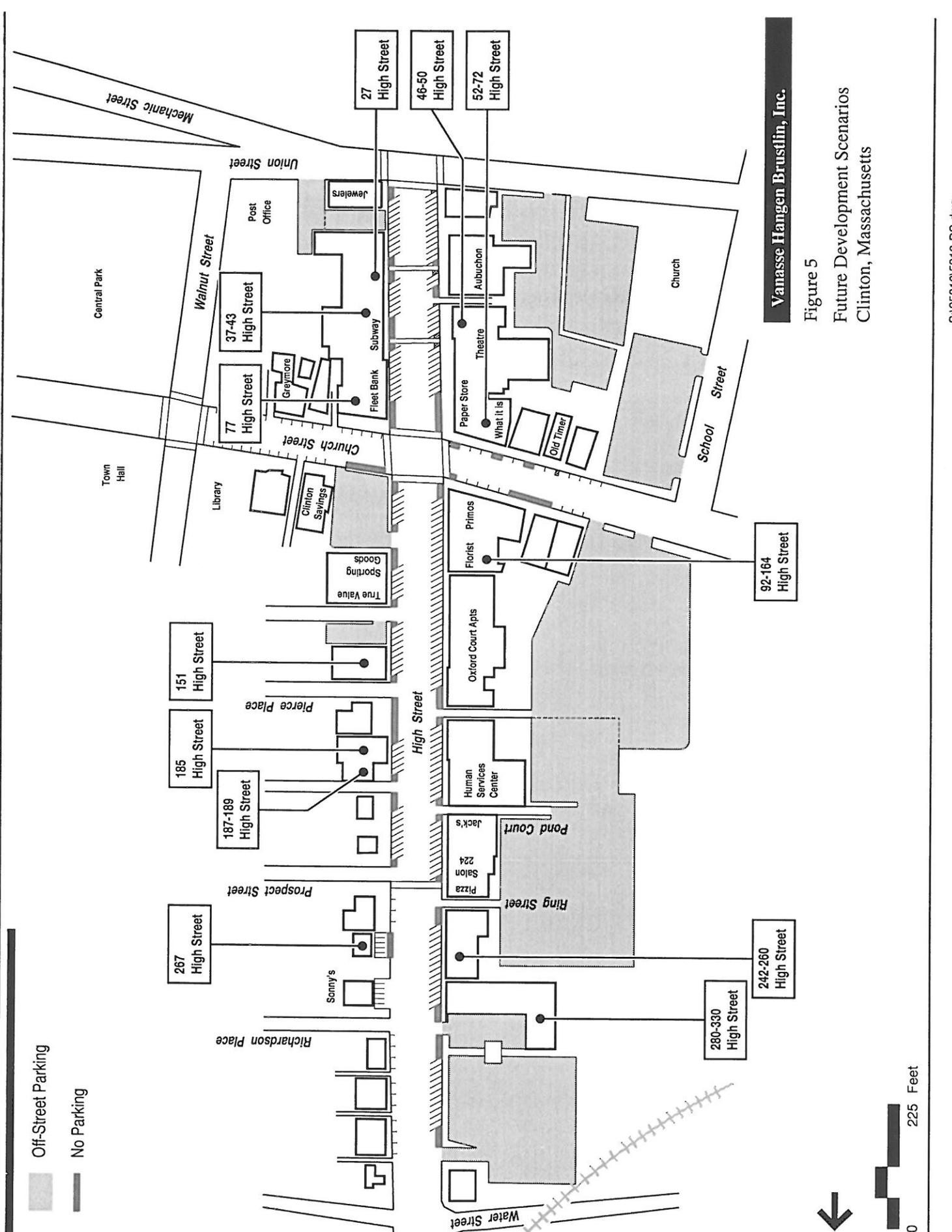
In order to estimate the additional parking demand generated by the downtown revitalization efforts, parking generation rates were estimated for each type of proposed establishment using standards developed by the National Parking Association, adjusted to reflect existing parking characteristics of downtown Clinton and factoring in any increase in population in Clinton. The results of the estimated future demand analysis are summarized in Table 7. The sites of the proposed developments are depicted on Figure 5.

**Table 7
Additional Parking Demand**

Location	Assumed Use	Size (Sq. ft.)	Peak Parking Requirements ^a
46-50 High Street	Retail Service	2,210	5
52-72 High Street	Retail Service	600	2
92-164 High Street	Office	1,967	6
242-260 High Street	Retail Service	1,080	3
280-330 High Street	Retail Service	10,270	25
27 High Street	Retail Service	2,050	5
37-43 High Street	Retail Service	1,500	4
77 High Street	Restaurant	4,500	18
151 High Street	Fitness Facility	6,528	16
185 High Street	Office	3,300	10
187-189 High Street	Office	924	3
267 High Street	Retail Service	1,482	4
			101

^a Peak parking requirements determined for weekday midday demand. Approximately 60 percent of these spaces are for visitor/customer usage.

The overall increase in demand for parking is estimated at 101 spaces, occurring during the peak hour (late morning or early afternoon) of an above-average weekday. Approximately 60 percent of the spaces are needed accommodate visitors/customers and must be very convenient and with close proximity to the businesses.



Vanasse Hangen Brustlin, Inc.

Figure 5
 Future Development Scenarios
 Clinton, Massachusetts

Visitor/customer spaces are typically on-street, or in a contiguous off-street parking lot.

The additional demand is localized, and therefore must be addressed by blockface. The following discussion looks at the localized parking demand created by these proposed establishments during the peak parking period (weekday, occurring during the midday). The analysis is also summarized on Figure 5.

- The 46 - 50 High Street and 52 - 72 High Street vacancies will generate an additional parking demand of approximately 7 spaces on the west side of High Street between Union Street and Church Street during the peak period. Of these 7 spaces, 4 will be on-street and very convenient as they will serve visitors/customers to these services.
- The 27 High Street, 37 - 43 High Street, and 77 High Street vacancies will generate an additional demand of approximately 27 spaces on the east side of High Street between Union Street and Church Street during the peak period. The restaurant proposed for 77 High Street generates the majority of this demand. Of these, approximately 16 spaces will be on-street for visitors/customers.
- The 151 High Street vacancy, if used as a fitness facility, will generate additional parking demand of approximately 16 spaces on the east side of High Street between Church Street and Pierce Place during the peak period for the downtown. Of these, 10 spaces will be for visitor/customer use. Although fitness facilities are busiest during the late afternoon and early evening period, a midday demand was applied to be concurrent with the downtown peak demand period.
- The 92 - 164 High Street vacancy, if used as office space, will generate an additional parking demand of approximately 6 spaces (4 for visitor/customer usage) on the west side of High Street between Church Street and the driveway north of Oxford Court Apartments.
- The 185 and 187 - 189 High Street vacancies, if used as office space, will generate an additional peak period demand of approximately 13 spaces (8 for visitor/customer use) on the east side of High Street between Pierce Place and Prospect Street. Since the existing demand on this portion of High Street is low, and off-street parking for office employees could be provided behind the buildings, no action is required to increase the supply of on-street spaces to accommodate the additional visitor/customer parking demand.
- The 267 High Street vacancy, if used as retail space, will generate an additional demand of approximately 4 spaces (2 for visitors/customers) on the northernmost portion of the east side of High Street, between Prospect and Water Streets. Demand for on-street parking on this portion of High Street is low, peaking at 56 percent of capacity, and is adequate to support the additional

visitor/customer demand. Adequate employee parking is provided behind the facility.

The remaining vacancies on the west side of High Street, 242 - 260 High, and 280 - 330 High will generate an additional peak period demand of approximately 28 spaces (17 for visitors/customers) on the northernmost portion of the west side of High Street between Ring Street and Water Street. The 280 - 330 High Street development generates a majority of this additional parking. Demand for on-street parking on this portion of High Street is low, peaking at only 50 percent of capacity, and is adequate to support the additional visitor/customer demand for the 242-260 High Street development. Therefore, no action is required to increase the supply of on-street parking to meet the additional demand. For the 280 to 330 development, ample off-street parking is provided in the Lincoln Plaza upper lot. The existing utilization of this lot is low, peaking at only 17 percent of capacity on the day of the survey.

4

Recommendations

Recommendations to address current and projected parking deficiencies in the downtown area are outlined below. The short-term recommendations, addressing current conditions, are principally directed at improving convenience to customers. Long-term recommendations address the need for new spaces and the overall balance of parking that will be required to assure convenient parking for all downtown employees and customers.

Recommendations to Address Current Conditions

The following recommendations support the findings of the existing conditions analyses. The recommendations address opportunities for improvement rather than expansion of the existing parking supply. The approach is to enhance the existing supply, making it more convenient and attractive. Improvements to traffic circulation are also presented to improve access to the downtown.

- ▶ **Improvement of the Walnut Street Municipal Parking Lot**—The public parking lot located on Walnut Street provides parking for area businesses, municipal employees, shoppers and visitors to the adjacent park area. The lot provides over 20 parking spaces and is typically filled to capacity on a daily basis. Presently the parking lot shows severe signs of deterioration and wear. Corrugated pavement, surface cracking and rutting are visible throughout the lot. The lot is equipped with temporary jersey barriers towards the rear of the parking area to protect motorists from driving over an embankment. Also, a stairway towards the rear of the lot is currently assessable, however, in disrepair and is recommended for improvement to maintain access between the lot and business on High Street. Improvement to the parking lot surface and a restriping of the parking layout will provide a more attractive, safe and efficient parking facility for public use.

Improvements to the Walnut Street Municipal Parking Lot include rehabilitation and resurfacing. Redesign of the parking lot should include provisions for a more efficient use of parking and traffic flow space to maximize the parking capacity. Other provisions include installation of permanent vehicle barriers along the rear of the parking area, stairwell improvements, decorative landscaping and signage.

- **Improvement of Private Parking Facilities**—The majority of off-street parking presently serving downtown Clinton is privately owned. These parking lots are typically unrestricted for use during the hours of 9:00 AM to 5:00 PM and are generally utilized by residents, merchants and employees. Two parking lots of particularly constant usage include the Saint John's lot located at the corner of Church Street and School Street and the parking lot located off Union Street behind Aubuchon Hardware store. These two lots accommodate approximately 100 vehicles at full capacity. The Saint Johns lot generally fills up on a daily basis while the lot off Union Street commonly operates at 30 percent of its capacity.

Both parking lots show signs of severe pavement deterioration and marking wear. Corrugated pavement, surface cracking and rutting are visible as well as vegetation growth within and along the edges in portions of both lots. Improvement to the surface of the lot and a restriping of the parking layout will provide a more attractive, safe and efficient parking facility for both public and private use. Landscaping improvements specific to the Saint Johns parking lot include installation of delineation islands or barriers along School Street to provide a safety buffer zone between the travelway and the parking area.

- **Complete Restriping of Parking and Other Pavement Markings throughout the Study Area**—On-street pavement markings throughout the study area are noticeably worn and in need of replacement. The layout of parking throughout much of the downtown appears to be adequate and the present configuration can be retained. If roadway reconstruction is anticipated in the near future, it is recommended that the restriping be scheduled after the road work is completed.

Pavement markings to be replaced include parking lines, centerlines, edge of pavement lines, crosswalks, restricted parking areas, etc. Any on-street striping should be conducted once the streetscape treatments have been completed.

- **Downtown Parking Signage Improvement**—The regulatory parking signs within the downtown area are visibly faded and worn. Given the present condition of the signs, a downtown parking sign improvement plan should include the replacement of all parking signs within the study area to be consistent with the streetscape design already under implementation. Also included should be the installation of signs directing motorists to areas of additional off-street parking. The signs should be located throughout the downtown and will not only assist the parking conditions downtown but also the traffic circulation.

Replacement of some signs may require replacement of supporting poles as well. Up to 10 custom parking lot signs and directional signs for parking facilities should be installed in strategic locations throughout the downtown to maximize the effectiveness and convenience for users.

- **Reconstruction of the Union Street/High Street and Union Street/Mechanic Street Intersections**—The primary access to the downtown area in Clinton is along Union Street through the intersection with High Street. Vehicles entering from the east and south typically travel along Mechanic Street which intersects Union Street just east of the Union Street/High Street intersection

High Street intersects Union Street to form a “T” intersection. High Street is STOP sign controlled. Field observations identify low to moderate queuing and delays along High street. Depending on the presence of parked vehicles along Union Street, sight distance can be limited for vehicles on the High Street approach.

The intersection of Mechanic Street and Union Street is controlled by a stop sign along the Mechanic Street approach. Traffic through the intersection is channeled by two small islands and directional signs. The design of the intersection is unique and can be confusing to motorists unfamiliar with the intersection. Similarly, activity associated with the post office located on Union Street adds to the operating and safety concerns at this intersection.

Reconstruction of the High Street and Mechanic Street intersections with Union Street will enhance the access to the downtown and improve circulation within the area. Conceptual improvements to the intersection include providing a more standard configuration of the intersection and maintaining continuous mainline travelways to eliminate confusion. These improvements as well as improvements to parking and adjacent driveway access will improve operations, safety and the attractiveness of the downtown area.

- **Parking Education and Promotion Activities**—As a means to educate the stake holders of the downtown of the importance and value of attractive and convenient parking, a promotional campaign should be implemented. The goal of the campaign is to encourage residents, merchants and employees to reserve the most attractive parking spaces for patrons by utilizing the outlying off-street parking facilities. Similarly, notification of available convenient off-street parking will be provided to patrons to maintain their confidence in securing parking in future visits to downtown.

The campaign can be conducted by distributing flyers and posting signs in the downtown businesses. The flyers should stress the amount and location of downtown parking, value of on-street parking, need for consistent enforcement procedures, plans for additional parking and the way the system operates. These public notices will support the success of the downtown and present a positive message on how a cooperative effort can have a significant impact. Directions or a map outlining the locations of available convenient parking may also be provided in the flyer.

The parking promotion activities must be managed by an appointed or hired person selected by the town. Efforts must be continuous as a means to address changing conditions and issues facing the downtown. Initial funding for the promotion activities will be needed, however, it is expected that the initial efforts will eventually gain sponsorship contributions and become self supporting.

- ▶ **Increase Number of Short Term Parking Spaces**—Consideration should be given to increase the number of 15 minute spaces in the downtown - specifically, on High Street in front of the Fleet Bank, Post Office, or Aubuchon Hardware. The majority of parkers on High Street, from Union to Church Street are very short-term—with an average duration of 45 minutes. Adding a few more 15-minute spaces would discourage any long-term parkers, such as employees, from utilizing these high demand spaces. Locating additional 15 minute spaces adjacent to handicap spaces is recommended.

If improved, the off-street parking adjacent to the Maybarton Building and adjacent to Duvarney Jewelers should include some short term spaces - such as 15 or 30 minute spaces.

- ▶ **Consider Installing Traffic Circle at High/Church Street Intersection**—Given the existing street widths at the Church/High Street intersection (Church Street at 42 feet, High Street at 58 feet), the construction of a traffic circle consisting of a central island and channelization islands at each approach is feasible. This action would discourage any heavy vehicles from repeatedly using High Street as a “cut through.” Traffic circles tend to reduce vehicle speeds and provide a visual impression of street discontinuity. If installed, any curb extensions at this intersection would have to be either removed or relocated. General field observations support this traffic calming alternative, although a substantive design effort would be required for implementation.
- ▶ **Moveable or Semi-Permanent Crosswalk Signs for All Crosswalks**—To further stress that motorists should yield to pedestrians in the crosswalk area, all crosswalks on High Street should have sturdy, noticeable signs which will be centered on High Street, and placed in the crosswalk.

Recommendations to Address Future Conditions

The following recommendations address the need for new spaces to accommodate increased floor space occupancy and to assure ample parking in downtown Clinton. These recommendations specifically address the additional demand generated by the uses which are assumed to occur from the existing vacancies targeted for occupancy during the three phases of the Downtown Revitalization Plan.

- ▶ **Construction Of Additional Off-Street Parking On Unpaved Lot Between Duvarney Jewelers and the Donut Shop Bakery**—Presently, the parcel between

Duvarney Jewelers and the Donut Bakery Shop is unpaved. It is recommended that this lot be constructed for off-street parking with access to High Street, to absorb the majority of this additional demand. This parcel is under private ownership and is presently being used unofficially for parking by downtown employees, postal patrons, etc.

Provided the parcel can be acquired by the town, improved and accommodated with adequate access from High Street, an additional 30 parking spaces could be added to the downtown parking supply minus several angled spaces lost to the curb cut. At least half of the new spaces should be given a 30-minute time limit to encourage usage by visitors/customers and prevent employees from filling the lot. This increase in parking should accommodate future capacity on this block of High Street.

- **Improvement to the Undeveloped Parcel Adjacent to the Vacant Maybarton Building**—Improvement to the undeveloped parcel adjacent to this property, will provide up to 10 off-street parking spaces which could have with mixed usage (employees and visitors/customers). This combined with available on-street and contiguous off-street parking will be sufficient for the proposed developments on this section of High Street.

The existing condition of this undeveloped parcel is poor, with substandard access. Regrading, paving, striping, access improvement, and decorative landscaping and signage are required to provide a more attractive, safe and efficient parking facility. If improvements to this parcel are not initiated, its poor condition may counter the downtown revitalization efforts.

- **Improvement to the Lincoln Plaza Upper Parking Lot**—To adequately and safely support the additional parking demand created by the proposed retail facility at 280 to 330 High Street, the Lincoln Plaza upper parking lot needs restriping with landscaping improvements. In addition, the unused metal staircase tower connecting this lot to the lower Lincoln Plaza lot should be removed or refurbished. This staircase is unsafe and presents a serious safety hazard, especially with the projected additional activity in this parking lot.
- **Improvement to the “No Parking” Zones at the High Street/Church Street Intersection**—To prevent delivery vehicles from parking in the no parking zones at the High/Church Street intersections, a raised curb should be constructed. This action discourages illegal parking/loading in these areas. Proposed improvements to these areas as part of the Streetscape Treatment Plan have been noted and are further recommended.

If handicap spaces are to be installed adjacent to these areas, appropriate curbing is recommended to provide wheelchair access to the sidewalk as required by standards established by the Americans with Disabilities Act (ADA). For this

reason, it is advantageous to locate handicap spaces adjacent to each other and/or at the end of a blockface to minimize curb reconstruction.

- **Improve Handicap Parking Facilities**—Also, adding handicap spaces in the middle of a contiguous portion of parking spaces should be avoided. Handicap spaces should be conveniently located, first and foremost, and if possible, always at the end of a row of spaces, where a break occurs. This simply keeps any curb reconstruction to a minimum.

The Americans with Disabilities Act (ADA) requirements for the amount of on-street parking depicted on the Streetscape Treatment Plan for the section of High Street between Church Street and Union Street is 2 handicap spaces on each side. One of each pair of handicap spaces would require an 8-foot vehicle stall and 5-foot accessible aisle. The other requires an 8 foot vehicle stall and an 8-foot accessible aisle (van accessible). Both configurations need proper signage and curb ramps for sidewalk access.

Action Plan

The recommendations outlined above identify improvement options for existing and potential needs. This action plan presents the fundamental activities that must be taken into account to implement these recommendations. Included in the action plan for each improvement category are potential funding sources other than Town resources. These potential funding sources may not include all funding sources available to the town.

Off-Street Parking Improvements

Public Parking Facilities

The Town of Clinton should evaluate the efficiency of the layout of public off-street parking facilities throughout the downtown. This evaluation should include the determination of efficiency and whether the lots can be reconfigured to accommodate more vehicles. Similarly, field inspections should be conducted to determine if any physical deficiencies exist that adversely impact the operations of the facilities.

Improvements to publicly owned parking facilities are eligible for state funding through state Transportation Bond bills. Although funding via the Transportation Bonds may include costs for design and engineering as well as construction, the town may wish to offer financing for design and engineering to expedite funding and show a commitment to the projects.

Private Parking Facilities

Improvement of private parking facilities is not eligible for state or federal funding. Certain Community Development Block Grants or Action Grants may be applicable to improving private facilities that are under agreement with a public agency.

Roadway Improvement Projects

Restriping of Parking and Other Pavement Markings

Restriping of pavement markings is typically conducted along with roadway surface improvements. High Street is presently part of the Federal Highway System and improvements are eligible for federal funding. It is recommended that the Town of Clinton contact the Massachusetts Regional Planning Commission to request inclusion in the Transportation Improvement Program (TIP). The TIP is a compilation of roadway, bridge, transit and pedestrian improvement projects to be funded by the state or federal agencies. Funding through the TIP can take between one and five years depending on the project's priority rating.

The Clinton Department of Public Works is the most likely responsible agency to initiate this activity. Non-state highway projects submitted to the TIP require design and engineering to be completed locally. Funds for the design are the responsibility of the Town.

Downtown Parking Signage Improvements

Regulatory signage can be included in the design and engineering of roadway improvements and funded as part of the TIP project. The town should adopt a signage theme plan that is both visually pleasing and clearly understandable.

Reconstruction of the Union Street/High Street and Union Street/Mechanic Street Intersections

Similar to roadway improvement projects, intersection projects are also eligible for federal funding. Special Federal Highway Administration Intermodal Surface Transportation Efficiency Act (ISTEA) funding categories are applicable, such as the Surface Transportation Program or Safety Improvement subcategory. Similarly, the state Transportation Bond is another source of funds for the improvement of roadways and intersections. Again, the town will be responsible for funding the design and engineering of the intersections prior to allocation of funds.

Initiation of design should include a complete analysis of the intersections to determine existing deficiencies and conceptual improvement options according to traffic demands. Conceptual designs should be presented to the Massachusetts Highway Department District office as all state and federally funded projects are advertised through district offices. All designs must be in compliance with state and/or federal guidelines to maintain eligibility.

Parking and Circulation Management

Parking Education and Promotion Activities

The effectiveness of downtown parking can be improved greatly through an awareness program directed at both merchants and customers. This type of program is often administered by a committee with the endorsement of the municipality. In Clinton, the Downtown Parking and Traffic Circulation Committee would be a suitable committee to take on this task. It is important that the committee be staffed by an individual available to provide a continuous and creative campaign educating and promoting parking that best serves the downtown.

The committee should begin by establishing a goal or set of objectives to be achieved under a specific time frame. A series of action items should be developed by the committee that will advance the goal or objectives. After implementation, it is important to revisit each activity and determine the effectiveness for future applications. The committee should also be accessible to public input as a means to provide customer and merchant participation.

Parking Space Designation

The downtown streetscape plan identifies the redesignation of special use parking spaces within the downtown area. These special uses include handicap parking, loading zones, and short-term parking spaces. The designation of these special use spaces should be consistent with local, state and federal regulations as well as being responsive to the demands of the downtown. Designation of loading zones and short-term parking can be tested by implementing temporary restrictions and monitoring operation.

Truck Circulation and Route Designation

Excessive truck travel in a downtown area can have negative impacts to traffic circulation and parking operations. Truck counts conducted during the parking and circulation study have not identified an excessive number of trucks, however, trucks do use High Street as a common route. The town may want to consider designating a truck route around the downtown area to minimize truck travel along High Street.

To designate truck routes within town, the Town must identify routes that are compatible with adjacent land-uses and do not pose an excessive inconvenience to truck travel. Considerations such as turning radii, vertical clearances, traffic controls and grades must be taken into account. Once the designated truck routes are in place and clearly signed, they will provide direction to truck drivers and minimize truck presence downtown.

Restrictive measures, such as truck exclusions, can be pursued if the truck route designations prove ineffective. To petition for a truck exclusion route, the share of trucks in the vehicle mix must be five percent or greater, incompatible land-uses

must be present along the existing route, and a suitable alternative route for trucks must be available. This information must be submitted to the Massachusetts Highway Department District Office for approval.

The Town may also implement "traffic calming" techniques to create a physically unattractive route for larger vehicles. Installation of traffic islands or travel lane width reductions are some example techniques.

Appendix Data Collection Results

**Table A-1
Downtown On-Street Parking Accumulation: Wednesday, July 17, 1996**

	<u>Capacity</u>	<u>8:30</u>	<u>9:00</u>	<u>9:30</u>	<u>10:00</u>	<u>10:30</u>	<u>11:00</u>	<u>11:30</u>	<u>12:00^a</u>
<u>High Street, east side</u>									
Union Street to Church Street	25	14	14	18	21	18	15	18	-
Church Street to Pierce Place	18	3	3	6	3	8	6	7	-
Pierce Place to Prospect Street	13	1	3	4	4	5	5	7	-
Prospect to Water Street	16	2	5	5	6	8	9	9	-
<u>High Street, west side</u>									
Union Street to Church Street	27	6	11	15	14	14	10	17	-
Church Street to Driveway North of Oxford Court Apts.	31	4	4	5	6	5	7	7	-
Driveway North of Oxford Court Apts to Ring Street	21	6	5	7	6	7	4	9	-
Ring Street to Water Street	24	8	8	7	7	7	12	10	-
<u>Church Street, south side</u>									
School Street to High Street	11	4	3	4	7	5	4	7	-
High Street to Walnut Street	11	5	6	6	7	5	7	7	-
High Street to Walnut Street, 15 min spaces	4	1	1	2	1	0	1	1	-
<u>Church Street, north side</u>									
School Street to High Street	8	4	4	4	5	5	4	5	-
High Street to Walnut Street	9	6	6	6	8	6	6	6	-
High Street to Walnut Street, 15 min spaces	2	0	0	1	1	1	2	2	-
Total	220	64	73	90	96	94	92	112	-
% of Total		29%	33%	41%	44%	43%	42%	51%	-

^a No counts were taken at 12:00 PM

**Table A-1 (cont.)
Downtown On-Street Parking Accumulation: Wednesday, July 17, 1996**

	12:30	1:00	1:30	2:00	2:30	3:00	3:30	4:00	4:30	5:00
High Street, east side										
Union Street to Church Street	15	12	11	7	11	16	12	11	13	12
Church Street to Pierce Place	2	5	9	4	5	3	3	5	4	2
Pierce Place to Prospect Street	6	3	8	7	6	7	6	5	7	6
Prospect to Water Street	8	5	6	4	4	5	7	6	8	7
High Street, west side										
Union Street to Church Street	16	20	13	13	16	17	19	19	16	18
Church Street to Driveway North of Oxford Court Apts.	12	13	11	13	12	10	9	12	13	18
Driveway North of Oxford Court Apts to Ring Street	17	9	10	10	9	7	11	7	4	8
Ring Street to Water Street	10	10	7	6	6	6	8	8	7	5
Church Street, south side										
School Street to High Street	9	5	4	7	9	6	5	7	10	10
High Street to Walnut Street	6	7	6	8	9	10	6	7	5	4
High Street to Walnut Street, 15 min spaces	2	3	3	3	2	2	1	3	2	2
Church Street, north side										
School Street to High Street	8	2	3	4	7	6	6	6	7	6
High Street to Walnut Street	6	7	8	6	9	4	5	1	2	0
High Street to Walnut Street, 15 min spaces	2	2	2	2	2	2	2	2	1	2
Total	119	103	101	94	107	101	100	99	99	100
% of Total	54%	47%	46%	43%	49%	46%	45%	45%	45%	45%

Table A-2
Downtown Off-Street Parking Accumulation

	<u>Capacity</u>	<u>8:00</u>	<u>9:00</u>	<u>10:00</u>	<u>12:00</u>	<u>2:00</u>	<u>4:00</u>
Lincoln Plaza "Lower Lot"	65	15	15	15	28	20	17
Lincoln Plaza "Upper Lot"	24	4	4	4	3	2	1
Oxford Court Lot (South)	70	63	68	68	61	63	60
Oxford Court Lot (North)	151	13	22	27	40	30	25
Clinton Savings Bank Lot	16	0	4	8	3	3	0
St. John's School Street Lot	70	7	13	13	19	23	25
St. John's Union Street Lot	25	2	2	4	1	0	2
Aubuchon Lot	50	8	17	17	15	16	17
Post Office Lot ^a	31	7	14	16	15	10	12
Maybarton Lot ^a	10	3	4	4	4	4	4
Total	512	122	163	176	189	171	163
% of Total		24%	32%	34%	37%	33%	32%

Note:
^a Counts conducted on Wednesday, July 17, 1996 and Tuesday, August 13, 1996
Capacity is estimated since not all spaces are marked. Includes unpaved portion.

Table A-3
Downtown On-Street Parking Accumulation: Monday, September 30, 1996

	<u>Capacity</u>	<u>8:30</u>	<u>9:00</u>	<u>9:30</u>	<u>10:00</u>	<u>10:30</u>	<u>11:00</u>	<u>11:30</u>	<u>12:00</u>
<u>High Street, east side</u>									
Union Street to Church Street	25	14	14	20	22	13	15	19	23
Church Street to Pierce Place	18	3	6	3	2	3	2	1	4
Pierce Place to Prospect Street	13	1	3	2	4	2	3	5	10
Prospect to Water Street	16	1	3	1	2	3	4	4	8
<u>High Street, west side</u>									
Union Street to Church Street	27	8	20	9	13	18	14	16	21
Church Street to Driveway North of Oxford Court Apts.	31	8	8	10	16	13	12	16	18
Driveway North of Oxford Court Apts to Ring Street	21	3	6	7	7	5	9	10	14
Ring Street to Water Street	24	7	6	4	6	8	7	8	10
<u>Church Street, south side</u>									
School Street to High Street	11	4	7	4	8	6	7	9	10
High Street to Walnut Street	11	8	10	10	10	12	11	9	10
High Street to Walnut Street, 15 min spaces	4	0	3	3	1	2	3	1	2
<u>Church Street, north side</u>									
School Street to High Street	8	3	6	7	8	8	8	6	6
High Street to Walnut Street	9	9	10	8	7	7	4	4	6
High Street to Walnut Street, 15 min spaces	2	1	4	2	5	2	3	2	3
Total	220	70	106	90	111	102	102	110	145
% of Total		32%	48%	41%	50%	46%	46%	50%	66%

**Table A-3 (cont.)
Downtown On-Street Parking Accumulation: Monday, September 30, 1996**

	<u>12:30</u>	<u>1:00</u>	<u>1:30</u>	<u>2:00</u>	<u>2:30</u>	<u>3:00</u>	<u>3:30</u>	<u>4:00</u>	<u>4:30</u>	<u>5:00</u>
<u>High Street, east side</u>										
Union Street to Church Street	19	19	10	15	9	12	19	12	12	14
Church Street to Pierce Place	8	6	5	3	5	3	3	6	4	4
Pierce Place to Prospect Street	9	6	4	5	3	4	3	3	6	4
Prospect to Water Street	8	7	3	5	8	6	4	6	5	3
<u>High Street, west side</u>										
Union Street to Church Street	23	17	15	13	12	19	18	21	17	15
Church Street to Driveway North of Oxford Court Apts.	18	27	20	22	23	23	23	25	25	22
Driveway North of Oxford Court Apts to Ring Street	16	14	11	9	7	5	4	3	4	5
Ring Street to Water Street	12	12	11	8	11	5	8	8	5	2
<u>Church Street, south side</u>										
School Street to High Street	10	6	7	6	10	8	9	8	6	6
High Street to Walnut Street	9	9	8	9	10	11	9	6	6	5
High Street to Walnut Street, 15 min spaces	4	5	3	3	3	3	3	2	1	2
<u>Church Street, north side</u>										
School Street to High Street	7	8	6	5	7	8	9	8	8	5
High Street to Walnut Street	5	5	6	6	8	7	7	7	4	2
High Street to Walnut Street, 15 min spaces	3	4	3	2	3	3	1	1	2	2
Total	151	145	112	111	119	117	120	116	105	91
% of Total	69%	66%	51%	50%	54%	53%	55%	53%	48%	41%