

**DOWNTOWN PARKING FACILITIES
AND
TRAFFIC CIRCULATION PLAN UPDATE
BLOOMINGTON, INDIANA**

Prepared for:

CITY OF BLOOMINGTON

By

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BLOOMINGTON DOWNTOWN PARKING AND TRAFFIC STUDY

INTRODUCTION

This report summarizes a very limited review of parking and traffic operations within and near the Downtown of Bloomington, Indiana. The limited review relies exclusively on recently compiled information provided by the City, including survey data, statistics, and maps.

The recent information is compared, to the extent possible, with similar information compiled in 1985 and significant changes of parking or traffic characteristics are noted.

The report also considers the imminent rehabilitation of the Showers Building and its adaptive multi-functional reuse for Municipal offices, for general corporate offices, and for Indiana University related research activities.

The report concludes that the Downtown and its nearby commercial areas have changed in character and function over the years, but have increased in vitality as measured by parking and traffic statistics. The construction of the new Justice Building, the conversion of an automotive dealership into a Convention Center, the rehabilitation of an entire block of specialty commercial and general office space south of the Courthouse, the construction of a new public parking garage, and a variety of other projects attest to the changing character of the Downtown.

As a result of these land use changes, the Downtown is gaining strength as a focal point for civic and governmental activities, for specialty retailing, for financial institutions, for general offices, and for a variety of eating and entertainment establishments.

As a result, parking demands continue to be strong and traffic continues to be of concern. Recommendations are given in the report in response to the analyses, conclusions and findings.

I. DATA SPECIFICATION AND COLLECTION

The Consultant met with City staff to specify types and formats of data to be collected or provided. The Consultant requested that the City survey and report all new data consistent with the methods used in 1985 for similar studies to enable direct comparisons to be made. The City was unable to entirely maintain this consistency because of limited staff and budget. As a result, City provided limited information as follows:

A. Inventory and Usage of Parking Supply

City provided parking usage data for a smaller area and for fewer hours of the day than was done in 1985. (Figure 1, Appendix A)

B. Operation Characteristics

City provided parking revenue reports for 1990 and 1991 with receipts segregated by various categories. (Appendix B)

C. Existing and Planned Land Use

City provided maps of existing land use, zoning and the Comprehensive Plan.

D. Survey of Downtown (Downtown) Interest Groups

City mailed, processed and summarized a parking opinion survey of Downtown office and business managers. The survey form is included in Appendix C. The results of that survey are in a separate document.

In addition, City and Consultant conducted a three hour workshop attended by public officials, Downtown property owners, business managers, and special interest groups. The workshop considered redevelopment potentials, parking and traffic issues.

E. Inventory of Streets and Intersections

City provided maps and aerial photos of the Downtown, traffic volume counts, traffic accident data, and traffic signal information which is included in Appendix D.

F. Coordination with Urban Design Study

Consultant coordinated with the concurrent Urban Design Study through the aforementioned workshop and direct contacts with architects and engineers who are preparing redevelopment plans.

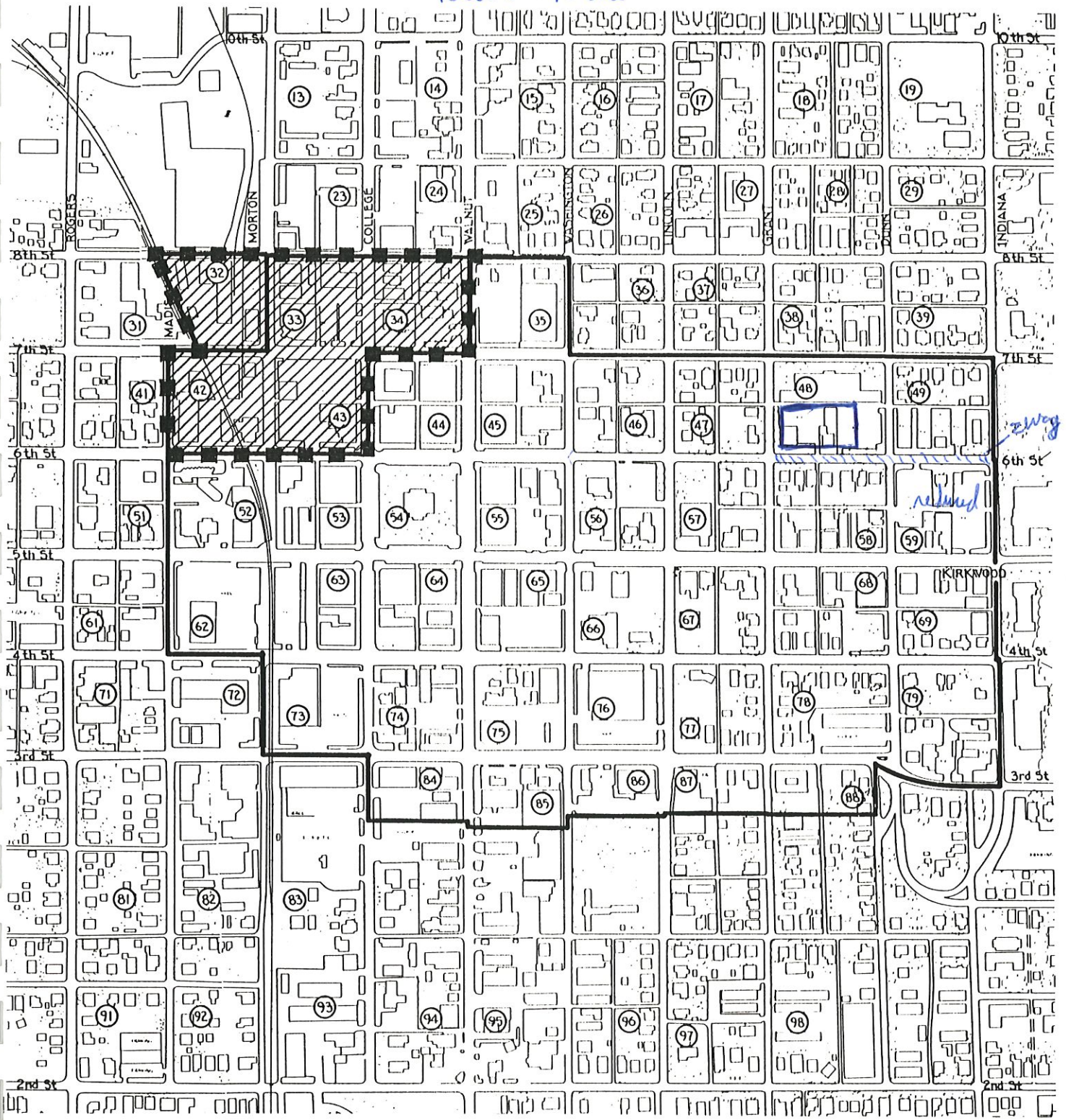
G. Coordination with Truck Route Plan

The official Truck Route Plan was reviewed and considered as a part of this work.

II. DATA ANALYSIS




The various surveys, data and information provided by the City were received and analyzed by the Consultant as described in following paragraphs.

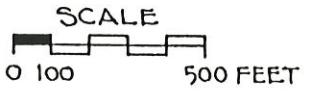
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BLOOMINGTON DOWNTOWN PARKING STUDY
BLOCK NUMBER REFERENCE MAP

FIGURE 1

-  INTENSIVE STUDY AREA BOUNDARY (1992)
-  INTENSIVE STUDY AREA BOUNDARY (1984-85)
-  (ANALYSIS) BLOCK NUMBER



A. Parking Supply, Demand and Usage Characteristics

The City conducted a parking usage survey for a five block area shown by Figure 1. The area encompasses the block where the Justice Building is located and four adjoining blocks. Observers recorded license plate numbers of parked vehicles, both on-street and off-street, at 30 minute intervals between the hours of 8:00 AM and 5:00 PM on a typical weekday (Monday, November 16, 1992). An example of the survey form is included in Appendix A. The survey information enables parking supply, demand, and usage characteristics to be determined.

1. Parking Accumulation

The accumulation of parked vehicles by hour is shown in Tables 1 and 2 and illustrated by Figures 2, 3 and 4. On-street, off-street and total parking categories are illustrated separately.

About 80 vehicles were parked at curbside, occupying 44% of the 177 spaces at 8:00 AM when the survey began as shown by Table 1 and Figure 2. Presumably, most of these vehicles were parked by downtown workers. The maximum number of vehicles parked on-street was 144 which occurred at 1:00 PM when 78% of the curb spaces were occupied. Beginning at 4:00 PM workers began to return home and the demand for parking diminishes. During the six and half hours between 10:00 AM and 4:30 PM more than 2/3 of the curb spaces were consistently occupied.

About 80 vehicles were parked in off-street lots and the City parking garage at 8:00 AM as shown by Table 2 and Figure 3. By noon the maximum accumulation occurred of about 165 off-street parked vehicles, representing 53% of the 305 off-street capacity. Off-street parking diminishes abruptly after 4:00 PM as workers leave downtown.

The maximum number of 310 total vehicles parked occurs at 1:00 PM as shown by Figure 3. Nearly all of this demand could be accommodated in off-street lots. This is not to imply that on-street parking be eliminated, but rather to indicate the excessive amount of off-street parking which exists. Many of the underutilized off-street parking spaces are in the form of small, restricted lots with difficult access.

2. Curb Parking Statistics

The parking utilization survey forms were processed by block face and by block and summarized in Tables 3 and 4.

Within the study area, 752 different vehicles parked in 177 available curbside spaces for an average turnover of 4.81 vehicles per space for the 9 hours surveyed.

The 752 different vehicles occupied curbside parking for a total of 1116 hours, for an average duration of about 1.3 hours per vehicle.

TABLE 1

OFF-STREET PARKING FACILITIES

Off-Street Facility	Block 32			Block 33	Block 34					Block 42				Block 43 Parking Garage	Total
	5	6	7	None	5	6	7	8	9	5	6	7	8		
8:00 AM	7	0	2	--	8	11	2	14	3	4	0	4	0	25	80
8:30	8	0	2	--	8	12	2	16	5	4	1	8	0	30	96
9:00	9	0	4	--	9	11	2	12	5	4	1	9	0	52	118
9:30	9	2	4	--	9	11	1	11	6	5	2	9	0	62	131
10:00	10	1	5	--	9	11	2	16	5	8	2	9	0	65	143
10:30	9	2	5	--	9	10	1	15	5	6	1	9	2	65	140
11:00	9	2	7	--	8	7	2	17	6	6	2	12	4	68	150
11:30	10	1	5	--	10	8	1	19	6	5	1	12	13	69	160
12:00 Noon	11	3	4	--	8	8	3	15	4	3	2	10	19	74	164
12:30 PM	10	0	4	--	8	8	2	18	4	6	2	10	19	70	161
1:00	11	1	6	--	9	8	2	17	4	6	2	13	17	70	166
1:30	10	2	5	--	9	7	3	7	4	4	0	12	7	66	136
2:00	11	1	6	--	7	5	2	4	5	6	1	11	4	68	131
2:30	9	3	6	--	5	9	2	13	5	7	1	11	0	64	135
3:00	9	1	7	--	10	11	2	10	5	5	1	14	0	66	141
3:30	9	1	6	--	10	13	2	7	6	6	3	12	0	66	141
4:00	9	2	6	--	10	10	2	8	4	7	3	12	0	62	135
4:30	7	3	8	--	6	13	2	6	3	2	3	13	0	56	122
5:00	7	2	7	--	4	10	2	2	0	0	2	7	0	47	90
Available Spaces	16	4	14	--	14	13	6	19	7	8	8	25	23	156	313

TABLE 2

ON-STREET PARKING FACILITIES

On-Street Facility	Block 32		Block 33				Block 34			Block 42			Block 43				Total
	1	2	1	2	3	4	1	2	3	1	2	3	1	2	3	4	
8:00 AM	2	17	10	3	6	11	10	0	8	3	2	1	2	2	0	4	81
8:30	2	16	10	6	7	15	11	1	5	3	4	2	4	4	0	5	95
9:00	3	17	10	4	7	17	11	3	8	4	3	1	4	4	1	4	101
9:30	2	17	10	6	9	16	11	3	9	4	3	2	3	6	3	6	110
10:00	3	17	10	6	9	20	11	3	7	10	9	1	5	8	5	6	130
10:30	3	17	8	7	6	18	11	3	8	8	9	1	4	6	6	8	123
11:00	3	16	8	6	4	18	11	3	9	9	9	2	4	6	4	7	119
11:30	3	16	9	6	11	18	10	3	7	9	7	5	4	4	3	6	121
12:00 Noon	2	17	10	4	10	15	10	3	10	8	7	6	6	8	4	6	126
12:30 PM	3	17	10	4	10	14	10	4	10	11	11	4	5	7	6	6	132
1:00	3	17	10	7	11	20	10	4	8	12	13	3	4	8	8	6	144
1:30	4	17	9	4	12	15	10	2	8	12	14	2	4	6	4	8	131
2:00	4	17	10	8	5	18	10	3	3	12	16	0	3	6	3	7	125
2:30	3	16	10	3	11	21	10	4	6	12	15	1	4	8	6	6	135
3:00	2	14	10	7	13	18	9	4	9	10	12	1	6	7	7	9	138
3:30	2	15	9	6	11	16	9	4	10	10	6	2	6	7	5	10	128
4:00	2	13	7	6	9	19	9	4	7	9	12	2	6	6	6	7	124
4:30	1	9	7	3	11	14	5	4	7	8	9	3	5	6	8	7	107
5:00	1	8	6	3	3	10	3	4	4	4	5	2	4	4	7	5	73
Available Spaces	7	17	10	9	13	21	17	4	12	14	19	7	6	8	9	11	184

FIGURE 2
ON STREET PARKING ACCUMULATION
 (BLOCKS 32,33,34,42,43)

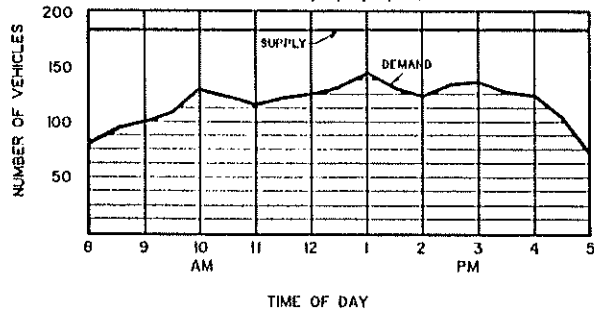


FIGURE 3
OFF STREET PARKING ACCUMULATION
 (BLOCKS 32,33,34,42,43)

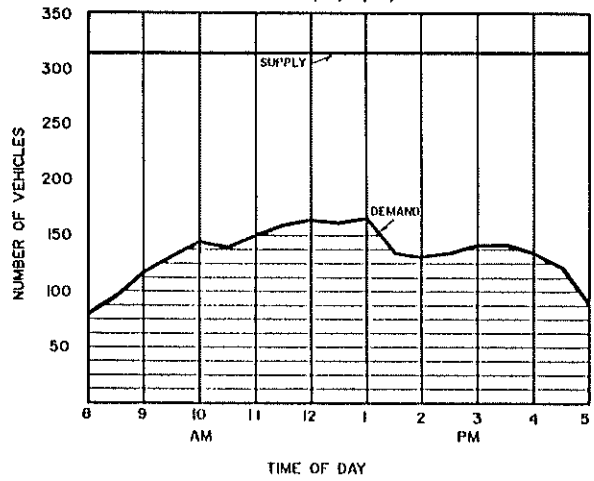


FIGURE 4
TOTAL PARKING ACCUMULATION
 (BLOCKS 32,33,34,35)

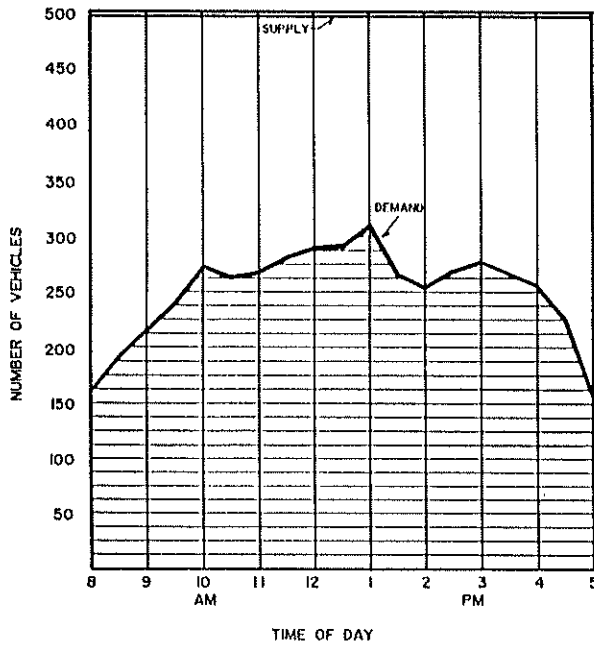


TABLE 3

PARKING CHARACTERISTICS
By Facility for Selected Blocks
Central Business District

<u>Block</u>	<u>Facility</u>	<u>No. of Spaces</u>	<u>Vehicles Parked</u>	<u>Usage (Veh Hrs)</u>	<u>Supply (Space Hrs)</u>	<u>Occupancy (Usage/Supply)</u>	<u>Turnover (Veh/Space)</u>	<u>Duration (Hours)</u>
32	1 on	7	6	24	63	.38	.85	4.00
32	2 on	17	28	146	153	.95	1.65	5.21
32	5 off	10	17	87	90	.97	1.70	5.12
32	6 off	4	26	14	36	.39	6.50	0.54
32	7 off	14	22	50	126	.40	1.57	2.27
33	1 on	10	24	86	90	.96	2.40	3.58
33	2 on	9	56	47	81	.58	4.00	0.84
33	3 on	13	108	85	117	.73	8.31	0.79
33	4 on	21	77	156	189	.82	3.67	2.03
34	1 on	11	17	90	99	.91	1.55	5.29
34	2 on	4	11	29	36	.81	2.75	2.64
34	3 on	11	68	70	99	.71	6.18	1.03
34	5 off	14	20	80	126	.63	1.43	4.00
34	6 off	12	35	92	108	.85	2.91	2.63
34	7 off	6	7	18	54	.33	1.16	2.57
34	8 off	19	113	112	171	.65	5.94	0.99
34	9 off	6	13	42	54	.77	2.17	3.23
42	1 on	14	51	79	126	.63	3.64	1.55
42	2 on	19	105	84	171	.49	5.53	0.81
42	3 on	7	17	21	63	.33	2.43	1.24
42	5 off	8	31	47	72	.65	3.87	1.52
42	6 off	8	11	15	72	.20	1.38	1.36
42	7 off	25	34	97	225	.43	1.36	2.85
42	8 off	23	61	45	207	.22	2.65	0.74
43	1 on	6	41	40	54	.74	6.83	0.98
43	2 on	8	47	57	72	.79	5.88	1.21
43	3 on	9	48	43	81	.53	5.33	0.90
43	4 on	11	48	59	99	.60	4.37	1.23
43	5A off (Lower Level of Parking Garage)	156	127	568	1404	.40	0.81	4.47

1846/R-27/10

TABLE 4
PARKING CHARACTERISTICS
Aggregated ON-STREET, Selected Blocks
Central Business District

Block No.	No. of Spaces		Vehicles Parked		Usage (Veh Hrs)		Supply (Space Hrs)		Occupancy (Usage/Supply)		Turnover (Veh/Space)		Duration (Hours)	
	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985
32	24	--	34	--	170	--	216	--	0.79	--	1.42	--	5.00	--
33	53	35	265	114	374	196	477	420	0.78	.47	5.00	3.3	1.41	1.72
34	26	20	96	104	189	163	234	240	0.81	.68	3.69	5.2	1.97	1.57
42	40	23	173	140	184	111	360	276	0.51	.40	4.33	6.1	1.06	0.79
43	34	34	184	181	199	233	306	408	0.65	.57	5.41	5.3	1.08	1.29
	177	112	752	539	1116	703	1593	1344	0.70	0.52	4.25	4.81	1.48	1.30

Note: 1. Block 32 was not included in 1985 surveys
2. 1985 Survey was for 12 hours (8:00 AM to 8:00 PM)
3. 1992 Survey was for 9 hours (8:00 AM to 5:00 PM)

TABLE 5
PARKING CHARACTERISTICS
Aggregated OFF-STREET, Selected Blocks
Central Business District

Block No.	No. of Spaces		Vehicles Parked		Usage (Veh Hrs)		Supply (Space Hrs)		Occupancy (Usage/Supply)		Turnover (Veh/Space)		Duration (Hours)	
	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985	1992	1985
32	28	--	65	--	151	--	252	--	0.60	--	2.32	--	2.32	--
33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
34	57	37	188	219	444	164	513	444	0.87	.37	3.30	5.9	2.36	0.75
42	64	78	137	201	204	406	576	936	0.35	.43	2.14	2.6	1.49	2.02
43*	156	152	127	180	568	681	1404	1818	0.40	.37	.81	1.2	4.47	3.79
	305	267	517	600	1367	1251	2745	3198	0.50	0.39	1.70	2.25	2.64	2.09

* Includes only the lower of two levels of the Public Parking garage.

Note: 1. Block 32 was not included in 1985 surveys
2. 1985 Survey was for 12 hours (8:00 AM to 8:00 PM)
3. 1992 Survey was for 9 hours (8:00 AM to 5:00 PM)

1846/R-27/11

The 177 curbside spaces represent 1,593 space-hours of parking supply. Actual usage of 1,116 space-hours represents an overall occupancy rate of 70% for the 9 hours surveyed.

More specifically:

- * on-street parking in block 32 is being used for long range durations (5.0 hours) with a correspondingly low average turnover rate (1.42 vehicles/space);
- * on-street parking in the other blocks (33, 34, 42, 43) are for one to two hour durations with correspondingly higher turnover rates (3 to 6 vehicles/space);
- * the average occupancy of on-street spaces is about 80% in blocks 32, 33 and 34.

Curb parking spaces in the central business district should be readily available for persons wanting to park for short periods of time to conduct personal business, shop or dine. When occupancy levels exceed 75% for sustained periods of time, as they do in some places, an adequate supply of vacant spaces is not conveniently available to incoming motorists. This results in vehicles cruising through and around the business district in search of parking and adding to congestions.

Table 3 indicates that six of the sixteen block faces have curb parking occupancy rates greater than 75% throughout the 9 hour period surveyed. During peak periods, the occupancy of these and other blocks is higher. Six of the block faces have high turnover rates (greater than 5 vehicles/day) and short parking durations (less than 1½ hours). The other blocks have low turnover rates (less than 4 vehicles/day) and long parking durations (longer than 2½ hours).

3. Off-Street Parking Statistics

The parking utilization survey forms were processed by facility and block and are summarized in Tables 3 and 5.

Within the study area, 517 different vehicles parked in 305 available off-street spaces for an average turnover of 1.70 vehicles/space for the 9 hours surveyed.

The 517 different vehicles occupied off-street parking for a total of 1,367 hours, for an average duration of about 2.6 hours per vehicle.

The 305 off-street spaces represent 2,745 space-hours of parking supply. Actual usage of 1,367 space hours represents an overall occupancy rate of 50% for the 9 hours surveyed.

Off-street parking should be readily available for workers and others who park for long durations of time. The current amount of off-street parking is more than adequate. However, many of the lots are small, restricted for special users, and difficult to locate and use.

The occupancy of the lower level of the City Parking Garage (block 43) peaked at 48 at noon. It was less than 45% occupied for all other periods of the day with at least 90 spaces available for use at anytime in the afternoon. The spaces were used for long average durations of 4½ hours with correspondingly low average turnover of 0.81 vehicles per space.

Off-street parking in the other blocks (32, 34, 42) are for average durations of between 1½ and 2½ hours. Turnover ranges between 2.1 and 3.3 vehicles/space.

B. Traffic Accidents

Accident and traffic volume data for the Downtown area was provided by the City for the year 1991 as shown in Appendix C.

Table 6 shown the various Downtown intersections ranked in terms of accident frequency. The intersection of Third Street and College Avenue was the site of 35 traffic accidents in 1991, four of which resulted in personal injuries. The intersection of Fourth and Rogers was the site of nine accidents, six of which involved personal injuries. Other intersections along Rogers at Fifth, Second, Sixth and Seventh and Third also resulted in personal injuries suggesting that the severity of these occurrences be of concern.

Table 7 shows the various Downtown intersections ranked in terms of annual traffic accidents per annual approach vehicle (where traffic data was available). The intersection of Sixth and Grant, with only five accidents, had the highest rate relative to traffic volumes. The intersection of Seventh and Walnut rank second both in terms of frequency and rate of accident occurrences.

The ranking of accident locations by both frequency and rate suggests locations where traffic control and/or traffic enforcement activities should be studied further.

C. Parking Revenues

Summaries of the parking revenues for years 1990 and 1991 were provided by the City for the downtown area. These summaries were organized to show revenues obtained from three general categories: Parking Lots/Garages; Leased Lots; and Violations. Individual Lots and Garages were further identified and the associated revenues were listed by month. These lists are included in the Appendix B.

TABLE 6
 Ranking of Intersections
 Based on Number of Accidents
 in 1991

No.	Intersection	Number of Accidents		
		Property Damage	Personal Injury	Total
1.	3rd & College	31	4	35
2.	7th & Walnut	18	2	20
3.	2nd & College	17	2	19
4.	3rd & Washington	13	2	15
5.	3rd & Grant	13	2	15
6.	3rd & Dunn	14	1	15
7.	5th & Rogers	10	4	14
8.	5th & College (Kirkwood & College)	11	3	14
9.	2nd & Rogers	13	1	14
10.	4th & Dunn	10	3	13
11.	7th & Dunn	12	1	13
12.	10th & College	10	1	11
13.	10th & Walnut	10	1	11
14.	10th & Dunn	10	1	11
15.	5th & Grant	8	2	10
16.	5th & Walnut	8	2	10
17.	2nd & Walnut	9	1	10
18.	3rd & Walnut	9	1	10
19.	10th & Indiana	9	1	10
20.	4th & Rogers	3	6	9
21.	6th & Rogers	7	2	9
22.	7th & College	9	0	9
23.	3rd & Indiana	9	0	9
24.	7th & Rogers	6	2	8
25.	6th & Walnut	8	0	8
26.	10th & Grant	6	1	7
27.	5th & Dunn	7	0	7
28.	4th & Indiana	7	0	7
29.	6th & Madison	2	4	6
30.	4th & Washington	5	1	6
31.	5th & Indiana	5	1	6
32.	4th & College	6	0	6
33.	3rd & Rogers	4	1	5
34.	6th & Grant	5	0	5
35.	4th & Walnut	5	0	5
36.	7th & Indiana	5	0	5
37.	6th & College	2	2	4
38.	2nd & Washington	3	1	4
39.	6th & Dunn	3	1	4
40.	8th & Indiana	3	1	4
41.	9th & College	3	1	4
42.	5th & Washington	3	1	4
43.	4th & Lincoln	3	1	4
44.	7th & Washington	4	0	4
45.	5th & Lincoln	4	0	4
46.	8th & College	4	0	4
47.	11th & Rogers	4	0	4
48.	10th & Washington	2	1	3
49.	5th & Madison	2	1	3
50.	Howe & Rogers	3	0	3
51.	3rd & Lincoln	3	0	3
52.	7th & Lincoln	3	0	3
53.	8th & Dunn	3	0	3
54.	10th & Lincoln	3	0	3
55.	4th & Madison	1	1	2
56.	Atwater & Indiana	2	0	2
57.	2nd & Lincoln	2	0	2
58.	2nd & Morton	2	0	2
59.	6th & Indiana	2	0	2
60.	8th & Rogers	2	0	2
61.	9th & Walnut	2	0	2

TABLE 7
Ranking of Intersections
Based on Number of Accidents
per 1000 Annual Vehicles Entering the
Intersection in 1991

<u>No.</u>	<u>Intersection</u>	<u>Rate</u> (Accidents/1000 Vehicles)
1.	6th & Grant	0.00473
2.	7th & Walnut	0.00397
3.	3rd & College	0.00356
4.	4th & Washington	0.00321
5.	10th & Indiana	0.00280
6.	3rd & Grant	0.00255
7.	3rd & Washington	0.00234
8.	2nd & College	0.00232
9.	7th & Washington	0.00214
10.	10th & Grant	0.00206
11.	6th & Rogers	0.00199
12.	3rd & Indiana	0.00191
13.	4th & Indiana	0.00189
14.	2nd & Rogers	0.00186
15.	8th & Indiana	0.00174
16.	4th & Lincoln	0.00174
17.	7th & College	0.00170
18.	6th & Walnut	0.00170
19.	7th & Rogers	0.00165
20.	7th & Lincoln	0.00157
21.	10th & Walnut	0.00153
22.	7th & Indiana	0.00152
23.	10th & College	0.00144
24.	4th & College	0.00132
25.	2nd & Walnut	0.00126
26.	4th & Rogers	0.00117
27.	3rd & Walnut	0.00104
28.	3rd & Rogers	0.00100
29.	4th & Walnut	0.00099
30.	8th & College	0.00093
31.	11th & Rogers	0.00081
32.	6th & College	0.00080
33.	10th & Washington	0.00075
34.	10th & Lincoln	0.00074

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A review of this information indicates an increase in total revenue generated by parking facilities and violations between these two years. The total revenues in 1990 were \$390,128, while in 1991 the total was \$449,799. This is an increase of approximately 15.3%.

A comparison of the 1990 and 1991 revenues with those reported in 1984* reveals a dramatic increase. The total revenues identified in 1984 were \$161,263. The 1990 revenues of \$390,128 represent a 141.9% increase while the 1991 figure of \$449,799 is a 178.9% increase over the 1984 value.

The largest increase in revenues from 1984 to 1991 is the Violations category. The 1984 value of \$87,203 was increased by \$96,682 or 110.9% to a 1990 level of \$183,885. The 1990 level was increased by \$87,879 or 47.8% to \$271,764. This is consistent with the recommendations included in the 1985 Report to intensify the enforcement of parking regulations.

Parking revenues, in general, went up from 1990 to 1991. Lot 1, located at 4th Street and Dunn Street was responsible for \$11,498 increase. The parking garage at 4th Street and Walnut Street accounted for another \$8,298 increase.

Leased Lots numbered 2 and 4 were the only facilities that were identified where revenues fell from 1990 values to 1991 levels. Leased Lot 2 is located at 7th Street and Walnut Street and Leased Lot 4 is located at 4th Street and Morton Street.

The revenue data leads to the conclusion that the efforts to more vigorously enforce parking restrictions are literally paying off. This effort should be maintained.

III. CONCLUSIONS ... SHARED PARKING

Parking accumulation, duration and turnover statistics for both 1985 and 1992 indicate that there is an adequate total supply of spaces throughout the central business district. This conclusion is supported by land use maps and aerial photographs which show extensive areas that are dedicated to the off-street parking function.

Many of the off-street spaces are in small lots which contain an average of 12 spaces in the current study area (blocks 32, 33, 34, 42 and 43, exclusive of parking garage) and 15 spaces elsewhere in the Downtown. These small lots are scattered, difficult to find and use, and are generally restricted to patrons or employees of specified establishments. Additional amounts of off-street parking spaces are warranted only if associated with major development or redevelopment projects.

* Parking Study and Recommendations, Prepared for City of Bloomington by Pflum, Klausmeier & Gehrum Consultants, June 1985.

Redevelopment potentials in the western portion of the Downtown (between 3rd, 10th, Morton and Rogers Streets) suggest the possibility of satisfying varying parking demands by the more efficient use and organization of parking spaces on a "shared basis."

Consider, for instance, the parking characteristics of the following types of land uses:

Showers Building - being renovated for the adaptive multifunctional reuse for city offices, general corporate offices and Indiana University related research functions.

Johnson Creamery Building - potential reuse as office, retail, or other activities.

County Justice Building - potential long term need for additional space nearby.

Conference Center - recently converted from an auto dealership.

Restaurants - several active restaurants serving resident and student populations.

Retail - a variety of retail establishments ranging from a grocery store serving local residents, to an antique mall attracting patrons from beyond the city.

Hotel - the potential market for a hotel convenient to the Conference Center.

Cinema - the potential market for a multiscreen cinema in the downtown area.

Each of these existing and potential uses have different parking demand characteristics that if considered as a group result in the need for fewer shared parking spaces than if considered as single isolated projects. The result is that less land need be devoted to parking and more land may be put to better economic use.

Table 8* indicates the peaking characteristics of various categories of development:

- * offices have peak accumulation in the late morning hours
- * retail has peak accumulation in the mid afternoon hours
- * restaurants have peak accumulation in the early evening hours
- * cinemas have peak accumulation in the late evening hours
- * residences have peak accumulation overnight
- * hotel guest rooms have peak accumulation overnight
- * conference facilities peak throughout the day

Source: Shared Parking (Fourth Printing) prepared by Barton-Aschman Associates for the Urban Land Institute, Washington, D.C., 1990.

TABLE 8

HOURLY PARKING DEMAND RATIOS—DEFAULT VALUES

Hour of Day	Office		Retail			Restaurant		Cinema		Residential			Hotel		Restaurant/ Lounge*		Con- ference	Conven- tion
	Spaces per 1,000 Sq. Ft. GLA		Spaces per 1,000 Sq. Ft. GLA			Spaces per 1,000 Sq. Ft. GLA		Spaces per Seat		Spaces per Dwelling Unit ^b			Guest Rooms		Spaces per 1,000 Sq. Ft. GLA		Rooms*	Area*
	Week- day Sat.		Week- day Sat. ^c Sat. ^d			Week- day Sat.		Week- day Sat.		Non-CHD			Spaces per Room		Week- day Sat.		Spaces per Seat	per 1,000 Sq. Ft.
										CHD Daily					Daily		Daily	Daily
6:00 a.m.	0.1	—	—	—	—	—	—	—	1.00	1.00	1.00	1.00	0.90	2.0	2.0	—	—	
7:00 a.m.	0.6	0.1	0.3	0.1	0.2	0.5	0.5	—	0.87	0.95	0.95	0.85	0.70	2.0	2.0	—	—	
8:00 a.m.	1.9	0.3	0.7	0.4	0.5	1.0	0.5	—	0.79	0.88	0.90	0.65	0.60	2.0	2.0	0.2	10	
9:00 a.m.	2.8	0.4	1.6	1.2	1.5	2.0	1.0	—	0.73	0.81	0.87	0.55	0.50	2.0	2.0	0.5	30	
10:00 a.m.	3.0	0.4	2.6	1.8	2.2	4.0	1.5	—	0.68	0.74	0.85	0.45	0.40	2.0	2.0	0.5	30	
11:00 a.m.	3.0	0.5	3.3	2.9	3.7	6.0	2.0	—	0.59	0.71	0.85	0.35	0.35	3.0	3.0	0.5	30	
12:00 Noon	2.7	0.5	3.7	3.4	4.2	10.0	6.0	0.10	0.60	0.71	0.85	0.30	0.30	5.0	3.0	0.5	30	
1:00 p.m.	2.7	0.4	3.8	3.8	4.7	14.0	9.0	0.15	0.59	0.70	0.85	0.30	0.30	7.0	4.5	0.5	30	
2:00 p.m.	2.9	0.3	3.7	4.0	5.0	12.0	9.0	0.15	0.60	0.71	0.85	0.35	0.35	6.0	4.5	0.5	30	
3:00 p.m.	2.8	0.2	3.6	4.0	5.0	12.0	9.0	0.15	0.61	0.73	0.85	0.35	0.40	5.5	4.5	0.5	30	
4:00 p.m.	2.3	0.2	3.3	3.6	4.6	10.0	9.0	0.15	0.66	0.75	0.87	0.45	0.50	5.0	4.5	0.5	30	
5:00 p.m.	1.4	0.1	3.0	3.0	3.8	14.0	12.0	0.15	0.77	0.81	0.90	0.60	0.60	7.0	6.0	0.5	30	
6:00 p.m.	0.7	0.1	3.1	2.6	3.2	18.0	18.0	0.20	0.85	0.85	0.92	0.70	0.70	9.0	9.0	0.5	30	
7:00 p.m.	0.2	0.1	3.4	2.4	3.1	20.0	19.0	0.20	0.94	0.87	0.94	0.75	0.80	10.0	9.5	0.5	30	
8:00 p.m.	0.2	0.1	3.3	2.2	2.8	20.0	20.0	0.25	0.96	0.92	0.96	0.90	0.90	10.0	10.0	0.5	30	
9:00 p.m.	0.1	—	2.3	1.6	2.1	20.0	20.0	0.25	0.98	0.95	0.98	0.95	0.95	10.0	10.0	0.5	30	
10:00 p.m.	0.1	—	1.2	1.5	1.9	18.0	19.0	0.25	0.99	0.96	0.99	1.00	1.00	9.0	9.5	0.2	10	
11:00 p.m.	—	—	0.5	0.5	0.5	14.0	17.0	0.20	1.00	0.98	1.00	1.00	1.00	7.0	8.5	—	—	
12:00 Midnight	—	—	—	—	—	10.0	14.0	0.15	1.00	1.00	1.00	1.00	1.00	5.0	7.0	—	—	
Peak parking ratio	3.0	0.5	3.8	4.0	5.0	20.0	20.0	0.25	1.0	1.0	1.0	1.0	1.0	10.0	10.0	0.5	30	
Percent auto usage	100	100	100	100	100	100	100	100	NA	NA	NA	80	80	100	100	100	100	
Average persons/auto	1.2	1.2	1.8	1.8	1.8	2.0	2.0	2.0	NA	NA	NA	1.4	1.4	2.0	2.0	2.0	2.0	

*Represents nonguest parking demand, assuming 50 percent of restaurant patrons and 100 percent of conference and convention attendees are nonguests. Conference and convention demands indicated are upper bounds, which are rarely achieved.

^bAt one auto per dwelling unit.

^cFor less than 400,000 sq. ft. GLA.

^dFor more than 600,000 sq. ft. GLA.

MONTHLY VARIATION IN PEAK PARKING DEMAND RATIOS—
DEFAULT VALUES (PERCENT OF PEAK MONTH)

Month	Office	Retail	Restaurant	Cinema	Residential	Hotel Rooms		Hotel Conference	Hotel Convention
						Weekday	Saturday		
January	100	65	80	90	100	90	65	100	20
February	100	65	75	70	100	90	70	100	40
March	100	70	90	50	100	95	80	100	80
April	100	70	90	70	100	95	85	100	80
May	100	70	95	70	100	95	85	100	100
June	100	75	100	100	100	100	90	100	100
July	100	75	100	100	100	100	100	100	50
August	100	75	85	70	100	100	100	100	50
September	100	75	80	80	100	95	90	100	70
October	100	75	80	70	100	95	90	100	70
November	100	80	80	50	100	85	80	100	40
December	100	100	90	50	100	85	65	100	20

SOURCE: SHARED PARKING, FORTH PRINTING, URBAN LAND INSTITUTE, WASHINGTON, D.C., 1990

Table 9 indicates that the hypothetical redevelopment of an area with offices, conference center, hotel, retail, restaurants and cinema might include 2,125 parking spaces according to typical zoning requirements. However, the various uses do not demand peak parking at the same time.

Considering that the peak demands are not concurrent, Table 9 further indicates that 1,313 parking spaces would be sufficient if used on a shared basis. This represents a 1/3 reduction in the required number of spaces. These fewer spaces would be more efficient because each space would be used more hours during the day, week or month.

The implementation of the shared parking concept in Bloomington would require the cooperation of private property owners, developers, and governmental agencies. A special shared parking district would be established within which parking requirements for development or redevelopment projects would be reduced if shared parking were arranged elsewhere within the district.

As such, the developer of a project might "purchase" shared parking rights from a neighbor, provide an internal mixture of uses with different peak parking demands to lessen the overall parking requirement, arrange to partner with another developer to share parking, or pay fee to the City which would then provide and guarantee a certain number of spaces. The fewer number of spaces required in the shared parking district would reduce project costs and serve as an incentive to redevelopment activities.

IV. RECOMMENDATIONS

The Goals and Objectives prescribed in 1985 by Pflum, Klausmeier & Gehrum Consultants should continue to guide the development and operation of the parking system in downtown Bloomington:

1. Recognize parking as an integral and important component of downtown revitalization and the traffic system:
 - a. coordinate parking with revitalization plans;
 - b. coordinate parking to enhance the retention and expansion of existing businesses;
 - c. coordinate parking with transit and traffic circulation plans.
2. Promote higher turnover of on-street parking:
 - a. shorten time durations;
 - b. intensify enforcement.
3. Encourage greater usage of off-street facilities:
 - a. make off-street spaces more attractive (signage, landscaping, lighting, maintenance);
 - b. encourage consolidation of small private lots for more efficient utilization;
 - c. adopt an appropriate parking fee schedule (hour, month, year).

TABLE 9
SHARED PARKING DEMAND
for
HYPOTHETICAL DEVELOPMENT

	<u>Offices</u>	<u>Conference</u>	<u>Hotel</u>	<u>Retail</u>	<u>Restaurants</u>	<u>Cinema</u>	<u>Total</u>
<u>Size</u>							
Measure	250,000	200	200	100,000	15,000	300	--
Units	SF	Seats	Rooms	SF	SF	Seats	--
<u>Peak Parking Demand Ratios (unadjusted)</u>							
Weekday	3.0	0.5	1.25	3.8	20.0	0.25	--
Saturday	0.5	0.5	1.25	4.0	20.0	0.30	--
<u>Adjusted for Auto Usage</u>							
Weekday	2.7	0.5	1.00	3.4	18.0	0.25	--
Saturday	0.5	0.5	1.00	3.6	18.0	0.30	--
<u>Adjusted for Month December</u>							
Weekday	2.7	0.5	0.85	3.4	16.2	0.13	--
Saturday	0.5	0.5	0.85	3.6	16.2	0.15	--
<u>Peak Spaces for Each Use</u>							
Weekday	675	100	170	340	243	39	1,567
Saturday	125	100	170	360	243	45	1,043
<u>Peak spaces at 2:00 PM Shared Use</u>							
Weekday	652	100	60	331	146	24	1,313
<u>Typical Requirement</u>							
Ratio	3.5	0.5	1.0	5.0	20	0.5	--
Spaces	875	100	200	500	300	150	2,125

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4. Designate adequate spaces for special purposes:
 - a. conveniently located spaces for handicapped;
 - b. adequate number and size of transit stops;
 - c. designated loading zones in active delivery areas.
5. Increase supply of public off-street spaces in conjunction with major development opportunities:
 - a. link new public parking physically and financially to development projects;
 - b. encourage and provide policy support for additional University parking.
6. Increase parking revenue devoted to parking system:
 - a. intensify enforcement;
 - b. dedicate greater portion of parking revenues for parking purposes;
 - c. adopt a moderate and fair parking fee schedule;
 - d. dispose of existing under utilized lots;
 - e. sell or lease air-right of existing garage.
7. Consolidate parking system management:
 - a. operation;
 - b. maintenance;
 - c. enforcement.

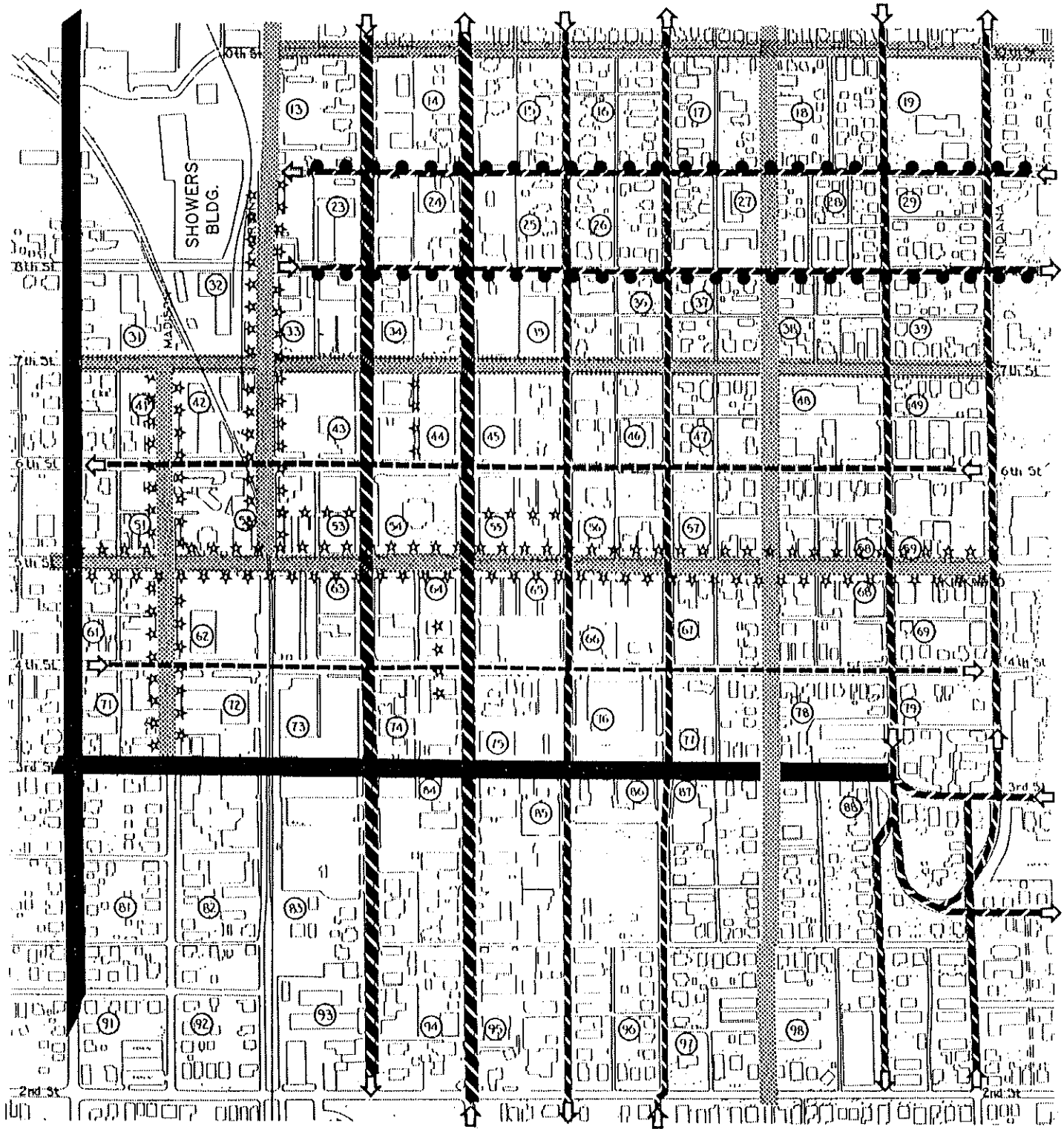
The limited review of this study provides a current indication of traffic and parking characteristics within and near the downtown area. This review, together with previous studies and local knowledge, provides a basis for the following additional recommendations:

- * Tenth Street between Morton and Rogers Streets should continue to function only as a service road for the Showers Building area due to inadequate geometrics and alignments.
- * Eighth Street between Morton and Rogers Streets should be abandoned and integrated into the planned parking area south of the Showers Building.
- * Eighth and Ninth Streets between Morton Street and Forrest Avenue should be designated as one-way bicycle routes, provided however that parking be removed, through traffic be discouraged, and pavement improvements and striping be installed.
- * Ninth Street between Walnut and Morton Streets should be improved to provide access to and from the Showers Building.
- * Madison Avenue between Third and Seventh Streets should be designated as a special corridor to provide access to and from the Showers Building and the Johnson Creamery.

- * The timing plans of the existing coordinated system of traffic signals should be reviewed and adjusted as appropriate in response to current traffic demands.
- * The extensiveness of the existing coordinated system of traffic signals should be reevaluated for possible expansion to include other routes in the transportation system that are experiencing increases in traffic volumes.
- * Fourth Street (eastbound) and Sixth Street (westbound) should be established as a one-way pair between Indiana and Rogers.
- * Kirkwood Avenue between Indiana and Rogers should remain a two-way street with landscaping and other amenities to encourage pedestrian usage.
- * Alleyways radiating from Courthouse Square should be improved for use by pedestrians.
- * A shared parking district should be considered for the area between Third, Tenth, Rogers and Morton to more efficiently use parking spaces and provide an incentive for redevelopment activities.








Figure 5 illustrates some of these recommendations.

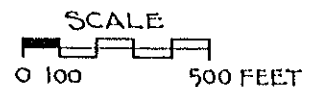
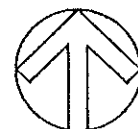
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CIRCULATION SYSTEM

FIGURE 5

-  MAJOR STREET, TWO WAY, EXISTING
-  MINOR STREET, TWO WAY, EXISTING
-  MAJOR STREET, ONE WAY, EXISTING
-  MINOR STREET, ONE WAY, EXISTING
-  MINOR STREET, ONE WAY, RECOMMENDED
-  BICYCLE ROUTE, RECOMMENDED
-  PEDESTRIAN AMENITIES, RECOMMENDED



TECHNICAL

APPENDIX

APPENDIX A

SAMPLE DATA COLLECTION FORM (Reduced)
BLOOMINGTON PARKING OCCUPANCY SURVEY

BLOOMINGTON PARKING OCCUPANCY SURVEY

BLOCK NO. 99 EXAMPLE Surveyor: PCB
FACILITY NO. 4 Date: 11/13/89

Time	Space Number																				Total Occupied
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
8:00	-	-	386	-	742	811	-	-	780	-	-	-	352	-	-	-	-	-	-	-	5
8:30	-	-	↓	-	↓	↓	-	611	↓	-	618	-	↓	-	463	-	-	-	-	-	8
9:00	211	-	586	215	-	-	-	471	↓	-	-	-	-	-	↓	-	-	-	-	-	8
9:30	↓	232	↓	↓	-	663	-	↓	-	788	-	115	174	222	-	173	-	-	-	-	10
10:00	-	↓	-	-	-	↓	-	↓	-	↓	-	-	-	-	-	-	-	-	-	-	8
10:30	611	↓	-	112	↓	315	-	↓	411	↓	-	115	↓	-	232	-	-	-	-	-	12
11:00	↓	↓	-	↓	↓	↓	291	↓	↓	-	-	-	115	↓	↓	-	-	-	-	-	12
11:30	-	511	623	↓	-	↓	↓	↓	-	663	-	251	↓	613	↓	-	666	-	-	-	11
12:00	232	↓	-	268	925	-	162	371	↓	↓	-	↓	251	↓	-	666	-	-	-	-	11
12:30	↓	↓	-	↓	↓	619	↓	↓	-	↓	-	858	813	↓	816	377	-	-	-	-	12
1:00	↓	252	371	↓	↓	↓	371	↓	411	↓	-	-	-	-	-	665	-	-	-	-	13
1:30	-	-	868	781	↓	↓	983	↓	↓	671	↓	↓	812	↓	↓	↓	-	-	-	-	13
2:00	-	611	↓	↓	↓	↓	612	↓	↓	328	↓	-	-	↓	↓	↓	-	-	-	-	13
2:30	815	↓	↓	↓	-	508	↓	↓	↓	↓	-	612	-	↓	↓	-	-	-	-	-	12
3:00	↓	↓	613	↓	415	↓	↓	↓	-	↓	-	358	-	212	↓	-	-	-	-	-	16
3:30	↓	↓	-	891	↓	↓	311	↓	-	↓	-	318	-	-	-	170	-	-	-	-	11
4:00	↓	↓	711	↓	-	↓	452	817	614	↓	-	↓	650	-	416	371	-	-	-	-	13
4:30	↓	-	↓	↓	-	↓	↓	↓	↓	↓	-	↓	↓	370	↓	↓	-	-	-	-	10
5:00	-	612	↓	↓	-	615	↓	↓	↓	↓	-	↓	↓	↓	↓	↓	-	-	-	-	7
5:30	-	↓	-	-	278	↓	↓	↓	↓	↓	-	211	-	417	↓	650	-	-	-	-	8
6:00	618	-	270	↓	↓	↓	↓	342	↓	↓	-	↓	515	-	278	↓	-	-	-	-	10
6:30	↓	-	-	617	↓	181	↓	↓	↓	431	↓	↓	↓	-	↓	↓	-	-	-	-	12
7:00	-	-	-	↓	-	↓	626	↓	↓	↓	-	↓	386	-	↓	980	-	-	-	-	8
7:30	-	-	412	-	-	↓	↓	-	-	-	-	-	↓	-	-	↓	-	-	-	-	5
Intervals Occupied	14	15	16	16	16	17	16	17	18	16	15	15	15	16	16						240
Different Vehicles	5	5	9	6	5	7	8	6	7	6	6	6	6	5	7						94

APPENDIX B

10/27/92 16:35

PARKING METER REVENUE 1991

REVENUE

	1990 Rate	1991 Rate	Jan 1991	Feb 1991	Mar 1991	April 1991	May 1991	Jun 1991	Jul 1991	Aug 1991	Sept 1991	Oct 1991	Nov 1991	Dec 1991	Total
Parking Lots/Garages															
Convention Center		1.00/day											190.05	4	202
Lot 1: 4th/Dunn	.20/hour	.50/hour	397	808	811	1,299	1,754	1,381	1,591	959	3,506	2,406	2,260	2,682	20,014
Lot 2: 7th/Walnut	.10/hour	.25/hour	188	400	456	462	340	288	307	163	445	303	307	450	4,279
Lot 3: 4th/Washington	.20/hour	.25/hour	894	1,038	1,298	1,286	1,219	1,222	1,959	1,092	2,293	1,680	1,555	2,191	17,712
Lot 5: 6th/Lincoln	.10/hour	.25/hour	166	307	292	556	391	6	307	207	402	337	425	340	3,897
Lot 6: City Hall	.10/hour	.25/hour	44	490	110	166	117	317	298	147	346	236	204	265	2,747
Lot 7: 7th/College (Register)	.10/hour	.25/hour	833	1,561	1,478	1,052	1,787	1,313	1,305	469	1,297	1,214	923	1,573	15,486
4th/Walnut Garage	.20/hour	.25/hour	1,780	1,330	1,297	1,090	1,958	1,414	2,129	2,245	2,104	2,718	1,937	2,169	22,985
Total			4,312	6,081	5,749	7,200	7,574	5,952	8,135	5,203	10,473	6,982	7,809	9,674	87,323
Leased Lots															
Lot 2: 7th/Walnut; 6/6 spaces	\$250/yr	same	295	0	0	0	0	0	0	0	0	0	0	0	295
Lot 4: 4th/Morton; 9/9 spaces	\$100/yr	\$125/yr	0	0	0	0	0	0	0	36	73	0	0	0	109
Lot 5: 6th/Lincoln; 16/16 spaces	\$250/yr	\$275/yr	3,180	0	0	210	0	219	270	111	15	0	0	0	4,005
*Red Permits, from \$45/qr to \$75/qr to \$170/yr	\$275/yr		14,794	4,340	476	6,000	2,211	2,619	6,327	2,512	3,004	6,094	646	37,190	96,302
Total Leased			18,269	4,340	476	6,200	2,211	2,838	6,507	2,660	3,092	6,094	646	37,190	\$90,712
Violations															
			10,877	16,184	18,200	35,560	19,361	15,067	16,444	17,256	39,720	25,286	33,195	23,815	\$271,764
TOTAL REVENUES:															<u>\$449,799</u>

PARKING REVENUE 1990

	Current Rate	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	
Parking Lots/Garages															
Lot 1: 4th/Dunn	.20/hour	582	810	742	690	623	466	400	754	827	953	980	681	8,516	
Lot 2: 7th/Walnut	.10/hour	227	395	391	343	362	267	254	331	348	236	324	299	3,777	
Lot 3: 4th/Washington	.20/hour	1,046	1,533	1,420	1,069	1,233	1,038	948	1,224	1,140	1,197	1,408	1,321	14,577	
Lot 5: 6th/Lincoln	.10/hour	236	374	325	255	278	223	216	294	252	251	344	298	3,346	
Lot 6: City Hall	.10/hour	54	76	66	59	58	61	83	113	90	94	101	80	955	
Lot 7: 7th/College (Register)	.10/hour	900	1,402	1,530	1,265	1,511	1,220	1,123	1,325	793	1,049	626	1,952	14,696	
4th/Walnut Garage	.20/hour	1,098	1,261	1,000	1,231	1,356	1,170	1,187	1,516	1,025	1,675	1,852	260	14,687	
Total		4,141	5,859	5,534	4,912	5,421	4,465	4,211	5,557	4,475	5,455	5,635	4,891	\$60,554	
Leased Lots															
Lot 2: 7th/Walnut; 6/6 spaces	\$250/yr	500	0	0	0	0	0	0	0	0	0	0	0	500	
Lot 4: 4th/Morton; 9/9 spaces	\$100/yr	900	0	0	0	0	0	0	0	0	0	0	0	900	
Lot 5: 6th/Lincoln; 16/16 spaces	\$250/yr	1,760	423	0	0	0	0	0	0	0	408	0	0	2,681	
Lot 7: Register; 75/75 spaces**	\$300/yr														
Register, 66/81 spaces**	\$30/mnth	Gen	3,040	3,456	2,597	2,252	2,252	2,212	2,221	1,525	61	2,023	1,233	22,070	45,562
4th/Walnut Garage	Gen	91	28	18	0	376	1,440	735	30	10	10	0	22,775	25,513	
Private Parking	\$26/yr	Gen	598	234	0	0	51	0	30	0	70	0	26	650	1,675
County Leased Parking	Gen												4,851	4,851	
Red Permits, \$45/quarter or	\$170/yr		9,259	552	5,622	4,367	505	1,000	0,101	2,616	3,552	4,029	178	25,559	64,007
Total Leased			16,648	4,608	8,236	6,619	3,264	4,675	9,175	4,171	3,701	7,160	1,437	75,904	\$145,609
TOTAL HOURLY and LEASED:															
Violations		7,250	13,401	15,056	14,190	8,895	9,028	29,687	25,404	14,957	18,217	18,094	9,699	183,885	
TOTAL GENERAL FUND:															\$77,601
TOTAL NON-GENERAL FUND:															\$312,527

**Register yearly and monthly lease revenue is combined on one line.

APPENDIX C-1

Parking Survey for Downtown Businesses/Offices

This survey is being conducted by the City of Bloomington Public Works Department as part of an analysis of downtown parking. We encourage you to complete this survey and bring it to the Municipal Building, or affix a stamp to the self-addressed form, and mail the survey by September 18. If you have any questions, please call the Public Works Department at 331-6410.

Name of Business _____

Type of Business _____

Your Name _____ Position _____

I. SERVING YOUR CLIENTS

1. How often is there enough parking available near your business to accommodate your shoppers and clients?

How would you describe the availability of parking for your shoppers and clients?

Always Enough 1 2 3 4 5 Never Enough

Please describe the parking situation near your place of business for shoppers and clients

About how many additional parking spaces would you need to meet the peak demand? _____

2. Do you have a private parking facility for your customers?

Yes _____ No _____

3. What kind of parking do most of your customers/clients require?

_____ 15 minute spaces _____ 1/2 hour spaces
_____ 1 hour spaces _____ 2 hour spaces
_____ 3 hour spaces _____ More than 3 hours

4. What is the most common customer complaint you get regarding downtown parking?

_____ Time Limits _____ Cost
_____ Location _____ Availability
_____ Other (Please describe below)

5. How important are:

Table with 5 rows and 5 columns. Columns: Not at all Important, 2, 3, 4, Very Important. Rows: More signage to direct visitors to parking..., More trees and benches, even if we lose parking..., More pay lots..., IU bus stop on Square..., Reinstate parking meters instead of some 2-hr zones...

APPENDIX C-2
II. SERVING YOUR EMPLOYEES

1. How often is there enough parking available near your business to accommodate your employees?

How would you describe the availability of parking for your employees?

Always Enough Never Enough
1 2 3 4 5

Please describe the parking situation near your place of business for employees

2. Do you have a private parking facility for your employees?

Yes _____ No _____

3. How many full-time employees at your place of business? _____ part-time? _____

4. What type of parking do most of your employees use (Check one):

_____ On Street _____ Metered Spaces
_____ Garage Space _____ Private Employee Space
_____ Paid Permit Parking (City or private)
_____ Car pool _____ No Car (Bike, Walk, etc.)
_____ Various Types _____ Don't Know

5. What are the most common employee complaints regarding downtown parking?

_____ Time Limits _____ Cost
_____ Location _____ Availability
_____ Other (Please describe below)

III. FINAL COMMENTS

1. In your opinion, what problems do you see with the current downtown parking situation?

2. What solutions do you feel would improve Bloomington's downtown parking?

APPENDIX D-1

ACCIDENTS FOR 1991		P.D.	P.I.	P.D.	P.I.
2nd/Rogers	1	1	2nd/Lincoln	2	0
Howe/Rogers	5	0	Lincoln/Smith	1	0
Rogers/Smith	0	0	3rd/Lincoln	3	0
Prospect/Rogers	1	0	4th/Lincoln	3	1
3rd/Rogers	4	1	5th/Lincoln (Kirkwood/Lincoln)	4	0
4th/Rogers	3	6	6th/Lincoln	1	1
5th/Rogers (Kirkwood/Hadison)	10	4	7th/Lincoln	3	0
6th/Rogers	7	2	8th/Lincoln	1	0
7th/Rogers	6	2	9th/Lincoln	1	0
8th/Rogers	2	0	10th/Lincoln	3	0
11th/Rogers	4	0			
			2nd/Grant	1	0
2nd/Hadison	1	0	Grant/Smith	0	0
Howe/Hadison	0	0	3rd/Grant	13	2
Hadison/Prospect	0	0	4th/Grant	0	0
3rd/Hadison	0	1	5th/Grant (Grant/Kirkwood)	2	2
4th/Hadison	1	1	6th/Grant	5	0
5th/Hadison (Kirkwood/Hadison)	2	1	7th/Grant	1	0
6th/Hadison	2	4	8th/Grant	0	1
7th/Hadison	0	0	9th/Grant	1	0
8th/Hadison	0	0	10th/Grant	6	1
2nd/Horton	2	0	2nd/Dunn	0	1
3rd/Horton	1	0	Dunn/Smith	0	0
4th/Horton	0	0	3rd/Dunn	14	1
5th/Horton (Kirkwood/Horton)	0	0	4th/Dunn	10	3

1991: 51 to 19:111
 PD = Property Damage
 PI = Personal Injury
 50000

6th/Horton	1	0	5th/Dunn (Dunn/Kirkwood)	7	0
7th/Horton	0	0	6th/Dunn	2	1
8th/Horton	1	0	7th/Dunn	12	1
9th/Horton	1	0	8th/Dunn	3	0
10th/Horton	1	0	9th/Dunn	0	0
			10th/Dunn	10	1
2nd/College	17	2			
College/Smith	1	0	2nd/Indiana	0	0
3rd/College	31	4	Buntor/Indiana	0	0
4th/College	6	0	Indiana/Smith	0	0
5th/College (College/Kirkwood)	11	3	3rd/Indiana	9	0
6th/College	2	2	4th/Indiana	7	0
7th/College	9	0	Alwater/Indiana	2	0
8th/College	4	0	5th/Indiana (Indiana/Kirkwood)	5	1
9th/College	3	1	6th/Indiana	2	0
10th/College	10	1	7th/Indiana	5	0
			8th/Indiana	3	1
2nd/Walnut	9	1	9th/Indiana	1	0
Smith/Walnut	0	0	10th/Indiana	9	1
3rd/Walnut	9	1			
4th/Walnut	5	0	9th/Prow	0	0
5th/Walnut (Kirkwood/Walnut)	2	2	10th/Prow	0	0
6th/Walnut	8	0			
7th/Walnut	18	2	Allco/Grant	0	0
8th/Walnut	1	0	Allco/Harold	0	0
9th/Walnut	2	0	9th/Harold	0	0
10th/Walnut	11	1			

2nd/Washington	2	1	700 N to 599 N Rogers St	15	2
Smith/Washington	1	0	700 N to 599 N Hadison St	0	1
3rd/Washington	15	2	700 N to 599 N Horton St	6	0
4th/Washington	5	1	700 N to 599 N College Av	45	3
5th/Washington (Kirkwood/Washington)	3	1	700 N to 599 N Walnut St	34	4
6th/Washington	1	0	700 N to 599 N Washington St	4	0
7th/Washington	4	0	700 N to 599 S Lincoln St	3	1
8th/Washington	0	0	700 N to 599 S Grant St	1	1
9th/Washington	0	0	700 N to 599 S Dunn St	14	1
10th/Washington	2	1	700 N to 599 S Indiana Av	6	2
500 W to 600 E 2nd St	7	1	500 W to 600 E 9th St	0	0
500 W to 600 E 3rd St	4	1	500 W to 600 E 10th St	2	0
500 W to 600 E 4th St	15	2	500 W to 600 E 11th St	0	0
500 W to 600 E 5th St	4	4	500 W to 600 E Smith Av	0	0
500 W to 600 E 6th St	10	0	500 W to 600 E Howe St	1	0
500 W to 600 E 7th St	12	0	500 W to 600 E Prospect St	0	0
500 W to 600 E 8th St	4	0	500 W to 600 E Kirkwood Av	3	1

APPENDIX D-2

Station Number	Description	ADDT	Date	Dir	P-Hour Travel	Peak Hour
1	Walnut St - (3rd & 4th)	12891	Jul-90	nb	923	4:00 PM
2	Smith - (Madison & Morton)	53	Jul-90			
3	Washington - (6th & 7th)	2329	Dec-91	sb	220	3:00 PM
4	Roger - (2nd & 3rd)	11600	Jul-91			
5	Roger - (3rd & 4th)	11240	Jul-91			
6	Roger - (4th & 5th)	12053	Jul-91			
7	Roger - (5th & 6th)	12293	Jul-91			
8	Morton - (25' S of 7th)	1448	Jun-87			
9	College - (8th & 9th)	13771	Jul-90	sb		
10	College - (11th & 14th)	14468	Dec-91	sb	1004	4:00 PM
11	Roger - (Allen & Dixie)	10683	Apr-92			
12	Walnut St - (Drissell & Grime)	20578	Feb-92			
13	Washington - (Drissell & Grime)	1707	Jul-92	sb		
14	Washington - (1st & 2nd)	3599	Jul-92	sb		
15	Lincoln - (S of 4th)	3790	Oct-91	nb		
16	Lincoln - (5th & 6th)	2474	Dec-91	nb		
17	Lincoln - (1st & 2nd)	2325	Jul-92	nb		
18	Grant - (5th & 6th)	542	Feb-92	nb		
19	Grant - (6th & 7th)	289	Jan-92	sb		
20	2nd - (W of College)	13529	Sep-90			
21	3rd - (Lincoln)	10378	Nov-91	wb		
22	3rd - (Lincoln)	8651	Nov-91	eb		
23	4th - (100' E of Madison)	2353	Oct-89			
24	4th - (w of Lincoln)	2273	Oct-91	eb		
25	4th - (e of Lincoln)	1621	Oct-91	wb		
26	6th - (Lincoln & Washington)	893	Dec-91	eb		
27	6th - (Lincoln & Washington)	1906	Dec-91	wb		
28	6th - (Lincoln & Grant)	1072	Feb-92	eb		
29	6th - (W of Madison)	1214	Jul-92	eb		
30	6th - (E of Madison)	1147	Jul-92	wb		
31	7th - (Morton & Madison)	3884	Dec-91			
32	8th - (Dunn & Indiana)	135	Dec-91	eb		
33	8th - (Dunn & Indiana)	426	Apr-89			
34	10th - (W of Indiana)	4801	Nov-90	eb		
35	10th - (Lincoln & Grant)	11011	Dec-91			
36	11th - (Morton & Collge)	4112	Dec-91			
37	Indiana - (3rd & 4th)	8479	Nov-89			
38	Indiana - (S of 10th)	3208	Nov-90	nb		
39	Indiana - (N of 10th)	3894	Nov-90	sb		

APPENDIX D-3

Traffic Signal Locations
City of Bloomington
12/91

LOCATION #	NAME	LOCATION #	NAME
1	17TH & COLLEGE	31	17TH & DUNN
2	11TH & COLLEGE	32	17TH & FEE
3	10TH & COLLEGE	33	17TH & KINSER
4	7TH & COLLEGE	34	5TH & ROGERS
5	6TH & COLLEGE	35	3RD & JORDAN
6	5TH & COLLEGE	36	3RD & HIGH
7	4TH & COLLEGE	37	3RD & WALNUT
8	2ND & COLLEGE	38	3RD & COLLEGE
9	17TH & WALNUT	39	3RD & ROGERS
10	10TH & WALNUT	40	3RD & WASHINGTON
11	7TH & WALNUT	41	3RD & INDIANA
12	6TH & WALNUT	42	WINSLOW & WALNUT
13	KIRKWOOD & WALNUT	43	3RD & WOODSCREST
14	4TH & WALNUT	44	1ST & COLLEGE
15	2ND & WALNUT	45	COLL. MALL & COVENANTER
16	1ST & WALNUT	46	3RD & MADISON
17	GRIMES & WALNUT	47	WINSLOW & HENDERSON
18	HILLSIDE & WALNUT	48	3RD & LINCOLN
19	10TH & INDIANA	49	3RD & DUNN
20	10TH & FEE	50	COLL. MALL & EASTLAND
21	10TH & JORDAN	51	OLD SR 37 & N. WALNUT
22	10TH & SUNRISE	52	HILLSIDE & HIGH
23	10TH & UNION	53	HOSPITAL ER & W. 1ST
24	JORDAN & LAW	54	COLL. MALL & MOORE'S PIKE
25	JORDAN & ATWATER	55	MILLER & WALNUT
26	10TH & WOODLAWN		
27	2ND & ADAMS		
28	2ND & ROGERS		
29	2ND & HIGH		
30	2ND & COLL. MALL		

Call 812-332-9928 24 hours a day for information, facilities location, or to report a problem.

For College & Walnut

65 sec cycle (off-peak)

75 sec cycle (Peak)

7:00am to 9:00am

11:30am to 1:30pm

3:00pm to 6:00pm

*25 mph
from 2nd to 10th*

Ralph John Merkle
Traffic Control Specialist
City of Bloomington
1901 S. Henderson
Bloomington, In. 47401