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**NEWARK TRANSPORTATION STUDY  
BASIC TRAFFIC DATA REPORT**

**Prepared For**

**THE NEW JERSEY STATE HIGHWAY DEPARTMENT  
IN COOPERATION WITH  
THE U. S. DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS**

**1961**

**EDWARDS AND KELCEY, INC.**

**DE LEUW, CATHER & COMPANY**

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EDWARDS AND KELCEY, INC.

DE LEUW, CATHER & COMPANY

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**EDWARDS AND KELCEY, INC. - DE LEUW, CATHER & COMPANY**  
A Joint Venture for The Newark Transportation Study

Mr. Dwight R. G. Palmer  
State Highway Commissioner  
New Jersey State Highway Department  
1035 Parkway Avenue  
Trenton 25, New Jersey

Subject: Newark Transportation Study  
Basic Traffic Data Report

Dear Commissioner Palmer:


Pursuant to the terms of our agreement with the State of New Jersey, dated May 12, 1960, we herewith submit our report entitled, "Basic Traffic Data--Newark Transportation Study." The purpose of this report is to detail the procedures employed in the collection and development of highway traffic data and to present tabulations of the findings. Thus, the technical detail may be omitted from the main project report.

We would like to acknowledge the cooperation received throughout this study from the officials of your Department, from the Bureau of Public Roads and from the various city and county agencies.

Very truly yours,

EDWARDS AND KELCEY, INC.

DE LEUW, CATHER & COMPANY

  
George H. Leland

  
Robert B. Richards

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## INTRODUCTION

Existing traffic data were collected from various sources and evaluated in terms of their usefulness to the Newark Transportation Study. These data were supplemented with original traffic surveys which were made as a part of this study. The intent in this report is to describe the methods employed in both the survey and analysis stages of traffic data development, as well as to present a detailed compilation of all basic data.

We assume that the material contained herein will be useful in the detailed solution of specific problems, both now and in the foreseeable future. Further, to the extent that unpredictable events may affect the proposed master plan as envisioned by the present study, these data will provide a convenient base for determining adjustments which may become necessary.

## TRAFFIC SURVEYS

### Origin and Destination Data

Origin and destination data have been collected from three independent sources in order to determine the basic travel patterns of people within the Newark area.

To facilitate the identification of similarly-oriented traffic, 123 origin and destination zones were established. The zones within and in proximity to Newark are detailed in Figures 1 and 2; all remaining zones are described in the Appendix. There are 53 zones within Newark as defined by the external cordon line, and 70 zones in areas outside the cordon. The internal area is composed of 16 zones within the Central Business District and 37 zones lying between the Central Business District and the cordon line. Because of the physical location of the cordon, there are 12 zones within the city limits which lie outside the cordon; these are the 300 series zones. The remaining 58 external zones are arranged in a generally radiating pattern and are broadly identified as the 400 through 900 series.

### External Cordon Survey

The majority of data, comprising about 80% of all origin and destination data, was obtained from an external cordon survey conducted in June, 1960. This phase of the data collection process provided origin and destination information on trips between zones lying outside the

survey cordon (through trips), and trips between zones lying outside the cordon and zones within the cordon (external to internal trips).

The survey cordon was established to surround the major portion of Newark, as shown in Figure 2. Also shown are 39 stations representing the actual 42 locations at which driver interviews were obtained.

Outbound drivers were interviewed during the three-hour period from 3:00 P.M. to 6:00 P.M. daily, exclusive of Fridays. In addition to obtaining the origins and destinations of drivers, the vehicle type, vehicle occupancy and trip purpose were recorded. The interview form used is included in the Appendix.

Some 16,323 acceptable interviews were taken during the survey period, representing 22.6% of the 72,190 vehicles crossing the cordon in the outbound direction during the three-hour period. All vehicles passing the stations in both directions in this period were counted manually and classified as to vehicle type. These counts were supplemented by 24-hour two-directional ATR counts at each station.

The interviews obtained during each hour at each station were expanded to 100%, according to vehicle class. This was done by relating the number of vehicle interviews in a particular class to the total hourly vehicle count of the same class. All vehicles except buses were classified as either passenger or commercial; buses were considered in another phase of the study.

The resultant three-hour, one-directional trip data were further expanded to a 24-hour, two-direction base by relating the total of the three-hour classification volume counts in the direction of the interview to the total of the 24-hour, two-directional volume counts similarly recorded at each station. A distinction was made, however, to differentiate between external to internal trips and external to external trips. The latter, having crossed the cordon twice, were expanded by a factor equal to about one-half that used for trips originating or terminating within the cordon.

The survey disclosed 530,400 trips entering and leaving the Newark cordon area daily, of which about 85,600 are external to external, or "through" trips. Trips through Newark made wholly on Routes 1 and 9, Route 22, the New Jersey Turnpike and Garden State Parkway are not included because these routes are outside the cordon.

External to external trips and external to internal trips are summarized in Tables 1 and 2.

#### Internal to Central Business District Survey

A downtown parking survey was conducted concurrently with the external cordon survey as another phase of this study. It provided three-hour, one-directional origin and destination data on trips between the Central Business District and internal zones; these data represented approximately 5% of the entire volume of trip data developed.

The three-hour, one-directional trip data were expanded to a 24-hour, two-directional base by relating three-hour, one-directional intersection count volumes to 24-hour, two-directional volumes at a number of intersections on the periphery of the parking survey area. There are

24,900 trips daily between the Central Business District and other internal zones. There are an additional 7,600 intra-zonal trips. Table 3 summarizes the trip transfers between the Central Business District and all internal zones.

#### Internal to Internal Trip Data

The 1945 origin and destination survey conducted by the New Jersey State Highway Department provided trip data on movements not developed in the above-mentioned surveys, i. e., trips between internal zones exclusive of the Central Business District. This material accounted for approximately 16% of all trip data. After relating the 1945 and 1960 zones, the 1945, 24-hour, two-directional trip data were expanded to 1960 by the following procedure:

- a. Selected external to internal trips were extracted from the 1945 study and compared with similar 1960 data, the magnitude of growth averaging about 2.3.
- b. All trips from internal zones to the Central Business District were extracted from the 1945 study and compared with similar 1960 data, the magnitude of growth being about 1.3.
- c. The above factors were averaged and compared with increases in traffic volumes at representative State ATR locations. A composite growth factor of 1.6 from 1945 to 1960 was determined.

There are 45,600 trips daily between internal zones, exclusive of the Central Business District. There are an additional 61,700 intra-zonal trips. Table 4 summarizes trip transfers between internal zones.

### Traffic Volume Data

Traffic volume data were gathered from many sources in order to determine the traffic flows on major streets within the study area, with particular emphasis on the Central Business District.

#### Traffic Volume Counts

Numerous traffic counts for varying periods of time were obtained from State, City and County agencies. These were supplemented by about forty additional intersection counts taken during June, 1960, between the hours of 3:00 p.m. and 6:00 p.m. daily, except Fridays; more than 100 ATR counts also were made. Vehicle classification was included in the counting procedure at a representative number of these intersections.

All data were adjusted to a common 1960 average weekday base, as follows:

- a. Traffic counts taken prior to 1960 were up-dated using appropriate annual patterns taken from permanent State counting stations in various sections of the area. Counts taken prior to 1954 were not used.
- b. All traffic counts were expanded to a 24-hour base by using the hourly patterns obtained from interview stations at the cordon, internal ATR counts and counts obtained from the State's permanent counting stations.
- c. All traffic counts were then adjusted for daily and monthly variations by using patterns taken from permanent counting stations.

The integration of adjusted and balanced traffic volume data formed the basis for the development of 1960 average weekday traffic flows.

### Other Data

#### Intersection Capacity Data

During the months of July and August, 1960, an inventory was made of approach widths, bus-stop locations, parking regulations, and signal timings at numerous intersections to supplement similar data obtained from City and County agencies. The information obtained in this manner was used in the subsequent analysis and is covered in a later section of this report.

#### Speed and Delay Surveys

Speed and delay data were collected to ascertain the fluctuation in driving time and the location and magnitude of delays encountered on major streets in the study area. During the months of June, July and August, 1960, 129 speed and delay runs were made on specific control sections of the major street network. The floating car technique was used, with runs being made between 3:00 p.m. and 6:00 p.m. daily. At least three runs were made on each section, the runs began at the intersection of Broad and Market Streets in the Central Business District. These data are summarized graphically in Figure 3.

## TRAFFIC ANALYSIS

### Travel Patterns and Characteristics--1960

#### Travel Desires--1960

Desire line charts reflecting external to external, external to internal, internal to internal and internal to the Central Business District transfers have been developed. In each instance, trips are considered as being distributed between centroids in accordance with the zonal grouping procedure used.

For the purpose of consolidation, zones within Newark have been grouped into areas and designated A, B, C, D, and E. Zones in the 300 series form areas F, G and H, while zones in the 400, 500, 600, 700, 800 and 900 series have been grouped accordingly and are referred to as the 400 series, etc. The groupings used are listed in the Appendix.

A composite desire line chart was also developed, necessitating the establishment of a series of inner and outer ring zones external to the area within the survey cordon. These are listed in the Appendix.

The procedure for the development of the composite desire lines required the establishment of definite trace paths through zonal centroids of the inner and outer rings and the area centroids within Newark. Transfers were assigned to a path connecting two centroids, and differentiation was made between (a) trips passing through both centroids, (b) trips between the areas of both centroids and (c) trips passing

through one centroid and terminating in the area of the second. Table 5 lists in detail the composition of each of the travel bands.

Desire line charts and corresponding summary tables are presented in the main study report.

#### Traffic Flows--1960

Average weekday traffic flows on all major streets and highways, with emphasis on the downtown area, are illustrated in the main report.

#### Demand vs. Capacity

Capacity analyses were made at 135 intersections on various approaches to determine the manner of accommodation of peak hour traffic. On each approach, volumes were expanded to a 24-hour base, and the directional peak hour percentages determined. These percentages were applied to the balanced flow map volumes to find corresponding peak hour volumes. The maximum peak hour volume on an approach was considered to reflect the period of maximum demand and was compared with practical capacity values. A composite demand vs. capacity plot was prepared, indicating approaches at which the demand exceeds or is within 80% of the practical capacity. This chart is presented in the main report. Practical capacity was computed on the basis of design capacity charts published by the Bureau of Public Roads. These charts take into account turning movements, commercial vehicle percentages, parking regulations, bus stops and the percentage of green time available.

## Future Traffic

### Projections to 1980

Based on future land use, population and motor vehicle data obtained from city and state planning agencies, factors were developed which reflect zonal growths to the year 1980. These factors were used in the establishment of 1980 origin and destination patterns and the determination of 1980 traffic volumes. In all instances, the factors developed are predicated on persons per vehicle ratios obtained from the New Jersey State Highway Department, as listed in Table 6.

Within Newark, growth factors were developed by considering all zones grouped into thirteen neighborhoods for which basic planning data were available. The zones in a particular neighborhood were generally given the same growth factor, with adjustments made for zones falling into more than one neighborhood or those expected to experience growths different from the neighborhood trend.

Neighborhoods were classified in consideration of anticipated redevelopment. A neighborhood not to be redeveloped will experience no significant changes in land use and density, and future trip generation in these neighborhoods will primarily be a function of increased motor vehicle registrations. Population projects for each neighborhood in this group were made, stabilization being assumed if a negative trend was encountered. The population figures for 1960 and 1980 for all zones in each neighborhood were modified by corresponding projections

of persons per vehicle ratios for Essex County to obtain the growth factors.

With the exception of the downtown area, most of the redevelopment is expected to occur in the industrial areas. Growth factors for industrial neighborhoods were developed by estimating the numbers of acres in use in 1980 and relating them to similar values in 1960.

For these purposes, the downtown neighborhood was considered to include two proposed redevelopment sections, each of which was treated separately. One is the Central Business District; the other is the remainder of the downtown neighborhood. A growth factor was established for the zones constituting the portion of the downtown neighborhood exclusive of the Central Business District by estimating the 1960 and 1980 populations from the number of dwellings and the persons per dwelling ratios. These values were modified by the 1960 and 1980 persons per vehicle ratios for Essex County.

For the Central Business District, the same procedure as above was applied to the residential portion. In the non-residential portion (commercial, industrial and institutional), the combined acreage was estimated for both 1960 and 1980 and modified by the corresponding persons per vehicle ratios for Essex County. A further modification was made by applying a functional weighting to each segment of growth, residential growth being all but discounted.

The general procedure for the development of growth factors in zones external to Newark was to determine 1960 populations and projected 1980 values and modify these by the corresponding persons per vehicle ratios. In zones composed of single municipalities, population projections were made and modified by the corresponding 1960 and 1980 persons per vehicle ratios for the particular county in which the municipality is located. Factors for zones composed of a number of municipalities for which it was possible to make a population estimate were developed in the same manner as were single municipalities. Where a single county or number of counties comprised a zone, the projected 1980 growth factors, based on county population figures, were modified by either the county persons per vehicle ratios (as in the first case) or corresponding State values (as in the second case).

When a zone was located beyond the limits of the State, a relationship between the national motor vehicle registrations in 1960 and 1980 was used to develop the growth factor.

Table 7 lists the populations, persons per vehicle ratios and resulting growth factors used in this study.

#### Trip Tables--1980

Zonal interchanges for 1980 were obtained by expanding similar 1960 data by the average factor method. In this manner external to internal, external to external, internal to the Central Business

District and internal to internal trip tables for 1980 were developed and are presented in Tables 8, 9, 10 and 11, respectively.

#### Travel Desires - 1980

Zonal interchanges were summarized from the detail trip tables and desire line charts. The charts and tabular summaries are included in the formal report. Detailed supporting data for the composite desire chart are included in Table 12.

#### Traffic Flows - 1980

By utilizing a modified, weighted growth factor developed for each internal area or zonal grouping (i. e., A, B, C, D and E), traffic flows for 1960 have been expanded on an individual area basis to reflect 1980 flows on existing streets, assuming no improvements.

Area factors have been determined by weighting the growth factors of individual zones within an area in terms of the total number of zonal trip ends, as obtained from the trip tables. This was done for each category of trip--internal to internal, external to internal, and internal to the Central Business District--producing a variable number of factors for each area according to the categories involved. A weighted average factor for each internal area, with values ranging from 1.3 to 1.5, was calculated as follows:

$$gf \text{ Area} = \frac{\sum (gfi \cdot ti)}{\sum ti}$$

gf = area growth factor

ti = trips generated in a zone

gfi = growth factor for a zone.

The same procedure was applied to zones external to the cordon, developing one factor for each series. These values for the 400, 500, 600, 700, 800 and 900 series varied from 1.4 to 1.7.

Each internal area factor was modified to reflect the influence of adjacent areas. Thus, in expanding flows in a given area, the area is given a weight equal to the sum of the single weights of the surrounding areas, as follows:

$$gfiw = \frac{(gfi \cdot ti \cdot wi)}{ti \cdot wi}$$

gfiw = weighted growth factor for an area  
gfi = growth factor for an area or series  
ti = trips in an area or series  
wi = weight value for an area.

The values used for the expansion of traffic flows in Areas A, B, C, D and E are 1.5, 1.4, 1.4, 1.4 and 1.4, respectively. Balancing procedures were applied between segments of the flow map expanded by different weighted factors.

#### Traffic Assignment

Comparative preliminary traffic assignments were made to alternate freeway networks from 1980 desire line data. The recommended system was selected on the basis of these preliminary assignments in conjunction with estimates of anticipated relief on presently overloaded city streets as well as cost and land use considerations.

A detailed traffic assignment was made to the selected freeway system for 1960 and 1980, utilizing an IBM 650 electronic computer. A

"Trip Trace" routine was used to determine the net effect of diversion to and from the city street system. The method used involves tracing zonal interchanges over a network of precoded legs corresponding to existing and proposed traffic facilities for which times and distances have been determined. The machine compares the alternate routings and calculates the percentage diversion to the new facility, the diversion being a function of the relative time saved, and retains the remaining traffic on the comparative route. Thus, the output for each coded leg consists of (a) the original traffic volume (without improvements), (b) diversion to a new facility, (c) traffic remaining after the diversion, (d) traffic reassigned back to the original route and (e) the net traffic with improvements.

Running times on the various arteries as determined from the 1960 survey were modified to reflect anticipated improvements. Peak period running times were determined in accordance with American Society of State Highway Officials design standards for freeways and for improved city street conditions.

#### Traffic Flows - 1980 - With Improvements

One function of the traffic assignment was to determine the effect of the proposed system, in terms of net traffic change, on the 1980 flow map. Here the effects of diversion to freeways, improved city streets and change in distributional pattern determine the amount of traffic relief or increase on a particular street. The flow map shown in the main report reflects the net effects of the proposed improvements.

### Other Considerations

As in most instances, the basic mechanical processes employed in the analyses and interpretation of traffic data required subjective refinement and adjustment. The principal effort and the collection of data in this study have been directed toward the problems besetting Newark. Not included in the present traffic surveys, although important regarding the proposed freeway complex in Newark, are the elements of through traffic which will be attracted from routes lying outside the cordon. These elements were accounted for by utilizing traffic forecasts and assignments made to the proposed interstate routes in 1958 by the New Jersey State Highway Department. These estimates include Newark-oriented traffic and the major elements of through traffic not revealed by the present study. The total traffic assigned to the freeway network includes Newark-oriented traffic as determined by the present study and the through elements forecast by the State.

Further, since traffic forecasting for the interstate system is usually predicated on the year 1975 as the design year, it was appropriate to adjust the 1980 freeway assignments to provide continuity in terms of connecting portions of the system. Thus, while the Newark Transportation Study, including the affected elements of the interstate systems, is oriented to the year 1980, a supplementary

analysis was made to reflect 1975 freeway traffic flows. These data are included in the main report.



**T A B L E S**



TABLE 1

1960 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	G								F				H				TOTAL									
	ZONE	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL	400	401	410	421	440	450	461	471	493	TOTAL
A	11			77		24		103	204	50	42	65	157		35	35	94	57		56		62				269
	12	49	53	43	51		25	58	279		35	100	135	144	120	264	144	175	102	188	57	499		196	51	1412
	14	100		140		103		107	450	61	167	208	436	234	370	604	151	95	85	134		61	56	56		638
	18		43			25			68		109	36	145	35	45	80	231	275	40	58		61		128		793
	19	61	58	61	51		36		267			78	78	32	65	97	98	151	93	112		209		113		776
	21					93	35		128	95	44	118	257	61	199	260	205	338	96	248	57	316	40	57	53	1410
	22	287		167		61	72	163	750	92	169	219	480	361	619	980	566	376	257	401	116	676	367	592	91	3442
	23	66							66						85	85	37	20	37							181
	24	39		53	31		66	61	250		60	155	215	69	84	153	137		97	119	57	389	31	233		1063
	25					38			38		59	104	163	45	65	110		96		98	77	183		81		535
	26							43	43		99	100	199	70	13	83	37	113		77		243		239		709
	28	40	40					51	131		44	148	192		92	92				79	56	278		95		508
	29							37	37	22	87	31	140	100		100	98	56	57	95	57	57		56	49	525
	32			61	20	25	35	56	197		226	141	367	39	35	74	56	209	20	140	40	514		237	49	1265
41														45	45			36	127		57		107		327	
42							53	53		21	13	34	44		44				57		123		56		236	
TOTAL	642	194	602	153	369	269	732	2961	320	1162	1516	2998	1234	1872	3106	1854	1961	920	1989	517	3815	494	2246	293	14089	
B	50		91		56	95	146	103	491		42	32	74	47	45	92	51	53		107		89		71	56	427
	51				24	56		122	202		44	114	158		32	32	20	169	76	57	56			56	434	
	52		83				158	51	292		44	12	56		76	76	82	93		39	36	149		51	450	
	60		56			76	68	56	256		35	38	73				114	157	57	290		227	94	58	20	1017
	61	61	58	76	25	241	107	143	711	41	179	250	470	167	315	482	349	647	265	431	103	599		369		2767
	70					78	103	51	232		13	81	94	163	45	208	53	294	20	51		149		76		643
	71	102		20	24	340	144	44	674		69	149	218	71	130	201	95	164		131	71	430	24	45		960
	80	82			36	133	451	24	726		148	181	329	194	76	270	171	273	201	244	25	619		117		1650
	TOTAL	245	288	96	165	1019	1177	594	3584	41	574	857	1472	642	719	1361	935	1850	623	1350	291	2262	118	787	132	8348

TABLE 1 - Continued

1960 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	G								F				H				TOTAL									
	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL	400	401	410	421	440	450	461	471	493	TOTAL	
C	90	800	20	222		82	110	834	18	36	74	128	45	155	200	460	377	114	272	43	766	61	469	17	2579	
	100	114	58	378	25	176	113	176	16	177	213	406	295	227	522	257	505	203	240		838	113	282		2438	
	103		85					99		184	113	113	54	150	204	161	120		61		296		212		850	
	140	793	779	494	53	95		455	2669		44	13	57	36	34	70	529	293	227	377		176		66	1668	
	150	185	77	152	53	95		99	661	22	21	32	75	26	206	232	231	143	39	127		365	43	190	1138	
	155	113	85	62		51	40		351	22	14	76	112	77	130	207	159			226	37	121		97	829	
	156	60		53	56	132		301		16	74	90	88	84	172	53	154		20	40	79		23		369	
	210	245	39	277		72	96	75	804		120	54	174	208	464	672	417	232	285	71		194	36	59	1294	
	220	254		98	25		157	183	717		19	119	138	113	327	440	76	293	37	270	53	371		131	1231	
	230	97		53		24			174		76	17	93	61	370	431	102	122	36	187	13	155		80	695	
	231	121	85	75					281	19	82	171	272	572	424	996		197	37	246		104		68	652	
	239			44	35	35		36	150	33		108	141	399	194	593	35							65	85	185
	TOTAL	2382	1228	1908	247	680	488	1233	8156	130	718	951	1799	1974	2765	4739	2480	2625	978	2097	186	3465	253	1742	102	13928
D	160	60	85		20	25			190	91	100	32	223	65	127	192	103	53		57		121		113		447
	161	111	85	114					310		176	68	244	181	160	341	95	37			23	120	62	98	37	472
	162			23		25			48		175	72	247	32	203	235	62	57	80	37	99	261		159		755
	170	85		77		20			182	41	171	265	477	31		31	113	113		83	43	934		96	1382	
	173	104							104		289	297	586	31	153	184	40	105		37		69		66	317	
	174				24	66	56		146		152	145	297	102	84	186	57	98	74	36	58	183		80	586	
	240	60		212	25	20	58		375	49	274	454	777	837	658	1495	224	948	86	174		130	65	119	1746	
	250	140	101	128		161	102		632	89	546	987	1622	239	441	680	136	140	64	204	60		38	136		778
	251				64				77	61	386	635	1082		180	180	29			37		79	49	122	49	365
	255			44		77		38	159		171	160	331	69	138	207		126	59	82		21		29	96	413
	TOTAL	560	271	898	109	352	226	107	2223	331	2440	3115	5886	1587	2144	3731	859	1677	363	747	283	1918	214	1018	182	7261
E	180	125			194	42			361	63	600	672	1335	69	49	118	88	64	103	94		103		60		512
	183	56			44	206		25	331	68	224	284	576	149	152	301	347	170	37	57	195		191		1034	
	190		56			25	31		112	182	271	103	556	44	111	155				215				105		320
	191	77			147	67	93		384	165	1070	829	2064	33	198	231					89	41	196	36	272	
	200	175	56	105	57	60		73	526	248	590	194	1032	59	368	427	160	37	28	41	37	226		411		940
	267					57			57	122	112	167	401	204	90	294										
	270					51			51	307	367	68	742	62	39	161					148	39	41			228
	TOTAL	433	112	105	101	740	140	191	1822	1155	3234	2317	6706	620	1007	1627	595	271	168	387	94	761	80	914	36	3306
SUM TOTAL	4262	2093	3309	775	3160	2300	2857	18756	1977	8128	8756	18861	6057	8507	14564	6723	8384	3052	6570	1371	12221	1159	6707	745	46932	

TABLE 1 - Continued

1960 - 24 Hour 2 Directional  
External to Internal Trip Table

AREA	ZONE	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL	
A	11	70			31	37	120		97		149	61	70		635	
	12	280	100	137	70			159		181	233		35	95	1290	
	14	207	108	153	174	35	251		37	192	85	57	46	61	1406	
	18	235	383	191	122		37			206	272	233	39	95	1813	
	19	215	158	152	86	75	109	123	157	236	351	257	45	56	2020	
	21	343	153	140	61	225			37	215	300	390	229	218	76	2387
	22	901	1181	812	458	316	630	279	326	623	808	474	375	153	7336	
	23	188	21	75	77	32	59			61	181	32	40		766	
	24	156	46	231	109	64	145	37	50	293	192	438	153	221	2135	
	25	109	103	98	92	106	212	21			109	45		45	940	
	26	84	179	80	68					62	24	162	62	170	172	1063
	28	25	21				38		20	40	184	137	74	98		637
	29	25	44		103	108	114	115			136	646	105	140	58	1594
	32	155	219	151	239	31	57	39	57	172	650	324	77	58		2229
	41		107					58	57		119	77	58			476
	42	35	38		35			61	36	57	169	57		19		527
		TOTAL	3028	2861	2220	1725	1067	1853	943	1098	2896	4499	2449	1525	1090	27254
B	50	26	34	167						230	170	61	56		744	
	51	90	94	35			106			149	51	57	51	322	955	
	52	35			94		36			50	73	92		32	412	
	60	242	177	167	119	40	36		119	57	318	57	58		1390	
	61	562	590	168	82		517	140	165	415	672	231		95	3637	
	70	132		56	57	25	24		24		40	344		24	726	
	71	328	122	172	31	71	226	64	118	256	330	64	206	158	2146	
	80	241	235	144	32	130	355	49	75	438	255	142	124	276	2496	
		TOTAL	1656	1252	909	415	266	1300	253	501	1595	1909	1048	495	907	12506

TABLE 1 - Continued

1960 - 24 Hour 2 Directional  
External to Internal Trip Table

AREA	ZONE	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL
C	90	499	185	127	88	61	522	31	105	508	818	167	84	237	3432
	100	453	674	150	284		476	111	53	732	673	267	312	276	4461
	103	281	237	143	132	113	145		36	169	156		55	87	1554
	140	539	1065	567	205	148	1563	384	600	385	360	102	171		6089
	150	446	508	141	38		257	74	214	562	243	410	148	23	3064
	155	172	292	112			222	34		470	146	95			1543
	156	428	171	106	123	44	120	37	36	165	132	90	63		1515
	210	1836	3055	906	527	338	1339	327	253	594	109	362	110	31	9787
	220	1197	1358	496	237	147	856	157	229	549	131	540	165	240	5902
	230	1013	644	264	287	105		59	31	365	91	248	137	65	3309
	231	1517	503	450	361	140	32	37	55	448	71	335	64		4013
	239	817	189	259	32		36			184	21	80			1618
	TOTAL	9198	8881	3721	2314	1096	5168	1251	1612	5131	2951	2696	1309	959	46287
	D	160	148	144	65	31	71	36		96	166	32	58	43	31
161		160	134	107	94	106	154			310	62	32	131	95	1385
162		265	35	90	39	53			109	55	124	190	67		1027
170		160	122	159	32	22	178		142	127	169	98	104	146	1459
173		70	74	128	106		13			100	64	232	189	74	1050
174		74	172	51	97			58	56	361	140	32	153		1194
240		1132	420	349	319	65	80	48	59	254	243	135	139	63	3306
250		407	430	336	301	39	140	95	128	455	184	418	65	32	3030
251		77	51		94	95					68	88	31	12	516
255		69	149	215	86	44	25	24		66	53	67	32		830
TOTAL		2562	1731	1500	1199	495	626	225	590	1894	1139	1350	954	453	14718
E	180	346	165	163	91	93		31	32	201	45	32	143	87	1489
	183	258	203	87	81		140	58	185	108	399	131	90	40	1780
	190	42	242	95	17	49				85	79	41	62	99	811
	191	182	36	81	51	33		61		84	152	44	45		769
	200	167	332	114	225	67	152	175	54	273	399	171	45	132	2306
	267								20	116				45	181
	270	107	197		69	41				125	57	71	41	86	794
TOTAL	1102	1175	540	534	283	292	325	291	992	1131	490	471	444	8070	
SUM TOTAL	17546	15900	8890	6187	3207	9239	2997	4092	12508	11629	8033	4754	3853	108835	

TABLE 1 - Continued

1960 - 24 Hour 2 Directional  
External to Internal Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL	700	701	702	703	704	705	720	721	722	735	TOTAL
A	11		75			38	42	89	178		44		55	35	556		83		16	80	101		26	34		340
	12	77	282	69	77				91	76	35	102	46	95	176	1126	70	131	83	111	32	251	32	99		809
	14	214	239		144	75	103	255	49	80	120	143	52	168	1642		123	211	52	113	121	107	156	79	224	1186
	18	197	32	37		72	48		93	96	97	90	64	69	895		15	86	97	105			64	48	64	479
	19	116	50	85	82	64	176	221	45		16	140	13	53	1062	32	48	125	158	99	12	211		53	172	910
	21	464	240	119		113	182	93	107	137	462	84	150	281	2432		132	100	195	231	77	72	24	397	263	1491
	22	1065	1120	240	432	233	903	714	809	323	306	376	250	484	7255	50	347	529	646	586	217	134	285	415	1014	4223
	23	174	231	185		29	91	180	83	118	319	38	38	282	1768	59	35	121	81	130	77	55	77		49	684
	24	224	65	256	117	49	179	129	132	165	131	250	141	289	2127		92	35	166	147	113	289	77	155	365	1439
	25	523	296	96		171	128	75	223	266	248	97	106	273	2502		89	112	246	139	88	86	49	172	170	1151
	26	338	251		151	45	50	124	194	199	53	45	140	90	1680		35	104	118	230	90	38		151	53	819
	28	271	145	56	38		78	194	187	44	184		54	244	1395	41	67	71	241	197	206	135	120		213	1291
	29	176	304	150	53	191	147	186	105	107	124	178	165	128	2014		221	419	177	94	263	122		204	355	1855
	32	460	89	130		143	130	106	144	278	240	53	200	487	2460	22	120	587	340	302	133	83		165	305	2057
	41		20					49					55		124		55		89	44	20	104		53	136	501
	42		18		39			77							134		81	110	107	80		44			57	479
	TOTAL	4199	3457	1423	1133	1223	2257	2583	2425	1848	2446	1540	1578	3059	29171	204	1613	2741	2812	2688	1550	1731	910	2025	3440	19714
B	50		13			38		128	38		44		81	50	392	50	44	49	191	126	38			49	24	571
	51		50		119		16		42			16	38		281		28	77	55		72	104			162	498
	52	124	206	86			44		87	32	36	36		153	804		95	83	90	49	52	89			32	490
	60	159	222	98	26	95	39				36	35	85	58	853		62	61	91	98	45	101		101		559
	61	265	284	149	91	88	140	122	58	77	163	42	45	170	1694		193	164	216	447	173	130		359	194	1876
	70	77	49	49				29	42			36	191	56	529		50	31		68	43	56		35	49	332
	71	249	110	20	143	26	86		45	38	58	20	49	167	1011	107	138	172	131	218	134	32	43	181	212	1368
	80	204	259	41	76	108	80	86	26	79	232	215	162	204	1772		175	396	141	342	208	170		219	566	2217
	TOTAL	1078	1193	443	455	355	405	365	338	226	569	400	651	858	7336	157	785	1033	915	1348	765	682	43	944	1293	7911

TABLE 1 - Continued

1960 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL	700	701	702	703	704	705	720	721	722	735	TOTAL
C	90	177	187	48	35	36	97	79	44	125	38	79	79	77	1101	66	122	221	218	191	140	62	55	69	238	1382
	100	325	148	167	64	194	93	153	140	44	235	90	45	117	1815	113	125		302	124	72	215		61	113	1125
	103	315	180	72	99		44	73	38		167	104	53	123	1268		77	76	32	50			80	35	44	394
	140	155	294		35	20	202	117			318			110	1251			55	102	161	35	91		44	149	637
	150	306	312	53	45		150	128	267	122	35	109	31	144	1702		77		44	34	76	36	113	35	186	601
	155	137	115	115	61	214	114	26	146	38	41	48		35	1090	50		77	95	61					94	377
	156	214	128	19	164	84	58	57	26		57				807	32	57	163	126	97				35	38	548
	210	389	159	173	86	39	465	299	39		113	86		84	1932	44		40	205	322		130	65		240	1046
	220	425	93	35	221	274	307	114	108	70	183	65	38	124	2017		132	61	28	300	71		61	79	99	831
	230	219	279	36	101	38	38	159	176	32	176	35		115	1404		86	55	153	193	70	71		96	77	801
	231	218	347	97	99	86	104	90	26	90	186	64		78	1485	14	26	58	102	76	34	130				167
239	59	104		32		26	34				36	36		327								35	19	26	12	92
	TOTAL	2939	2346	815	1042	985	1698	1329	1010	521	1509	716	282	1007	16199	319	702	806	1407	1609	533	754	374	480	1457	8441
D	160	115	302		100	44	64	68	133			53	122		1001	19	102	189	116	86	32					544
	161	487	187	59	60	31	309	328	32	69	412	113	16		2103	28	43	81	112	234	36	87	48	96	98	863
	162	106	343	171	107	38	38	193	203	162	86	151	53	106	1752		106	95	194	328	149	95		36	117	1120
	170	305	692	275	201		20	237	275	128	140	149	177	230	2829	22	228	284	441	360	187	158	98	437	221	2436
	173	158	455	112	149	202	225	113	135	61	158	59	70	154	2051		90	180	131	173	367	105	32		96	1174
	174	50	386	185	53	42	38	232	213	12	195	125		38	1569		91	185	223	210	80	141			125	1055
	240	555	505	186	393	141	300	83	105	116	212	52	50	94	2792	60	91	216	185	206	170	128	56	44	148	1304
	250	1149	1036	486	545	493	121	412	545	305	518	213	191	454	6468	89	145	356	489	1257	540	481	205	163	426	4151
	251	197	400	91	38	29	157	91	91		193	127		91	1505		48	187	44	74	16	76		71		516
	255	470	878	143	370	124	38		144	47	173		109		2496	19	38	161	108	394	203	49		21		993
		TOTAL	3592	5184	1708	2011	1144	1310	1757	1876	900	2087	1042	788	1167	24566	237	982	1934	2043	3322	1780	1320	439	868	1231
E	180	322	603	300		134	181	336	175	170	251	226	44		2742	66	336	266	288	593	105	81	17	92	13	1857
	183	105	506	227	80	86	147	305	234	44	188	171	107	159	2339	50	467	216	347	399	100	126	86	55	126	1972
	190	263	251	102	38	80		179	82	36	32		86		1149		316	455	244	161	193	216		166	52	1803
	191	131	484	202	272	121	178	20	33		232	210	17	68	1968	186	264	484	380	440	143	41	32	41	32	2043
	200	406	536	297	206	150	41	184		257	472	256	140	390	3335	460	1493	2793	1626	627	410	331	125	123	396	8384
	267	69	104	26		67	45		45	63	17				436		80	48	96	151	44	44				463
	270	49	126		62	76	58	26		90	22	104		49	662	224	449	335	250	321	185	104			54	1922
		TOTAL	1345	2610	1154	658	714	650	1050	569	660	1214	967	394	666	12651	986	3405	4597	3231	2692	1180	943	260	477	673
SUM TOTAL	13153	14790	5543	5299	4421	6320	7084	6218	4155	7825	4665	3693	6757	89923	1903	7487	11111	10408	11659	5808	5430	2026	4794	8061	68666	

TABLE 1 - Continued

1960 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
A	11		102		68	74		68	32	74		378	55	49		104	2678
	12	50	194	25	86	137	102	189	105	31		919					6234
	14	133	180	24	20	137	37	138	38	32	81	820	90	56	50	196	7378
	18		120		43	131		85	52	25	24	480	73	98	37	208	4961
	19	155	470	50	40	137	56	32	86	88	180	1294	107	35	117	259	6762
	21	474	541	111	163	467	36	307	86	258	52	2495	131	31	95	257	11117
	22	455	1184	71	531	1511	133	397	71	649	463	5465	502	328	71	901	30832
	23	31	116		192	136		49	13	39		576	71			71	4197
	24	211	544		122	258	68	70	68	265	321	1927	36	36	157	229	9538
	25	359	143	48		148	38	49	221	117	101	1224	32			32	6695
	26	172	203	25	35	67	94	49				645			64	64	5305
	28	180	454			255		283	38	101	434	1745		38	44	82	6073
	29	592	977	25	142	176	193	574	100	32	266	3077		55	73	128	9470
	32	405	600		132	473	140	255		248	353	2606		109	64	173	11428
41	208	152			157	56	73	52	31	36	765	103			103	2341	
42		152			130	24	38		35		387	20			20	1914	
	TOTAL	3425	6132	379	1574	4402	977	2656	962	1985	2311	24803	1220	835	772	2827	126923
B	50	178	92			24		89	38			421	91	24	45	160	3372
	51	205	131	25	24	157	35		100	217		894	44		25	69	3523
	52	121	275	68		343			49	128	52	1036		118		118	3734
	60	217	216		51	535	51	38		135		1243	108	107	113	328	5719
	61	615	477	63	297	1043	111	124	263	314	230	3537	299	258	242	799	15973
	70	101	85			270	20	32	50	25		583	50	122	36	208	3555
	71	185	464	61	35	349	101	170	158	169	111	1803	20	59		79	8460
	80	491	1274	71	92	436	163	278	140	214	297	3456	31	106	55	192	13108
		TOTAL	2113	3014	288	499	3157	481	731	798	1202	690	12973	643	794	516	1953

TABLE 1 - Continued

1960 -- 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL	
C	90	156	298		172	345	100	86	32		87	1276	84	40	119	243	11175	
	100	439	368		208	364	43	128	32	149	119	1850	274	151		425	14082	
	103	49	127		35	112			23			346			36	36	4949	
	140	247	137	20	304	196			78	39	36	1057	140			140	13638	
	150	130	234			62	51	38		39		554	39	130	44	213	8240	
	155	237	132			115	20	90	49	31	35	709			83	83	5301	
	156	122	110			20			28		39	319	36			36	4157	
	210	75	311		116	199	212				36	949	39	83	75	197	16855	
	220	244	138			274	62	36	32	123	119	1028		203	38	241	12545	
	230	57	32	58		207		20	32	102	35	543	35	36	43	114	7564	
	231	265	151	94		107	45	49		84		795	55		45	100	9201	
	239		24									48	72	35	21	56	3234	
		TOTAL	2021	2062	172	835	2001	533	447	306	603	518	9498	737	643	504	1884	110941
D	160	121	75			148		65	110	42		561	36			36	4115	
	161	73	182			134		122		94	86	691	31	72	35	138	6547	
	162	41	174			67	50		42	31	104	509	61	42	20	123	5816	
	170	247	536		96	63	277	107	143		101	1570			35	35	10401	
	173	243	485		71	120	20	162	41	72	144	1358		128		128	6952	
	174	152	453	61	35	239	56	24		117	111	1248	38		42	80	6361	
	240	328	260	56	40	156	13	81	148	67	89	1238		65	55	120	13153	
	250	521	597	204	72	194		152	105	117	357	2319	12	55	92	159	19839	
	251	412	373			299	38	113		21		1156		61	12	73	5470	
	255	284	12			91	38					425		20	81	101	5955	
		TOTAL	2422	3147	321	314	1511	492	726	589	561	992	11075	178	443	372	993	84609
	E	180	460	369		41	275		136		32	116	1429		19		19	9802
		183	1004	1248	91	164	178	183	229	151	84		3332	143	149		892	11977
190		312	163		92	91	49	49	52		28	836	52	59	50	161	5903	
191		458	231	50	77	124		31			120	1091	22	74	35	131	8953	
200		392	569	110	49	585	188	750	229	303	392	3567	214	52	13	279	20796	
267																	1832	
270		127	162	121		98	76	28	48	17	123	800	36	15		51	5351	
		TOTAL	2753	2742	372	423	1351	496	1223	480	436	779	11055	467	368	98	933	64614
SUM TOTAL	12734	17097	1532	3645	12422	2979	5783	3135	4787	5290	69404	3245	3083	2262	8598	444531		

TABLE 2

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	G								F				H			
	ZONE	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL
G	300	85	109	91		36			321			17	17	54	143	197
	301		13	24			13		50	20		23	43	55	79	134
	302					60			60	17	8	44	69	19	111	130
	305						15		15			58	58	16	32	48
	306						15	12	27		73	40	113	41	119	160
	307						86	32	118			85	85	107	45	152
	308									25	26	41	92	104	36	140
	TOTAL	85	122	115		96	129	44	591	62	107	308	477	396	565	961
F	310										11	89	100			
	311										90	153	243	54	43	97
	312											362	362	76	54	130
	TOTAL										101	604	705	130	97	227
H	320													54		54
	323														13	13
	TOTAL													54	13	67
	SUM TOTAL	85	122	115		96	129	44	591	62	208	912	1182	580	675	1255

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	400	401	410	421	440	450	461	471	493	TOTAL	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL	
G	300	98	11	30			175		31		345	239	473	80	33	32	174	116	73	81	60	24	31		1416	
	301		24		18		172		59		273	93	76	33		29	60	77	61	91		171	42	89	822	
	302	113	55		24		75		11		278	206	319	167	60	19	247	61	46	93	128	31	15		1392	
	305					18					18	48	19	32										29	128	
	306	12	13	10	25		43		34	13	150	134	52	22	32		15	10	29	54	43		31		422	
	307	12					36		15	19	82	80	58		57		66		29	10	30	51	62		443	
	308								26		26	128	147	29	27	19					29		16		395	
	TOTAL	235	103	40	67	18	501		176	32	1172	928	1144	363	209	99	562	264	238	329	290	277	197	118	5618	
F	310								16		16	16			23		9									48
	311	52	101		60	9	33	18	32		305	47	68	24	32		18						21			210
	312	59	69		49	28	60	49	66		380	182	45	124	5	33	42	32	75	61	51	16	47	20		733
	TOTAL	111	170		109	37	93	67	114		701	245	113	148	60	33	69	32	75	61	51	16	68	20		991
H	320	48	68	16			10				142	188	59		35		60		19	26			19	15		421
	323	23	22	41							86	104	78	19			16			24						241
	TOTAL	71	90	57			10				228	292	137	19	35		76		19	50			19	15		662
	400	29	24		24						77	36	63	47			92							20		258
	401			19							19	230	153				147			31		43				604
	410											33					15									48
	421											102	68							18						188
	440															18							23			41
	450										92	132		44					18							286
	461										22	18									30					70
	471										65	137	140				24									366
	493										28	26					34									88
	TOTAL	29	24	19	24						96	608	597	187	44	18	312		18	49	30	43	43			1949
SUM TOTAL	446	387	116	200	55	604	67	290	32	2197	( 500 series total carried on following page )															

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL
501	932	453	98	45	27	216	27	23	146	63	23		50	2103
502		113		33	44	218	69	22	54	85	48		22	708
503			27										19	46
504						35				18				53
505					6	18								24
520						657	176	72		15	29	31		980
521														
522														
523										13				13
526														
528														
531														
541														
TOTAL	932	566	125	78	77	1144	272	117	200	194	100	31	91	3927
SUM TOTAL	3005	2557	842	426	228	2163	568	467	689	565	436	358	244	12547

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL
G	300	32	44	22	37			30	32	22	32	6		77	334
	301	88	91	44	27		32	17	50		107			44	500
	302	70	173	65	22		32	53	24		56	88	16	69	668
	305	6	86	22	19	94		46	27	22		13		54	389
	306	46	148	72	56		51	54	32		16	28	50	138	691
	307	224	95	52	27		76	25	95	20	55	69	54	137	929
	308	83	110	23	30	41	19	39	33	49	68	19	54	208	776
	TOTAL	549	747	390	218	135	210	264	293	113	334	223	174	727	4287
	F	310	32	21											
311		115	53	22	21		27	10	16						264
312		157	354	77	117	148	124	207	164	32	72	17	16	16	1501
TOTAL		304	428	99	138	148	151	217	180	32	72	17	16	16	1818
H	320	48	54											16	118
	323	16	17		19		22		13					9	96
	TOTAL	64	71		19		22		13					25	214
	400	151	77	38		13				22					301
	401	123	122	24		33		92		57	131	11			593
	410														
	421	57	103				13	32			33		67		305
	440			20					27		22				69
	450	35	106				19	14	26		41	29		20	290
	461		35												35
	471		40		36		24	18					32	67	217
	493	21				24	14							18	77
	TOTAL	387	483	82	36	70	70	156	53	79	227	40	99	105	1887

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL
501	29	96	55	38	12	13	65	13	17	75			37	450
502	98	140	32	19		32			35		9	19	44	428
503	13	13										24	22	72
504	32	93	17									27	22	191
505	19	30												49
520	73	183	9		40	27				18			31	381
521						13								13
522														
523	58	57	8					6		12		28		169
526	42	58		31							20		26	177
528		22												22
531	26	30	16										38	110
541	19	10	19											48
TOTAL	409	732	156	88	52	85	65	19	52	105	29	98	220	2110
600	191	627	86		34		39	32	44		59	46	42	1200
601		509	56	130	9	6	51	72	32	27	53		134	1079
602								19						19
603				19	14									33
604					54				8					62
606														
607													35	35
609														
611													19	19
613														
614														
622														
631														
TOTAL	191	1136	142	149	111	6	90	123	84	27	112	46	230	2447
SUM TOTAL	1904	3597	779	648	516	544	792	681	360	765	421	433	1323	12763

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	700	701	702	703	704	705	720	721	722	735	TOTAL
G	300		70			49	87	30				236
	301	25	14	51	145		22	34		24	24	339
	302		44	93		78	44	34	24	33	269	619
	305		57	78	151	89	18	50	24	76	51	594
	306	37	92	176	273	95	73	44	50	13	72	925
	307		48	99	15	50	87	81	28	24	24	456
	308		41	109	79	139	94	94	44	66	141	807
	TOTAL	62	366	606	663	500	425	367	170	236	581	3976
F	310	25	11	96	22	81	22					257
	311	41	27	250	59	47		18				442
	312	45	60	210	135	150		35	10	17		662
	TOTAL	111	98	556	216	278	22	53	10	17		1361
H	320				18	29			26			73
	323	32		49								81
	TOTAL	32		49	18	29			26			154
400	5	16	28		36	32	29	43		59	248	
401	21	53	186	140	88	43	126	40	160	95	952	
410			16	22	14		12					64
421		32	71	26	17	32	53	52			37	320
440			24		68						24	116
450		49	96	255		74	90					564
461			40				16					56
471	11		38	72	26	66	36	133	32		45	459
493		17	46				34				26	123
TOTAL	37	167	545	515	249	247	396	268	192	286		2902

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	700	701	702	703	704	705	720	721	722	735	TOTAL
501	13	35	128	10	265		54		19	61	585
502			146		98	91	32	75	29	37	508
503			38		15					23	76
504		10	45	19	58						132
505			29	14	23						66
520	18	38	22	32	162	75	27				374
521		29		10	35		69				143
522											
523		43	57	45	21	13	9	6		12	206
526		10			12	24	20			41	107
528			45		25						70
531			6		10						16
541			30	41	20	14		81			186
TOTAL	31	165	546	171	744	217	211	162	48	174	2469
600		42	123	45	169	17			24	44	464
601		53	264	46	128	59	38	44	19	61	712
602	13	13	89							9	124
603			31	16						27	74
604	19	24	14		29				19		105
606			15								15
607			38				20				58
609			20							14	34
611	25		14								39
613			33		24						57
614			16		8						24
622		14	14								28
631					22				27		49
TOTAL	57	146	671	107	380	76	58	44	89	155	1783
700	15		70	28							113
701		16	11		37					18	82
702			86	20	228	45				6	385
703				45	42	19					106
704					41	42	18		6	36	143
705						11					11
720											
721											
722										9	9
735											
TOTAL	15	16	167	93	348	117	18		6	69	849
SUM TOTAL	345	958	3140	1828	2483	1104	1103	680	588	1265	13494

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL	
G	300		52	26		18		24	26		88	234	27	19	38	84	3184	
	301	166	175				6	32	26			405	28			28	2594	
	302	86	116	40	73	82		78	24			499	18		54	72	3787	
	305	86	79			22		45			32	264	10			10	1524	
	306	129	299	74	32	27		92		10	100	763				12	3263	
	307	15	239	32	18	36		83	102			553	12	15		27	2845	
	308	123	118			25		28	88			425		38		38	2699	
	TOTAL	605	1078	172	123	210	6	382	266	10	291	3143	95	72	104	271	19896	
F	310	58	46	11				13				128					602	
	311	288	283	64		90	10	53	13		52	853	51			51	2465	
	312	341	265	56	16	207	56	36	50	35	94	1156	31	37		68	4992	
	TOTAL	687	594	131	16	297	66	102	63	35	146	2137	82	37		119	8059	
H	320	216	89	54	26	127	19		19	13	15	578	45	64		109	1495	
	323	299	35	41	33	106			16			530	39	23		62	1109	
	TOTAL	515	124	95	59	233	19		35	13	15	1108	84	87		171	2604	
	400	521	207					81	21		35	865	44	19	20	83	1832	
	401	772	320	18		38	13	61	56	18	139	1435		68		68	3671	
	410	217	59								29	305					417	
	421	340	260			13	25	35	67	17	69	826		18		18	1657	
	440	60										60					286	
	450	1130	333	18		41	29	114	69		25	1759				27	27	2926
	461	48	118			29		19	28		28	270				18	18	449
	471	405	423	27		12		77	58		31	1033						2075
	493	88				16						104	31	11	29	71	463	
	TOTAL	3581	1720	63		149	67	1720	387	299	35	356	6657	75	116	94	285	13776

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional.  
External to External Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
	501	440	180	126		309	17	19	41			1132	71	57		128	4398
	502	282	135	37		296	74	24	19	27		894	66	45		111	2649
	503	223	27	99		76		18			36	479	127	49	16	192	865
	504	153	89		32	193		62			14	543	50	119	19	188	1107
	505	63	14				10					87	69	24		93	319
	520	275	305	95	57	152	29	113	43	47	76	1192	18		52	70	2997
	521	85	65					32				182		30		30	368
	522	272	65	16		18		29		40	64	504	31			31	1453
	523	469	248		29	27		131	41		60	1005	31	29		60	535
	526	603	426	97		35		74	24			1259	55	175		230	1773
	528	257	167		18	48		19	25		31	565					657
	531	265	61	19		81		16		13		455	53	58		111	692
	541	20	148			10		16	109		56	359	36	49		85	678
	TOTAL	3407	1930	489	136	1245	130	553	302	127	337	8656	607	635	87	1329	18491
	600	851	328	316	44	366	46	105	14		83	2153	93	48		141	3958
	601	846	486	185	109	555	72	115	50	24	99	2541	194	142	38	374	4706
	602	294	265	27	22	33		47		20	26	734	13	14		27	904
	603	132	261	132	36	275	37	48		11	26	958	69		24	93	1158
	604	304	31		21	158	23	25	21			583		167		167	917
	606	33	113		19	94						259	64	36		100	374
	607	287	42	85	32	203		9				658	118			118	869
	609	285	131	28		98						542	27	48		75	651
	611	177		40	21	71						309			20	20	387
	613	213	72	59	54	59				19		476	19	23		42	575
	614	90	99			23						212	18	32		50	286
	622	174			133							307					335
	631	227	59	39	125	57	6	9				522					571
	TOTAL	3913	1887	911	616	1992	184	358	85	74	234	10254	615	510	82	1207	15691

TABLE 2 - Continued

1960 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
700	109	75	20		18	36	10				268	18	36		54	435
701	397	27					29				453	6			6	541
702	457	41	14	41	5		15		15		588	45	41	33	119	1092
703	404	33		18	27	14					496					602
704	566	393	91	148	151		16	18			1383		45		45	1571
705	262		19	9	93						383					394
720	249	18			59						326		18		18	344
721	25										25		19		19	44
722	55						19			9	83			18	18	110
735	13				44					19	76	15			15	91
TOTAL	2537	587	144	216	397	50	89	18	15	28	4081	84	159	51	294	5224
801	56	41	63	199	560	65		21	25		1030	143	32	103	278	1308
802		20	57	50	18		31		25	27	228			8	8	236
803							24		27		51					51
804							31				31					31
805					17						17		27		27	44
806								22			22					22
831														32	32	32
832																
835																
836												27			27	27
TOTAL	56	61	120	249	595	65	108	21	77	27	1379	170	59	143	372	1751
906																
907													13		13	13
908																
TOTAL													13		13	13
SUM TOTAL	15301	7981	2125	1415	5118	587	1979	1089	386	1434	37415	1812	1688	561	4061	85505

TABLE 3

1960 - 24 Hour, 2 Directional  
Internal to CBD Trip Table

AREA	ZONE	11	12	14	18	19	21	22	23	24	25	26	28	29	32	41	42	SUM TOTAL
A	11	45																45
	12	157	20															177
	14	23	33	71														127
	18	43		83	228													354
	19	104	158	87	256													605
	21		20	119	41	99												279
	22	80	140	59	221	212	98	41										851
	23	111	41	23	12	72		38	17									314
	24		57		91	81		103	10									342
	25	50	99	50	12	27	143	108	26	12	86							613
	26	46		26	41		24	27	17	45	50	15						291
	28	99	35	35	88	41		33		121	54	23						529
	29	57	71	19	19	473	58	88	17	118	37	71	211	19				1258
	32	94	78	42	26	117		92										449
	41	78		140				50			12		23	19	82	198		602
	42	33	73	253	136			17	86		41				25		77	741
	TOTAL	1020	825	1007	1171	1122	323	597	173	296	280	109	234	38	107	198	77	7577
B	50	103						26	26				24		23	25	11	238
	51	20		17		11	56		46	25					11		41	227
	52		74	33	21	60	20	150	26					157	23			564
	60		41		30		14	16									11	112
	61	33		86		135	23	96		25	12					198	41	649
	70	45				53		30	29	30					21	52		260
	71			44	50	27		42	12	17			13	264				469
	80		33		50	37	90	32	54			40	47		54	125	77	639
	TOTAL	201	148	180	151	323	203	392	193	97	12	40	84	421	132	400	181	3158

TABLE 3- Continued

1960 - 24 Hour, 2 Directional  
Internal to CBD Trip Table

AREA	ZONE	A	11	12	14	18	19	21	22	23	24	25	26	28	29	32	41	42	SUM TOTAL	
C	90	43	20	11	21	20	20	55						90	41	23			336	
	100	169	54	28	41	106	48	107			32	12			131	122	125	59	1034	
	103	58	66		170	76	86	47			81		15		199	26	25		849	
	140	298	374	184	125	86	271	254	459			78	65			102	120		2416	
	150	122	110	56	102	176	23	39				38	49			10			725	
	155	58	152	44	109		67	67	38		32	47		23		25		102	764	
	156	21		17	174				109							32	33		84	526
	210	261	319	170	227	154	345	132	155		58	33	22			48	99	73	17	2113
	220	81	77	91	272	72	58	129	84		189	172	171			59	115			1570
	230	205	85	32	56	27	114		59						13	33	23	47		694
	231	23	41	17	41		56	93	41		26	12			23	81	87			541
	239	23	76					46	86				29							260
		TOTAL	1362	1374	650	1338	697	1088	1023	977	418	433	378	149	624	665	390	262		11828
	D	160	41			85		67	41	12	81			24						351
161		78	59			83	56	160	12			149	22	13		43		114	789	
162				23	50	48						71			41	36			269	
170		152		44	26	36	67	134	76	28	59	22	13	19		68		102	846	
173		56	95		21	66		67	12	28	27								372	
174		196	33	11	60	35	79		91	104	15	13	41	52					730	
240		170	135	23	63	84	189	47				22		41			14	17	805	
250		255	214	350	49	32	212	184	29	127	154	130	35	32	53				1856	
251		58	33	23		29		29										17	189	
255			20					16					18							54
		TOTAL	1006	589	474	231	388	550	870	217	355	582	235	74	174	252	14	250		6261
E	180	169	50	165			149	16	48			23		103	137		73		933	
	183	21	20	51	50	27	37	16	38						32	48			340	
	190		119	36	43		53	108				23	64	12	41				499	
	191	119	69	23		70	26	105	105			174			41	67			799	
	200	43	44	11		24	90	51		30	12		90	47	47		147		636	
	267	58	20																78	
	270	52		46	74		17	86	26				15	13					329	
		TOTAL	462	322	332	167	121	372	382	217	30	232	79	218	298	162	220			3614
	SUM TOTAL	4051	3258	2643	3058	2651	2536	3264	1777	1196	1539	841	759	1555	1318	1222	729		32397	

TABLE 4

1960 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

AREA	B				C										TOTAL	SUM TOTAL	
	ZONE	50,51,52	60,61	70,71	80	TOTAL	90	100,103	140	150,155,156	210	220	230,231	239			
B	50,51,52	774				774											774
	60,61	1057	1363			2420											2420
	70,71	896	910	1369		3175											3175
	80	418	579	837	1250	3084											3084
	TOTAL	3145	2852	2206	1250	9453											9453
C	90	197	648	195	145	1185	162									162	1347
	100,103	256	611	328	80	1275	737	668								1405	2680
	140	568	212	292		1072	843	755	1127							2725	3797
	150,155,156	432	1579	365	469	2845	517	1663	1864	2358						6402	9247
	210	261	232	376	395	1264	285	599	1601	1323	1127					4935	6199
	220	299	530	54	99	982	138	686	1732	2511	2128	1206				8401	9383
	230,231	323	606	374	612	1915	402	1067	427	1262	808	2444	1685			8095	10010
	239	46	32	39	199	316	63	61	11	114	16	106	459	110		940	1256
	TOTAL	2382	4450	2023	1999	10854	3147	5499	6762	7568	4079	3756	2144	110	33065	43919	

TABLE 4 - Continued

1960 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

AREA	ZONE	B				TOTAL	C				TOTAL				
		50,51,52	60,61	70,71	80		90	100,103	140	150,155,156		210	220	230,231	239
D	160,161,162	266	422	303	266	1257	166	1256	1016	1760	659	333	939	227	6356
	170,173,174	365	290	41	262	958	40	452	309	800	280	208	322	465	2876
	240	99	270	342	144	855	132	285	125	623	413	377	1280	234	3469
	250,251	176	281	187	176	820	125	270	432	654	350	234	525	69	2659
	255	48	59	149		256	52	59	59	128		115	184	30	627
	TOTAL	954	1322	1022	848	4146	515	2322	1941	3965	1702	1267	3250	1025	15987
E	180,183	130	385	210	227	952	270	707	419	467	245	102	573	80	2863
	190,191	176	82	114	328	700	58	246	218	335	163	201	169	39	1429
	200	22	273	167	177	639		173	48	296	30	138	194	39	918
	267	13	15	28	13	69	3	41	28	19	3	17	48	10	169
	270	110	110	24	230	474	112	13	89	138	43		237	12	644
	TOTAL	451	865	543	975	2834	443	1180	802	1255	484	458	1221	180	6023
	SUM TOTAL	6932	9489	5794	5072	27287	4105	9001	9505	12788	6265	5481	6615	1315	55075

TABLE 4 - Continued

1960 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

AREA	D						E					TOTAL	SUM TOTAL	
	ZONE	160,161,162	170, 173, 174	240	250,251	255	TOTAL	180,183	190,191	200	267			270
D	160,161,162	1354					1354							8967
	170,173,174	755	779				1534							5368
	240	1205	497	486			2188							6512
	250,251	820	1592	1054	1371		4837							8316
	255	126	108	80	649	147	1110							1993
	TOTAL	4260	2976	1620	2020	147	11023							31156
E	180,183	703	1160	454	361	77	2755	1280					1280	7850
	190,191	440	416	246	562	16	1680	907	1183				2090	5899
	200	91	97	125	83	59	455	611	560	502			1673	3685
	267	44	59	110	169	9	391	115	67	16	13		211	840
	270	85	271	24	139		519	470	1164	995	40	221	2890	4527
	TOTAL	1363	2003	959	1314	161	5800	3383	2974	1513	53	221	8144	22801
	SUM TOTAL	5623	4979	2579	3334	308	16823	3383	2974	1513	53	221	8144	107329

TABLE 5

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg	External to External				External to Internal				Internal to Internal					
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
X	Y	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Drop	Cont.	Drop	Drop	Cont.
A	B	7900		0		0		0		5800	3200	17300		8900
	C	3100		0		0		0		0	11800	6000		23400
	D	11400		0		0		0		8100	6300	11900		34000
	E	1400		0		0		0		1700	3600	1800		17200
	F	600		0		500		0		1800	3000	1500		2700
	400s	0		0		500		0		0	14100	0		0
	801	2500		0		6300		0		5000	3400	4400		16300
B	C	1100		0		0		0		0	10900	4100		12600
	G	7200		0		11400		0		2300	3600	6900		8800
	801	6400		0		4900		0		400	2100	0		10700
	803	1400		0		300		0		1900	300	200		5100
	805	0		0		3200		0		0	3200	7900		0
C	D	3500		0		0		0		4200	16000	8700		17100
	G	500		0		4800		0		0	8200	0		800
	H	500		0		1500		0		0	4700	1400		11400
	400s	0		0		4000		0		0	13900	10600		0
	501&502	2300		0		3800		0		21100	18100	8700		17900
	520&521	600		0		1800		0		3400	6400	5800		1600
	600&601	700		0		900		0		0	5300	0		1800

TABLE 5 - Continued

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg	External to External								External to Internal Internal to Internal						
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	
	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.
D	E	2200		0		0		0	1300	5800		14000		8500	
	F	2100		0		1300		0	8000	5900		1800		12500	
	H	2600		0		1100		0	3500	3700		3100		7100	
	501&502	900		0		1200		0	1000	4300		2300		1900	
	600&601	3700		0		4100		0	26100	8800		9900		14600	
E	F	9900		0		2800		0	0	6700		0		20100	
	700&701	1200		0		900		0	13400	4400		2800		7800	
	702	400		0		1900		0	0	4600		5500		0	
	801	500		0		3800		0	0	2800		0		3200	
	802	4300		0		4500		0	3800	2700		3100		6100	
F	H	200		200		200		100	0	0		1400		0	
	600&601	1700		700		2800		400	4000	0		4000		0	
	602	1700		100		700		900	6900	0		1600		0	
	700&701	1200		200		400		400	10900	0		2200		0	
	704	1700		300		2000		0	2300	0		11700		0	
G	400s	0		1200		6900		0	0	0		8400		0	
	520&521	100		800		100		600	0	0		0		0	
	804	0		100		1200		0	0	0		3600		0	
	805	400		200		200		300	0	0		0		0	

TABLE 5 - Continued

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg		External to External				External to Internal				Internal to Internal						
		<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>			
<u>X</u>	<u>Y</u>	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.
H	501&502	1500		400		1800		400		0		0		0		0
	503	2100		0		500		0		1400		0		2000		0
	504	0		0		900		0		0		0		6500		0
	600&601	1000		100		800		100		0		0		0		0
	603	1400		0		300		100		8000		0		1000		0
400s	520&521	0		300		0		2400		0		0		0		0
	522	0		0		0		200		0		0		0		0
	500s*	0		100		0		0		0		0		0		0
501	503	1300		100		800		400		22500		0		6900		0
&502	520&521	1200		500		500		1300		0		0		0		0
	523	0		300		1200		0		0		0		12500		0
503	504	0		0		0		100		0		0		0		0
	523	0		0		300		200		0		0		0		0
	500s*	0		0		3500		0		0		0		26900		0
504	500s*	0		0		2000		0		0		0		3000		0
	600&601	1100		100		300		300		3000		0		0		300
	603	600		0		0		100		0		0		0		0
	600*	0		0		100		0		0		0		0		0
520	522	0		100		900		0		0		0		5000		0
&521	523	0		0		400		100		0		0		0		0
	804	0		100		0		0		0		0		0		0

(\* Series - Ring)

TABLE 5 - Continued

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg X _____ Y	External to External				External to Internal Internal to Internal			
	X _____ Y Cont. Cont.	X _____ Y Drop Drop	X _____ Y Cont. Drop	X _____ Y Drop Cont.	X _____ Y Cont. Cont.	X _____ Y Drop Drop	X _____ Y Cont. Drop	X _____ Y Drop Cont.
522 523	200	0	0	0	0	0	0	0
523 500s*	0	0	100	0	0	0	0	0
500s* 600s*	0	100	0	100	0	0	0	0
600 602	1700	100	500	800	0	0	4000	0
&601 603	300	100	1200	0	0	0	4300	0
604	2800	0	700	600	32500	0	3700	0
602 604	2700	0	500	100	6200	0	700	0
704	2000	0	1100	200	0	0	0	0
603 604	500	0	100	100	0	0	0	0
600s*	0	0	1300	0	0	0	8000	0
604 600s*	0	0	5500	0	0	0	38600	0
600s* 704	0	100	0	2000	0	0	0	0
700s*	0	100	100	0	0	0	0	0
700 702	1100	100	800	300	0	0	0	0
&701 703	1300	0	1100	0	19100	0	9400	0
704	1500	0	400	300	0	0	0	0
705	0	0	1000	0	0	0	3500	0

(\* Series - Ring)

TABLE 5 - Continued

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg		External to External								External to Internal Internal to Internal						
		<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>				
<u>X</u>	<u>Y</u>	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.
702	703	1800		0		1200		0		3100		0		900		0
	802	2900		0		200		1100		4000		0		0		100
	831	700		0		100		100		0		0		0		0
	800s*	0		0		900		0		0		0		0		0
703	705	0		0		0		0		0		0		0		0
	700s*	0		0		3200		0		0		0		22200		0
704	705	800		0		600		100		0		0		2300		0
705	700s*	0		0		900		0		0		0		0		0
700s*	800s*	0		0		0		100		0		0		0		0
801	802	3700		0		3300		1100		7500		0		11200		0
	803	1100		100		1100		300		3800		0		700		0
	800s*	0		100		300		0		0		0		8200		0
802	803	2300		100		700		0		2300		0		400		0
	831	700		0		1700		100		4900		0		5800		0
803	805	0		0		1400		0		0		0		1400		0
	831	200		0		0		0		0		0		0		0
	800s*	0		0		1300		0		0		0		3200		0
	900s	0		0		2600		0		0		0		8600		0

(\*Series - Ring)

TABLE 5 - Continued

1960 - 24 Hour, 2 Directional  
Composite of All Trips

Leg		External to External								External to Internal Internal to Internal							
		<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>	<u>X</u>	<u>Y</u>		
<u>X</u>	<u>Y</u>	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	
805	900s		0		0	700			0		0		0		0		0
831	800s*		0		0	700			0		0		4900				0
	900s		0		0	600			0		0		0				0
800s*	900s		0		400	100			0		0		0				0

(\* Series - Ring)

TABLE 6

Persons Per Vehicle Ratios

<u>County</u>	<u>Year</u>	
	<u>1960</u>	<u>1980</u>
Essex	2.7	2.1
Union	2.3	2.0
Bergen	2.3	2.0
Hudson	3.2	2.65
Passaic	2.65	2.25
State of New Jersey	2.4	2.0

Values obtained from the New Jersey State Highway Department.

TABLE 7

Zone Growth Factors

<u>Zone</u>	<u>Population</u>		<u>Persons Per Vehicle</u>		<u>Growth Factor</u>
	<u>1960</u>	<u>1980</u>	<u>1960</u>	<u>1980</u>	
50, 51, 52, 60, 61, 70, 71, 80, 307	39690	41000	2.7	2.1	1.3
90, 150	20400	21500	2.7	2.1	1.3
140, 210	37220	35000	2.7	2.1	1.2
156	Estimated from Adjacent Zones				1.6
160	22810	23900	2.7	2.1	1.3
170, 173	Estimated from Adjacent Zones				1.5
180	14420	17100	2.7	2.1	1.5
183, 190, 191, 200, 270	43300	45000	2.7	2.1	1.3
220	24670	25700	2.7	2.1	1.3
230, 231, 240	54760	53000	2.7	2.1	1.2
250	Estimated from Adjacent Zones				1.2
267	Branch Brook Park				1.0
300	5430	5400	2.7	2.1	1.2
310, 311, 312, 251	31580	29300	2.7	2.1	1.2
320, 323	31210	32600	2.7	2.1	1.3
11, 12, 14, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 32, 41, 42	Based on land use data supplied by the Newark City Planning Department and others				1.5
100, 103, 161, 162, 174	Same as above				1.8

TABLE 7 - Continued

Zone Growth Factors

<u>Zone</u>	<u>Population</u>		<u>Persons Per Vehicle</u>		<u>Growth Factor</u>
	<u>1960</u>	<u>1980</u>	<u>1960</u>	<u>1980</u>	
155	Based on land use data supplied by the Newark City Planning Department and others				1.7
301	Same as above				1.5
302	Same as above				1.2
305, 308	Same as above				2.6
306	Same as above				1.7
400, 401	107000	113000	2.3	2.0	1.2
410	33460	45500	2.3	2.0	1.6
421	67540	93500	2.3	2.0	1.6
440	Estimated				2.0
450	432300	786200	2.4	2.0	2.2
461	970800	1495600	2.4	2.0	1.8
471	441600	767100	2.4	2.0	2.1
493	Estimated from motor vehicle registration data				2.0
501, 502, 239	59090	57500	2.7	2.1	1.2
503	23910	25000	2.7	2.1	1.3
504	16070	18000	2.7	2.1	1.4
505	18860	26500	2.7	2.1	1.8
520, 521	22240	24400	2.3	2.0	1.3
522, 523	51100	61000	2.3	2.0	1.4
526	155100	224300	2.3	2.0	1.7
528	56460	81600	2.3	2.0	1.7
531	322970	511700	2.4	2.0	1.9

TABLE 7 - Continued

Zone Growth Factors

<u>Zone</u>	<u>Population</u>		<u>Persons Per Vehicle</u>		<u>Growth Factor</u>
	<u>1960</u>	<u>1980</u>	<u>1960</u>	<u>1980</u>	
541	196940	327200	2.4	2.0	2.0
600, 601, 602, 255	76260	74000	2.7	2.1	1.2
603, 604	35760	34500	2.7	2.1	1.2
606, 607	41120	46000	2.7	2.1	1.4
609	23060	33000	2.7	2.1	1.8
611	32560	41400	2.7	2.1	1.6
613	50930	50800	2.7	2.1	1.3
614	23500	32100	2.7	2.1	1.8
622	405500	494700	2.65	2.25	1.4
631	308840	491800	2.4	2.0	1.9
700, 701, 702	34930	38000	2.7	2.1	1.4
703	29460	35200	2.7	2.1	1.5
704, 705	51900	58000	2.7	2.1	1.4
720	81950	114000	2.65	2.25	1.6
721	53870	53000	2.65	2.25	1.2
722	178290	190000	2.65	2.25	1.3
735, 835, 836	738490	1084700	2.3	2.0	1.7
801	11700	11100	3.2	2.65	1.2
802, 803	37460	36500	3.2	2.65	1.4*
804	73540	71000	3.2	2.65	1.2
805	322190	315000	3.2	2.65	1.2

\* Adjusted for Meadows Development.

TABLE 7 - Continued

Zone Growth Factors

<u>Zone</u>	<u>Population</u>		<u>Persons Per Vehicle</u>		<u>Growth Factor</u>
	<u>1960</u>	<u>1980</u>	<u>1960</u>	<u>1980</u>	
806	160030	157400	3.2	2.65	1.3*
831	17430	22300	2.3	2.0	1.5
832	21760	25300	2.3	2.0	1.3
906, 907	Estimated from motor vehicle registration data				1.6
908	Estimated from motor vehicle registration data				1.4

\* Adjusted for Meadows Development.

TABLE 8

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	G								F				H															
	ZONE	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL	400	401	410	421	440	450	461	471	493	TOTAL		
A	11			104		39		211	354	67	49	87	203		50	50	126	77		86		115				404		
	12	66	80	59	105		35	118	463		48	135	183	202	167	369	194	236	158	292	99	97		353	75	1504		
	14	135		188		164		220	707	83	225	281	589	328	518	846	204	129	131	208		113	93	101		979		
	18		65			41			106		146	49	195	50	63	113	312	373	61	89		113		230		1178		
	19	83	86	83	105		50		407			105	105	45	91	136	132	204	144	173		386		202		1241		
	21					149	50		199	128	59	159	346	86	278	364	277	457	149	385	99	584	65	102	77	2195		
	22	388		225		98	101	334	1146	124	229	295	648	505	867	1372	764	508	398	622	203	1250	606	1066	131	5548		
	23	89							89						119	119	50	27	58				161			296		
	24	52		72	63		92	105	384		81	209	290	97	117	214	185		150	185	99	703	50	419		1791		
	25					60			60		80	141	221	63	91	154		130		152	134	338		146		900		
	26							88	88		134	135	269	98	18	116	50	153		119		450		429		1201		
	28	53	59					105	217		59	199	258		129	129				122	98	515		170		905		
	29							76	76	29	119	41	189	140		140	132	76	88	148	99	105		101	70	819		
	32			83	41	41	50	114	329		305	191	496	54	50	104	76	282	31	216	69	950		426	70	2120		
41															63	63			56	197		105		193		551		
42							109	109		28	17	45	62		62				89		220		101		410			
TOTAL	866	290	814	314	592	378	1480	4734	431	1562	2044	4037	1730	2621	4351	2502	2652	1424	3083	900	6205	814	4039	423	22042			
B	50		127		109	142	190	200	768		53	41	94	61	58	119	64	67		156		156		121	76	640		
	51				48	84		239	371		55	143	198		41	41	25	212	110	82	92			76	597			
	52		116				206	100	422		55	14	69		100	100	103	116		56	59	262		87	683			
	60		78			113	88	109	388		44	48	92				143	196	82	420		397	145	98	27	1508		
	61	77	81	95	50	362	140	279	1084	52	224	313	589	217	410	627	437	809	391	626	169	1049		627		4108		
	70					118	133	100	351		16	102	118	212	59	271	67	368	29	75		262		129		930		
	71	127		25	48	510	202	86	998		86	187	273	93	168	261	123	205		189	117	753	38	77		1502		
	80	104			70	200	588	48	1010		186	226	412	253	98	351	214	341	291	354	41	1084		204		2529		
	TOTAL	308	402	120	325	1529	1547	1161	5392	52	719	1074	1845	836	934	1770	1176	2314	903	1958	478	3263	183	1343	179	12497		

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	G								F				H													
	ZONE	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL	400	401	410	421	440	450	461	471	493	TOTAL
C	90	500	28	278			106	214	1126	23	45	93	161	59	202	261	575	472	166	394	71	1340	95	797	23	3933
	100	172	95	567	56	309	176	388	1763	24	266	320	610	457	352	809	385	758	346	509		1676	203	549		4926
	103		140						358		169		169	84	233	317	272	180		104		592		414		1562
	140	951	1052	593	101	137		865	3699		53	15	68	45	43	88	635	351	318	528		299		108		2239
	150	230	107	190	104	143		194	968	27	26	40	93	34	268	302	289	179	56	184		638	67	323		1736
	155	165	135	90		87	59		536	32	20	110	162	115	194	309	231	275		373	68	235		185		1367
	156	81		72	114	225			492		22	100	122	123	117	240	72	208		31	69	147		41		568
	210	293	52	333		104	121	142	1045		144	65	209	260	580	840	500	279	400	100		330	54	96		1759
	220	318		122	50		203	356	1049		23	149	172	147	425	572	95	367	53	392	87	649		223		1866
	230	117		64		35			216		91	21	112	77	463	540	122	147	50	262	20	263		132		996
	231	145	114	90					349	23	98	205	326	716	530	1246		237	51	344		176		112		920
	239			53	67	51		68	239	40		130	170	500	242	742	42							107	110	259
	TOTAL	2972	1723	2452	492	1091	665	2445	11840	169	957	1248	2374	2617	3649	6266	3218	3453	1440	3121	315	6345	449	3087	133	21531
D	160	76	119		39	38			272	113	125	41	279	85	165	250	129	67		82		212		193		683
	161	167	144	172					479		265	103	368	281	248	529	142	56		43	239	112	192	59	843	
	162			34		44			78		262	108	370	50	314	364	94	86	136	63	188	522		311		1400
	170	114		104		33			251	56	231	357	644	43		43	153	153		129	76	1728		174		2413
	173	141							141		390	401	791	43	214	257	53	142		58		128		118		499
	174				42	102	122		266		229	218	447	158	130	288	86	147	125	61	110	365		157		1051
	240	72		254	48	29	72		475	59	329	545	933	1047	823	1870	269	1138	121	243		221	97	196		2285
	250	168	136	153		234	127		818	107	655	1184	1946	300	552	852	163	168	89	286	96		57	224		1083
	251				122			24	146	74	464	761	1299		225	225	34			51		135	73	203	63	559
	255			53		113		72	238		205	193	398	86	172	258		151	82	114		35		48	125	555
	TOTAL	738	395	770	209	533	301	218	3164	409	3155	3911	7475	2093	2843	4936	1123	2108	553	1087	513	3585	339	1816	247	11341
E	180	169			310	59			538	86	810	907	1803	97	68	165	119	86	159	145		190		101		800
	183	70			86	310		50	516	86	280	355	721	194	198	392	432	230	58	53	94	342		324		1533
	190		78			38	40		156	228	338	129	695	58	144	202				312				179		491
	191	95				221	86	181	583	206	1337	1036	2579	43	257	300					156	64	181	49		450
	200	219	78	131	111	91		142	772	310	738	243	1291	77	479	556	201	46	41	59	61	395		699		1502
	267					77			77	135	122	184	441	235	104	339										
	270					77			77	383	459	85	927	81	50	131						258	60	69		387
	TOTAL	553	156	131	197	1124	185	373	2719	1434	4084	2939	8457	785	1300	2085	752	362	258	569	155	1341	124	1553	49	5163
SUM TOTAL	5437	2966	4287	1537	4869	3076	5677	27849	2495	10477	11216	24188	8061	11347	19408	8771	10889	4578	9818	2361	21439	1879	11838	1031	72604	

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL	
A	11	95			44	61	167		141		238	98	120		964	
	12	378	135	192	102			223		262	373		59	167	1891	
	14	280	146	214	252	58	352		53	278	135	91	79	107	2045	
	18	317	518	267	176		51			299	435	373	66	166	2668	
	19	291	212	213	124	123	152	173	227	342	562	410	77	98	3004	
	21	463	207	196	89	372			51	312	435	624	365	370	132	3616
	22	1216	1594	1137	664	520	882	391	473	903	1292	759	638	268	10737	
	23	256	28	104	113	52	82			89	290	50	68		1132	
	24	211	62	324	158	105	203	51	73	424	307	701	260	386	3265	
	25	147	139	138	133	176	296	29			175	72		79	1384	
	26	113	242	113	99					90	35	259	99	289	301	1640
	28	34	28			62			28	58	266	219	118	167		980
	29	34	59		149	178	160	161		197	1034	168	231	101	2472	
	32	209	295	212	346	50	79	54	82	249	1040	518	131	101	3366	
	41		145					81	79		172	124	92		693	
	42	48	51		51		86	78	82	246	90			32	764	
		TOTAL	4092	3861	3110	2500	1757	2591	1318	1591	4197	7197	3914	2587	1906	40621
B	50	32	43	217						310	256	92	89		1039	
	51	113	117	46			138			202	77	86	82	532	1393	
	52	44			126		47			68	110	138		53	586	
	60	302	221	218	160	61	47		160	77	477	86	92		1901	
	61	702	737	219	112		671	182	222	560	1009	348		158	4920	
	70	166		73	77	39	32		32		59	516		41	1035	
	71	410	152	223	41	110	293	83	159	345	496	96	329	260	2997	
	80	302	293	187	42	201	461	63	101	591	383	213	199	455	3491	
		TOTAL	2071	1563	1183	558	411	1689	328	674	2153	2867	1575	791	1499	17362

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL	
C	90	624	230	165	119	95	679	40	142	690	1228	250	134	391	4787	
	100	680	1012	233	455		738	172	85	1171	1178	468	578	525	7295	
	103	421	356	221	212	204	225		58	271	273		102	166	2509	
	140	647	1278	709	266	221	1954	481	780	500	522	148	266		7772	
	150	558	635	184	51		335	96	289	758	365	615	236	37	4159	
	155	249	423	167			334	51		728	248	161			2361	
	156	577	231	149	179	73	167	51	52	239	212	144	107		2181	
	210	2203	3666	1133	686	507	1674	409	329	772	158	525	170	49	12281	
	220	1497	1697	644	320	228	593	203	309	742	197	810	264	397	7901	
	230	1215	772	329	374	158		73	40	474	131	360	212	104	4242	
	231	1820	604	563	469	210	41	46	71	582	104	485	99		5094	
	239	981	227	324	41		45			239	30	116			2003	
		<b>TOTAL</b>	11472	11131	4821	3172	1696	6785	1622	2155	7166	4646	4082	2168	1669	62585
D	160	185	180	85	41	110	47		130	223	49	86	69	50	1255	
	161	240	202	166	149	191	239			495	109	55	243	180	2269	
	162	397	53	139	62	95			175	88	213	332	123		1677	
	170	216	166	223	46	36	249		206	184	271	157	177	256	2187	
	173	95	100	179	154		18			145	103	372	321	130	1617	
	174	111	258	80	156			89	89	578	246	55	284		1946	
	240	1359	504	437	414	97	100	59	77	330	353	196	215	101	4242	
	250	488	517	419	391	59	176	120	167	591	266	606	101	50	3951	
	251	92	61		122	143					99	120	48	20	705	
	255	83	179	269	113	67	32	31		86	77	96	49		1082	
		<b>TOTAL</b>	3266	2220	1997	1648	798	861	299	844	2720	1786	2075	1630	787	20931
	E	180	466	222	228	118	153		43	47	291	72	52	243	153	2088
		183	323	255	113	110		183	75	250	146	599	196	144	66	2460
190		53	302	123	23	76				114	119	62	99	164	1135	
191		228	45	105	69	51		79		113	229	67	72		1058	
200		210	415	149	304	104	198	227	73	368	599	257	72	219	3195	
267									23	140			66		229	
270		134	247		94	64				169	86	107	65	141	1107	
		<b>TOTAL</b>	1414	1486	718	718	448	381	424	393	1341	1704	741	761	743	11272
	<b>SUM TOTAL</b>	22315	20261	11829	8596	5110	12307	3991	5657	17577	18200	12387	7937	6604	152771	

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL	700	701	702	703	704	705	720	721	722	735	TOTAL
A	11		101			51	61	130	294		62		79	59	837		120		24	116	148		35	48		491
	12	104	381	94	104			131	125	54	142	76	139	299	1649		102	191	124	160	46	389	44	139		1195
	14	289	323		194	101	149	369	80	124	167	236	76	286	2394		179	305	78	163	175	166	211	111	358	1746
	18	266	44	50		97	70		153	149	136	149	93	118	1325		23	125	145	153			86	68	103	703
	19	157	68	114	111	86	255	320	75		23	231	18	90	1548	47	69	182	237	144	17	327		75	275	1373
	21	627	324	160		153	264	134	176	212	646	138	218	477	3525		192	145	293	338	112	112	32	555	420	2199
	22	1437	1511	324	583	315	1309	1035	1335	500	428	621	362	822	10582	72	504	768	969	850	314	208	385	581	1622	6273
	23	235	312	250		39	131	261	137	183	446	62	55	479	2590	85	51	175	122	188	111	86	104		77	999
	24	302	87	345	158	66	260	186	219	256	184	413	205	491	3172		133	51	248	212	165	448	104	217	585	2163
	25	706	400	130		231	185	108	368	411	347	160	154	464	3664		130	162	288	201	128	132	66	240	272	1619
	26	457	339		204	61	73	180	320	308	75	75	203	153	2448		51	150	177	333	131	59		212	85	1198
	28	231	195	76	51		113	282	309	68	257		78	415	2075	59	96	104	362	286	299	209	162		341	1918
	29	251	410	203	72	257	212	270	174	166	174	294	239	219	2941		321	607	266	136	381	190		286	567	2754
	32	621	121	175		194	188	154	238	431	337	87	290	828	3664	32	174	851	510	438	194	129		230	488	3046
	41		27					70					79		176		79		134	64	29	160		75	218	759
	42		24		52			113							189		118	159	161	116		68			91	713
	TOTAL	5683	4667	1921	1529	1651	3270	3743	4003	2862	3424	2542	2288	5200	42783	295	2342	3975	4138	3898	2250	2683	1229	2837	5502	29149
B	50		16			48		173	58		58		110	81	544	67	59	66	267	170	51			63	37	780
	51		63		149		22	66				25	51		376		38	104	77		97	149			243	708
	52	156	257	107			59		135	47	47	56		245	1109		129	112	126	66	70	130			49	682
	60	199	278	122	32	120	52				47	54	114	92	1110		84	83	129	132	61	146		131		766
	61	331	356	187	113	111	188	166	89	111	212	66	61	272	2263		260	221	302	604	233	188		467	292	2567
	70	95	61	61				39	66			56	257	91	726		68	41		91	59	81		46	73	459
	71	311	139	25	179	32	117		70	55	75	31	66	268	1368	145	186	232	184	294	181	46	54	235	318	1875
	80	256	324	50	95	135	108	124	41	115	302	333	219	327	2429		236	535	198	462	281	247		284	850	3093
	TOTAL	1348	1494	552	568	446	546	502	525	328	741	621	878	1376	9925	212	1060	1394	1283	1819	1033	987	54	1226	1862	10930

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL	700	701	702	703	704	705	720	721	722	735	TOTAL	
C	90	221	234	59	44	45	141	107	68	182	50	122	107	122	1502	89	166	299	305	257	190	90	68	90	356	1910	
	100	488	221	250	96	292	149	245	245	75	365	162	72	217	2877	182	200		500	199	115	365		95	199	1855	
	103	473	270	108	149		70	117	72		259	186	85	228	2017		122	121	53	79			121	54	77	627	
	140	185	353		42	23	262	152						397		170	1584		71	138	210	46	127		55	217	864
	150	383	391	67	57		203	173	414	177	46	169	41	230	2351		104		62	46	102	52	142	46	280	834	
	155	198	167	167	89	311	177	41	256	62	62	84		63	1677	77		119	153	95						159	603
	156	289	173	25	221	121	84	82	43					79		1117	47	82	236	189	141				50	60	805
	210	466	191	207	103	47	605	389	59		140	129		130	2466	58		51	277	418		182	77			348	1411
	220	531	116	44	275	342	414	154	167	102	186	101	51	199	2682		178	83	39	405	96		77	103	149	1130	
	230	263	335	43	121	45	50	207	265	45	221	53		178	1826		113	71	207	250	99	100		121	113	1074	
	231	261	416	117	119	104	135	117	40	126	233	96		122	1886	18	34	75	138	98	44	182				243	832
	239	70	136		42		34	44						47	427						46	26		32		17	121
	TOTAL	3828	3003	1087	1358	1330	2324	1828	1629	769	2038	1156	403	1659	22412	471	999	1126	2061	2198	738	1124	485	646	2218		12066
	D	160	144	377		125	55	86	93	206			83	166		1335	25	138	256	163	115	40					737
161		731	300	88	91	46	494	524	54	118	639	203	26		3314	45	69	130	185	374	58	149	72	149	172	1403	
162		159	425	257	153	57	60	308	365	292	132	272	85	196	2761		170	153	320	524	238	162		56	205	1828	
170		412	934	371	271		29	342	453	198	195	245	257	392	4099	32	330	411	662	522	272	244	132	612	355	3572	
173		212	614	150	202	272	327	165	223	95	221	96	102	262	2941		131	261	196	250	533	163	44		154	1732	
174		75	580	278	80	64	60	372	384	20	302	225		70	2510		146	297	368	336	128	240			231	1746	
240		666	606	223	472	169	390	108	158	163	266	78	65	145	3509	78	118	281	250	268	221	179	67	55	214	1731	
250		1379	1243	583	654	592	157	536	817	428	648	320	248	703	8308	116	188	463	659	1623	702	673	247	203	617	5491	
251		237	480	109	45	34	203	118	137		241	191		141	1936		62	243	59	96	21	106		89		676	
255		563	1053	172	444	149	53		216	68	216		141		3075	24	50	210	146	512	265	68		26		1301	
TOTAL		4578	6612	2231	2537	1438	1859	2566	3013	1382	2860	1713	1090	1909	33788	320	1402	2705	3008	4620	2478	1984	562	1190	1948		20217
E	180	435	815	405		181	262	487	288	264	352	373	64		3926	95	487	385	432	860	153	126	23	129	20	2710	
	183	131	633	284	100	108	198	412	363	64	245	266	145	255	3204	67	631	292	485	538	135	183	106	71	189	2697	
	190	329	314	127	48	100		242	127	52	42		115		1496		427	614	341	218	262	313		215	78	2468	
	191	165	602	252	340	151	240	27	51		302	322	23	110	2585	251	356	653	531	593	194	59	41	54	49	2781	
	200	509	670	372	257	188	55	248		398	613	396	189	624	4519	621	2016	3770	2266	846	554	481	157	160	594	11465	
	267	77	114	29		73	54		63	82	20				512		96	58	121	182	53	58				568	
	270	61	158		77	95	77	35		131	28	160		77	899	302	607	452	350	434	250	151				81	2627
	TOTAL	1707	3306	1469	822	896	886	1451	892	991	1602	1517	536	1066	17141	1336	4620	6224	4526	3671	1601	1371	327	629	1011		25316
SUM TOTAL	17144	19082	7260	6814	5761	8885	10090	10062	6332	10665	7549	5195	11210	126049	2634	10423	15424	15016	16206	8100	8149	2657	6528	12541		97678	

TABLE 8 - Continued

1980 - 24 Hour, 2 Directional  
External to Internal Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
A	11		146		91	100		103	44	61		545	86	76		162	4010
	12	68	281	37	117	185	142	284	148	49		1311					8565
	14	180	261	35	27	185	51	207	53	52	130	1181	140	86	73	299	10786
	18		174		59	177		127	73	41	39	690	113	152	53	318	7296
	19	209	681	73	53	185	78	48	121	141	288	1877	166	54	170	390	10081
	21	640	784	160	220	631	50	461	121	413	84	3564	203	48	137	388	16400
	22	615	1716	104	717	2040	186	596	100	1039	740	7853	779	508	104	1391	45550
	23	41	168		259	184		73	18	60		803	122			122	6150
	24	284	788		166	348	95	105	95	450	514	2845	56	56	227	339	14463
	25	485	208	69		199	53	73	310	187	161	1745	50			50	9797
	26	232	295	37	48	90	131	73				906			93	93	7959
	28	243	658			344		424	53	161	694	2577		59	64	123	9182
	29	799	1418	37	192	237	270	861	140	52	427	4433		86	105	191	14015
	32	547	870		178	638	196	383		398	564	3774		169	93	262	17161
	41	281	221			212	78	110	73	49	58	1082	159			159	3483
	42		221			186	34	60		56		557	31			31	2880
	TOTAL	4624	8890	552	2127	5941	1364	3988	1349	3209	3699	35743	1905	1294	1119	4318	187778
B	50	223	124			31		125	50			553	131	35	61	227	4764
	51	257	176	34	31	196	46		130	326		1196	64		34	98	4978
	52	151	372	91		428			63	192	78	1375		171		171	5197
	60	271	292		64	669	67	53		203		1619	157	156	152	465	7849
	61	769	644	86	372	1304	144	174	342	472	346	4653	433	374	327	1134	21945
	70	126	114			338	26	44	66	38		752	72	177	49	298	4940
	71	230	627	83	44	437	131	239	205	254	167	2417	29	86		115	11806
	80	615	1719	96	115	545	212	390	182	321	446	4644	44	154	74	272	18228
	TOTAL	2642	4068	390	626	3948	626	1025	1038	1806	1037	17206	930	1153	697	2780	79707

TABLE 8 - Continued

1980 - 24 Hour 2 Directional  
External to Internal Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
C	90	194	402		215	431	130	121	23		131	1647	122	58	160	340	15667
	100	659	589		312	545	67	211	50	260	208	2901	465	257		722	23158
	103	73	203		53	167			35			531			58	58	8148
	140	296	178	26	365	236			98	56	52	1307	196			196	17817
	150	162	316			77	67	53		59		734	56	188	59	303	11480
	155	343	205			167	30	144	73	52	59	1073			129	129	8217
	156	164	159			27			39		62	451	56			56	6032
	210	90	404		140	239	266			52		1191	54	116	97	267	21469
	220	305	186			342	81	50	41	185	178	1368		293	51	344	17084
	230	68	42	75		248		25	41	148	51	698	50	50	56	156	9860
	231	318	196	122		129	57	66		122		1010	77		59	136	11799
239		32									69	101	50		27	77	4139
	TOTAL	2672	2912	223	1085	2608	698	670	400	934	810	13012	1126	962	696	2784	154870
D	160	151	101			185		91	143	64		735	52			52	5598
	161	117	291			202		201		164	151	1126	52	122	56	230	10561
	162	61	278			100	78		66	54	181	818	104	72	32	208	9504
	170	333	778		130	86	388	161	201		161	2238			51	51	15498
	173	329	704		96	162	28	243	57	115	230	1964		198		198	10140
	174	229	725	98	53	358	86	41		205	194	1989	64		68	132	10375
	240	393	338	73	48	187	16	110	185	96	130	1576		91	71	162	16783
	250	626	776	266	86	232		205	131	170	518	3010	16	77	120	213	25672
	251	495	484			358	48	17		30		1432		86	16	102	7080
	255	340	15			109	48					512		28	105	133	7552
		TOTAL	3074	4490	437	413	1979	692	1069	783	898	1565	15400	288	674	519	1481
E	180	621	536		55	372		218		52	185	2039		26		26	14095
	183	1256	1685	122	205	223	238	320	196	126		4371	208	215		423	16317
	190	391	220		115	113	68	68	68		42	1085	76	85	68	229	7957
	191	572	312	68	97	156		43			180	1428	32	107	48	187	11951
	200	490	768	149	61	732	245	1049	297	455	589	4835	311	76	17	404	28539
	267																2166
	270	158	219	163		122	98	39	62	26	185	1072	52	23		75	7302
		TOTAL	3488	3740	502	533	1718	649	1737	623	659	1181	14830	679	532	133	1344
SUM TOTAL	16500	24100	2104	4784	16194	4029	8489	4193	7506	8292	96191	4928	4615	3164	12707	629445	

TABLE 9

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	G								F				H			
	ZONE	300	301	302	305	306	307	308	TOTAL	310	311	312	TOTAL	320	323	TOTAL
G	300	102	145	110		53			410			21	21	67	178	245
	301		19	33			18		70	77		31	58	77	111	188
	302					87			87	20	10	57	87	24	139	163
	305						32		32			109	109	30	63	93
	306						23	26	49		106	58	164	61	178	239
	307						111	63	174			106	106	139	58	197
	308									47	51	79	177	203	71	274
	TOTAL	102	164	143		140	184	89	822	94	167	461	722	601	798	1399
F	310										13	106	119			
	311										108	183	291	68	54	122
	312											434	434	95	68	163
	TOTAL										121	723	844	163	122	285
H	320													71		71
	323														17	17
	TOTAL													71	17	88
	SUM TOTAL	102	164	143		140	184	89	822	94	288	1184	1566	835	937	1772

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	400	401	410	421	440	450	461	471	493	TOTAL	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL	
G	300	118	14	42			297		50		521	287	568	101	43	61	218	144	95	105	87	35	47		1791	
	301		33		28		318		105		484	125	102	50		48	85	107	88	133		275	72	156	1241	
	302	135	66		34		127		18		380	247	383	208	78	29	309	77	60	121	185	44	24		1765	
	305					42					42	93	37	63											68	261
	306	18	18	16	41		83		65	19	260	195	76	33	50		23	15	45	85	73		55		650	
	307	15					62		26	26	129	99	72		77		86		40	14	45	77	99		609	
	308								60		60	243	279	56	55	41						63	36		773	
	TOTAL	286	131	58	103	42	887		324	45	1876	1289	1517	511	303	179	721	343	328	458	453	431	333	224	7090	
	F	310								27		27	19			32		12								63
311		62	121		85	14	57	27	52		418	56	82	30	41		23						33		265	
312		70	83		69	45	102	74	108		551	237	54	155	6	50	53	40	97	79	74	23	73	32	973	
TOTAL		132	204		154	59	159	101	187		996	312	136	185	79	50	88	40	97	79	74	23	106	32	1301	
H	320	60	85	23			18				186	235	74		47		78	26	35				31	25	551	
	323	28	27	59							114	130	97	25			21				33				306	
	TOTAL	88	112	82			18				300	365	171	25	47		99	26	35	33			31	25	857	
	400	35		29		34					98	43	76	59			115						31		324	
	401				27						27	276	183				184			40		62			745	
	410										47						22								69	
	421										143	95									27				265	
	440														34								44		78	
	450										157	225		79						33						494
	461										33	27										53				113
	471										108	226	238					41								613
	493										37	33						45								115
	TOTAL	35		29	27	34					125	844	865	297	79	34	407		33	67	53	62	75		2816	
SUM TOTAL	541	447	169	284	135	1064	101	511	45	3297																

(500 Series total carried on following page)

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	501	502	503	504	505	520	521	522	523	526	528	531	541	TOTAL
501	1118	543	123	59	42	270	34	29	190	92	33		81	2614
502		135		43	66	272	87	29	70	123	69		35	929
503			36										32	68
504						47				27				74
505					10	28								38
520						854	229	98		23	44	49		1297
521														
522														
523										19				19
526														
528														
531														
541														
TOTAL	1118	678	159	102	118	1471	350	156	260	284	146	49	148	5039
SUM TOTAL	3928	3367	1177	610	381	2786	759	649	897	864	662	594	429	17103

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL
G	300	39	52	27	45			39	49	31	41	9		119	451
	301	119	123	59	37		47	27	82		150			74	718
	302	84	207	78	27		42	69	36		70	132	22	108	875
	305	12	163	42	36	178		92	60	46		28		122	779
	306	67	214	104	81		79	83	56		24	50	78	248	1084
	307	279	118	65	33		102	33	147	29	72	108	73	219	1278
	308	158	210	44	57	77	39	78	73	102	133	41	109	468	1589
	TOTAL	758	1087	419	306	255	309	421	503	208	490	368	282	1358	6774
F	310	38	25												63
	311	138	63	27	25		36	13	24						326
	312	188	425	92	140	178	162	270	246	45	90	26	22	24	1908
	TOTAL	364	513	119	165	178	198	283	270	45	90	26	22	24	2297
H	320	60	67											25	152
	323	20	22		24		30		20					15	131
	TOTAL	80	89		24		30		20					40	283
	400	181	92	46		16				31					366
	401	148	146	29		40		119		79	163	17			741
	410														
	421	79	144				20	49			48		93		433
	440			32					52		36				120
	450	59	180				34	26	52		72	58		41	522
	461		52												52
	471		66		60		43	32					55	134	390
	493	27				32			23					29	111
	TOTAL	494	680	107	60	88	97	226	127	110	319	75	148	204	2735

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	600	601	602	603	604	606	607	609	611	613	614	622	631	TOTAL
501	35	116	72	45	14	17	84	19	23	75			57	557
502	117	168	38	23		41			49		14	25	68	543
503	16	16										33	35	100
504	42	121	22									38	36	259
505	29	45												74
520	91	229	12		50	37				23			49	491
521						17								17
522														
523	76	99	10					10		16		40		251
526	61	84		44							35		46	270
528		32												32
531	41	47	24										73	185
541	31	17	31											79
TOTAL	539	974	209	112	64	112	84	29	72	114	49	136	364	2858
600	229	753	103		41		50	48	61		88	60	65	1498
601		611	68	156	11	8	66	109	45	34	80		208	1396
602								28						28
603				23	17									40
604					64									64
606									12					12
607														
609													65	65
611														
613													30	30
614														
622														
631														
TOTAL	229	1364	171	179	133	8	116	185	118	34	168	60	368	3133
SUM TOTAL	2464	4707	1025	856	718	754	1130	1134	553	1047	686	648	2358	18080

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	700	701	702	703	704	705	720	721	722	735	TOTAL
G	300		98			64	113	42				317
	301	35	20	74	217		32	53		34	39	504
	302		57	130		102	57	48	29	41	390	854
	305		113	156	309	177	35	104	46	148	110	1198
	306	57	143	274	437	148	119	73	72	19	123	1465
	307		65	133	22	68	113	117	36	32	36	622
	308		81	218	162	277	187	198	83	128	303	1637
	TOTAL	92	577	985	1147	836	656	635	266	402	1001	6597
F	310	32	14	125	30	105	29					335
	311	53	36	325	80	62		65				621
	312	58	78	273	183	195		49	34	21		891
	TOTAL	143	128	723	293	362	29	114	34	21		1847
H	320				25	40			33			98
	323	44		66								110
	TOTAL	44		66	25	40			33			208
	400	6	21	37		47	41	41	52		86	331
	401	27	68	242	189	114	56	176	48	200	138	1258
	410			24	34	22		19				99
	421		47	107	41	26	48	84	73		61	487
	440			41		115					45	201
	450		88	172	472		140	171				1043
	461			63				27				90
	471	19		67	131	45	115	68	173	54	86	758
	493		24	64				51			41	180
	TOTAL	52	248	817	867	369	400	637	346	254	457	4447

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	700	701	702	703	704	705	720	721	722	735	TOTAL
	501	17	45	166	14	345		75		24	85	771
	502			189		127	114	45	90	36	54	655
	503			51		21					34	106
	504		14	63	28	82						187
	505			47	23	36						106
	520	24	52	30	45	219	101	39				510
	521		40		14	47		100				201
	522											
	523		64	86	65	29	18	14	8		18	302
	526		16			19	38	33			70	176
	528			70		38						108
	531			10		17						27
	541			47	71	34	24		130			306
	TOTAL	41	231	759	260	1014	295	306	228	60	261	3455
	600		55	160	60	220	22			30	63	610
	601		69	343	63	166	77	53	52	24	89	936
	602	17	17	116							14	164
	603			40	22						39	101
	604	25	32	18		37				24		136
	606			22								22
	607			53				31				84
	609			32							24	56
	611	37		21								58
	613			45		33						78
	614			25		13						38
	622		19	19								38
	631					36				42		78
	TOTAL	79	192	894	145	505	99	84	52	120	229	2399
	700	23		98	41							162
	701		23	16		52					27	118
	702			129	29	342	63				10	573
	703				72	61	27					160
	704					58	59	27		8	56	208
	705						16					16
	720											
	721											
	722										13	13
	735											
	TOTAL	23	23	243	142	513	165	27		8	106	1250
	SUM TOTAL 474		1399	4487	2879	3639	1644	1803	959	865	2054	20203

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE															SUM	
		801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	TOTAL
G	300	69		33		22		33	33		128	318	37	27	50	114	4188
	301	224	254				9	48	36			571	43			43	3877
	302	104	151	52	87	98		106	31			629	25		70	95	4935
	305	162	158			44		91			68	523	21			21	3058
	306	187	463	114	46	39		148		17	171	1185			19	19	5115
	307	19	322	43	23	45		117	132		43	744	18	22		40	3899
	308	234	237			48		58	172		93	842		81		81	5433
	TOTAL	930	1654	242	156	296	9	601	404	17	503	4812	144	130	139	413	30505
F	310	70	60	14				17				161					768
	311	346	367	83		108	13	71	16		76	1080	71			71	3194
	312	410	344	73	20	248	70	49	63	50	136	1463	44	52		96	6479
	TOTAL	826	771	170	20	356	83	137	79	50	212	2704	115	52		167	10441
H	320	270	120	73	32	159	25		25	19	23	746	66	93		159	1963
	323	374	47	55	42	132			21			671	56	33		89	1438
	TOTAL	644	167	128	74	291	25		46	19	23	1417	122	126		248	3401
	400	625	269					110	27		51	1082	66	27	26	119	2320
	401	927	417	23		46	16	83	70	26	202	1810		95		95	4676
	410	304	89								48	441					609
	421	476	386			18	36	54	97	28	114	1209		28		28	2422
	440	96										96					495
	450	1922	599	33		69	50	212	121		49	3055			48	48	5162
	461	75	189			43		31	44		50	432			29	29	716
	471	667	741	46		20		139	98		58	1769					3530
	493	115				21						136	46	17	41	104	646
	TOTAL	5207	2690	102		217	102	629	457	54	572	10030	112	167	144	423	20576

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	ZONE	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
	501	527	234	163		370	22	26	51			1393	99	79		178	5513
	502	338	176	48		355	93	33	24	39		1106	93	63		156	3389
	503	279	36	134		95		25			54	623	185	71	21	277	1174
	504	199	124		41	251		90			21	726	75	79	27	281	1527
	505	95	23				16					134	117	41		158	510
	520	344	411	128	71	190	38	158	56	71	113	1580	26		71	97	3275
	521	106	88					45				239		44		44	501
	522	354	91	22		23		42		62	100	694	46			46	740
	523	610	348		37	36		189	55		93	1368	46	44		90	2030
	526	875	661	150		51		119	36			1892	90	289		379	2717
	528	373	258		26	69		30	38		53	847					987
	531	411	100	31		126		27		23		718	92	67		159	1089
	541	32	251			16		30	180		103	612	66	87		153	1150
	TOTAL	4543	2801	676	175	1582	169	814	440	195	537	11932	935	964	119	2018	25302
	600	1021	426	411	52	439	58	142	18		120	2687	130	67		197	4992
	601	1015	632	240	131	666	90	155	62	35	143	3169	271	199	50	520	6021
	602	353	344	35	27	40		64		29	37	929	18	20		38	1159
	603	159	339	171	44	330	46	64		16	38	1207	97		32	129	1477
	604	365	41		25	189	28	33	27			708		233		233	1141
	606	43	158		25	122						348	97	54		151	533
	607	373	59	118	42	265		13				870	178			178	1132
	609	428	210	45		147						830	45	82		127	1078
	611	248		60	30	99						437			30	30	525
	613	267	97	79	68	74				28		613	27	33		60	781
	614	136	158			34						328	31	54		85	451
	622	226			173							399					437
	631	352	97	65	194	89	10	14				821					899
	TOTAL	4986	2561	1224	811	2494	232	485	107	108	338	13346	894	742	112	1748	20626

TABLE 9 - Continued

1980 - 24 Hour, 2 Directional  
External to External Trip Table

AREA	801	802	803	804	805	806	831	832	835	836	TOTAL	906	907	908	TOTAL	SUM TOTAL
700	142	105	28		23	49	14				361	27	54		81	604
701	516	37					42				595	9			9	722
702	594	57	19	54	6		22		24		776	68	62	47	177	1526
703	545	48		24	37	19					673					833
704	735	550	128	192	196		23	24			1848		67		67	2123
705	341		27	12	121						501					517
720	349	27			83						459		30		30	489
721	30										30		27		27	57
722	69						27			13	109			24	24	146
735	18				64					41	123	26			26	149
TOTAL	3339	824	202	282	530	68	128	24	24	54	5475	130	240	71	441	7166
801	67	54	82	239	672	81		27	36		1258	200	45	133	378	1636
802		28	80	65	23		45		39	43	323			9	9	332
803							35		43		78					78
804							42				42					42
805					21						21		38		38	59
806							30				30			46	46	76
831																
832																
835																
836												45			45	45
TOTAL	67	82	162	304	716	81	152	27	118	43	1752	245	83	188	516	2268
906													20		20	20
907																
908																
TOTAL													20		20	20
SUM TOTAL	20542	11550	2096	1822	6482	769	2946	1584	585	2282	51468	2697	2524	773	5994	120305

TABLE 10

1980 - 24 Hour, 2 Directional  
Internal to CBD Trip Table

AREA	A	11	12	14	18	19	21	22	23	24	25	26	28	29	32	41	42	Total
A	11	68																68
	12	1	30															265
	14	34	50	107														199
	18	65		124	365													554
	19	156	156	131	383													826
	21		30	178	62	149												419
	22	128	210	89	332	319	148	61										1287
	23	177	61	35	18	108		57	26									482
	24		86		137	122		154	16									515
	25	75	148	75	18	41	215	162	40	18	129							921
	26	69		40	62		37	41	26	68	76	23						442
	28	149	53	53	132	61		50		181	81	34						794
	29	86	107	29	29	709	86	132	26	177	56	107	316	29				1889
	32	140	118	64	40	176		138										676
	41	118		211				75			18		34	29	123	297		905
	42	50	110	380	204			26	139		62				38		116	1125
	TOTAL	1550	1159	1516	1782	1685	486	896	273	444	422	164	350	58	161	297	116	11359
B	50	144						37	37				34		32	35	15	334
	51	28		24		15	78		64	35					15		58	317
	52		104	50	29	85	28	211	37					220	32			796
	60		57		41		20	23									15	156
	61	47		120		189	33	135		35	16					277	58	910
	70	63				75		41	41	41					29	73		363
	71			62	69	38		59	16	24			18	369				655
	80		47		69	51	126	45	76			56	66		76	176	108	896
	TOTAL	282	208	256	208	453	285	551	271	135	16	56	118	589	184	561	254	4427

TABLE 10 - Continued

1980 - 24 Hour, 2 Directional  
Internal to CBD Trip Table

AREA	ZONE	A	11	12	14	18	19	21	22	23	24	25	26	28	29	32	41	42	SUM TOTAL
C	90	60	28	15	29	29		28		77		16		126	57	32			468
	100	279	89	46	68	176		79	176		52	19			217	202	206	96	1705
	103	95	108		281	125		141	77		134		25		328	43	41		1398
	140	402	506	248	169	115		365	343	620		105	87			138	162		3260
	150	171	154	78	142	246		32	54			53	68			14			1012
	155	92	243	70	185			106	106	60	50	75		36		41		163	1227
	156	32		26	261				164				84		48	50		126	791
	210	353	430	230	306	208		465	178	209	77	45	29		65	134	98	23	2850
	220	113	108	127	381	101		81	180	117	265	240	239		83	161			2196
	230	277	115	44	76	37		154		80				17	45	31	63		939
	231	31	55	23	55			76	125	55	35	16		31	110	118			730
	239	31	102						46	89			39						307
	TOTAL	1936	1938	907	1953	1008	1527	1449	1307	613	608	532	210	953	964	570	408		16883
	D	160	57			119			95	57	16	113		34					
161		130	98			137	92	265	19		248	36	21		71		189	1306	
162				37	82	78					124			67	63				451
170		243		67	40	54	100	202	121	42	88	32	19	29	103		153	1293	
173		84	143		32	99		100	18	43	41								560
174		324	55	18		100	58	131		150	172	25	21	67	86				1207
240		230	183	32		86	113	256	64			29		55		20	23		1091
250		344	289	473	66	43	286	248	39	171	208	176	47	43	72				2505
251		77	45	32			39		39									23	255
255			27					22				24							73
TOTAL		1489	840	659	339	597	783	1281	316	519	905	332	108	261	395	20	388		9232
E	180	254	75	248				224	24	72		35		154	205	110		1401	
	183	29	28	72	69	38	51	23	53					44	67			474	
	190		166	50	60		75	151			32	89	16	57				696	
	191	167	97	32		98	37	148	148		243			57	94			1121	
	200	60	62	15		34	126	72		41	16		126	66	66	205		889	
	267	72	25															97	
	270	73		64	104		24	121	37				22	18				463	
	TOTAL	655	453	481	233	170	537	539	310	41	326	111	314	429	227	315			5141
SUM TOTAL	5912	4598	3819	4515	3913	3618	4716	2477	1752	2277	1195	1100	2290	1931	1763	1166		47042	

TABLE 11

1980 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

AREA	B					TOTAL	C								TOTAL	SUM TOTAL
	ZONE	50,51,52	60,61	70,71	80		90	100,103	140	150,155,156	210	220	230,231	239		
B	50,51,52	1006				1006										1006
	60,61	1374	1772			3146										3146
	70,71	1165	1183	1780		4128										4128
	80	544	753	1088	1625	4010										4010
	TOTAL	4089	3708	2868	1625	12290										12290
C	90	258	842	254	189	1543	210								210	1753
	100,103	397	948	508	124	1977	1142	1203							2345	4322
	140	710	266	366		1342	1054	1133	1353						3540	4882
	150,155,156	605	2210	511	656	3982	723	2744	2516	3537					9520	13502
	210	326	291	470	494	1581	356	895	1921	1785	1353				6310	7891
	220	389	689	71	129	1278	179	1063	2165	3516	2660	1568			11151	12429
	230,231	404	758	468	765	2395	502	1601	513	1706	969	3056	2022		10369	12764
	239	58	40	48	249	395	78	92	14	153	20	132	551	132	1172	1567
	TOTAL	3147	6044	2696	2606	14493	4244	8731	8482	10697	5002	4756	2573	132	44617	59110

TABLE 11 - Continued

1980 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

ARBA	B					TOTAL	C								TOTAL
	ZONE	50,51,52	60,61	70,71	80		90	100,103	140	150,155,156	210	220	230,231	239	
D	160,161,162	399	634	454	399	1886	249	2197	1472	2816	955	500	1361	329	9879
	170,173,174	529	421	60	380	1390	58	768	433	1240	392	302	451	651	4295
	240	124	338	428	180	1070	166	427	149	840	495	472	1536	280	4365
	250,251	220	352	235	220	1027	156	405	518	883	420	292	630	83	3387
	255	60	74	186		320	65	89	71	173		144	221	36	799
	TOTAL	1332	1819	1363	1179	5693	694	3886	2643	5952	2262	1710	4199	1379	22725
E	180,183	175	520	283	306	1284	365	1131	544	677	319	138	745	104	4023
	190,191	230	107	148	426	911	75	381	272	469	205	261	212	48	1923
	200	29	355	167	230	781		268	60	415	38	179	242	48	1250
	267	15	17	32	15	79	4	58	31	24	3	20	53	10	203
	270	143	143	31	299	616	145	20	112	193	54		296	12	832
	TOTAL	592	1142	661	1276	3671	589	1858	1019	1778	619	598	1548	222	8231
	SUM TOTAL	9160	12713	7588	6686	36147	5527	14475	12144	18427	7883	7064	8320	1733	75573

TABLE 13 - Continued

1980 - 24 Hour, 2 Directional  
Internal to Internal Trip Table

AREA	D						E						TOTAL	SUM TOTAL			
	ZONE	160,161,162	170,173,174	240	250,251	255	180,183	190,191	200	267	270						
D	160,161,162	2301													2301	2301	14066
	170,173,174	1246	1247												2493		8178
	240	1747	696	583											3026		8461
	250,251	1189	2228	1265	1645										6327		10741
	255	183	151	96	779	176									1385		2504
	TOTAL	6666	4322	1944	2424	176									15532		43950
E	180,183	1089	1741	590	470	100									3990	1791	11088
	190,191	660	604	308	702	21									2295	1225	7893
	200	137	141	156	104	74									612	826	4850
	267	60	77	121	169	10									437	138	971
	270	128	394	30	175										727	635	5955
	TOTAL	2074	2957	1205	1620	205									8061	4615	30757
	SUM TOTAL	8740	7279	3149	4044	381									23593	4615	146107

TABLE 12

1980 - 24 Hour, 2 Directional  
Composite of All Trips

Leg	External to External								External to Internal				Internal to Internal			
	X		Y		X		Y		X		Y		X		Y	
	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.
A	B	11300		0		0		0		8300		4400		24400		13100
	C	4200		0		0		0		0		16900		8500		39000
	D	15900		0		0		0		11400		9200		16800		51400
	E	2200		0		0		0		2400		5100		2600		25900
	F	900		0		700		0		2500		4000		2000		4000
	400s	0		0		900		0		0		22000		0		0
	801	3700		0		7500		0		7800		4600		5700		28300
B	C	1500		0		0		0		0		14500		5700		17800
	G	11600		0		17400		0		3100		5400		10700		13200
	801	10300		0		7500		0		500		2600		0		14700
	803	2300		0		500		0		2800		400		200		8000
	805	0		0		3900		0		0		3900		10700		0
C	D	6000		0		0		0		6200		22700		13600		24600
	G	700		0		7200		0		0		11800		0		1100
	H	700		0		1500		0		0		6300		1800		16700
	400s	0		0		6900		0		0		21500		16600		0
	501&502	3500		0		5000		0		33500		22600		11900		26800
	520&521	800		0		2500		0		4900		8400		7900		2300
	600&601	1000		0		1300		0		0		6800		0		2400
D	E	3200		0		0		0		1800		8100		20000		12200
	F	3800		0		1800		0		11600		7500		2400		18200
	H	3900		0		1500		0		5000		4900		4300		10800
	501&502	1200		0		1500		0		1400		5500		3000		2700
	600&601	5400		0		5100		0		40400		11300		13700		23800

TABLE 12 - Continued

1980 - 24 Hour, 2 Directional  
Composite of All Trips

Leg	External to External								External to Internal				Internal to Internal			
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
X	Y	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.	Cont.	Drop	Drop	Cont.	Drop	Drop	Cont.
E	F	13500		0		3600		0		0		8500		0		28600
	700&701	1900		0		1300		0		20200		6000		4000		10700
	702	600		0		2700		0		0		6200		8000		0
	801	700		0		5000		0		0		3500		0		4300
	802	6000		0		6300		0		5700		3700		4400		8700
F	H	300		300		200		200		0		0		1900		0
	600&601	2500		900		3800		500		6100		0		4100		0
	602	2400		100		900		1200		10200		0		0		2100
	700&701	2500		300		500		600		16500		0		3100		0
	704	2500		400		3000		0		3200		0		16600		0
G	400s	0		1900		10800		0		0		0		12500		0
	520&521	100		1100		200		900		0		0		0		0
	804	0		200		1600		0		0		0		4800		0
	805	700		300		300		400		0		0		0		0
H	501&502	2300		500		2300		500		0		0		0		0
	503	3300		0		700		100		7000		0		2800		0
	504	0		0		1300		0		0		0		9200		0
	600&601	1400		200		1000		100		0		0		0		0
	603	2200		0		500		100		12100		0		1300		0

TABLE 12- Continued

1980 - 24 Hour, 2 Directional  
Composite of All Trips

Leg X Y	External to External				External to Internal Internal to Internal			
	X Y Cont. Cont.	X Y Drop Drop	X Y Cont. Drop	X Y Drop Cont.	X Y Cont. Cont.	X Y Drop Drop	X Y Cont. Drop	X Y Drop Cont.
400s 520&521 522 500s*	0 0 0	400 0 200	0 0 0	3800 400 0	0 0 0	0 0 0	0 0 0	0 0 0
501 503 &502 520&521 523	2200 2000 0	200 600 300	1100 700 1600	500 1900 0	37000 0 0	0 0 0	9500 0 17800	0 0 0
503 504 523 500s*	100 0 0	0 0 0	0 500 5600	100 300 0	0 0 0	0 0 0	0 0 44000	0 0 0
504 500s* 600&601 603 600s*	0 1800 1100 0	0 200 0 100	3300 400 0 100	0 400 100 0	0 4800 0 0	0 0 0 0	4800 0 0 0	0 500 0 0
520 522 &521 523 804	0 0 0	100 0 100	1300 600 100	0 100 0	0 0 0	0 0 0	7200 0 0	0 0 0
522 523	300	0	100	0	0	0	0	0
523 500s*	0	0	200	0	0	0	0	0
500s* 600s*	0	100	0	200	0	0	0	0

(\* Series - Ring)

TABLE 12 - Continued

1980 - 24 Hour, 2 Directional  
Composite of All Trips

Leg X Y	External to External				External to Internal Internal to Internal			
	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>	<u>X</u> <u>Y</u>
	Cont.   Cont.	Drop   Drop	Cont.   Drop	Drop   Cont.	Cont.   Cont.	Drop   Drop	Cont.   Drop	Drop   Cont.
600 602	2400	200	700	1100	0	0	5300	0
&601 603	500	200	1500	0	0	0	5600	0
602 604	4400	100	800	900	50500	0	4900	0
602 604	3800	0	700	100	9300	0	900	0
602 704	2900	0	1500	200	0	0	0	0
603 604	700	0	200	100	0	0	0	0
603 600s*	0	0	2100	0	0	0	12100	0
604 600s*	0	0	8200	0	0	0	59700	0
600s* 704	0	100	0	3000	0	0	0	0
600s* 700s*	0	100	200	0	0	0	0	0
700 702	1700	100	1200	400	0	0	0	0
&701 703	2700	0	1700	0	28400	0	14000	0
701 704	2400	100	500	400	0	0	0	0
701 705	0	0	1400	0	0	0	4900	0
702 703	2800	0	1700	0	4200	0	1300	0
702 802	4400	0	200	1500	5500	0	0	200
702 831	1200	0	200	200	0	0	0	0
702 800s*	0	0	1400	0	0	0	0	0
703 705	0	0	0	0	0	0	0	0
703 700s*	0	0	5600	0	0	0	32600	0
704 705	1200	100	900	100	0	0	3200	0

(\* Series - Ring)

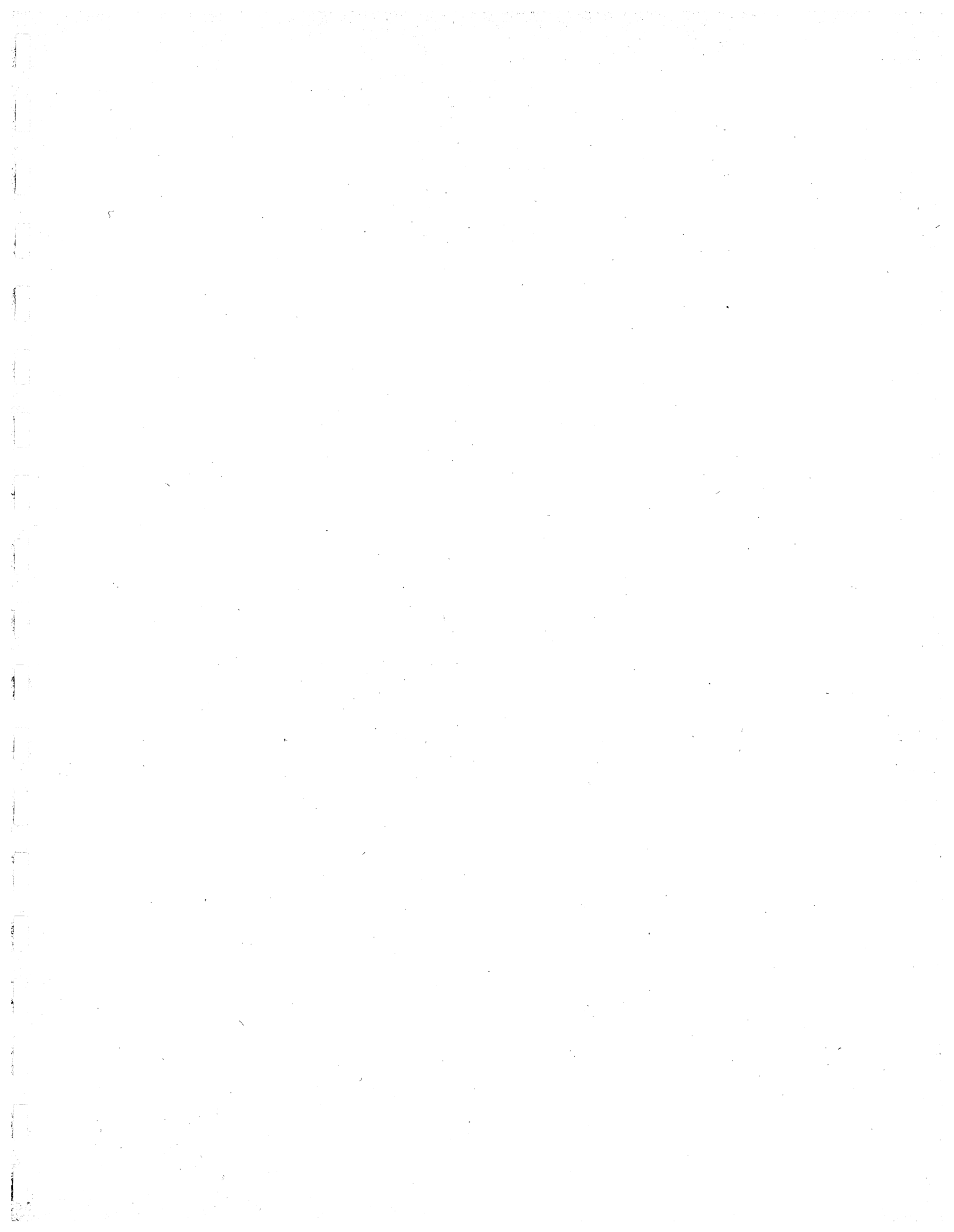
TABLE 12 - Continued

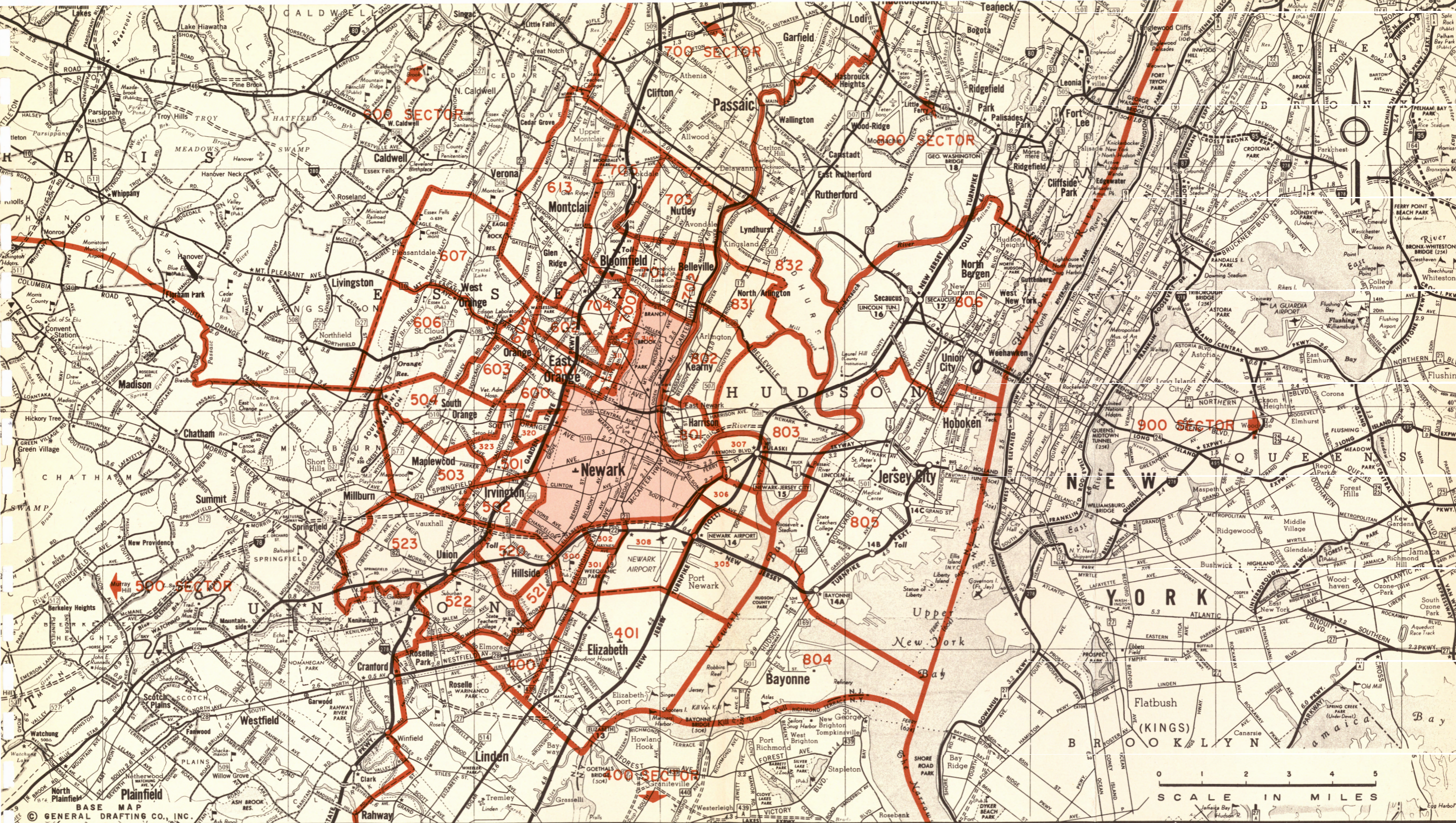
1980 - 24 Hour, 2 Directional  
Composite of All Trips

Leg X Y	External to External				External to Internal				Internal to Internal			
	X Y Cont. Cont.	X Y Drop Drop	X Y Cont. Drop	X Y Drop Cont.	X Y Cont. Cont.	X Y Drop Drop	X Y Cont. Drop	X Y Drop Cont.	X Y Cont. Cont.	X Y Drop Drop	X Y Cont. Drop	X Y Drop Cont.
705 700s*	0	0	1200	0	0	0	0	0	0	0	0	0
700s* 800s*	0	0	0	100	0	0	0	0	0	0	0	0
801 802	5900	100	5000	1500	10800	0	16300	0	0	0	0	0
801 803	2000	100	1300	400	6000	0	1000	0	0	0	0	0
801 800s*	0	200	500	0	0	0	12900	0	0	0	0	0
802 803	3000	100	900	0	3200	0	500	0	0	0	0	0
802 831	1000	0	2700	100	7300	0	8500	0	0	0	0	0
803 805	0	0	1900	0	0	0	1800	0	0	0	0	0
803 831	300	0	0	0	0	0	0	0	0	0	0	0
803 800s*	0	0	2200	0	0	0	4800	0	0	0	0	0
803 900s	0	0	3700	0	0	0	13200	0	0	0	0	0
805 900s	0	0	1400	0	0	0	0	0	0	0	0	0
831 800s*	0	0	1100	0	0	0	7300	0	0	0	0	0
831 900s	0	100	1000	0	0	0	0	0	0	0	0	0
800s * 900s	0	0	100	0	0	0	0	0	0	0	0	0

(\* Series - Ring)

ILLUSTRATIONS





NEW JERSEY STATE HIGHWAY DEPARTMENT  
 NEWARK TRANSPORTATION STUDY  
 EDWARDS AND KELCEY, INC. - DE LEUW, CATHER & COMPANY

# ORIGIN AND DESTINATION ZONES

FIGURE 1

# CORDON AREA

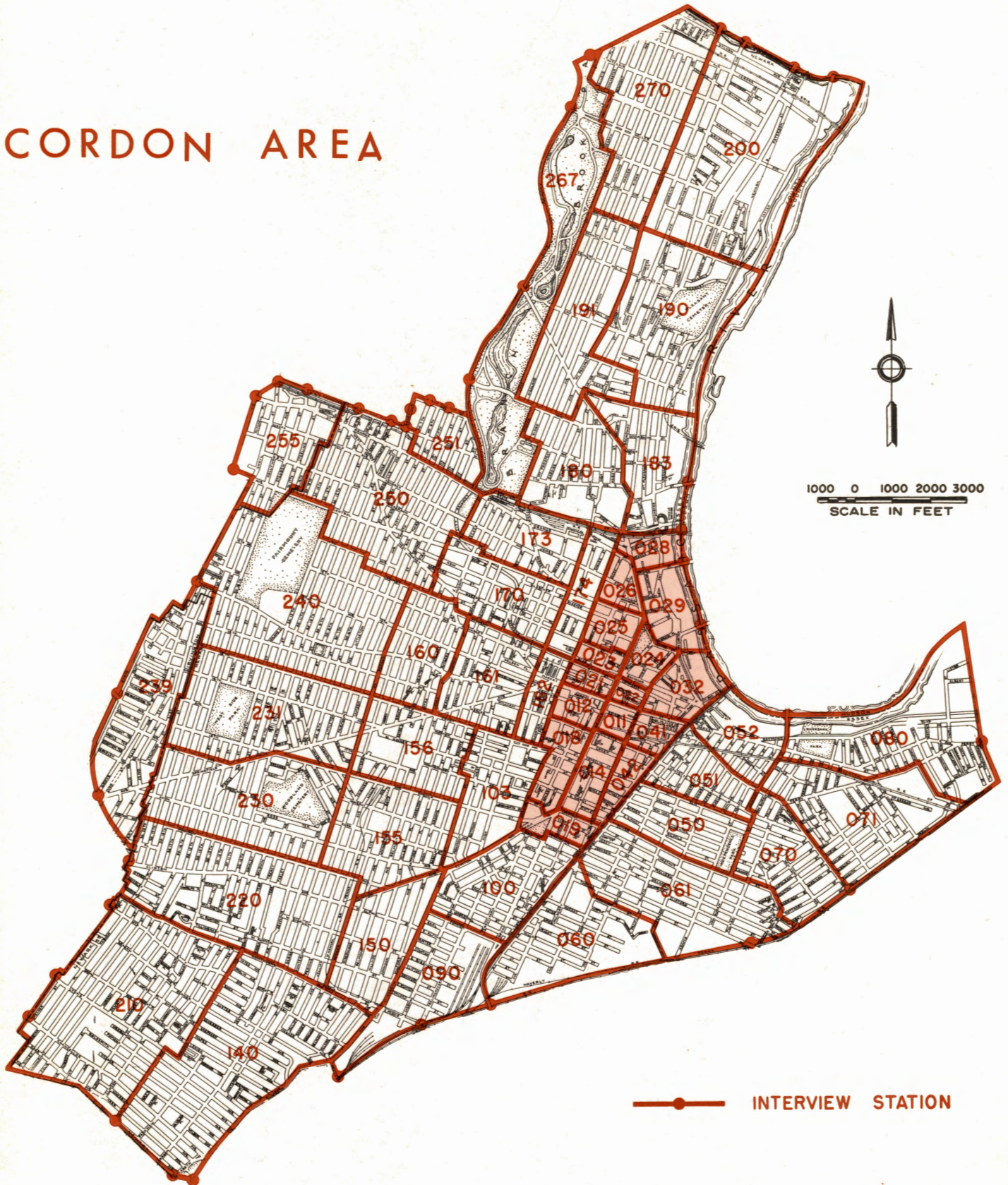
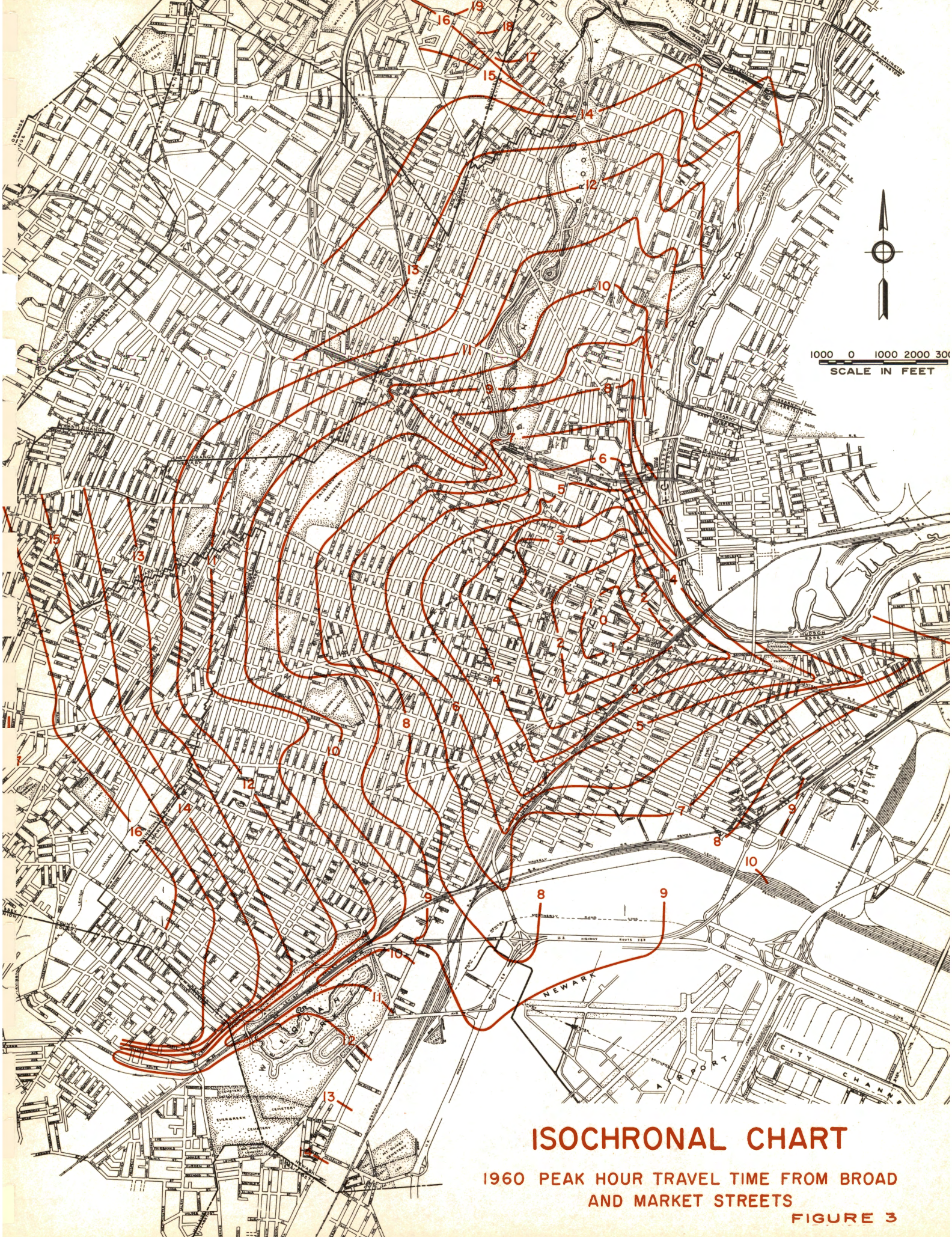


FIGURE 2





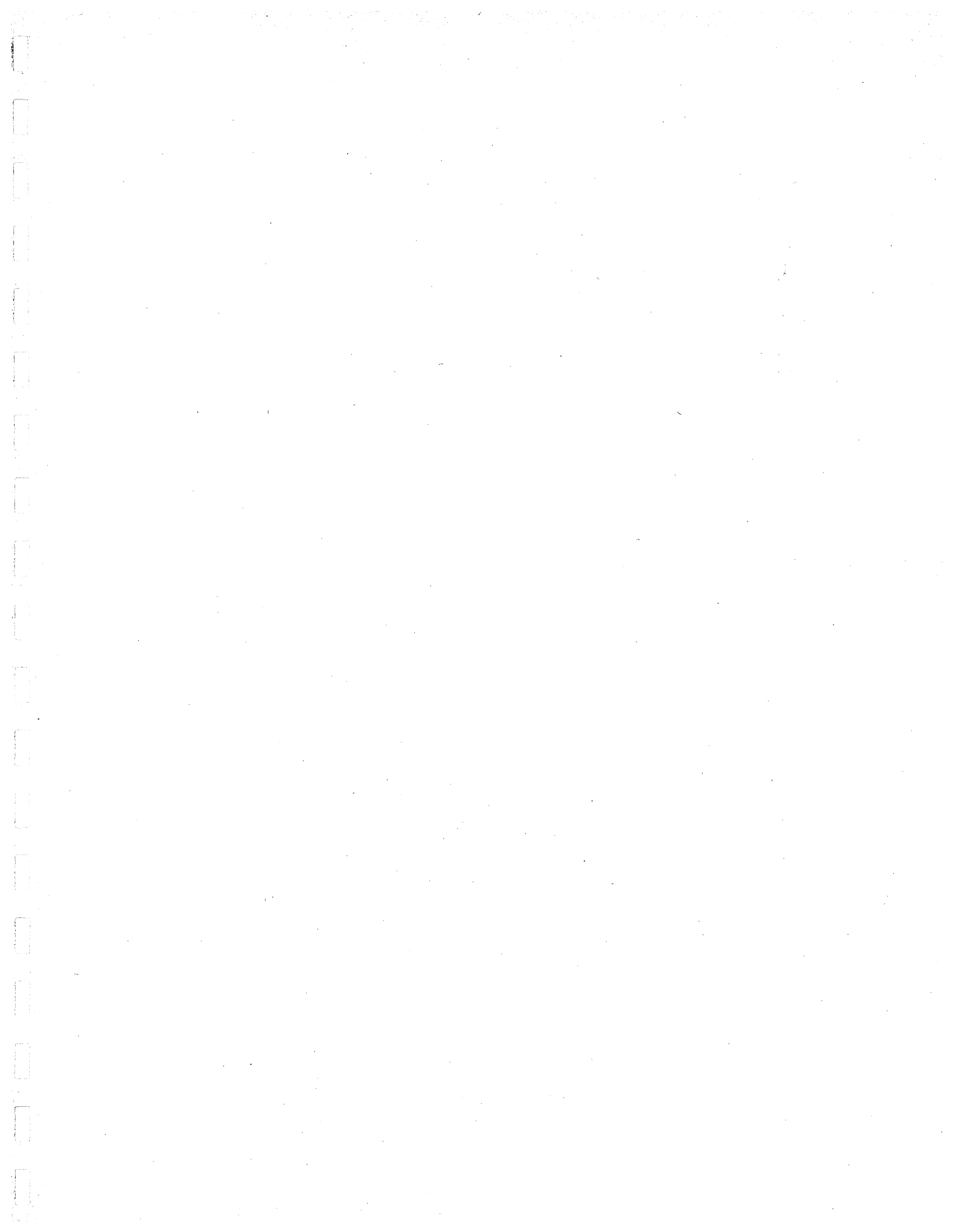
1000 0 1000 2000 3000  
SCALE IN FEET

# ISOCHRONAL CHART

1960 PEAK HOUR TRAVEL TIME FROM BROAD AND MARKET STREETS  
FIGURE 3



A P P E N D I X





External Zone Listing

<u>Drainage Area</u>	<u>Zone</u>	<u>Description</u>
400	410	Roselle and Roselle Park
	421	Linden and Rahway
	440	Staten Island
	450	Middlesex County
	461	Mercer, Burlington, Atlantic, Camden, Cape May, Gloucester, Salem, and Cumberland Counties
	471	Monmouth and Ocean Counties
	493	Lower Eastern Pennsylvania and Beyond
500	505	Millburn
	526	Cranford, Kenilworth, Garwood, Westfield, Clark, Scotch Plains, Fanwood, and Plainfield
	528	Springfield, Berkeley Heights, New Providence, and Summit
	531	Northeastern Pennsylvania, Warren and Southern Morris Counties
	541	Somerset and Hunterdon Counties
600	609	Livingston
	611	North Caldwell, Cedar Grove, and Verona
	614	Roseland, Essex Fells, Caldwell, West Caldwell, Caldwell Township
	622	Wayne Township, Little Falls, Totowa, West Paterson, and Passaic County (West of Route 202)
	631	Sussex and Northern Morris Counties
700	720	Clifton
	721	Passaic
	722	Paterson, Haledon, North Haledon, Prospect Park, and Hawthorne
	735	Fair Lawn, East Paterson, Saddle Brook, Garfield, Paramus, Lodi, Maywood, River Edge, Rochelle Park, Allendale, Waldwick, Oakland, Franklin Lakes, Wyckoff, Midland Park, Hohokus, Ridgewood, Upper Saddle River, Montvale, Park Ridge, Woodcliff Lake, Hillsdale, Washington, Westwood, Emerson, Rivervale, Old Tappan, Harrington Park, Norwood, Northvale, Rock Leigh, Oradell, and New York State (North and West of Route 23 and the Hudson River and Beyond)

External Zone Listing - Continued

<u>Drainage Area</u>	<u>Zone</u>	<u>Description</u>
800	835	Alpine, Closter, Haworth, Demarest, Cresskill, Dumont, New Milford, Bergenfield, Tenafly, Englewood, Englewood Cliffs, Teaneck, Bogota, Ridgefield Park, Leonia, Palisades Park, Fort Lee, Ridgefield, Cliffside Park, and Fairview.
	836	Wallington, Woodridge, Carlstadt, East Rutherford, Rutherford, Hasbrouck Heights, Teterboro, Moonachie, Little Ferry, and Hackensack
900	906	Manhattan
	907	Brooklyn, Queens, Nassau and Suffolk Counties
	908	The Bronx, Westchester County, New York State (East of the Hudson River between Westchester County Line and Route 23) and New England

Zone Groupings for Desire Lines

<u>Area</u>	<u>Zones</u>
A (Central Business District)	11, 12, 14, 18, 19, 21, 22, 23, 24, 25, 26, 28, 29, 32, 41, 42
B	50, 51, 52, 60, 61, 70, 71, 80
C	90, 100, 103, 140, 150, 155, 156, 210, 220, 230, 231, 239
D	160, 161, 162, 170, 173, 174, 240, 250, 251, 255
E	180, 183, 190, 191, 200, 267, 270,
F	310, 311, 312
G	300, 301, 302, 305, 306, 307, 308,
H	320, 323
Series 400	400, 401, 410, 421, 440, 450, 461, 471, 493
Series 500	501, 502, 503, 504, 505, 520, 521, 522, 523, 526, 528, 531, 541
Series 600	600, 601, 602, 603, 604, 606, 607, 609, 611, 613, 614, 622, 631
Series 700	700, 701, 702, 703, 704, 705, 720, 721, 722, 735
Series 800	801, 802, 803, 804, 805, 806, 831, 832, 835, 836
Series 900	906, 907, 908

Inner and Outer Ring Zones

Inner Ring Zones

300, 301, 302, 305, 306, 307,  
308, 310, 311, 312, 320, 323

501, 502, 503, 504, 520, 521,  
522, 523

600, 601, 602, 603, 604

700, 701, 702, 703, 704, 705

801, 802, 803, 804, 805, 831

Outer Ring Zones

400, 401, 410, 421, 440, 450,  
461, 471, 493

505, 526, 528, 531, 541

606, 607, 609, 611, 613, 614,  
622, 631

720, 721, 722, 735

832, 835, 836

906, 907, 908

