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ESSEX JUNCTION

VILLAGE CENTER AREA PARKING STUDY

Prepared for

THE VILLAGE OF ESSEX JUNCTION

By

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CONTENTS

Table of Contents i.

List of Tables ii.

List of Maps ii.

I. INTRODUCTION 1.
A. Brief Summary of Study Conclusions 1.
B. The Study Area 3.
C. The General Approach 3.

II. PARKING DEMAND: ASSESSING "THE PARKING PROBLEM" 5.
A. Characteristics of Village Center Businesses 6.
B. Parking Practices and Perceptions In the Village Center 10.
B. Estimated Parking Needs 13.

III. PARKING SUPPLY: INVENTORY OF EXISTING RESOURCES 14.

IV. RECOMMENDATIONS 15.
A. Short Term Recommendations 15.
B. Long Term Considerations 23.

APPENDIX A: Parking Survey Questionnaire 26.

APPENDIX B: Block by Block examination of the Parking Situation 29.

LIST OF TABLES

1.	Parking Survey Distribution and Response Patterns	5.
2.	Distribution of Businesses by Category	6.
3.	Distribution of Businesses by Block	7.
4.	Principal Advantages of a Village Center Location	8.
5.	Principal Disadvantages of a Village Center Location	8.
6.	Suggested Improvements to the Village Center	9.
7.	Floor Area By Businesses by Category	9.
8.	Off-Site Employee Parking by Block of Business Location	11.
9.	Off-Site Customer Parking by Block of Business Location	12.
10.	Estimated Parking Need by Block	14.
11.	Parking Inventory Summary	16.
12.	Comparison of Parking Supply with Estimated Need	18.
13.	Building Coverage Ratios for Various Building/Parking Scenarios	24.

LIST OF MAPS

1.	STUDY AREA AND BLOCK NUMBERS	4.
2.	EXISTING PARKING SUPPLY	17.
3.	PARKING DEFICITS	19

ESSEX JUNCTION
VILLAGE CENTER AREA PARKING STUDY

I. INTRODUCTION

Parking in the Village Center area of Essex Junction has long been recognized as a problem. In 1984 a Village wide parking study was undertaken by the Cavendish Partnership (as part of a Village Design Study) which indicated that, for the Village as a whole, parking supply was roughly in balance with parking demand. This report concluded that there may be very minor localized parking shortages in the Village Center area during peak use periods.

Since that time there have been increasing complaints from local businesses that parking in the area is inadequate, even though the Village has taken steps to increase the number of parking spaces available. In the Spring of 1989 the Village retained R.E.S.V., Inc. to undertake a parking study of the Village Center Area. The objectives of that study were three:

1. To assess the nature of "the parking problem" in the Village Center area and determine the demand for parking;

2. To inventory tha actual supply of parking in the area; and

3. to develop recommendations for overcoming any parking deficits and remedy other facets of "the parking problem".

This report presents the findings of that study. Since the study was to concentrate on the Village Center area, it also concentrated on the parking needs of the businesses and other non-residential activities located there. It was assumed that parking for the few residences located in the study area would be provided on-site, or would be needed at night or during other non-business hours, and could make use of parking otherwise used by the non-residential activities.

A. Brief Summary of the Study Conclusions

Based on the inventory and the survey of Village Center area businesses, it appears that the parking problem is less one of total numbers of spaces and more one of location. The entire Village Center Area contains a total of 1,123 parking spaces available for business employees and customers (plus some large gravel areas), compared to an estimated current parking need of 944 spaces. However, four of the five blocks surrounding the

five corners face a parking deficit while the surplus is located in the more outlying blocks.

Much of the present deficit is accommodated by the existing municipal lots. The planned municipal lot just across the tracks will also reduce some of the present pressure. In addition, the following recommendations are offered for short term relief of present parking shortages:

1. Allow long term parking in on-street spaces along the north end of Railroad Avenue (five spaces on the west side) and on the west end of Lincoln Place (13 spaces along both sides). A total of 18 spaces should be changed to long term employee parking.

2. Implement the planned long term parking area across the tracks on block 5. This will add 13 spaces, which should be designated for long term, employee parking.

3. Work to establish a long term parking area for approximately 30 spaces (on a leased or purchased basis) in the area behind the Essex Agency on block 6. This lot, if established, should be paved and landscaped as the present municipal lot has been.

4. Work with property owners to ensure efficient use of parking areas behind buildings on block 8.

5. If necessary because of increased demand on other blocks or the loss of on-street parking, consider establishing a municipal lot at the southeast corner of this block.

6. Work to expand the municipal lot in block 9 to the north. The land can be either purchased or leased, and some 20 to 25 long term spaces can be provided.

7. Work with the relevent property owners to establish a long term parking area for Chittenden Bank employees in the large private parking area on block 13.

8. Blocks 15 and 16, along Park Street, have adequate parking without requiring the use of the on-street spaces. Accordingly, if it is desirable to remove the on-street spaces to improve traffic flow, this can be done without exacerbating any parking problems.

9. Remove the on-street parking in front of the Federal Building on Lincoln Street.

In the long term, the Village must re-evaluate its parking policies in the Village Center Area. Parking clearly must be provided to serve businesses and other activities in this area, but there is an inconsistency between the desire for a densely developed Village Center (as presently exists) and the requirement that each parcel provide its own on-site parking. If

growth or redevelopment in the Village Center is to occur, some alternative must be established. Multi-level parking is not feasible for individual parcels of the size likely to be developed or redeveloped in the Village Center. More appropriate is the concept of large common lots (or possibly structures), either supported by the Village, by contributions in lieu of parking by developers, by lease or rental arrangements with property owners, or other mechanisms.

If the Village Center Area is to continue to thrive and serve as the intensely developed "center" that it is, an alternative to the requirement of individually provided surface parking spaces must be established.

B. The Study Area

The study area was defined generally as the area included in the Village Center District in the Village Zoning regulations. In a few minor places, the study area extends beyond the Village Center District in order to include adjacent businesses or parking areas. Map 1 shows the study area and indicates how it was divided into individual blocks for analytic and data collection purposes.

C. The General Approach

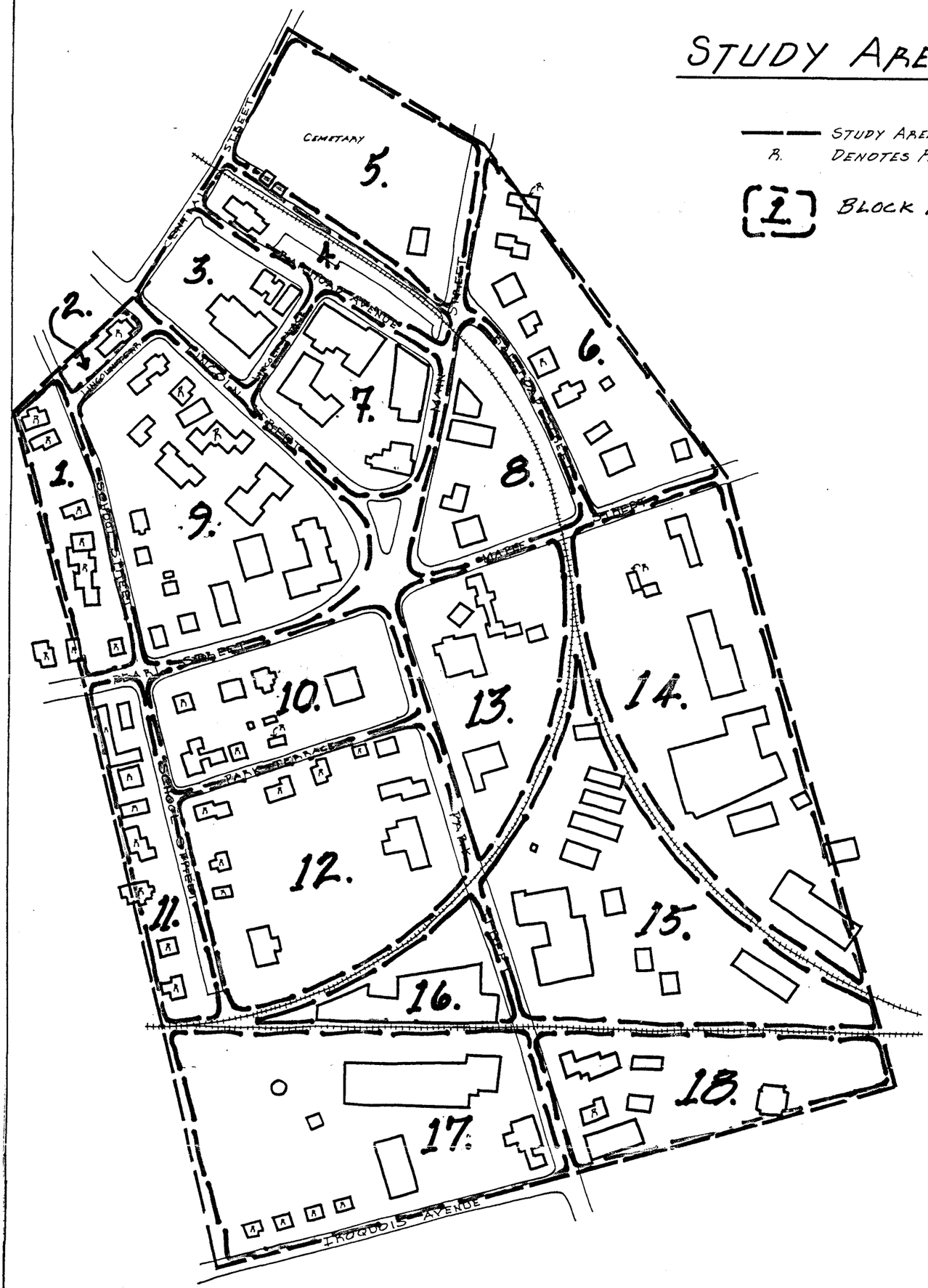
In order to generally assess the nature of "the parking problem", a survey of all businesses in the study area was undertaken. A brief questionnaire was developed and delivered to every business with the request that they complete the form and return it, either by mail or by having the distributor return to collect it. A total of 108 businesses were given the questionnaire and 76 were returned, a return rate of 70%.

The survey allowed the determination of some basic information about each business which enabled the estimation of its parking need. The survey also asked questions about parking practices for each business and how they perceived the parking situation in the area.

In addition, a field survey of the entire study area was undertaken to identify and count all available parking spaces, on-street and off-street, public and private. This enabled preparation of a complete parking inventory on a block by block basis.

Comparing the estimated parking demand with the inventory provided a quantitative assessment of "the parking problem". In addition, review of the survey responses allowed for qualitative assessment of the problem along with review of suggestions for solutions.

Ultimately, this allowed the specification of the problem in terms which could be used for developing possible solutions. Specific recommendations were developed for implementing those solutions.



ESSEX JUNCTION PARKING STUDY

RESV, Inc.

DATE: SEPT. 1989 SCALE:

MAP 1.

II. PARKING DEMAND: ASSESSING "THE PARKING PROBLEM"

In order to properly assess "the parking problem" as perceived by parking users, it was decided to survey all businesses in the study area. A brief questionnaire was developed which asked each respondant for some basic information on the nature of their business and their business space, and then for some information specifically regarding parking and parking practices. A copy of the questionnaire is attached as Appendix A of this report. Respondants were also asked for any suggestions they might have for improving the parking situation. The information about the business was used to create an inventory of business activities as a basis for developing estimates of total parking needs in the study area. The information regarding parking and parking practice was used to assess perceptions of the parking problem.

Village staff distributed the questionnaires in June of 1989. Staff was instructed to give one questionnaire to every business which could be identified in the study area, and to advise the business that the forms would be collected in a few days. A total of 108 questionnaires were distributed, which indicates that there were 108 identifiable businesses in the area.

A total of 76 useable questionnaires were returned, a response rate of 70%. This is considered to be a very good response rate for survey research where anything over 50% is generally regarded as acceptable. Table 1 presents information on the number of questionnaires distributed and returned, and the response rate for each block in the study area.

TABLE 1.
PARKING SURVEY DISTRIBUTION AND RESPONSE PATTERNS

Block Number	Questionnaires Distributed	Questionnaires Returned	Response Rate
1	0	0	100%
2	0	0	100%
3	13	7	54%
4	1	1	100%
5	1	0	0%
6	9	9	100%
7	23	16	70%
8	6	5	83%
9	24	20	83%
10	5	2	40%
11	0	0	100%
12	2	2	100%
13	8	6	75%
14	4	2	50%
15	1	0	0%
16	1	1	100%
17	7	3	43%
18.	3	2	67%
TOTAL	108	76	70%

Three blocks in the study area had no businesses and obviously no questionnaires were received from those areas. Four blocks had only one business, and questionnaires were received from two of those, leaving two blocks with zero response rates. Survey data for these two blocks were supplemented with field observations when the analysis focussed on floor area and parking need. Of the remaining eleven blocks, the response rate ranged from 40 percent to 100 percent.

A. Characteristics of Village Center Businesses:
A total of 108 businesses were identified and given questionnaires. Additional field checking indicated that one or two businesses may have been missed, so a realistic estimate is that the Village Center Area contains 110 businesses.

When asked to indicate which of several business categories best described themselves, the survey responses indicated that almost 62 percent were either retail sales businesses or professional service businesses. Table 2. indicates the distribution of businesses by category. In Table 2., the survey response data have been expanded to estimate the total number of businesses in each category in the village Center Area.

TABLE 2.
DISTRIBUTION OF BUSINESSES BY CATEGORY

Business Category	Number of Responses	Estimated Total Businesses
General Office	5	7
Retail Sales	20	29
Personal Services	8	11
Professional Services	27	39
Restaurant/Tavern	5	7
Other (inc. govt. agencies and offices)	11	16
TOTALS	76	110

It should be noted that the survey treated government agencies and public organizations such as the senior center as businesses, since they clearly have parking needs.

The 76 responding businesses, and presumably all businesses, are not distributed uniformly among the eighteen blocks in the study area. Table 3 shows the number of businesses of each business type category by block. The small numbers of businesses in some blocks make it statistically unrealiable to attempt to create a similar distribution for the estimated 110 total businesses in the area, but it is probably fair to assume some similarities, as suggested by the conclusions which follow the Table.

TABLE 3.
DISTRIBUTION OF BUSINESSES BY BLOCK

Block Number	General Office	Retail Sales	Person'l Services	Prof'l Services	Rest'nt Tavern etc.	Other	Total
	Business Category						
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	1	3	1	2	7
4	0	0	0	1	0	0	1
5	0	0	0	0	0	0	0
6	1	3	0	4	1	0	9
7	0	5	0	8	1	2	16
8	0	2	0	3	0	0	5
9	3	4	3	5	0	5	20
10	0	0	0	2	0	0	2
11	0	0	0	0	0	0	0
12	0	2	0	0	0	0	2
13	1	2	1	0	1	1	6
14	0	1	0	0	0	1	2
15	0	0	0	0	0	0	0
16	0	0	1	0	0	0	1
17	0	1	1	1	0	0	3
18	0	0	1	0	1	0	2
TOTALS	5	20	8	27	5	11	76

The following conclusions are apparent:

- Blocks 6, 7 and 9 contain 60 percent of all responding businesses.
- Blocks 6, 7 and 9 contain 60 percent of the retail sales businesses.
- Blocks 6, 7 and 9 contain 62 percent of the professional service businesses.
- Most businesses on blocks 6, 7 and 8 are retail sales businesses.
- Of all "other" businesses, which include govt. agencies, 42 percent are located in block 9.
- Block 9, which includes Lincoln Hall, contains the most establishments of any block, and includes all business types except restaurant/tavern.

For the most part, businesses located in the Village Center Area serve customers who come to the business location to obtain products or services. Of the 75 businesses which answered this question, 48 indicated that customers come to their location, 5 indicated that they deliver, and 22 indicated both. Thus, it is clear that a large portion of local businesses rely on available parking for their customers.

A total of 75 businesses indicated the number of employees they had at their Village Center location. On the average, there were 7.25 employees per business. Applying this average to the estimated 110 total businesses yields an estimate of 798 employees in the Village Center Area.

When asked to indicate the principal advantages of having a Village Center location, over 70 percent first indicated that it was proximity to their clients or service area. Several respondants provided several advantages, and the number of times specific advantages were mentioned is indicated in Table 4.

TABLE 4.
PRINCIPAL ADVANTAGES OF A VILLAGE CENTER LOCATION

	ADVANTAGE	Number of times mentioned	
1.	Access, convenience, close to clients, exposure, high traffic area.	51	60%
2.	"Good Location"	16	19%
3.	Low Rent	5	6%
4.	Alwayis been there, been there many years	4	5%
5.	Close to Home	3	4%
6.	Good Parking	2	3%
7.	Other (only mentioned once)	4	(1% each)

When asked to indicate the principal disadvantage of their location, 35 percent first indicated traffic congestion, 31 percent first indicated parking problems, and 24 percent simply named Five Corners. Again, several respondants listed several disadvantages. The number of times specific disadvantages were mentioned is indicated in Table 5.

TABLE 5.
PRINCIPAL DISADVANTAGES OF A VILLAGE CENTER LOCATION

	DISADVANTAGE	Number of times mentioned	
1.	Traffic congestion	44	52%
2.	Lack of Parking	22	26%
3.	Train Traffic	5	6%
4.	Too far from Burlington	2	2%
5.	Parking time too short	2	2%
6.	Being on second floor	2	2%
7.	Other (only mentioned once)	8	(1% each)

Interestingly, when asked what improvements they felt should be considered in the Village Center Area, 48 percent called first for parking improvements while only 25 percent called first for improvements to five corners or to traffic flow.

Again, this question generated multiple suggestions from many respondants. Table 6. indicates the number of times specific suggestions were offered.

TABLE 6.
SUGGESTED IMPROVEMENTS TO THE VILLAGE CENTER

	IMPROVEMENT	Number of times mentioned	
1.	Provide more parking	21	38%
	(Longer parking time limits)	(2)	
	(Prevent long term parking on street)	(5)	
2.	Improved traffic control and traffic flow	12	21%
3.	Build the Circumferential Highway	8	14%
4.	Change schedule of train crossings	3	5%
5.	Better Access from Municipal lot to Route 15 north	2	4%
6.	Other (only one mention)	10	(2% each)

It would appear that local businesses feel that parking is a problem amenable to local solution, but that traffic and five corners congestion is not.

Of the 76 businesses which responded to the survey, the average floor area per business was 1,941.31 square feet. Applying this to the estimated 110 total businesses in the Village Center Area produces an estimate of 213,544 square feet of business activity in the study area.

An alternative approach to that estimate is to look at the average space for each of the six categories of business type, and to apply those averages to the estimated number of businesses of each type. This analysis is shown in Table 7.

TABLE 7.
FLOOR AREA BY BUSINESSES BY CATEGORY

Business Category	Average Floor Area	Estimated Total Businesses	Estimated Total Area
General Office	1,352	7	9,464
Retail Sales	1,622	29	47,038
Personal Services	600	12	7,200
Professional Services	1,599	39	62,361
Restaurant/Tavern	1,633	7	11,431
Other (inc. govt. agencies and offices)	4,397	16	70,352
TOTALS		110	207,846

On the basis of these data, it is probably safe to estimate that the Village Center Area contains approximately 210,000 square feet of space used for business, government and public organization purposes.

B. Parking Practices and Perceptions in The Village Center
Of the 76 respondents, 75 answered the question of whether on-site parking was provided for employees. Of these, 58 (77%) said yes and 17 (23%) said no. Of those saying no, 8 are located in block 7 and 4 are located in block 9, the two blocks containing the largest number of businesses.

Respondents who indicated that on-site parking was provided for employees were then asked if it was adequate. A total of 57 respondants answered this question, with 38 (67%) saying yes and 19 (33%) saying no. When the number saying that on-site parking for employees was inadequate is added to the number where on-site parking for employees is not provided (17) it is apparent that over half of the responding businesses either do not provide on-site parking for employees or believe that such parking is inadequate.

Of those saying that on-site employee parking is inadequate, 79 percent were from blocks 7 and 9 (note that 70 percent of the respondents saying that on-site employee parking is not provided are also located on blocks 7 and 9). It is quite clear that businesses located on blocks 7 and 9 perceive parking difficulties for their employees.

When asked where their employees park, given that on-site parking is inadequate, several respondents provided multiple alternatives. Table 8 indicates these alternatives by the block in which the responding business is located.

TABLE 8.
OFF-SITE EMPLOYEE PARKING BY BLOCK OF BUSINESS LOCATION

Block Number	Off-site employee parking location: Munic. Lot	On the Street	Behind Bldgs on Main St.	Anyplace can find space	Howard Bank lot	Railroad property
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	1	1	0	0	0	0
4	0	0	0	0	0	0
5	0	0	0	0	0	0
6	0	2	0	0	0	0
7	2	5	6	4	1	0
8	0	1	0	0	1	1
9	12	2	0	0	0	0
10	1	0	0	0	0	0
11	0	0	0	0	0	0
12	0	0	0	0	0	1
13	0	0	0	0	0	0
14	0	0	0	0	0	0
15	0	0	0	0	0	0
16	0	0	0	0	0	0
17	0	1	0	0	0	0
18	0	0	0	0	0	0
Total	14	12	6	4	2	2

Looking at the blocks for which employee parking appears to be a problem, different practices are evident. For block 9, virtually all businesses indicated that their employees relied on the municipal lot (which is also located in block 9). For block 7, however, the municipal lot received only 11 percent of the mentions. Instead, businesses indicated that their employees parked on the streets, in the gravel area behind buildings on Main street, and "anyplace they can find a space". This may include on-street spaces or other non-municipal lots.

A similar series of questions was asked regarding parking for customers. A total of 74 respondents answered the question of whether on-site parking was provided for customers. Of these, 55 (74%) answered yes while 19 (26%) answered no. Eleven of the 19 "no"s were from businesses located on block 7, while 5 were from businesses located on block 9.

Respondents who indicated that on-site parking was provided for customers were then asked if it was adequate. A total of 54 respondents answered this question, with 32 (59%) saying yes and 22 (41%) saying no. Again, when the number saying that on-site parking for customers was inadequate is added to the number where on-site parking for customers is not provided (19) it appears that over half of the responding businesses either do not provide

on-site parking for customers or feel that such parking is inadequate.

Of those saying that on-site customer parking is inadequate, 64 percent were from blocks 7 and 9 (note that 85 percent of the respondants saying that on-site customer parking is not provided are also located on blocks 7 and 9). It is quite clear that businesses located on blocks 7 and 9 perceive parking difficulties for their customers.

When asked where their customers park, given that on-site parking is inadequate, most businesses indicated a number of alternatives. The number of times each was mentioned, according to the block on which the business is located, is indicated on Table 9.

TABLE 9.
OFF-SITE CUSTOMER PARKING BY BLOCK OF BUSINESS LOCATION

	Off-site customer parking location						
Block Number	On the Street	Munic. lot	Anyplace can find space	Howard Bank lot	Railroad property	Fire Station lot	School lot
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	2	0	0	1	0	0	0
4	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0
6	1	0	1	0	0	0	0
7	7	1	3	1	0	0	0
8	1	0	1	0	0	0	0
9	4	9	0	1	1	1	1
10	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0
12	0	0	0	0	1	0	0
13	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
18	1	0	0	0	0	0	0
Total	16	10	5	3	2	1	1

It is clear from the above table that the municipal parking lot is used as customer parking almost exclusively by businesses located on block 9, the same block on which the lot is located. Field observation, however, noted employees from businesses located on block 10 using the municipal lot. Several block 9 businesses also reported that their customers park on the street. By contrast, most block 7 businesses reported that their customers park on the street or "any place they can find a space". It is interesting that a small number of businesses

reported that their customers parked in the Howard Bank lot, even though that is not a public parking area.

Finally, respondants were asked if they felt that parking is a serious problem for their business in its present location. A total of 74 respondants answered this question, and 44 (59.5 percent) said no. Twenty eight (38%) said yes and two (2.5%) said sometimes. Of the 28 indicating that parking was a serious problem, 12 were located in block 9 and 9 were located in block 7. These two blocks accounted for 75% of all respondants indicating that parking was a serious problem. In addition to these two major blocks, it should be noted that 40% of the respondants from blocks 3 and 8 indicated that parking was a serious problem, as did the only respondant from block 4.

Almost all of the respondants who indicated that parking was a serious problem also had some suggestions on what could be done to improve the situation. Over 60 percent of the suggested improvements incorporated the provision of additional parking. In some cases, specific suggestions were offered, such as putting a second level over the federal building parking lot or placing a parking structure on the site of the fire station and/or Colonial Office building. Generally, the suggestion was a general request for additional parking.

Several (7) respondants suggested that long term parking for employees should be clearly distinguished from short term parking for customers, althugh it was not clear just how they thought that could be accomplished.

Altogether, the survey responses paint a very clear picture. Businesses and other establishments located in blocks 7 and 9 perceive a parking problem, both for employees and customers. Establishments located on these blocks are more likely to report that on-site parking is inadequate than establishments located elsewhere in the study area. They are also more likely to state that parking is a problem for their business. Even though the large municipal lot is located in block 9, block 9 establishments perceive parking difficulties--in part because the municipal lot serves an area larger than the single block in which it is located. (It was interesting to see that some block 9 establishments seem to claim a proprietary interest in the municipal lot, expressing resentment that it it is used by employees or customers of businesses not located adjacent to it.)

C. Estimated Parking Needs

The information provided by the survey makes it possible to estimate the parking needed by the various businesses in the various blocks. To do this, the parking requirements established in the Village Zoning Regulations were used, along with the estimated average floor space and employment. As a starting point, most business activities in the Village are required to have one parking space for each 200 square feet of floor area, with the exception of retail sales which requires one space for

each 100 square feet of floor area. Warehouse activities, however, are required to have one space for each two employees. With these general ratios, it is possible to estimate the parking needs of each business responding to the survey. Note that government agencies and/or public organizations were treated as professional office activities.

The next step was to compute the average parking need per business in each block, and multiply that by the estimated number of businesses in each block as indicated by the number of questionnaires distributed in each block. This yielded a preliminary estimate of parking needs for businesses in each block. The preliminary estimates were then examined and adjusted to reflect such things as available vacant space, specific current activities, etc. The adjusted estimates of parking demand are shown in Table 10. This Table indicates that the 110 businesses in the Village Center Area have a combined parking need of approximately 950 parking spaces.

TABLE 10.
ESTIMATED PARKING NEED BY BLOCK

Block Number	Parking Need
1	0
2	0
3	58
4	20
5	24
6	93
7	133
8	82
9	187
10	53
11	8
12	30
13	32
14	62
15	28
16	3
17	107
18	24
TOTAL	944 spaces

III. PARKING SUPPLY: INVENTORY OF AVAILABLE RESOURCES

While the survey data were being collected, a detailed, block by block inventory of parking spaces was undertaken. This involved walking every street, poking into every driveway and estimating the parking capacity of unmarked, gravel parking areas.

The inventory counted all marked on-street spaces (both public and private) and off-street spaces (both public and private).

While the principal interest was in parking available for use by business employees and customers, parking associated with multiple family residential structures was also counted. Where parking areas were clearly used but not paved and/or marked for individual parking spaces, RESV estimated the parking capacity on the basis of size and shape of the area. Table 11. summarizes the inventory findings and Map 2 graphically portrays the existing supply of parking spaces. Altogether, there are 1,123 parking spaces available for use by business employees and customers in the study area, along with 36 residential spaces and 26 spaces reserved for employees of a school located outside of the study area.

Of the 1,123 total spaces, 133 are public on-street spaces, 148 are public off-street spaces and the remaining 842 spaces are privately provided. With the exception of the public on-street spaces located on Park Street (blocks 15, 16, 17 and 18) all public on-street parking is restricted to short term (one hour) parking during business hours.

Table 12. compares the spaces available for use by business employees and customers on each block with the estimated parking needs for that block. For the entire study area, there is a net surplus of 172 parking spaces. The problem is clearly one of distribution. Two of the blocks have neither parking need nor supply. Eleven blocks have a surplus of parking and the remaining five blocks have a parking deficit. Map 3 indicates the location and magnitude of the block by block parking deficits.

There is considerable correlation between those blocks for which estimated parking need exceeds parking supply and those blocks on which businesses perceive parking as a serious problem. Need exceeds supply for blocks 7, 8, 9, 10 and 17. Businesses indicated that parking was a problem on blocks 3, 7, 8 and 9.

A block by block discussion of "the parking problem" is presented in Appendix B of this report. At this point attention will be focussed on those blocks where serious parking problems appear. Recommendations for meeting the immediate problems will be offered and some long term issues discussed.

IV. RECOMMENDATIONS

A. Short Term Recommendations.

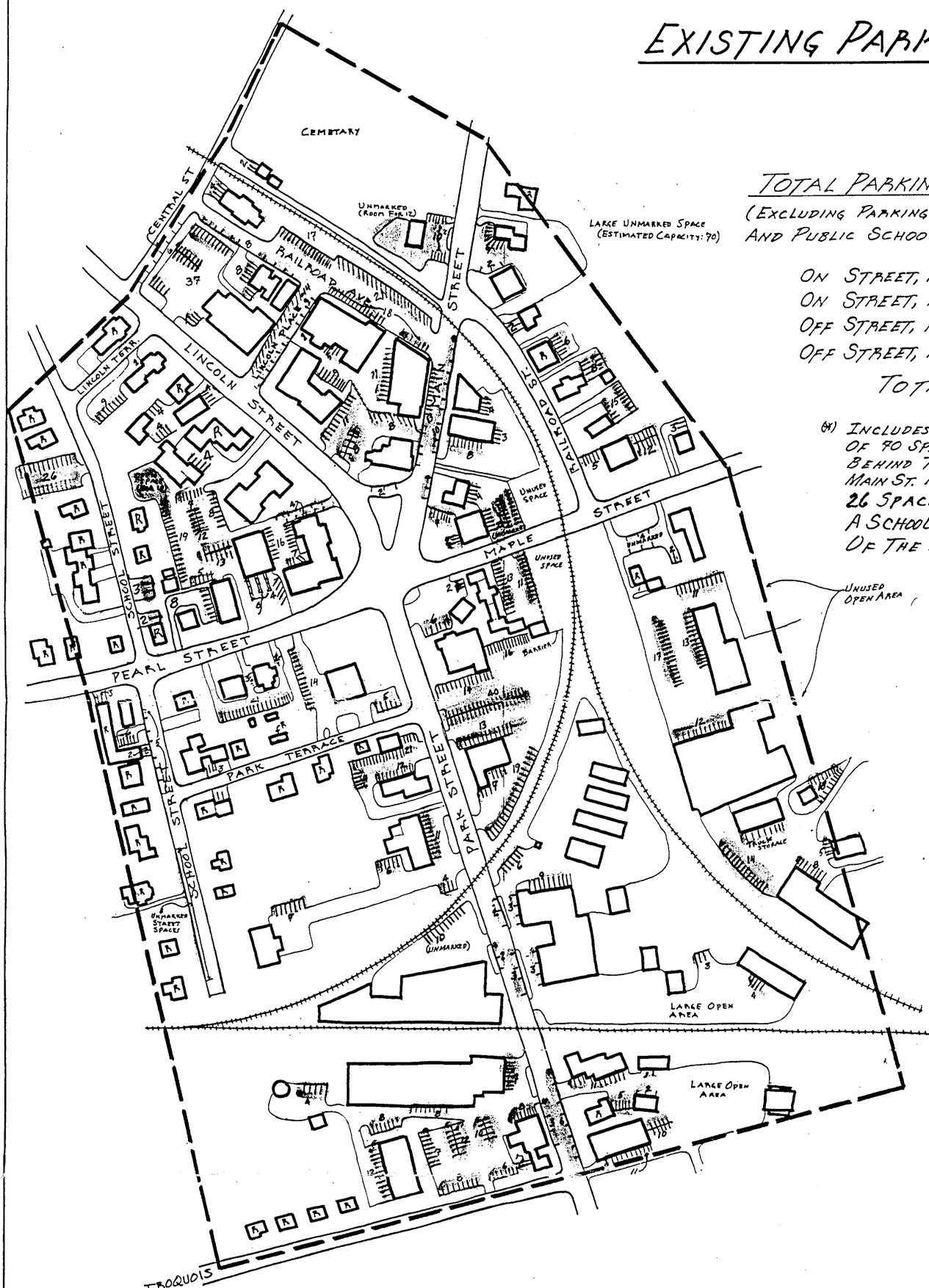
The core of the Village Center Area is composed of blocks 3, 7, 8, 9 and 10, and this is where parking problems or deficits are concentrated. The total parking deficit for blocks 7, 8, 9 and 10 is 107 spaces. Block 3 has a surplus of 15 spaces, but much of that is either in a private lot or on streets away from business locations on the block. In addition, on street parking in Block 3 is used to ease the deficits on blocks 7 and 9. Surrounding blocks, particularly blocks 4, 5 and 6, have surplusses which can also be used to meet the deficits in blocks 7, 8, 9 and 10.

TABLE 11.

PARKING INVENTORY SUMMARY

BLOCK NUMBER	TYPES OF USES	ON-STREET PUBLIC	ON-STREET PRIVATE	OFF-STREET PRIVATE OFF-STREET PUBLIC	OFF-STREET PRIVATE COMM-ERCIAL	OFF-STREET PRIVATE RESI-DENTIAL	TOTAL ON-STREET SPACES	TOTAL OFF-STREET SPACES	TOTAL SPACES	COMMENTS	PARKING AVAILABLE FOR BUSINESS EMPL'S AND CUST'RS
1	Single and multi-family residences	0	0	26	0	6	0	32	32	26 space school lot	0
2	Residential (single family)	0	0	0	0	0	0	0	0		0
3	Commercial and office	28	0	0	45	0	28	45	73	37 spaces for Fed. Bldg.	73
4	Commercial	21	21	0	0	0	42	0	42	Bank and train station	42
5	Gas station, cemetary	0	0	13	24	0	0	37	37	Plans for 13 public spaces	37
6	Commercial	0	0	0	126	6	0	132	132	Includes a large gravel area	126
7	Commercial	42	0	0	53	0	42	53	95		95
8	Commercial	10	0	0	51	0	10	51	61	Plans to remove 2 on-street spaces	61
9	Commercial (1 resi	0	0	102	51	6	0	159	159	Plans to revise Village lot	153
10	Commercial and residential	0	0	0	39	2	0	41	41		39
11	Mostly residential (one office)	13	0	0	8	9	13	17	30		21
12	Residential, commercial, school	0	0	7	35	2	0	44	44	School parking on grass	42
13	Commercial	0	0	0	141	0	0	141	141		141
14	Mostly Commercial	0	0	0	107	3	0	110	110	Large open area not used, plans for	107
15	Lumber yard/building supply	5	0	0	28	0	5	28	33	Large open area not used	33
16	Wharehouse	5	0	0	10	0	5	10	15		15
17	Commercial and s.f. residential	3	0	0	91	0	3	91	94		94
18	Commercial, one residence	6	0	0	38	2	6	40	46	large open area not used	44
TOTALS		133	21	148	847	36	154	1031	1185		1123

EXISTING PARKING



TOTAL PARKING INVENTORY

(EXCLUDING PARKING FOR RESIDENTIAL AND PUBLIC SCHOOL USES)

ON STREET, PUBLIC	133
ON STREET, PRIVATE	21
OFF STREET, PUBLIC	148
OFF STREET, PRIVATE (*)	847
TOTAL (*)	1,149

(*) INCLUDES AN ESTIMATED CAPACITY OF 90 SPACES IN THE GRAVEL AREA BEHIND THE ESSEX AGENCY AT MAIN ST. AND RAILROAD ST. AND 26 SPACES RESERVED FOR A SCHOOL LOCATED OUTSIDE OF THE STUDY AREA.

ESSEX JUNCTION PARKING STUDY

RESV, Inc.

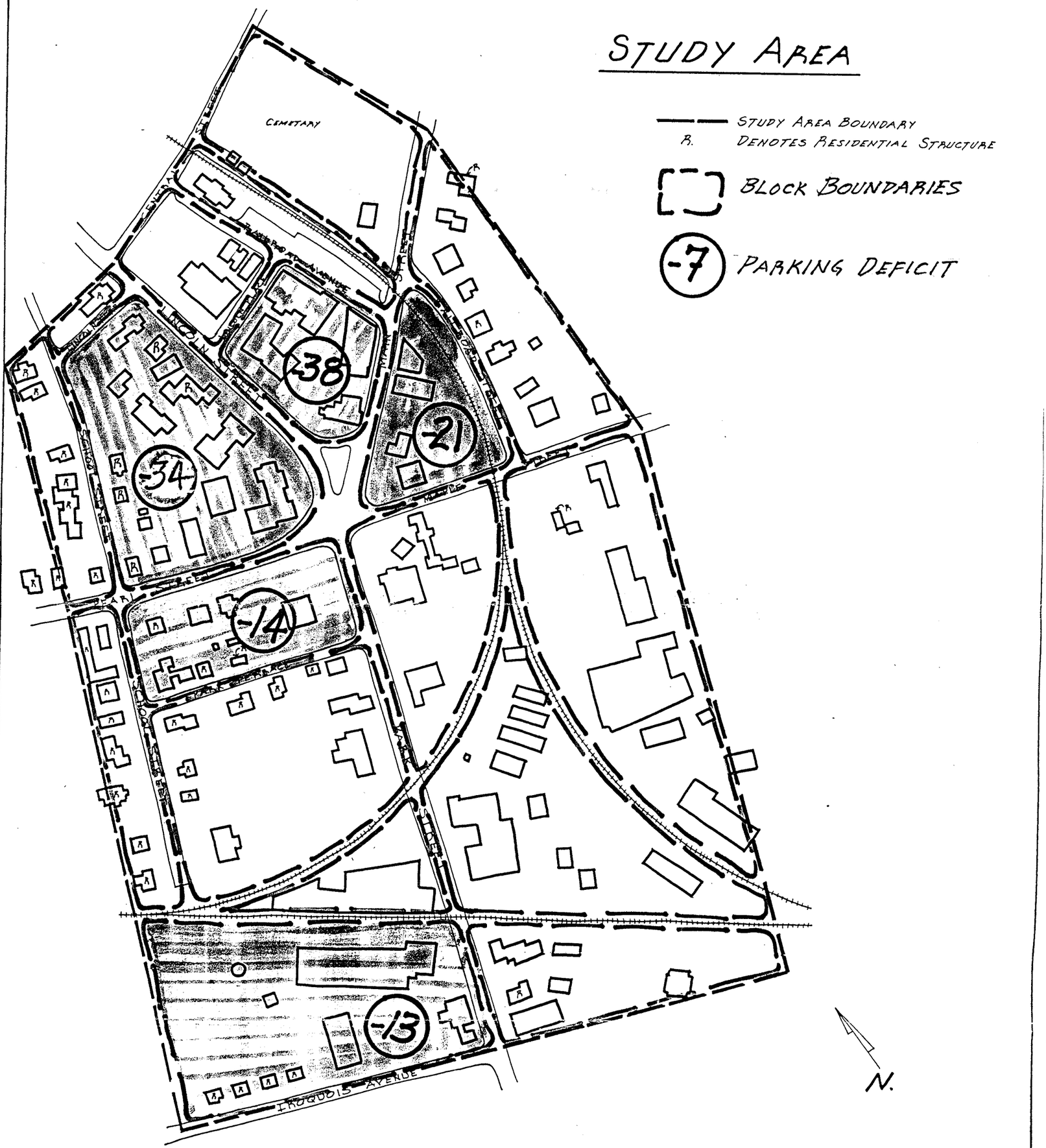
DATE: SEPT. 1989

MAP 2.

TABLE 12.

COMPARISON OF PARKING SUPPLY WITH ESTIMATED NEED

BLOCK NUMBER	TYPES OF USES	PARKING AVAILABLE FOR BUSINESS EMPL'S AND CUST'RS	PARKING DEMAND FOR BUSINESS EMPL'S AND CUST'RS	BLOC DEFICIT OR SURPLUS
1	Single and multi-family residences	0	0	0
2	Residential (single family)	0	0	0
3	Commercial and office	73	58	15
4	Commercial	42	20	22
5	Gas station, cemetary	37	24	13
6	Commercial	126	93	33
7	Commercial	95	133	-38
8	Commercial	61	82	-21
9	Commercial (1 res)	153	187	-34
10	Commercial and residential	39	53	-14
11	Mostly residential (one office)	21	8	13
12	Residential, commercial, school	42	30	12
13	Commercial	141	32	109
14	Mostly Commercial	107	62	45
15	Lumber yard/building supply	33	28	5
16	Wharehouse	15	3	12
17	Commercial and s.f. residential	94	107	-13
18	Commercial, one residence	44	24	20
TOTALS		1123	944	179



ESSEX JUNCTION PARKING STUDY

RESV, Inc.

DATE: SEPT. 1989 SCALE:

MAP 3.

In Block 3, the problem is not one of quantity, but one of location and use of parking. The Federal office building has adequate parking for its needs, and it is the businesses located on Railroad Avenue and Lincoln Place which have difficulty. Many of the available on-street spaces are not located near the existing businesses, and most are limited to one hour parking which does not serve employees. While it is desirable to keep on-street parking in front of businesses available for customers (ie. short term parkers), it may make sense to allow long term parking in on-street spaces which are not directly in front of businesses--north end of Railroad Avenue and west end of Lincoln Place (a total of 18 spaces can be designated for long-term parking). The perceived parking problem in this block will probably disappear if the deficits on blocks 7 and 9 can be rectified.

There are presently several on-street spaces along Lincoln Street serving Block 6 which are posted for fifteen minute parking. These are left over from the time when the Post Office was located in the Federal Building. They are not included in the parking inventory because the short time limit limited their value for employee or customer parking. Since there is no shortage of parking in this area, since Lincoln Street carries considerable traffic, and since the narrow street could handle the traffic more easily if there were no on-street parking, it is recommended that these few on-street spaces be removed.

Block 7 has the largest deficit of any block in the study area (38 spaces). It is also the most intensively developed block in the Central Village Area. The mid-block area is almost completely devoted to parking and there is on-street parking on three sides. Traffic flow concerns preclude on-street parking on Lincoln Street. For the most part, the available on-street parking is in front of business locations and should be kept available for customer use. The exception is along the western end of Lincoln place where the on-street parking could be made available for long-term (as specified in the previous paragraph).

The 38 space deficit is reduced, in part, by the public on-street parking on block 4, directly across Railroad Avenue. In addition, the Village is planning to construct 11 new long term parking spaces immediately across the railroad tracks on block 5 with a mid-block pedestrian railroad crossing to make them convenient to blocks 3 and 7. This reduces the block 7 deficit to 6 spaces.

There is presently a substantial surplus (33 spaces) of private parking in block 6 behind the Essex Agency which could provide long-term parking convenient to the northeast corner of block 7. The Village should work with the property owner to acquire or lease this area for public parking, and improve it with paving and striping.

Block 8 has a deficit of 21 spaces. There are, however, few complaints regarding parking from this block, in part because

there is considerable vacant office space at this time. In the future, parking needs can be met by more efficient use of existing parking areas, and by utilization of the unused lot fronting on Maple Street. The planned reconstruction of the Main Street railroad crossing will result in the elimination of 2 on-street spaces.

In the immediate future, the Village should not pursue additional public parking on this block. It should, however, work with property owners to make efficient use of available parking space to meet the block's parking needs as they evolve. In the longer term, if parking shortages on block 7 increase, or if it becomes necessary to remove on-street parking on this section of Main Street, the Village should explore the possibility of a municipal lot at the southeast corner of block 8--perhaps on a leased land basis--to be designated for long-term parking. This locaton could accommodate 20 to 25 spaces of surface parking, and can easily satisfy the needs of block 8.

Block 9 is the center of public activities in the Village Center area and also contains the largest municipal parking lot (102 spaces, of which 21 are reserved for the fire station). There are no restrictions on parking duration in this municipal lot.

The demand for parking on this block is based on full office utilization of all non-residential buildings, including Lincoln Hall. In fact, many of the establishments in Lincoln Hall either don't generate parking demand equivilant to other office space, or do so at other than normal business times of the day. As a result, there are usually a few empty parking spaces in the municipal lot.

With the exception of the public buildings located on this block (Lincoln Hall, Fire Station, Library) most non-residential buildings are able to provide on-site parking which satisfies their needs according to parking requirements in the Zoning Regulations. Thus, most demand for use of the public lot stems from public buildings. The library is the only public organization which expressed serious concern about parking. Most other complaints regarding parking came from businesses objecting to the fact that spaces in this block serve businesses located elsewhere (blocks 7 and 10).

The Village has recently upgraded the municipal parking lot on block 9, with the result of a slight reduction in the number of spaces provided. Without removing one or more buildings, the only way to expand block 9's parking supply is to arrange for use of the open land to the north of the unmarked lot behind the florist, and to more efficiently utilize the unmarked lot. Since these areas are privately owned, purchase or lease arrangements will be needed in order to make parking in these areas available to the public. A total of 20 to 25 spaces might be created on these areas. This should substantially ease the parking pressure on this block except when events occur at the

Library or in Lincoln Hall, particularly if employees from block 10 are provided with alternative parking space.

Block 10 shows a parking deficit of 14 spaces, virtually all of which are associated with the bank. It is understandable that the bank prefers that its employees not occupy its limited supply of customer parking. The Village and the Bank should work together to arrange for bank employees to make use of the large unused private parking area on block 13 which is actually closer to the bank than the municipal lot on block 9.

With one exception, parking in all other blocks in the Village Center study area is adequate to meet present needs. The exception is block 17 where a shortage of 13 spaces in indicated. The principal attractor on this block is the health and fitness center, and it is not clear that its parking demand is sufficiently concentrated to create problems. In responding to the survey questionnaire, this establishment did not indicate that parking was a serious problem, but did note that there was a shortage during special events. No Village action is recommended in this area until there is more evidence that a problem actually exists.

Summary of Short Term Recommendations:

1. Allow long term parking in on-street spaces along the north end of Railroad Avenue (five spaces on the west side) and on the west end of Lincoln Place (13 spaces along both sides). A total of 18 spaces should be changed to long term employee parking.

2. Implement the planned long term parking area across the tracks on block 5. This will add 11 spaces, which should be designated for long term, employee parking.

3. Work to establish a long term parking area for approximately 30 spaces (on a leased or purchased basis) in the area behind the Essex Agency on block 6. This lot, if established, should be paved and landscaped as the present municipal lot has been.

4. Work with property owners to ensure efficient use of parking areas behind buildings on block 8.

5. If necessary because of increased demand on other blocks or the loss of on-street parking, consider establishing a municipal lot at the southeast corner of block 8.

6. Work to expand the municipal lot in block 9 to the north. The land can be either purchased or leased, and some 20 to 25 long term spaces can be provided.

7. Work with the relevent property owners to establish a long term parking area for Chittenden Bank employees in the large private parking area on block 13.

8. Blocks 15 and 16, along Park Street, have adequate parking without requiring the use of the on-street spaces. Accordingly, if it is desirable to remove the on-street spaces to improve traffic flow, this can be done without exacerbating any parking problems.

9. Remove the on-street parking in front of the Federal Building on Lincoln Street.

B. Long Term Considerations:

The above recommendations will satisfy the immediate parking needs of the Village Center Area. In the longer term, the Village must face some more difficult questions. For the most part, the Village Center Area is already built up. What land that is not presently used for parking has been identified for expansion of parking to meet present needs. Growth in the village Center Area will most likely be based on redevelopment of existing properties. In a very real sense, parking will become the factor limiting future growth.

Traditionally, the Village Center has beed perceived as a small, compact, intensely developed concentration of commercial, office and public activities. The empahasis is on a convenient, pedestrian oriented center. The present zoning regulations reflect this by permitting buildings up to 40 feet in height and covering as much as 75 percent of their individual sites. Minimum front yard setbacks are small to bring buildings up close to streets and encourage parking to be located in rear yards.

Current parking requirements call for development on each site to provide for its own parking needs. This is clearly an improvement of earlier regulations which did not require the provision of parking in the Village Center Area and which led to the present shortage. On the other hand, the requirement of individual parking lots associated with individual buildings has two disadvantages relative to the concept of a dense pedestrian oriented Village Center. First, the individual lots for individual buildings do not encourage customers to park in one place to visit several establishments, thus discouraging people from walking around the Village Center. Second, the size of the small lots associated with individual buildings encourages the use of surface parking rather than multi-level structures. It is this latter issue that merits further examination.

On average, every 200 gross square feet of building space used for commercial and office purposes requires one parking space for employees and/or customers. Surface parking can be provided at an average ratio of 110 spaces per acre. Structured parking can be provided at an average ratio of 100 spaces per acre of floor area (after making allowances for ramps, elevators, etc.). thus, each 200 square feet of building space requires 396 square feet of surface parking or 436 square feet of parking structure floor area. When surface parking is utilized, more land is devoted to

parking than is devoted to building space, and this relationship is magnified if multiple story commercial structures are built.

If parking is to be provided on each individual lot in order to meet the parking needs of the structure on that lot, the amount of structure which can be built and the portion of the lot devoted to structure will be severely limited. The following table (13) illustrates this by computing the ratio of the building footprint to the total lot area (in percent) which can be achieved with various building heights (in stories), various numbers of levels of parking and with the assumption that no more than 75% of the total site can be devoted to building and parking.

TABLE 13.
BUILDING COVERAGE RATIOS FOR VAROUS
BUILDING/PARKING SCENARIOS

	Scenario						
	1	2	3	4	5	6	7
Building stories	3	3	3	2	2	1	1
Parking levels	1	2	3	1	2	1	2
Parking ratio(a)	1/200	1/200	1/200	1/200	1/200	1/200	1/200
Site coverage(b)	.75	.75	.75	.75	.75	.75	.75
Area per pkg space(c)	396	436	436	396	436	396	436
Ratio of building footprint to lot area (%)	10.8	17.6	23.6	15.1	23.6	25.2	35.9

(a) Ratio of required parking spaces per gross building floor area.
(b) Maximum portion of site to be covered by building and/or parking.
(c) Number of spaces per acre, converted to square feet per space.

It is clear from the above table that it is not possible to build at the desired intensity and building height and still provide the necessary parking on individual parking facilities. With three story buildings and surface parking, the maximum footprint ratio is 10.8 percent. This increases to 25.2 percent if only single story buildings are constructed, but that is not consistent with the Village Center concept. Indeed, the requirement of individual parking facilities for each lot leads to the typical suburban form of development--a pattern which is not consistent with present perceptions of the Village Center.

Because of the interaction between building area and parking requirements, new development in the Village Center would have to be less intense than present development. For this reason, it is unlikely that new development will occur. Buildings may be renovated, but little new space will be added.

The Village is thus faced with a choice. It can continue to rely on traditional parking requirements--individual parking facilities for each individual lot--with the result that the Village Center Area will essentially stay as it is. Little or no new building space will be created. Or, it can make a policy choice to develop public parking facilities designed to meet the needs of all present and anticipated Village Center development, and thus remove the requirement that individual lots include parking for their individual buildings.

This latter option is not intended to be a reversion to an earlier situation where there was simply no parking requirement in the Village Center Area. Instead, it is intended as a positive, assertive position that the Village will build or otherwise provide public parking in conjunction with or in advance of future development. This implies up-front capital investment by the Village. It is reasonable, however, to anticipate that in lieu of the parking requirement, developers would be required to make a pro-rata cash contribution to a Villageg Center parking fund, and would thus defray the costs to the Village. Other options might include arrangements to lease parking spaces to local property owners as a means of satisfying their parking obligations.

This is a critical decision. It should be made as a part of the Village Plan update where the future form and function of the Village Center will be discussed and decided upon. At that point the appropriate capital budgeting decisions must be made, along with establishment of the parking fund or other means of funding the needed Village Center parking.

APPENDIX A.
Village Center Area Parking Survey Questionnaire

RESV INC.

MICHAEL J. MUNSON, PH.D. PLANNING CONSULTANT

11 Pearl Street, Essex Junction, Vermont 05452 (802) 879-0605

VILLAGE CENTER PARKING STUDY

June 1989

Dear Business Person:

The Village of Essex Junction has retained Michael Munson, of RESV, Inc., Planning consultants, to undertake a study of parking in the Village Center Area. As a part of that study, we are conducting a brief survey of Village Center Area businesses in order to gain an accurate understanding of the businesses and their parking needs.

We appreciate your taking a few minutes to answer the following questions. Your answers will, of course, be kept confidential and used only for analytical purposes. If you have any questions, don't hesitate to call Dr. Michael J. Munson at RESV, Inc.; telephone 879-0605.

Someone will return in a few days to collect this questionnaire after you have completed it.

I. First, we would like to ask you a few questions about your business and its location.

a. What is the address of your business at this location?

b. Briefly, what is the nature of your business at this location? ___General office; ___Retail Sales; ___Personal services; ___Professional Services; ___restaurant/tavern; ___other (please describe _____).

c. Do your customers, or clients, come to this location for a product or service, or do you deliver it to them elsewhere? ___come to this location; ___delivered.

d. How many people are employed by your business at this location? _____ persons.

e. What are the principal advantages of having your business located in the Village Center area?

f. What are the principal disadvantages of such a location?

(over)

g. What improvements, if any, do you feel should be considered for the Village Center area?

II. Now we would like to ask a few questons about your business' space and parking needs at this location.

a. Approximately how many square feet of floor space does your business occupy? _____square feet.

b. On what floor is your business' space located? _____floor.

c. Would you indicate on the following table the approximate percent of your business' floor space which is devoted to the listed business activities?

Activity	Percent of total floor space
Direct sales	_____%
General office activities	_____%
Provision of professional services	_____%
Provision of personal services	_____%
Eating/drinking areas	_____%
Food preparation	_____%
Research	_____%
Fabrication/manufacturing	_____%
Stock or supply storage	_____%
Other _____	_____%

d. Is parking provided on-site for your business' employees? _____ If yes, is it adequate? _____

e. If on-site parking is not adequate, where do your employees park?

f. Is parking provided on-site for your business' customers? _____ If yes, is it adequate? _____

g. If on-site parking is not adequate, where do your customers park?

h. Do you consider parking to be a serious problem for your business in this location? _____

i. If yes, what do you think can be done to improve the situation?

I very much appreciate your completing this questionnaire and returning to the staff person when they call for it. Thank you.

Michael J. Munson, Ph.D., AICP
Planning Consultant

APPENDIX B.
Block by Block Examination of the Parking Situation

APPENDIX B.
Block by Block Examination of the Parking Situation

Blocks 1 and 2 have no commercial parking need, no supply and no problem.

Block 3 has a surplus of 15 spaces, yet some 40% of the survey respondants indicated that parking was a problem. The problem lies in the fact that the majority of the block's parking is in the lot reserved for the Prouty Federal Building, and not available for use by businesses which are located on the south east corner of the block. (Note: There are signs for fiteen minute parking along Lincoln Street, but no lines defining the parking area. These spaces were not counted in the inventory.)

For the most part, businesses on this block rely on on-street parking, and must compete for space with businesses located on other blocks (particularly block 7). Businesses not associated with the Federal Building should require 21 spaces, and there are 28 on-street spaces available. The parking supply on this block should be adequate if the needs of adjacent blocks can be met. Perhaps as many as six to eight spaces could be provided on Lincoln Street, but they are not as close to block 3 businesses as parking on Railroad Avenue. If they were signed for long term parking, they might be used by employees, thus easing the crunch for customers.

Block 4 has a parking surplus of 22 spaces, yet the only business on the block indicated that parking is a problem. In this case, the business maintains its own private on-street parking, but finds that those spaces are used by people visiting other establishments. Since block 4 serves as a supply of parking for blocks 7 and 3, this is understandable. The issue is one of enforcement, but can be mitigated slightly if additional parking for block 7 can be provided.

Block 5 contains a surplus of 13 spaces, all associated with a single business. In addition, the Village intends to construct a public parking area on block 5, containing 11 spaces. In conjunction with this lot, a pedestrian crossing of the railroad tracks will be provided at mid-block, making the spaces less than 100 feet further from block 7 than the parking on block 4. If this new parking on block 5 is devoted to day long parking for employees, it could help free up spaces closer to businesses for customers.

Block 6 contains a surplus of 66 parking spaces, and block 6 businesses do not perceive of parking as a serious problem. Indeed, some respondants from blocks 7 and 8 indicated that they parked on block 6 behind the Essex Agency. Working with the owner of this space, and publicizing this parking resource could help mitigate the parking shortage perceived by businesses on the northern portions of blocks 7 and 8.

Block 7 suffers a parking deficit of 38 spaces, the largest of any block in the study area. This is to some extent offset by the 21 public on-street spaces on block 4, and will be further mitigated by the construction of the 11 new spaces in block 5. This block contains on-street public spaces along three sides, totalling 42 spaces, and 53 off-street private spaces.

While half of the business respondants on block 7 indicated that they provide on-site (ie. off-street) parking for employees, less than half of those providing such parking indicated that it is adequate. Just over a quarter of the respondants indicated that they provide off-street parking for customers, and of those, only 20 percent indicated that the off-street customer parking is adequate. This suggests that much of the off-street parking is actually used by employees, leaving customers to compete for the on-street spaces. If alternative employee parking could be provided, some of the customer parking shortage could be relieved.

Block 8 has a net deficit of 21 parking spaces, yet most of the business respondents indicated that their on-site (ie. off-street) parking for employees and customers is adequate. Still, 40% of the respondants indicated that parking is a problem. In part, this reflects the fact that the need for parking is based on full utilization of present structures, and there is presently a substantial amount of unused office space on this block. Parking problems may be perceived as more severe when all of that space is occupied.

Some of the paved parking area on block 8 is not efficiently utilized at present, and there is also an open area which is not used at all. Thus, there is potential for expanding the parking supply in this block. Additional parking here could also serve the needs of block 7.

Block 9 contains a net deficit of 34 parking spaces, the second largest deficit of any block in the study area. (Note: the parking inventory included a total of 18 spaces in an unmarked paved area behind the florist which is not part of the municipal lot. There

are also a total of 21 spaces reserved for the Fire Station.) The deficit exists even though block 9 contains the large municipal parking lot and is perceived as providing parking for people visiting establishments on other blocks.

The demand for parking on this block is based on full utilization of all non-residential buildings, including Lincoln Hall. In fact, many of the establishments in Lincoln Hall either don't generate parking demand equivilant to other office space, or do so at other than normal business times of the day. As a result, there are usually a few empty parking spaces in the municipal lot.

With the exception of the public buildings located on this block (Lincoln Hall, Fire Station, Library) most non-residential buildings are able to provide on-site parking which satisfies their needs according to parking requirements in the zoning regulations. Thus, most demand for use of the public lot stems from public buildings. The library is the only public organization which expressed serious concern about parking. Most other complaints regarding parking came from businesses objecting to the fact that spaces in this block serve businesses located elsewhere (blocks 7 and 10).

The Village has recently upgraded the municipal parking lot on block 9, which resulted in a slight reduction in the number of spaces provided. Without removing one or more buildings, the only way to expand block 9's parking supply is to arrange for use of the open land to the north of the unmarked lot behind the florist, and to more efficiently utilize the unmarked lot. Since these areas are privately owned, special arrangements will be needed to make parking in these areas available to the public.

Block 10 shows a deficit of 14 parking spaces. Most of this is attributable to the bank which contains some 5,000 square feet of floor area but which provides only 19 on-site parking spaces. Other businesses fronting Pearl Street have adequate numbers of parking spaces, but experience difficulties in getting in or out from the street. Their employees choose to park on block 9 which has easier access. A possible solution may be to expand the bank's parking area to the west and link it with the parking behind the Pearl street businesses, but this may be limited by grade changes.

Block 11 contains only two non-residential buildings, both of which are located at the north end of the block. One of these structures provides adequate on-site (off-street) parking. On-street parking extends virtually the entire length of School Street,

generating a surplus of 13 spaces. The on-street spaces at the north end of School Street tend to be well utilized, perhaps serving block 10 as well, while the spaces at the south end of School Street are underutilized.

Block 12 contains a surplus of five parking spaces. Businesses (and the school) located on this block front on Park Street. All of the business establishments appear to provide adequate on-site parking.

Block 13 contains a very large paved parking area, only a portion of which is marked and used actively for parking. Even so, this block has a net surplus of over 100 parking spaces. Unfortunately, these spaces are not located where they can conveniently mitigate deficits in most of the blocks having shortages. It may, however, be possible to ease the parking deficit on block 10 (ie. the bank) through an arrangement allowing bank employees to park on block 13, which is actually closer than the municipal lot on block 9. The large lot on block 13, however, is privately owned, and not generally available to the public.

Block 14 contains a total surplus of 45 parking spaces, not including two large unused gravel areas. Unfortuantely, these areas are so distant from the blocks with deficits (close to 1/4 mile) that it is doubtful that they can be utulized to remedy existing shortages. The Village has developed a plan for a small lot at the north end of block 14, but this has not yet received final approval. In fact, it is unlikely that it would prove attractive to businesses experiencing parking problems other than those located in block 8. The businesses at the south end of block 8 currently have adequate on-site parking, and there is also an unused area in that block which could provide additional parking if it were needed.

Block 15 is basically the Flanders Building Supply site, and has slightly more spaces than needed--although peak periods generate some parking difficulties. There is sufficient open area that the business could create additional spaces if they felt that it was necessary.

Block 16 contains a single warehouse building and considerably more parking than needed.

Block 17 shows a net parking deficit of 13 spaces, but businesses on the block did not indicate that parking is a problem. The large parking generator on this block is the health and fitness club, and their business may be sufficiently distributed throughout the day that parking problems do not occur. Even so, the

survey response from that establishment indicated that occassionally they experienced problems. If those problems become acute, there is some mid-block land associated with the oil distributorship which might be utilized (although it is in a residential zoning district).

Block 18 has a substantial net surplus, not including the large open gravel area behind most of the buildings. Most of the businesses have sufficient on-site parking, but tavern customers frequently use parking on block 17 during evening hours.