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Statewide Transportation Analysis & Research

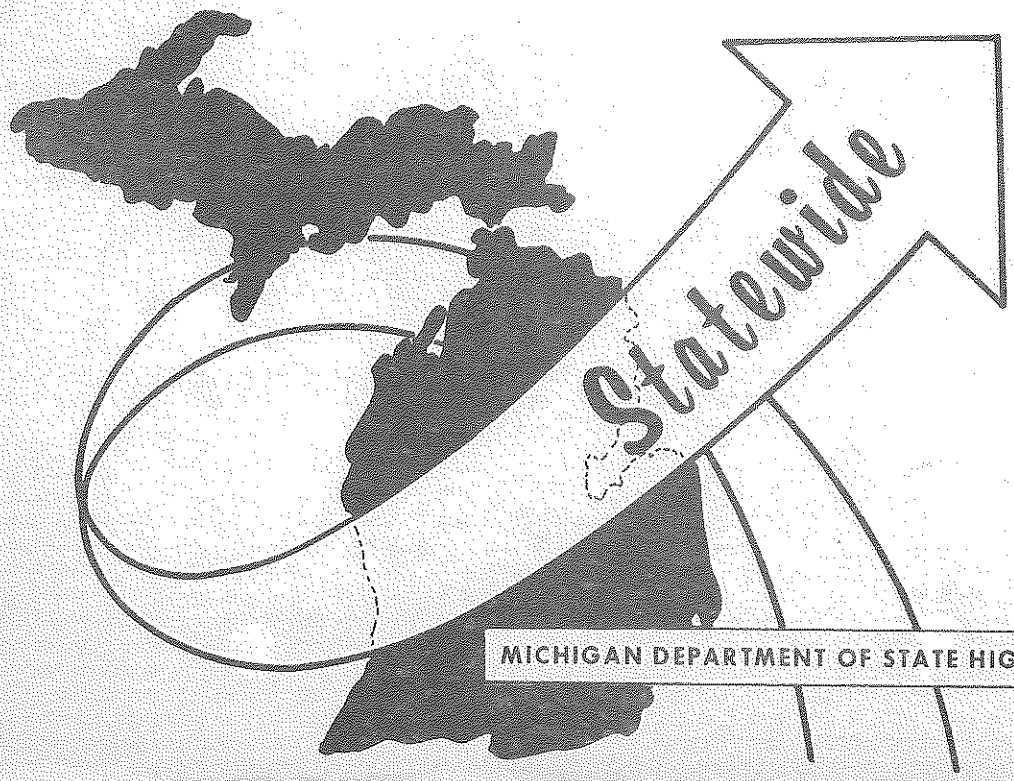
MICHIGAN'S STATEWIDE
TRANSPORTATION MODELING SYSTEM

REFERENCE HANDBOOK NO. 3

MINOR ORIGIN & DESTINATION TRAVEL CHARACTERISTICS REGION 4

STATEWIDE PROCEDURES SECTION

SEPTEMBER, 1978



MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

MICHIGAN DEPARTMENT OF STATE HIGHWAYS AND TRANSPORTATION

BUREAU OF TRANSPORTATION PLANNING

MICHIGAN'S STATEWIDE
TRANSPORTATION MODELING SYSTEM

REFERENCE HANDBOOK NO. 3

MINOR ORIGIN & DESTINATION TRAVEL CHARACTERISTICS REGION 4

STATEWIDE PROCEDURES SECTION

SEPTEMBER, 1978

STATE HIGHWAY COMMISSION

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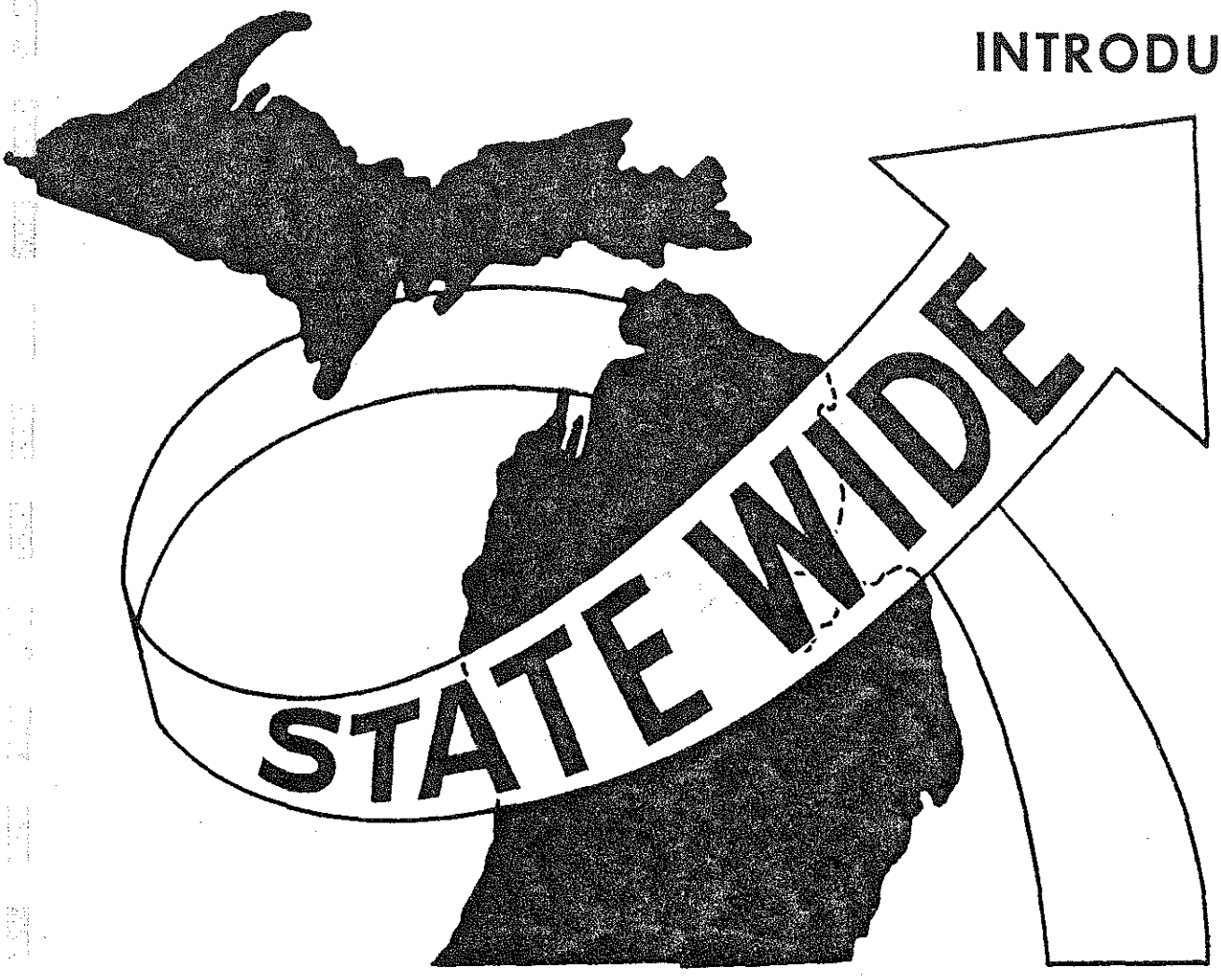
MINOR ORIGIN AND DESTINATION TRAVEL CHARACTERISTICS

BY: DAVID R SCHADE

INTRODUCTION



INTRODUCTION

The Statewide Procedures Section, Bureau of Transportation Planning, Department of State Highways and Transportation, has prepared a travel characteristics handbook in order to fully utilize information collected in minor origin and destination studies. The conversion of minor O&D studies to a single format made this handbook possible and is intended to supply the user with travel characteristics about a specific minor O&D study or a group of studies by region. The geographical locations of the minor O&D studies appear in Figure 1.

This handbook was organized at the regional level, with an individual book for each of the 14 planning regions. This format will allow the user to compare one region to another. There were no minor O&D studies taken in Regions 6 and 14; thus, no handbook is presently available for these regions. Each handbook contains the following sections:

1. Statewide Travel Characteristics Summaries
2. Regional Travel Characteristics Summaries
3. City Travel Characteristics Summaries in Alphabetical Order

The O&D data collection process is based upon the 547-zone system with Michigan consisting of 508 zones (Figure 2) and the remaining zones representing out-of-state locations (Figure 3). Each zone number corresponds to a specific city or area. Appendix A is a list of the zone number and its corresponding area. Basing the O&D data collection process around a single zone system allows the Department to fully utilize many of the analysis routines that were developed in conjunction with the statewide transportation modeling system. A list documenting other utilizations of the statewide modeling system follows on the next pages.

STATEWIDE SYSTEM DEVELOPMENT REPORTS

VOLUME I	- OBJECTIVES AND WORK PROGRAM
VOLUME I-A	- REGION 4 WORKSHOP TOPIC SUMMARIES
VOLUME I-B	- SINGLE AND MULTIPLE CORRIDOR ANALYSIS
VOLUME I-D	- PROXIMITY ANALYSIS
VOLUME I-E	- MODEL APPLICATION: COST-BENEFIT ANALYSIS
VOLUME I-F	- AIR AND NOISE POLLUTION
VOLUME I-G	- PSYCHOLOGICAL IMPACT MODEL
VOLUME I-H	- LEVEL OF SERVICE MODEL
VOLUME I-I	- STATEWIDE SOCIO-ECONOMIC AND TRANSPORTATION RESOURCES
VOLUME I-J	- SERVICE AREA MODEL
VOLUME I-K	- EFFECTIVE SPEED MODEL
VOLUME I-L	- SYSTEM IMPACT ANALYSIS GRAPHIC DISPLAY
VOLUME I-M	- MODELING GASOLINE CONSUMPTION
VOLUME I-O	- ACCIDENT RATES 547 ZONE SYSTEM
VOLUME I-P	- POPULATION PROJECTIONS 547 ZONE SYSTEM
VOLUME II	- DEVELOPMENT OF NETWORK MODELS
VOLUME II-A	- EFFICIENT NETWORK UPDATING WITH INTERACTIVE GRAPHICS
VOLUME II-B	- TREE PLOTTING WITH INTERACTIVE GRAPHICS
VOLUME II-C	- CALIBRATION OF MICHIGAN'S STATEWIDE TRAFFIC FORECASTING MODEL
VOLUME III	- SEGMENTAL MODEL
VOLUME III-A	- SEMI-AUTOMATIC NETWORK GENERATOR USING A "DIGITIZER"
VOLUME III-B	- AUTOMATIC NETWORK GENERATOR USING INTERACTIVE GRAPHICS
VOLUME IV	- AASHTO REPORT
VOLUME IV-A	- MICHIGAN'S STATEWIDE MODELING SYSTEM - SYNOPSIS
VOLUME V	- PART A - REFORMATION - TRIP DATA BANK PREPARATION
VOLUME V	- PART B - DEVELOPMENT OF SOCIO-ECONOMIC DATA BANK FOR TRIP GENERATION - DISTRIBUTION
VOLUME V-A	- SINGLE STATION O&D PROCEDURES MANUAL
VOLUME V-B	- EXTERNAL O&D PROCEDURES MANUAL
VOLUME VI	- CORRIDOR LOCATION DYNAMICS
VOLUME VI-A	- ENVIRONMENTAL SENSITIVITY COMPUTER MAPPING
VOLUME VII	- DESIGN HOUR VOLUME MODEL
VOLUME VII-A	- CAPACITY ADEQUACY FORECASTING MODEL
VOLUME VII-B	- MODELING MAJOR FACILITY OPENING IMPACT ON DHV
VOLUME VIII	- PUBLIC AND PRIVATE FACILITY FILE
VOLUME VIII-A	- CONVERSION OF INDUSTRIAL EXPANSION FILE
VOLUME IX	- SOCIO-ECONOMIC DATA FILE
VOLUME IX-A	- MAPPING SOCIO-ECONOMIC DATA WITH SYMAP
VOLUME IX-B	- CONVERSION OF THE AGRICULTURAL CENSUS FILE
VOLUME IX-C	- TAX RATE AND ASSESSED VALUATION INFORMATION
VOLUME IX-D	- SCHOOL DISTRICT DATA FILE
VOLUME X-A	- TRAVEL IMPACT ANALYSIS PROCEDURES
VOLUME X-A-1	- AUTOMATED DESIRELINE PLOTTING
VOLUME X-A-2	- TRAFFIC FORECASTING FOR A SPECIAL GENERATOR
VOLUME X-B	- SOCIAL IMPACT ANALYSIS PROCEDURES
VOLUME X-C	- ECONOMIC IMPACT ANALYSIS PROCEDURES
VOLUME XI	- COMPUTER RUN TIMES
VOLUME XIII	- MICHIGAN GOES MULTI-MODAL

VOLUME XIII-A - MULTI-MODAL MOBILITY AND ACCESSIBILITY ANALYSIS
VOLUME XIII-B - 1972 STATEWIDE RAIL NETWORK - SUMMARY TABULATIONS
VOLUME XIII-C - MICHIGAN'S RAIL CROSSING INVENTORY AND ANALYSIS PROCESS
VOLUME XIII-D - IMPACT OF POPULATION AND ENERGY ON TRANSPORTATION NEEDS - A MULTI-MODAL APPROACH
VOLUME XIV-A - COMMODITY FLOW MATRIX - ANN ARBOR RAILROAD
VOLUME XIV-B - COMMODITY FLOW MATRIX - PENN CENTRAL RAILROAD
VOLUME XIV-C - COMMODITY FLOW MATRIX - MICHIGAN RAILROADS 1% SAMPLE
VOLUME XV-A - RAILROAD FINANCIAL IMPACT ANALYSIS
VOLUME XV-B - RAILROAD COMMUNITY IMPACT ANALYSIS
VOLUME XVI - DIAL-A-RIDE
VOLUME XVII - INTERMODAL IMPACT ANALYSIS - TRUCK AND RAILROAD
VOLUME XVIII - CUTLINE ANALYSIS PROGRAM

STATEWIDE SYSTEM APPLICATION REPORTS

REPORT 1 - COMMUNITY COLLEGE SERVICE - AREA ANALYSIS
REPORT 2 - PROXIMITY OF PEOPLE TO GENERAL PURPOSE HOSPITALS
REPORT 3 - INDUSTRIAL PARK PROXIMITY ANALYSIS
REPORT 4 - PROXIMITY OF AUTOMOBILE INJURY ACCIDENTS TO HOSPITALS
REPORT 5 - PROXIMITY OF AIRPORTS WITH SCHEDULED SERVICE TO POPULATION
REPORT 6 - REGIONAL PARK PROXIMITY ANALYSIS
REPORT 7 - RIFLE RANGE PROXIMITY ANALYSIS
REPORT 8 - AMBULANCE SERVICE - AREA ANALYSIS
REPORT 9 - COMPREHENSIVE STATEWIDE PLANNING
REPORT 10 - GRAPHIC DISPLAY OF FIXED-OBJECT ACCIDENT DATA
REPORT 11 - PRELIMINARY INVESTIGATION: A TECHNIQUE FOR THE PROJECTION OF ACCIDENT RATES
REPORT 12 - IMPACT OF 50, 55, OR 60 M.P.H. STATEWIDE SPEED LIMIT
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REPORT 14 - ECONOMIC AND TRAVEL IMPACTS OF SPEED LIMIT REDUCTION USING A STATEWIDE TRANSPORTATION MODELING SYSTEM
REPORT 15 - I-69 IMPACT ON THE ACCESSIBILITY OF HEALTH, FIRE, AND AMBULANCE SERVICES TO RESIDENTIAL AREAS
REPORT 16 - CRISIS OR OPPORTUNITY: APPLICATION OF AN OPERATIONAL STATEWIDE TRANSPORTATION MODELING SYSTEM
REPORT 17 - US-23 CORRIDOR LOCATION STUDY - PRELIMINARY TRAVEL IMPACT ANALYSIS
REPORT 19 - GRAPHIC DISPLAY OF ACCIDENT DATA
REPORT 20 - DEMOGRAPHIC INFORMATION FOR THE NORTHWEST REGION
REPORT 21 - AMTRAK MARKET AREA ANALYSIS - SYSTEM APPLICATION

STATEWIDE SYSTEM REFERENCE HANDBOOKS

REFERENCE HANDBOOK #1 - STATEWIDE BUS TICKET SURVEY TRAVEL CHARACTERISTICS
REFERENCE HANDBOOK #2 - MICHIGAN'S PERMANENT TRAFFIC RECORDER TRENDS - POTENTIAL APPLICATION IN TRANSPORTATION PLANNING - ENERGY ANALYSIS
REFERENCE HANDBOOK #3 - MINOR ORIGIN & DESTINATION TRAVEL CHARACTERISTICS - PART A

FIGURE 1

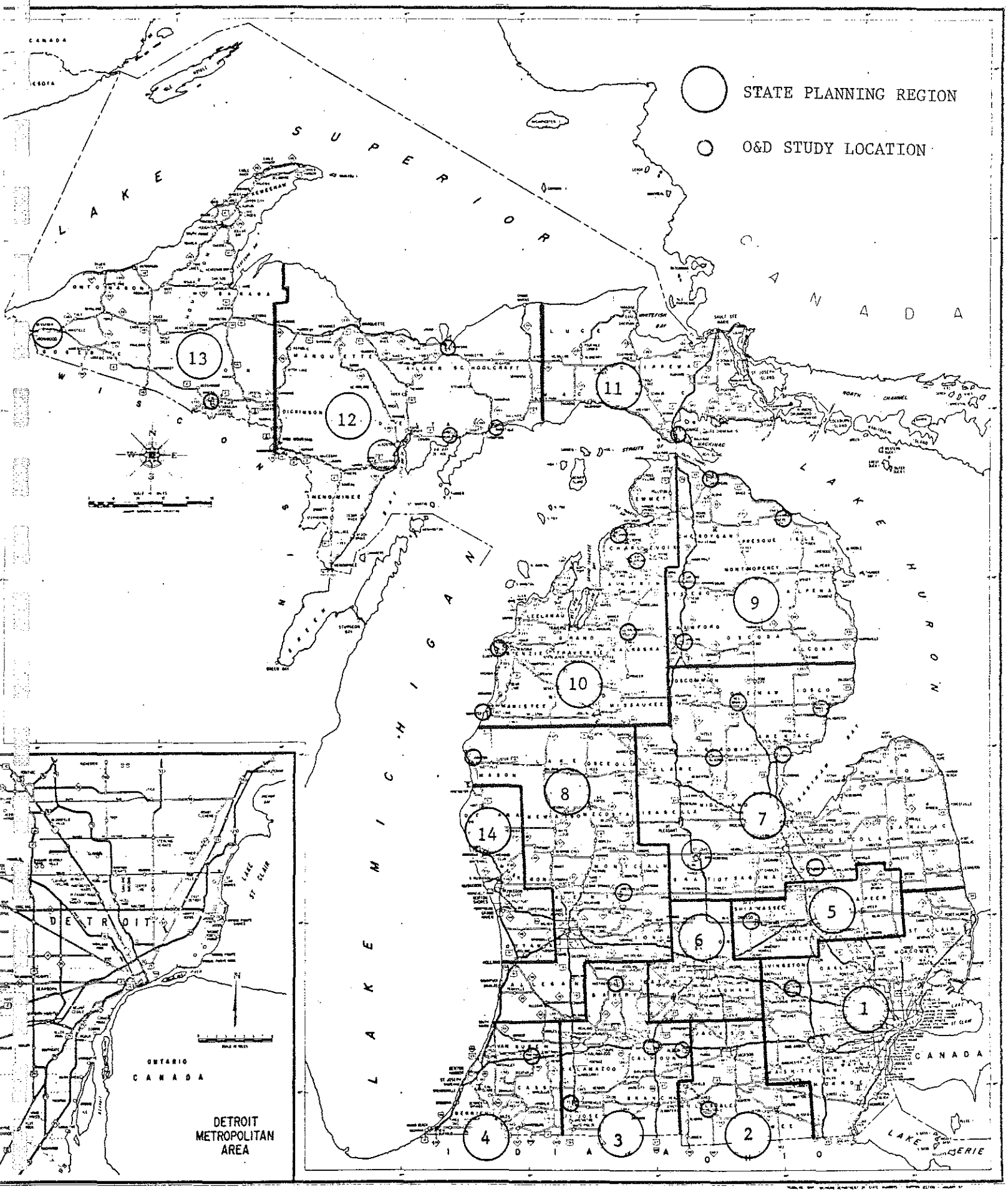
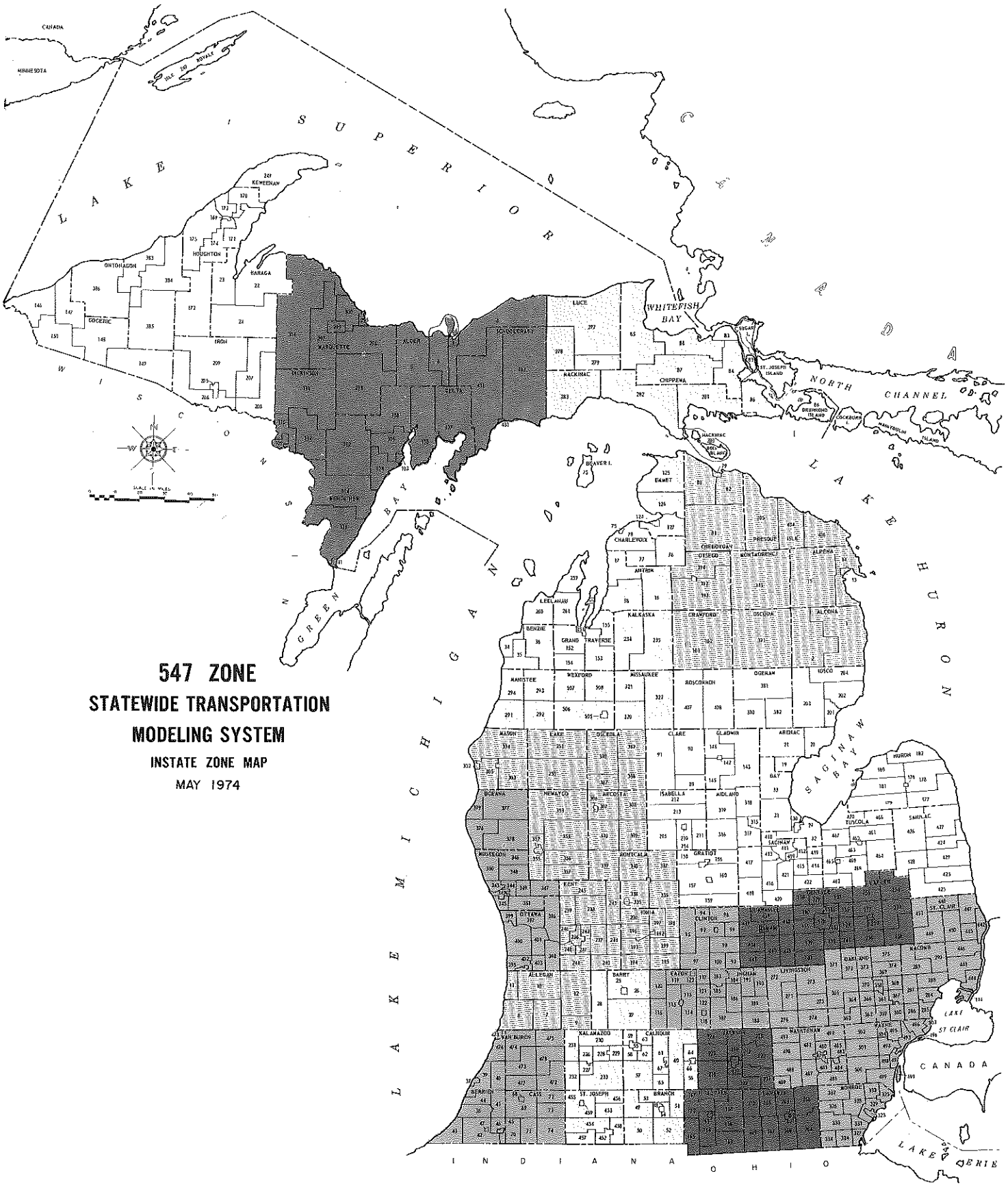

STATE PLANNING REGION
O&D STUDY LOCATION
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ERIE
CANADA
13
12
11
10
9
8
7
6
5
4
3
2
1
14
DETROIT
LAKE ST CLAIR
ONTARIO
CANADA
DETROIT METROPOLITAN AREA

FIGURE 2

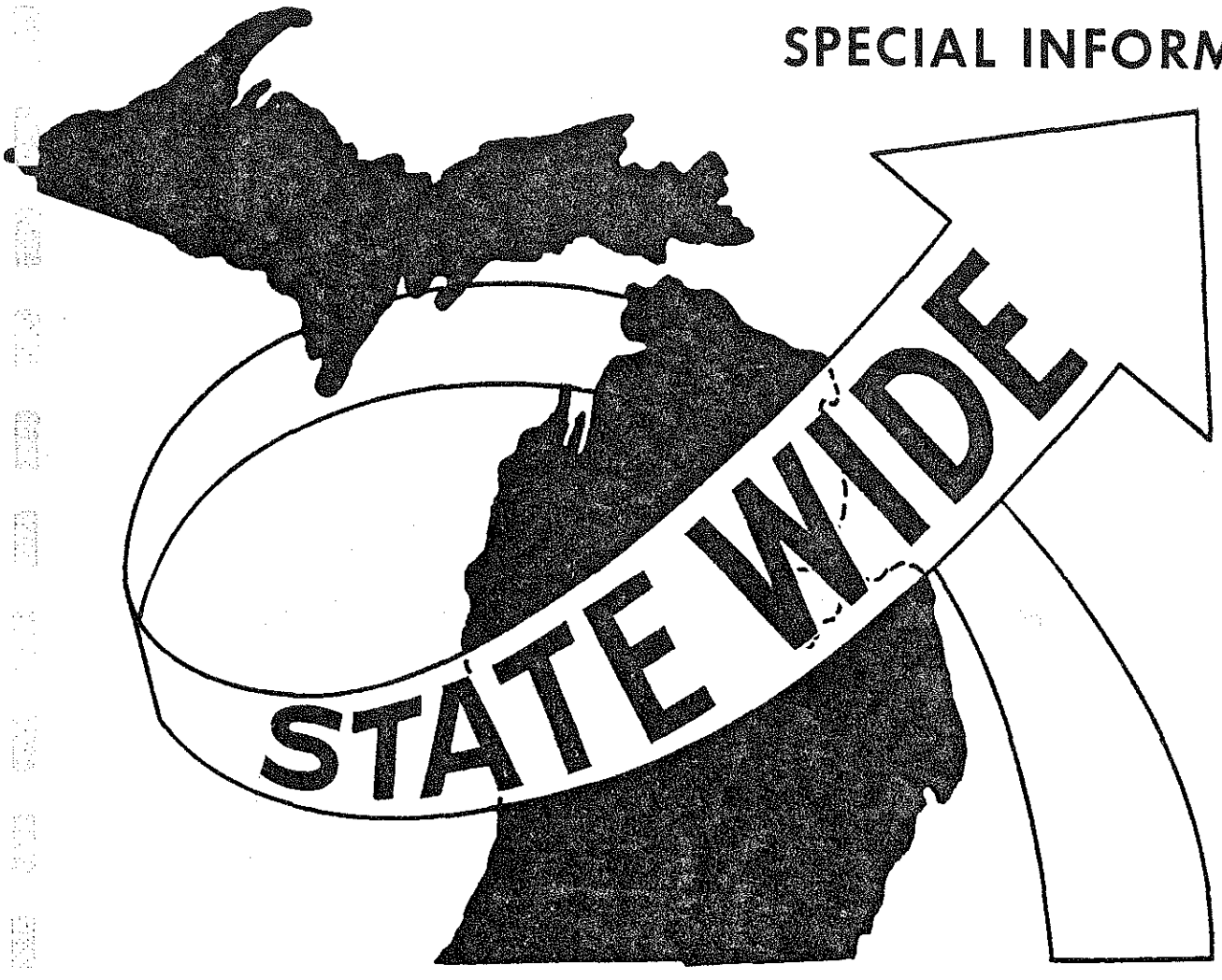


547 ZONE
STATEWIDE TRANSPORTATION MODELING SYSTEM
INSTATE ZONE MAP
MAY 1974

MICHIGAN'S TRANSPORTATION MODELING SYSTEM

547 ZONE
OUTSTATE ANALYSIS ZONES

SPECIAL INFORMATION



SPECIAL INFORMATION

To properly evaluate the following handbook information, it is important to understand how the data is used. Each handbook has been set up to analyze the travel characteristics of minor O&D studies. It was necessary to use only terminal trips to analyze the travel impacts generated as a result of a specific city. These are trips that have an origin and/or destination in that city or study area. Any trips that were not terminal in relation to the study area were not used. Nonterminal trips are classified as "thru trips", those which pass through a given city or study area. Figures 4a and 4b show the effect thru trips would have on a city's true travel characteristics. It is obvious that including thru trips could greatly distort the travel pattern and the actual impacts a specific city has on its region.

There are some instances where the O&D city is not a statewide model zone in itself, such as in Figure 5a. Generally, this does not present a problem, but the reader should be made aware of it. The trips that go into the study city will be shown as going to the zone that surrounds the city. The ideal situation arises when the study cordon is set up as close to the city boundary as possible and the city represents its own zone, such as in Figure 5b.

FIGURE 5a

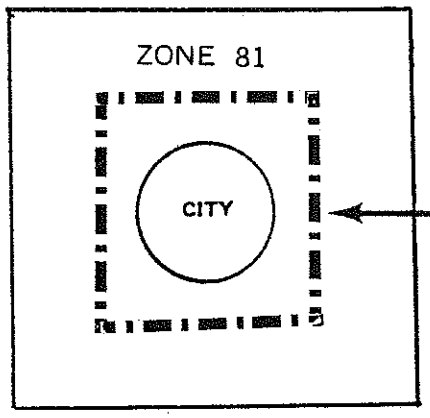
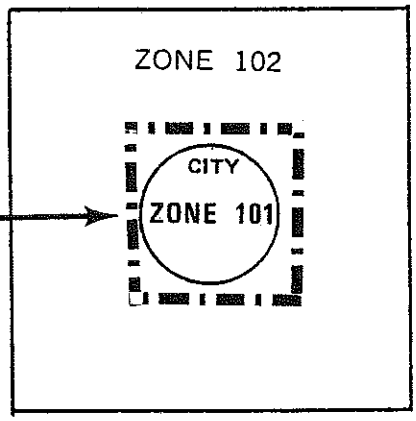


FIGURE 5b



STUDY CORDON

FIGURE 4a

TERMINAL TRIPS ONLY

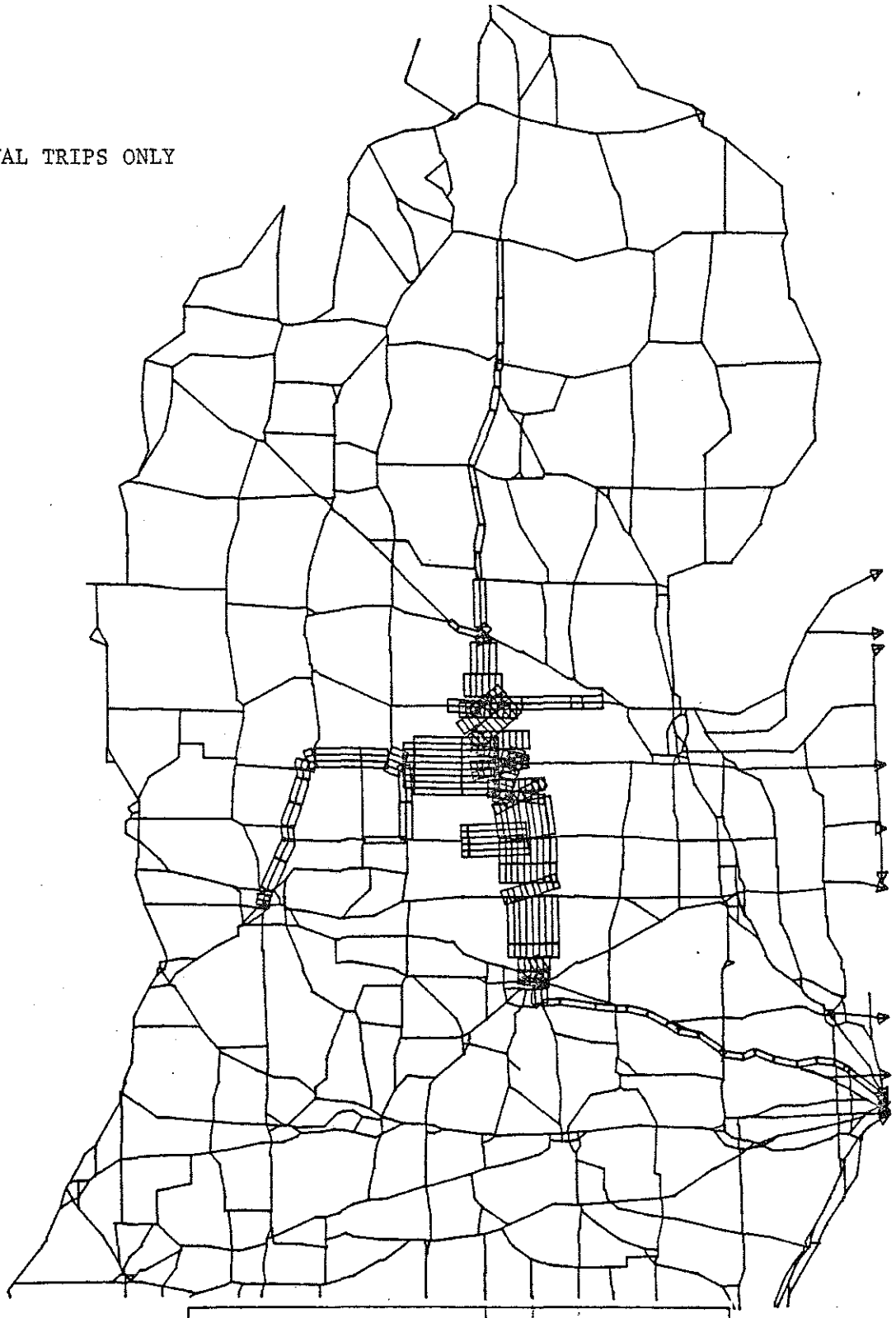
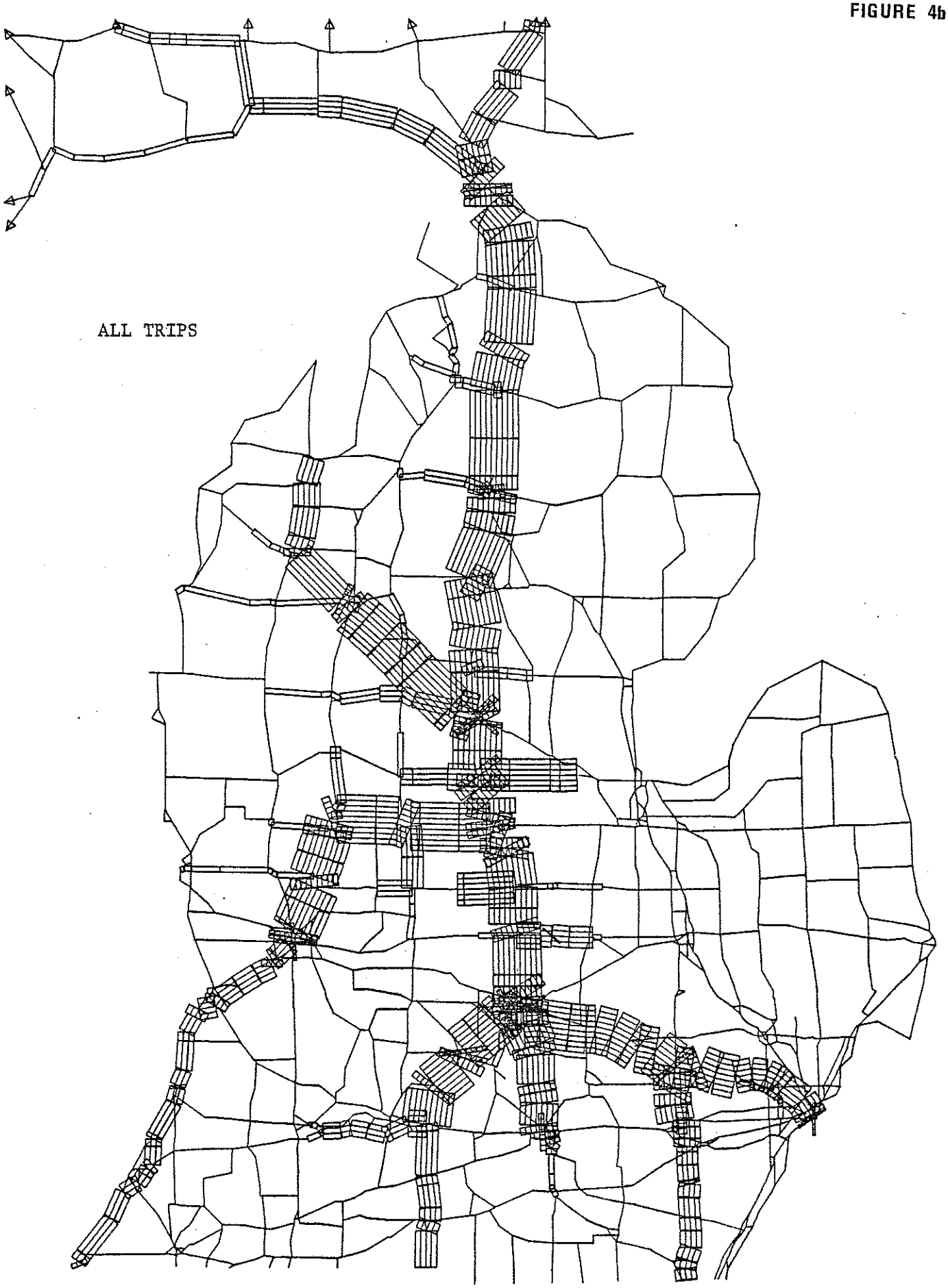


FIGURE 4b



ALMASTLOUIS BANDWIDTH

The travel analysis in this handbook is based on three main computer routines. These routines deal with three types of transportation analysis:

1. General Purpose Summary Program Tables
2. Trip Length Distribution Graphs
3. Selected Link Plots

The following is a brief explanation of the three areas:

General Purpose Summary Program (GPSP)

Terminal trips were summarized by vehicle type, trip purpose, number of occupants, and by where the vehicle is garaged (Figure 6). For example, in Figure 6, 34.8% of all trips to and from Cheboygan are work trips (4095 trips).

In addition to the straight percentage breakdowns and actual trips, cross tabulations of trip purpose versus vehicle occupancy and trip purpose versus vehicle type were supplied. Figure 7 shows that 75.1% of all work trips to and from Cheboygan have one person in the vehicle (3075 trips). These summaries like the previous data appear at the statewide, regional, and city levels.

Trip Length Distribution (TLD)

A trip length frequency distribution (TLD) is a graph that summaries the distribution of the length of trips in minutes for each study. In each handbook, TLD's are available at three levels:

1. Statewide
2. Regional
3. City

CHEBOYGAN

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

EHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
80.9%	1.0%	13.9%	0.4%	2.6%	1.3%
9533	113	1632	52	303	150

TRIP PURPOSE

	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
PERCENT OF TRIPS	34.8%	7.2%	30.5%	3.8%	17.2%	6.6%
	4095	848	3595	446	2021	779

NUMBER OF TRIPS

UMBER IN VEHICLE

1	2	3	4	5	6+
46.5%	27.7%	11.4%	7.5%	3.7%	3.2%
5479	3260	1342	883	440	379

EHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
40.4%	27.5%	32.1%
4762	3244	3777

TOTAL TRIPS = 11783

FIGURE 7

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR CHEBOYGAN

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
	PERCENT OF TOTAL WORK TRIPS					
	75.1%	43.3%	30.4%	8.6%	29.9%	39.0%
1	3075	367	1091	38	604	304
	NUMBER OF TRIPS					
	16.8%	36.0%	33.1%	40.4%	31.9%	32.2%
2	688	306	1191	180	644	251
	4.7%	11.4%	15.9%	14.5%	14.7%	15.7%
3	192	96	570	65	296	123
	2.4%	4.9%	11.2%	15.3%	10.5%	7.7%
4	99	41	402	68	212	60
	0.5%	2.7%	5.7%	12.0%	5.6%	3.4%
5	19	23	205	54	113	27
	0.5%	1.7%	3.8%	9.1%	7.5%	1.9%
6+	22	15	135	41	151	15
	100%	100%	100%	100%	100%	100%
TOTAL	4095	848	3595	446	2021	779

TOTAL TERMINAL-TRIPS FOR CHEBOYGAN = 11783

The left hand column of the chart (Figure 8) is the trip length in 10-minute increments. If a trip is less than 10 minutes, it was recorded as a 10-minute trip. All trips over the maximum time allowed by the program were recorded in the last time span.

The top row of the chart is the percent of total travel for that TLD. Figure 8 indicates that 40.460% of all work trips to and from Cheboygan are between 30-40 minutes. Each graph is for a specific trip purpose with the last chart showing all purposes combined.

At the bottom left of the TLD, the "volume table number" designates the trip purpose:

201 = work trips

202 = business trips

203 = shopping trips

204 = vacation trips

205 = other social or recreational trips

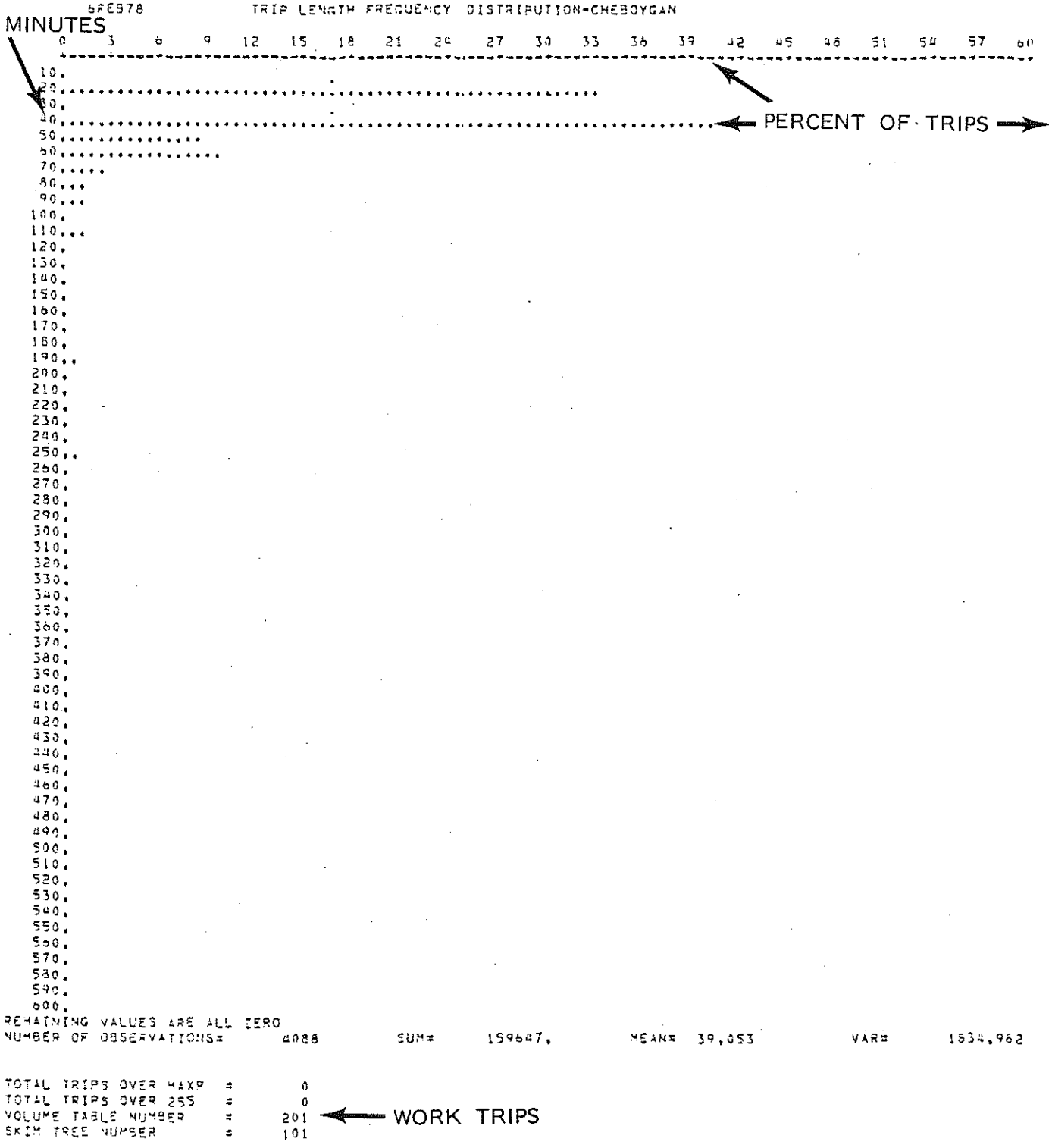
206 = all other trips

207 = total trips

Selected Link Plots

Selected link plots are available at the city level only. These plots are a diagram of the distribution of travel that has an origin or destination in the city and the probable routes on the state trunkline system this traffic used.

The magnitude of the travel on each highway link is shown by the bandwidths with each band's value representing 100 trips. The value assigned to the bands



6FE878 TRIP LENGTH FREQUENCY DISTRIBUTION-CHEBOYGAN PAGE

0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60

	P.C.	CUM
10.	0.024	0.0
20.	33.121	33.1
30.	0.000	33.1
40.	40.460	73.6
50.	8.146	81.7
60.	9.416	91.1
70.	2.128	93.2
80.	0.954	94.2
90.	1.272	95.5
100.	0.294	95.8
110.	1.125	96.9
120.	0.049	96.9
130.	0.000	96.9
140.	0.196	97.1
150.	0.269	97.4
160.	0.147	97.5
170.	0.098	97.7
180.	0.122	97.8
190.	0.465	98.2
200.	0.122	98.4
210.	0.098	98.5
220.	0.171	98.6
230.	0.024	98.7
240.	0.122	98.8
250.	0.313	99.1
260.	0.098	99.2
270.	0.000	99.2
280.	0.171	99.4
290.	0.098	99.5
300.	0.049	99.5
310.	0.122	99.6
320.	0.000	99.6
330.	0.000	99.6
340.	0.024	99.7
350.	0.000	99.7
360.	0.000	99.7
370.	0.024	99.7
380.	0.000	99.7
390.	0.000	99.7
400.	0.000	99.7
410.	0.000	99.7
420.	0.000	99.7
430.	0.000	99.7
440.	0.000	99.7
450.	0.000	99.7
460.	0.171	99.8
470.	0.000	99.8
480.	0.000	99.8
490.	0.000	99.8
500.	0.000	99.8
510.	0.000	99.8
520.	0.000	99.8
530.	0.000	99.8
540.	0.000	99.8
550.	0.000	99.8
560.	0.000	99.8
570.	0.000	99.8
580.	0.073	99.8
590.	0.000	99.8
600.	0.024	100.0

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 4088 SUM= 159647. MEAN= 39.053 VAR= 1834.962 SD

SD=42.8

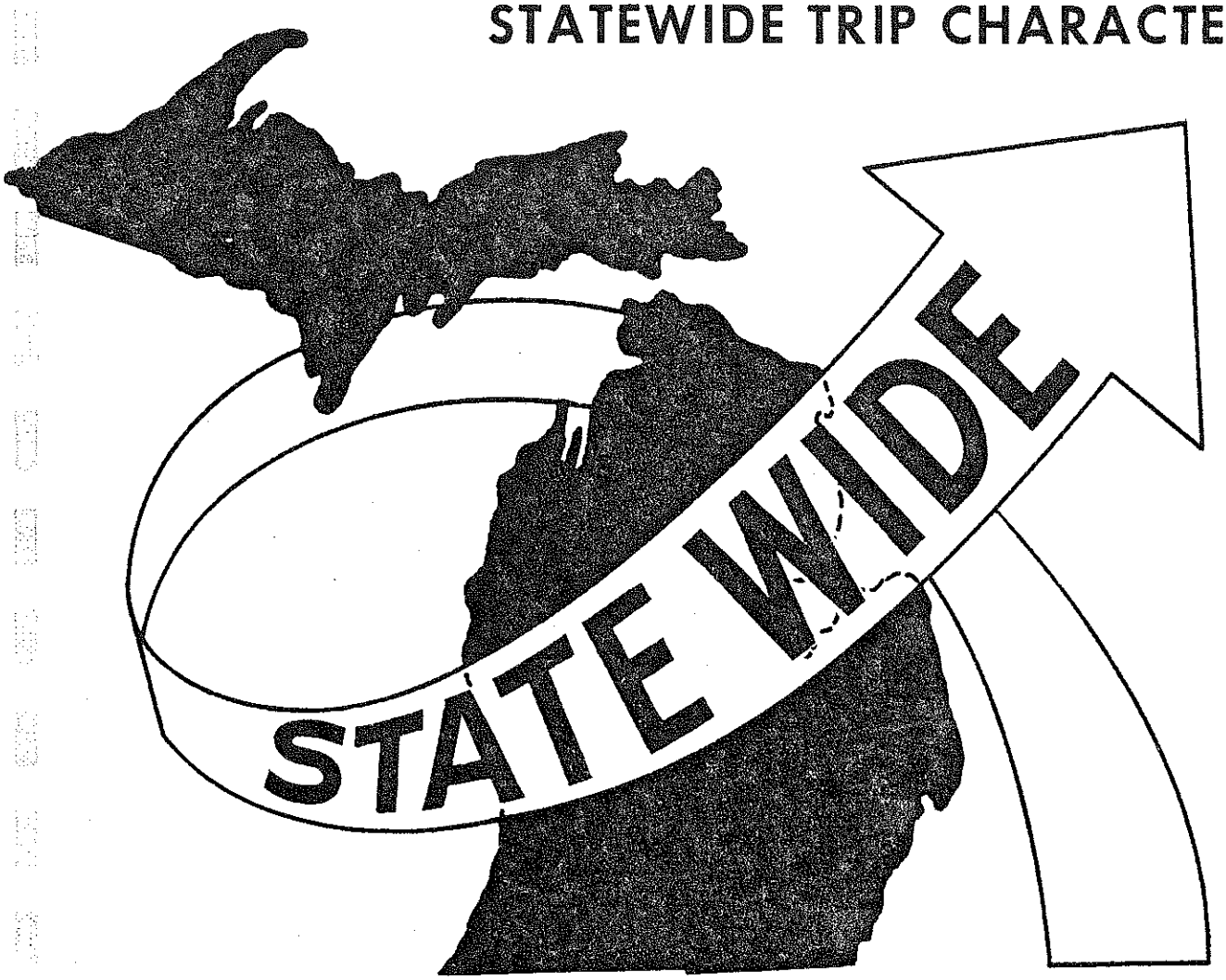
TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 201
SKIM TREE NUMBER = 101

is the same for all cities. Using the same value accomplishes two purposes:

1. simplifies the reading of the plots
2. shows the importance of one city relative to another

These plots, using the constant bandwidth values, can be used to identify the service area of a city and the function one city plays relative to another.

STATEWIDE TRIP CHARACTERISTICS



MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

REGION	CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
1	81.1% 26968	0.4% 119	14.6% 4859	0.2% 64	2.8% 924	1.0% 324
2	78.3% 16424	0.2% 50	16.3% 3425	0.2% 49	3.3% 686	1.6% 343
3	79.6% 57205	0.3% 203	14.5% 10427	0.2% 145	3.7% 2669	1.8% 1261
4	80.6% 13958	0.3% 50	15.2% 2627	0.2% 41	2.8% 479	1.0% 172
5	77.6% 22200	0.4% 100	15.3% 4390	0.2% 54	4.2% 1192	2.4% 675
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	78.1% 59871	0.8% 646	14.9% 11455	0.4% 282	3.8% 2936	2.0% 1508
8	79.8% 50406	0.7% 463	14.2% 8987	0.4% 222	3.4% 2139	1.5% 959
9	78.4% 43329	2.0% 1096	12.9% 7134	0.4% 232	4.8% 2625	1.5% 845
10	79.8% 40959	0.8% 416	14.0% 7210	0.3% 142	3.6% 1841	1.5% 762
11	78.8% 9864	3.3% 416	12.7% 1592	0.5% 69	4.1% 508	0.6% 73
12	76.8% 21307	1.5% 409	15.5% 4303	0.5% 133	3.5% 961	2.2% 614
13	76.1% 19369	1.1% 278	17.3% 4399	0.4% 114	3.8% 960	1.4% 348
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
STATE	78.9% 381860	0.9% 4247	14.6% 70806	0.3% 1546	3.7% 17922	1.6% 7884

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

TRIP PURPOSE

EGION	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	40.7% 13537	10.7% 3573	19.1% 6350	0.7% 229	16.6% 5512	12.2% 4056
2	48.1% 10082	7.1% 1486	19.8% 4147	0.1% 22	12.1% 2540	12.9% 2702
3	46.7% 33564	7.2% 5146	18.2% 13123	0.8% 607	15.4% 11098	11.6% 8372
4	34.8% 6026	9.5% 1653	23.5% 4077	2.4% 416	16.7% 2886	13.1% 2268
5	51.9% 14847	9.3% 2662	14.5% 4160	0.2% 71	12.9% 3693	11.1% 3179
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	38.8% 29779	9.9% 7609	20.7% 15856	3.5% 2723	16.2% 12429	10.8% 8302
8	39.4% 24916	8.0% 5070	22.4% 14124	2.7% 1690	17.1% 10810	10.4% 6565
9	33.4% 18432	7.0% 3852	27.9% 15443	7.4% 4108	15.9% 8782	8.4% 4645
10	35.5% 18224	8.1% 4140	19.9% 10189	6.6% 3371	19.8% 10168	10.2% 5237
11	19.0% 2380	4.3% 536	12.3% 1536	36.1% 4516	18.8% 2354	9.6% 1200
12	32.7% 9072	8.0% 2208	22.5% 6240	7.0% 1934	21.4% 5942	8.4% 2331
13	29.5% 7520	6.9% 1762	23.7% 6047	6.9% 1754	21.4% 5452	11.5% 2933
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
STATE	38.9% 188380	8.2% 39698	20.9% 101291	4.4% 21441	16.9% 81666	10.7% 51789

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

NUMBER IN VEHICLE

EGION	1	2	3	4	5	6+
1	60.5% 20136	23.2% 7713	8.9% 2968	4.3% 1424	1.7% 575	1.3% 440
2	64.1% 13437	24.0% 5044	7.6% 1596	2.8% 589	0.9% 183	0.6% 129
3	62.6% 45020	23.7% 17048	7.6% 5476	3.6% 2562	1.5% 1100	1.0% 703
4	56.8% 9848	25.4% 4399	9.5% 1638	5.3% 911	1.9% 337	1.1% 194
5	65.9% 18855	22.4% 6399	6.9% 1982	3.1% 882	1.0% 290	0.7% 204
6	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
7	53.8% 41250	26.0% 19974	9.8% 7530	5.8% 4455	2.5% 1906	2.1% 1582
8	53.9% 34083	26.3% 16585	9.7% 6113	5.6% 3554	2.5% 1552	2.0% 1289
9	44.4% 24536	28.7% 15864	11.3% 6246	8.2% 4551	3.8% 2094	3.6% 1971
10	50.6% 25964	27.7% 14196	10.3% 5275	6.5% 3340	2.7% 1410	2.2% 1144
11	27.5% 3445	30.5% 3815	14.1% 1767	14.3% 1785	7.0% 878	6.7% 833
12	44.9% 12450	28.8% 7980	11.7% 3244	7.6% 2115	4.0% 1118	3.0% 820
13	47.8% 12184	30.5% 7779	10.8% 2738	6.0% 1520	2.9% 728	2.0% 520
14	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
STATE	53.9% 261207	26.2% 126796	9.6% 46574	5.7% 27688	2.5% 12170	2.0% 9829

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE GARAGED AT

EGION	ORIGIN	DESTIN	OTHER
1	44.6% 14820	35.1% 11660	20.4% 6777
2	46.9% 9845	37.2% 7801	15.9% 3332
3	46.1% 33165	37.0% 26580	16.9% 12164
4	44.4% 7686	34.4% 5966	21.2% 3675
5	50.0% 14319	39.4% 11277	10.5% 3015
6	0.0% 0	0.0% 0	0.0% 0
7	44.1% 33808	35.2% 27011	20.7% 15879
8	43.6% 27521	35.0% 22118	21.4% 13536
9	37.0% 20468	27.9% 15401	35.1% 19392
10	38.1% 19557	30.5% 15640	31.4% 16132
11	20.7% 2589	19.5% 2445	59.8% 7488
12	42.6% 11810	32.6% 9034	24.8% 6883
13	38.9% 9902	33.4% 8504	27.7% 7063
14	0.0% 0	0.0% 0	0.0% 0
STATE	42.4% 205492	33.7% 163438	23.8% 115335

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEG ORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TR AVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR STATE

TRIP PURPOSE

# IN VEH.	WORK	PERS BTZ	SHOP	VACATION	SOC-REC	OTHER
1	79.7% 150202	49.5% 19644	38.5% 39042	6.8% 1468	35.5% 29020	42.2% 21831
2	15.1% 28469	31.1% 12354	33.7% 34147	37.9% 8123	33.0% 26925	32.4% 16777
3	3.4% 6354	10.6% 4202	14.0% 14150	17.2% 3690	13.9% 11381	13.1% 6796
4	1.2% 2215	5.3% 2107	7.7% 7821	20.3% 4353	9.3% 7575	7.0% 3617
5	0.4% 697	2.1% 844	3.5% 3544	9.5% 2036	4.3% 3495	3.0% 1554
6+	0.2% 442	1.4% 546	2.6% 2586	8.3% 1770	4.0% 3270	2.3% 1214
TOTAL	100% 188380	100% 39698	100% 101291	100% 21441	100% 81666	100% 51789

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 484264

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR STATE

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-RFC	OTHER
CAR W/O TRLR	66.1% 124466	85.0% 33758	86.4% 87559	82.9% 17775	89.4% 73046	87.4% 45256
CAR W/ TRLR	0.2% 422	0.6% 226	0.8% 805	7.0% 1501	1.1% 922	0.7% 371
PICK-UP W/O/TRLR	21.1% 39816	13.5% 5367	11.8% 11931	5.5% 1171	8.5% 6937	10.8% 5583
PICK-UP W/ TRLR	0.4% 670	0.2% 71	0.2% 171	1.3% 280	0.3% 250	0.2% 104
SINGLE-UNIT TRUCKS	8.2% 15420	0.6% 250	0.7% 754	3.0% 634	0.5% 443	0.8% 421
COMBINATION TRUCKS	4.0% 7585	0.1% 27	0.1% 71	0.4% 80	0.1% 68	0.1% 54
TOTAL	100% 188380	100% 39698	100% 101291	100% 21441	100% 81666	100% 51789

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 484264

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

IMAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 2

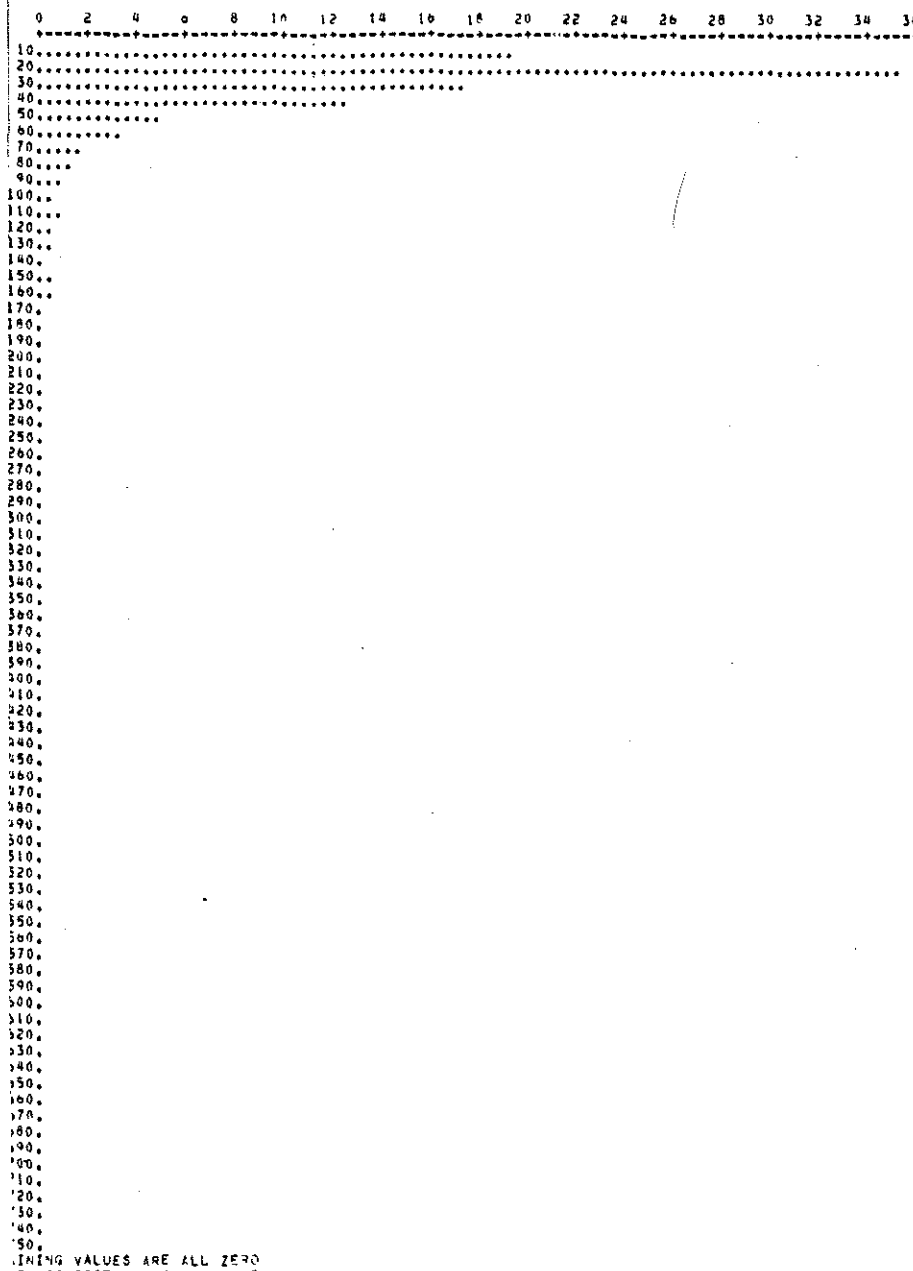
0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.	ACTUAL
10																					17.038	17.038	31907
20																					31.697	48.735	59361
30																					16.806	65.541	31474
40																					13.658	79.199	25578
50																					7.157	86.356	13403
60																					3.848	90.204	7206
70																					1.948	92.153	3649
80																					1.561	93.714	2924
90																					1.170	94.885	2192
100																					0.637	95.521	1192
110																					0.908	96.429	1701
120																					0.591	97.020	1107
130																					0.399	97.420	748
140																					0.232	97.652	434
150																					0.214	97.865	400
160																					0.372	98.237	696
170																					0.140	98.377	262
180																					0.146	98.523	274
190																					0.173	98.696	324
200																					0.135	98.831	253
210																					0.075	98.906	141
220																					0.088	98.994	164
230																					0.133	99.127	250
240																					0.075	99.203	141
250																					0.138	99.341	259
260																					0.061	99.402	114
270																					0.056	99.457	104
280																					0.029	99.486	54
290																					0.059	99.545	110
300																					0.030	99.575	57
310																					0.022	99.597	41
320																					0.038	99.635	71
330																					0.026	99.661	49
340																					0.024	99.685	45
350																					0.034	99.720	64
360																					0.014	99.734	27
370																					0.034	99.768	64
380																					0.011	99.779	21
390																					0.010	99.789	18
400																					0.014	99.803	27
410																					0.004	99.807	7
420																					0.011	99.818	20
430																					0.008	99.826	15
440																					0.036	99.862	68
450																					0.012	99.874	22
460																					0.015	99.889	28
470																					0.017	99.905	31
480																					0.006	99.912	12
490																					0.011	99.923	20
500																					0.003	99.925	5
510																					0.004	99.930	8
520																					0.008	99.938	15
530																					0.002	99.940	4
540																					0.006	99.946	11
550																					0.003	99.948	5
560																					0.005	99.953	9
570																					0.002	99.955	3
580																					0.008	99.963	15
590																					0.006	99.968	11
600																					0.003	99.971	5
610																					0.005	99.977	10
620																					0.001	99.978	2
630																					0.000	99.978	0
640																					0.000	99.978	0
650																					0.001	99.978	1
660																					0.003	99.981	5
670																					0.002	99.982	3
680																					0.001	99.983	1
690																					0.005	99.988	9
700																					0.001	99.989	2
710																					0.000	99.989	0
720																					0.000	99.989	0
730																					0.000	99.989	0
740																					0.002	99.991	4
750																					0.009	100.000	17

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 157274 SUM= 6066433. MEAN= 32.393 VAR= 1745.897 SD= 41.784

TOTAL TRIPS OVER MAXP = 17
TOTAL TRIPS OVER 255 = 0
TIME TABLE NUMBER = 201
TREE NUMBER = 101

WORK TRIPS

1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 3



	P.C.	CUM.	ACTUAL
10	19.028	19.028	7499
20	35.341	54.369	13926
30	17.227	71.596	6784
40	12.596	84.192	4964
50	4.900	89.092	1931
60	3.007	92.098	1185
70	1.540	93.639	607
80	1.106	94.745	436
90	0.812	95.557	320
100	0.487	96.044	192
110	0.787	96.831	310
120	0.370	97.201	146
130	0.279	97.480	110
140	0.188	97.668	74
150	0.218	97.886	86
160	0.520	98.406	205
170	0.140	98.546	55
180	0.119	98.665	47
190	0.165	98.830	65
200	0.137	98.967	54
210	0.104	99.071	41
220	0.084	99.155	33
230	0.063	99.218	25
240	0.069	99.287	27
250	0.069	99.355	27
260	0.071	99.427	28
270	0.089	99.515	35
280	0.036	99.551	14
290	0.023	99.574	9
300	0.053	99.627	21
310	0.020	99.647	8
320	0.028	99.675	11
330	0.025	99.701	10
340	0.028	99.728	11
350	0.025	99.754	10
360	0.000	99.754	0
370	0.020	99.774	8
380	0.005	99.779	2
390	0.005	99.784	2
400	0.005	99.789	2
410	0.008	99.797	3
420	0.018	99.815	7
430	0.013	99.827	5
440	0.005	99.833	2
450	0.005	99.838	2
460	0.010	99.848	4
470	0.020	99.868	8
480	0.008	99.876	3
490	0.000	99.876	0
500	0.010	99.886	4
510	0.005	99.891	2
520	0.013	99.904	5
530	0.008	99.911	3
540	0.008	99.919	3
550	0.000	99.919	0
560	0.000	99.919	0
570	0.005	99.924	2
580	0.005	99.929	2
590	0.005	99.934	2
600	0.008	99.942	3
610	0.003	99.944	1
620	0.005	99.949	2
630	0.010	99.959	4
640	0.000	99.959	0
650	0.005	99.964	2
660	0.000	99.964	0
670	0.015	99.980	6
680	0.003	99.982	1
690	0.008	99.990	3
700	0.005	99.995	2
710	0.000	99.995	0
720	0.000	99.995	0
730	0.000	99.995	0
740	0.000	99.995	0
750	0.005	100.000	2

INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS= 39410 SUM= 1165781. MEAN= 29.581 VAR= 1678.348 SD= 40.968

L TRIPS OVER MAXP = 2
L TRIPS OVER 255 = 0
ME TABLE NUMBER = 202
I TREE NUMBER = 101

PERS.BUSINESS TRIPS

IHAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUAL
10.	20.889	20.889	21022
20.	37.583	58.473	37822
30.	15.472	73.944	15570
40.	12.236	86.181	12314
50.	4.805	90.986	4836
60.	2.457	93.444	2473
70.	0.927	94.371	933
80.	1.080	95.451	1087
90.	0.554	96.005	558
100.	0.263	96.269	265
110.	0.862	97.130	867
120.	0.288	97.418	290
130.	0.281	97.700	283
140.	0.215	97.914	216
150.	0.064	97.978	64
160.	0.199	98.177	200
170.	0.063	98.239	63
180.	0.125	98.364	126
190.	0.180	98.544	181
200.	0.106	98.651	107
210.	0.095	98.746	96
220.	0.067	98.813	67
230.	0.178	98.990	179
240.	0.090	99.081	91
250.	0.093	99.174	94
260.	0.201	99.375	202
270.	0.075	99.449	75
280.	0.049	99.498	49
290.	0.023	99.521	23
300.	0.079	99.600	79
310.	0.063	99.662	63
320.	0.022	99.684	22
330.	0.044	99.728	44
340.	0.010	99.738	10
350.	0.013	99.751	13
360.	0.010	99.761	10
370.	0.042	99.802	42
380.	0.005	99.807	5
390.	0.022	99.829	22
400.	0.011	99.840	11
410.	0.000	99.840	0
420.	0.012	99.852	12
430.	0.008	99.860	8
440.	0.023	99.883	23
450.	0.018	99.901	18
460.	0.017	99.918	17
470.	0.001	99.919	1
480.	0.003	99.921	3
490.	0.008	99.929	8
500.	0.013	99.942	13
510.	0.001	99.943	1
520.	0.011	99.954	11
530.	0.008	99.962	8
540.	0.002	99.964	2
550.	0.008	99.972	8
560.	0.003	99.975	3
570.	0.003	99.978	3
580.	0.002	99.980	2
590.	0.000	99.980	0
600.	0.001	99.981	1
610.	0.001	99.982	1
620.	0.003	99.985	3
630.	0.000	99.985	0
640.	0.000	99.985	0
650.	0.002	99.987	2
660.	0.000	99.987	0
670.	0.000	99.987	0
680.	0.004	99.991	4
690.	0.002	99.993	2
700.	0.001	99.994	1
710.	0.000	99.994	0
720.	0.000	99.994	0
730.	0.000	99.994	0
740.	0.000	99.994	0
750.	0.006	100.000	6

INING VALUES ARE ALL ZERO

ER OF OBSERVATIONS= 100635 SUM= 2816970. MEAN= 27.992 VAR= 1603.356 SD= 40.042

L TRIPS OVER MAXP = 6
L TRIPS OVER 255 = 0
HE TABLE NUMBER = 203
TREE NUMBER = 101

SHOPPING TRIPS

INAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 5

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	P.C.	CUM.	ACTUAL
10	5.683	5.683	1192
20	8.715	14.398	1828
30	5.592	19.990	1173
40	12.167	32.157	2552
50	3.342	35.499	701
60	7.638	43.137	1602
70	2.565	45.702	538
80	5.507	51.209	1155
90	4.105	55.313	861
100	1.836	57.149	385
110	3.280	60.429	688
120	1.778	62.207	373
130	2.207	64.415	463
140	1.754	66.169	368
150	0.882	67.051	185
160	2.532	69.583	531
170	1.440	71.023	302
180	1.411	72.434	296
190	1.874	74.308	393
200	1.383	75.690	290
210	1.545	77.235	324
220	0.656	77.893	138
230	1.526	79.418	320
240	1.235	80.653	259
250	1.216	81.869	255
260	1.769	83.638	371
270	1.492	85.130	313
280	0.987	86.117	207
290	0.853	86.970	179
300	1.125	88.095	236
310	0.968	89.063	203
320	0.806	89.869	169
330	1.087	90.956	228
340	0.234	91.190	49
350	0.462	91.652	97
360	0.319	91.971	67
370	0.420	92.391	88
380	0.277	92.667	58
390	0.319	92.987	67
400	0.296	93.282	62
410	0.267	93.549	56
420	0.488	94.038	102
430	0.305	94.341	64
440	1.025	95.366	215
450	0.267	95.633	56
460	0.191	95.824	40
470	0.343	96.167	72
480	0.324	96.491	68
490	0.200	96.691	42
500	0.176	96.868	37
510	0.234	97.101	49
520	0.391	97.492	82
530	0.038	97.530	8
540	0.391	97.921	82
550	0.186	98.107	39
560	0.138	98.246	29
570	0.143	98.389	30
580	0.033	98.422	7
590	0.110	98.532	23
600	0.024	98.555	5
610	0.243	98.799	51
620	0.095	98.894	20
630	0.091	98.985	19
640	0.029	99.013	6
650	0.024	99.037	5
660	0.010	99.046	2
670	0.200	99.247	42
680	0.010	99.256	2
690	0.119	99.375	25
700	0.057	99.433	12
710	0.010	99.442	2
720	0.029	99.471	6
730	0.057	99.528	12
740	0.057	99.585	12
750	0.415	100.000	87

MINING VALUES ARE ALL ZERO
BER OF OBSERVATIONS= 21975 SUM= 2821726. MEAN= 134.528 VAR= 20258.672 SD= 142.333

AL TRIPS OVER MAXP = 87
AL TRIPS OVER 255 = 0
HE TABLE NUMBER = 204
TREE NUMBER = 101

VACATION TRIPS

1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 6

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40	P.C.	CUM.	ACTUAL
10	17.917	17.917	14496
20	34.385	52.301	27820
30	15.558	67.860	12588
40	10.738	78.598	8688
50	4.744	83.342	3838
60	3.420	86.762	2767
70	1.667	88.429	1349
80	1.606	90.034	1299
90	1.175	91.210	951
100	0.735	91.945	595
110	1.649	93.594	1334
120	0.787	94.381	637
130	0.666	95.047	539
140	0.428	95.475	346
150	0.377	95.852	305
160	0.492	96.344	398
170	0.264	96.608	214
180	0.240	96.848	194
190	0.374	97.223	303
200	0.292	97.514	236
210	0.197	97.711	159
220	0.130	97.841	105
230	0.251	98.092	203
240	0.159	98.251	129
250	0.187	98.438	151
260	0.185	98.623	150
270	0.137	98.760	111
280	0.053	98.813	43
290	0.125	98.938	101
300	0.091	99.030	74
310	0.087	99.116	70
320	0.061	99.177	49
330	0.069	99.246	56
340	0.016	99.262	13
350	0.044	99.307	36
360	0.017	99.324	14
370	0.052	99.376	42
380	0.027	99.403	22
390	0.028	99.431	23
400	0.025	99.456	20
410	0.007	99.464	6
420	0.047	99.511	38
430	0.025	99.535	20
440	0.080	99.616	65
450	0.023	99.639	19
460	0.015	99.654	12
470	0.042	99.696	34
480	0.022	99.718	18
490	0.019	99.737	15
500	0.026	99.763	21
510	0.041	99.803	33
520	0.016	99.820	13
530	0.002	99.822	2
540	0.026	99.848	21
550	0.021	99.869	17
560	0.009	99.878	7
570	0.010	99.888	8
580	0.004	99.891	3
590	0.004	99.895	3
600	0.010	99.905	8
610	0.009	99.913	7
620	0.004	99.917	3
630	0.010	99.927	8
640	0.006	99.933	5
650	0.026	99.959	21
660	0.000	99.959	0
670	0.007	99.967	6
680	0.001	99.968	1
690	0.000	99.968	0
700	0.000	99.968	0
710	0.001	99.969	1
720	0.002	99.972	2
730	0.000	99.972	0
740	0.005	99.977	4
750	0.023	100.000	19

INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS= 81908 SUM= 3028356. MEAN= 37.430 VAR= 3367.270 SD= 58.028

L TRIPS OVER MAXP = 19
L TRIPS OVER 255 = 0
ME TABLE NUMBER = 205
TREE NUMBER = 101

OTHER SOC. OR REC. TRIPS

1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 7

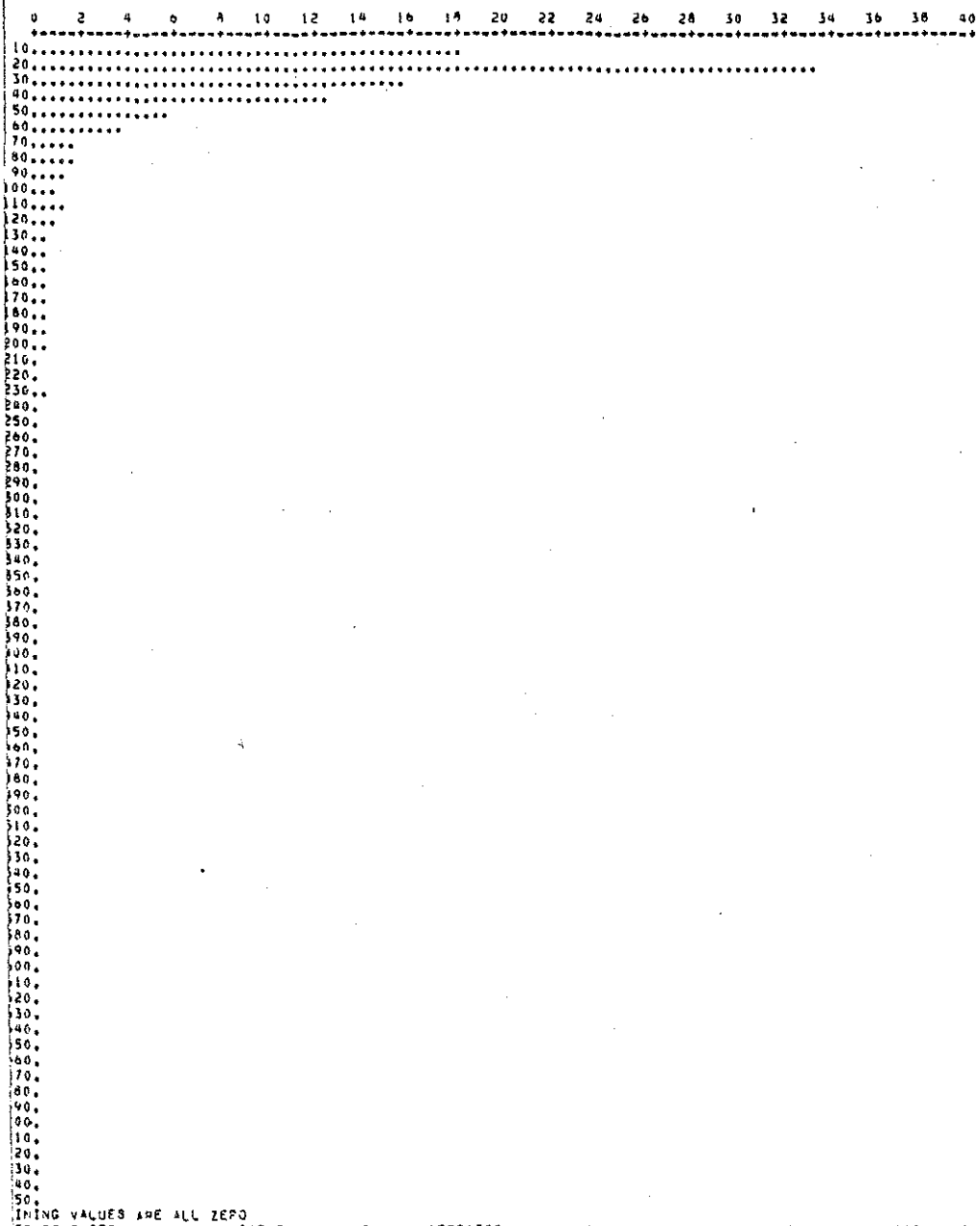
																						F.C.	CUM.	ACTUAL
10																						20.460	20.460	10505
20																						35.123	55.583	18034
30																						15.978	71.561	8204
40																						11.242	82.803	5772
50																						5.050	87.853	2593
60																						2.807	90.659	1441
70																						1.313	91.972	674
80																						1.190	93.162	611
90																						0.843	94.005	433
100																						0.510	94.516	262
110																						0.795	95.310	408
120																						0.871	96.181	447
130																						0.547	96.728	281
140																						0.251	96.979	129
150																						0.259	97.238	133
160																						0.545	97.784	280
170																						0.148	97.932	76
180																						0.179	98.111	92
190																						0.208	98.319	107
200																						0.105	98.424	54
210																						0.105	98.530	54
220																						0.082	98.611	42
230																						0.156	98.767	80
240																						0.107	98.874	55
250																						0.175	99.050	90
260																						0.109	99.159	56
270																						0.105	99.264	54
280																						0.047	99.311	24
290																						0.082	99.392	42
300																						0.045	99.437	23
310																						0.027	99.464	14
320																						0.029	99.494	15
330																						0.058	99.552	30
340																						0.019	99.572	10
350																						0.025	99.597	13
360																						0.014	99.610	7
370																						0.031	99.642	16
380																						0.019	99.661	10
390																						0.010	99.671	5
400																						0.014	99.684	7
410																						0.016	99.700	8
420																						0.019	99.720	10
430																						0.021	99.741	11
440																						0.039	99.780	20
450																						0.012	99.792	6
460																						0.008	99.799	4
470																						0.021	99.821	11
480																						0.019	99.840	10
490																						0.012	99.852	6
500																						0.018	99.870	9
510																						0.018	99.887	9
520																						0.006	99.893	3
530																						0.006	99.899	3
540																						0.006	99.905	3
550																						0.006	99.910	3
560																						0.000	99.910	0
570																						0.004	99.914	2
580																						0.008	99.922	4
590																						0.000	99.922	0
600																						0.002	99.924	1
610																						0.008	99.932	4
620																						0.010	99.942	5
630																						0.000	99.942	0
640																						0.002	99.944	1
650																						0.014	99.957	7
660																						0.000	99.957	0
670																						0.012	99.969	6
680																						0.000	99.969	0
690																						0.002	99.971	1
700																						0.010	99.981	5
710																						0.000	99.981	0
720																						0.004	99.984	2
730																						0.008	99.992	4
740																						0.002	99.994	1
750																						0.006	100.000	3

INING VALUES ARE ALL ZERO
ER OF OBSERVATIONS= 51345 SUM= 1622116. MEAN= 31.592 VAR= 2262.102 SD= 47.562

L TRIPS OVER MAXP = 3
L TRIPS OVER 255 = 0
ME TABLE NUMBER = 200
TREE NUMBER = 101

ALL OTHER TRIPS

1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT PAGE 8



	P.C.	CUM.	ACTUAL
10	16.026	16.026	86021
20	33.044	51.070	177931
30	15.773	66.843	75798
40	12.458	79.301	59868
50	5.681	84.983	27302
60	3.470	88.453	16674
70	1.613	90.065	7750
80	1.563	91.628	7512
90	1.106	92.735	5315
100	0.602	93.336	2891
110	1.105	94.441	5308
120	0.624	95.065	3000
130	0.504	95.569	2424
140	0.326	95.896	1567
150	0.244	96.140	1173
160	0.481	96.620	2310
170	0.202	96.823	972
180	0.214	97.037	1029
190	0.286	97.322	1373
200	0.207	97.529	994
210	0.170	97.699	815
220	0.114	97.813	549
230	0.220	98.033	1057
240	0.146	98.179	702
250	0.182	98.361	876
260	0.192	98.553	921
270	0.144	98.697	692
280	0.081	98.778	391
290	0.097	98.875	464
300	0.102	98.977	490
310	0.083	99.060	399
320	0.070	99.130	337
330	0.087	99.217	417
340	0.029	99.246	138
350	0.048	99.294	233
360	0.026	99.320	125
370	0.054	99.374	260
380	0.025	99.399	118
390	0.029	99.427	137
400	0.027	99.454	129
410	0.017	99.471	80
420	0.039	99.510	189
430	0.026	99.536	123
440	0.082	99.618	393
450	0.026	99.643	123
460	0.022	99.665	105
470	0.033	99.698	157
480	0.024	99.721	114
490	0.019	99.740	91
500	0.019	99.759	89
510	0.021	99.780	102
520	0.027	99.807	129
530	0.006	99.813	28
540	0.025	99.838	122
550	0.015	99.853	72
560	0.010	99.863	48
570	0.010	99.873	48
580	0.007	99.880	33
590	0.008	99.888	39
600	0.005	99.893	23
610	0.015	99.908	74
620	0.007	99.916	35
630	0.006	99.922	31
640	0.002	99.924	12
650	0.008	99.932	38
660	0.001	99.934	7
670	0.013	99.947	63
680	0.002	99.949	9
690	0.008	99.957	40
700	0.005	99.962	22
710	0.001	99.962	3
720	0.002	99.964	10
730	0.003	99.968	16
740	0.004	99.972	21
750	0.028	100.000	134

MISSING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 480547 SUM= 17521382. MEAN= 36.461 VAR= 3294.507 SD= 57.396

TOTAL TRIPS OVER MAXP = 134
TOTAL TRIPS OVER 255 = 0
NAME TABLE NUMBER = 207
TREE NUMBER = 101

TOTAL TRIPS

MINOR ORIGIN AND DESTINATION STUDIES

MEAN TRIP LENGTHS BY PURPOSE

REGION 1

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	26	41
2	21	11
3	18	19
4	119	1
5	22	17
6	20	12
ALL	23	

REGION 2

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	27	48
2	25	7
3	20	20
4	197	0
5	22	12
6	25	13
ALL	25	

REGION 3

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	25	47
2	20	7
3	18	18
4	149	1
5	24	15
6	25	12
ALL	24	

TRIP PURPOSE

1 WORK
2 PERS. BUSINESS
3 SHOPPING
4 VACATION
5 OTHER SOC. OR REC.
6 ALL OTHER

REGION 4

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	33	35
2	35	10
3	20	24
4	124	2
5	41	17
6	36	13
ALL	34	

REGION 5

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	35	52
2	30	9
3	26	15
4	193	0
5	32	13
6	30	11
ALL	33	

REGION 7

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	33	39
2	31	10
3	26	21
4	115	3
5	38	16
6	33	11
ALL	35	

REGION 8

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	32	39
2	26	8
3	24	22
4	145	3
5	33	17
6	27	10
ALL	32	

REGION 9

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	34	33
2	35	7
3	47	28
4	136	7
5	52	16
6	47	8
ALL	49	

REGION 10

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	31	36
2	29	8
3	23	20
4	92	7
5	31	20
6	26	10
ALL	33	

REGION 11

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	51	19
2	50	4
3	48	12
4	125	36
5	76	19
6	52	10
ALL	82	

REGION 12

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	58	33
2	51	8
3	45	23
4	201	7
5	64	21
6	53	8
ALL	65	

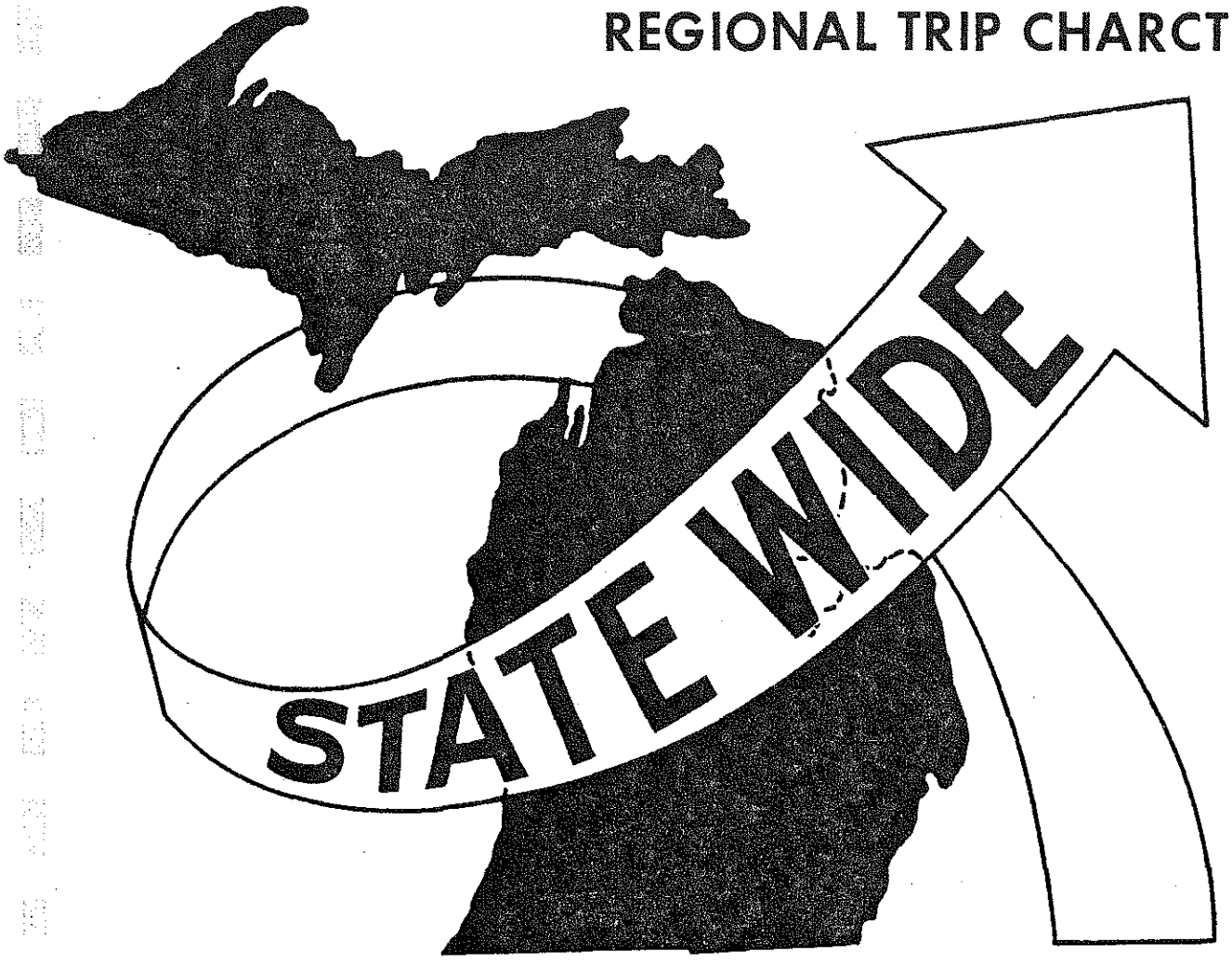
REGION 13

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	42	30
2	35	7
3	24	24
4	179	7
5	40	21
6	37	12
ALL	46	

STATEWIDE AVERAGE

TRIP PURPOSE	MINUTES	PERCENT OF TOTAL TRIPS
1	32	39
2	30	8
3	28	21
4	135	4
5	37	17
6	32	11
ALL	36	

REGIONAL TRIP CHARCTERISTICS



REGION 4

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
80.6%	0.3%	15.2%	0.2%	2.8%	1.0%
13958	50	2627	41	479	172

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
34.8%	9.5%	23.5%	2.4%	16.7%	13.1%
6026	1653	4077	416	2886	2268

NUMBER IN VEHICLE

1	2	3	4	5	6+
56.8%	25.4%	9.5%	5.3%	1.9%	1.1%
9848	4399	1638	911	337	194

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
44.4%	34.4%	21.2%
7686	5966	3675

TOTAL TRIPS = 17327

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR REGION 4

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	82.6% 4978	49.5% 818	46.3% 1889	2.9% 12	37.9% 1094	46.6% 1058
2	14.3% 863	30.4% 502	30.2% 1230	39.6% 165	33.0% 953	30.2% 685
3	2.1% 128	13.0% 215	13.1% 532	19.4% 81	13.9% 401	12.4% 281
4	0.6% 37	4.5% 75	6.7% 272	26.0% 108	9.9% 285	5.9% 134
5	0.3% 19	1.2% 20	2.5% 102	6.7% 28	3.3% 96	3.2% 72
6+	0.0% 1	1.4% 23	1.3% 52	5.4% 22	2.0% 57	1.7% 38
TOTAL	100% 6026	100% 1653	100% 4077	100% 416	100% 2886	100% 2268

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 17327

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR REGION 4

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	70.4% 4243	85.0% 1406	84.2% 3431	89.6% 373	89.7% 2589	84.5% 1916
CAR W/ TRLR	0.0% 3	0.2% 3	0.1% 6	3.2% 13	0.6% 17	0.4% 9
PICK-UP W/O/TRLR	19.5% 1176	14.5% 240	14.9% 606	3.6% 15	9.5% 274	13.9% 316
PICK-UP W/ TRLR	0.3% 20	0.1% 1	0.1% 4	1.5% 6	0.1% 2	0.3% 7
SINGLE-UNIT TRUCKS	6.9% 413	0.2% 3	0.7% 30	2.1% 9	0.2% 5	0.9% 20
COMBINATION TRUCKS	2.9% 172	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
TOTAL	100% 6026	100% 1653	100% 4077	100% 416	100% 2886	100% 2268

TOTAL TERMINAL-TRIPS FOR ALL STUDIES IN REGION = 17327

TABLE SHOWS PCT OF EXPANDED ORIGIN-DESTINATION INTERVIEWS FOR EACH CATEGORY IN THE REGION. ACTUAL TRIPS BELOW EACH PCT DOES NOT REPRESENT ALL TRAVEL IN THE REGION--ONLY THAT INTERVIEWED.

23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG4

Scale: 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUAL
10.	23.606	23.606	14[illegible]
20.	33.948	57.553	2[illegible]
30.	3.569	61.122	2[illegible]
40.	22.493	83.616	13[illegible]
50.	6.242	89.857	3[illegible]
60.	0.548	90.405	[illegible]
70.	0.764	91.169	[illegible]
80.	1.726	92.895	1[illegible]
90.	0.033	92.928	
100.	0.415	93.343	[illegible]
110.	0.315	93.659	[illegible]
120.	0.083	93.742	
130.	0.581	94.323	[illegible]
140.	0.083	94.406	
150.	1.345	95.750	[illegible]
160.	2.839	98.589	1[illegible]
170.	0.448	99.037	[illegible]
180.	0.432	99.469	[illegible]
190.	0.216	99.685	[illegible]
200.	0.100	99.784	
210.	0.033	99.817	
220.	0.033	99.851	
230.	0.033	99.884	
240.	0.000	99.884	
250.	0.000	99.884	
260.	0.000	99.884	
270.	0.000	99.884	
280.	0.000	99.884	
290.	0.000	99.884	
300.	0.000	99.884	
310.	0.033	99.917	
320.	0.000	99.917	
330.	0.000	99.917	
340.	0.000	99.917	
350.	0.017	99.934	
360.	0.000	99.934	
370.	0.000	99.934	
380.	0.000	99.934	
390.	0.000	99.934	
400.	0.000	99.934	
410.	0.033	99.967	
420.	0.000	99.967	
430.	0.000	99.967	
440.	0.033	100.000	

MAINING VALUES ARE ALL ZERO

MBER OF OBSERVATIONS= 6024 SUM= 196873. MEAN= 32.681 VAR= 1334.698 SD= 36.534

TAL TRIPS OVER MAXP = 0
TAL TRIPS OVER 255 = 0
LUME TABLE NUMBER = 201
IN TREE NUMBER = 101

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23FEB78            TRIP LENGTH FREQUENCY DISTRIBUTION-REG4                                                  PAGE   3

   0    3    6    9    12   15   18   21   24   27   30   33   36   39   42   45   48   51   54   57   60
   +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+     P.C.   CUM.   ACTUAL
 10................................                                                                          21.403 21.403     3
 20......................................................................                                    46.675 68.077     7
 30.......                                                                                                    3.930 72.007
 40..................                                                                                        11.850 83.857     1
 50.......                                                                                                    4.232 88.089
 60.                                                                                                          0.121 88.210
 70..                                                                                                         0.302 88.513
 80..                                                                                                         0.363 88.875
 90.                                                                                                          0.121 88.996
100.                                                                                                          0.181 89.178
110.                                                                                                          0.000 89.178
120.                                                                                                          0.000 89.178
130..                                                                                                         0.544 89.722
140..                                                                                                         0.423 90.145
150....                                                                                                       1.511 91.657
160............                                                                                               7.134 98.791     1
170..                                                                                                         0.484 99.274
180..                                                                                                         0.363 99.637
190.                                                                                                          0.242 99.879
200.                                                                                                          0.060 99.940
210.                                                                                                          0.000 99.940
220.                                                                                                          0.000 99.940
230.                                                                                                          0.000 99.940
240.                                                                                                          0.000 99.940
250.                                                                                                          0.000 99.940
260.                                                                                                          0.000 99.940
270.                                                                                                          0.000 99.940
280.                                                                                                          0.000 99.940
290.                                                                                                          0.000 99.940
300.                                                                                                          0.000 99.940
310.                                                                                                          0.060100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=      1654        SUM=       58201.        MEAN=  35.188        VAR=       1816.253            SD=  42.618

TAL TRIPS OVER MAXP   =       0
TAL TRIPS OVER 255    =       0
LUME TABLE NUMBER     =     202
IN TREE NUMBER        =     101
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     23FE878            TRIP LENGTH FREQUENCY DISTRIBUTION-REG4                                                          PAGE    4

     0    3    6    9   12   15   18   21   24   27   30   33   36   39   42   45   48   51   54   57   60
     +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+    P.C.   CUM.   ACTUAL
  10.........................................................                                                 34.004  34.004      13
  20.................................................................................                         47.792  81.796      19
  30.....                                                                                                      2.552  84.347       1
  40.....................                                                                                     12.635  96.982       5
  50....                                                                                                       1.742  98.724
  60.                                                                                                          0.000  98.724
  70.                                                                                                          0.147  98.871
  80.                                                                                                          0.294  99.166
  90.                                                                                                          0.025  99.190
 100.                                                                                                          0.098  99.289
 110.                                                                                                          0.000  99.289
 120.                                                                                                          0.000  99.289
 130.                                                                                                          0.123  99.411
 140.                                                                                                          0.000  99.411
 150.                                                                                                          0.098  99.509
 160.                                                                                                          0.123  99.632
 170.                                                                                                          0.000  99.632
 180.                                                                                                          0.123  99.755
 190.                                                                                                          0.221  99.975
 200.                                                                                                          0.000  99.975
 210.                                                                                                          0.000  99.975
 220.                                                                                                          0.000  99.975
 230.                                                                                                          0.000  99.975
 240.                                                                                                          0.000  99.975
 250.                                                                                                          0.000  99.975
 260.                                                                                                          0.000  99.975
 270.                                                                                                          0.000  99.975
 280.                                                                                                          0.000  99.975
 290.                                                                                                          0.000  99.975
 300.                                                                                                          0.000  99.975
 310.                                                                                                          0.000  99.975
 320.                                                                                                          0.000  99.975
 330.                                                                                                          0.000  99.975
 340.                                                                                                          0.008  99.975
 350.                                                                                                          0.025100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=      4076          SUM=        80059.        MEAN=  19.642          VAR=        250.575          SD=  15.83

TAL TRIPS OVER MAXP   =        0
TAL TRIPS OVER 255    =        0
LUME TABLE NUMBER     =      203
TH TREE NUMBER        =      101
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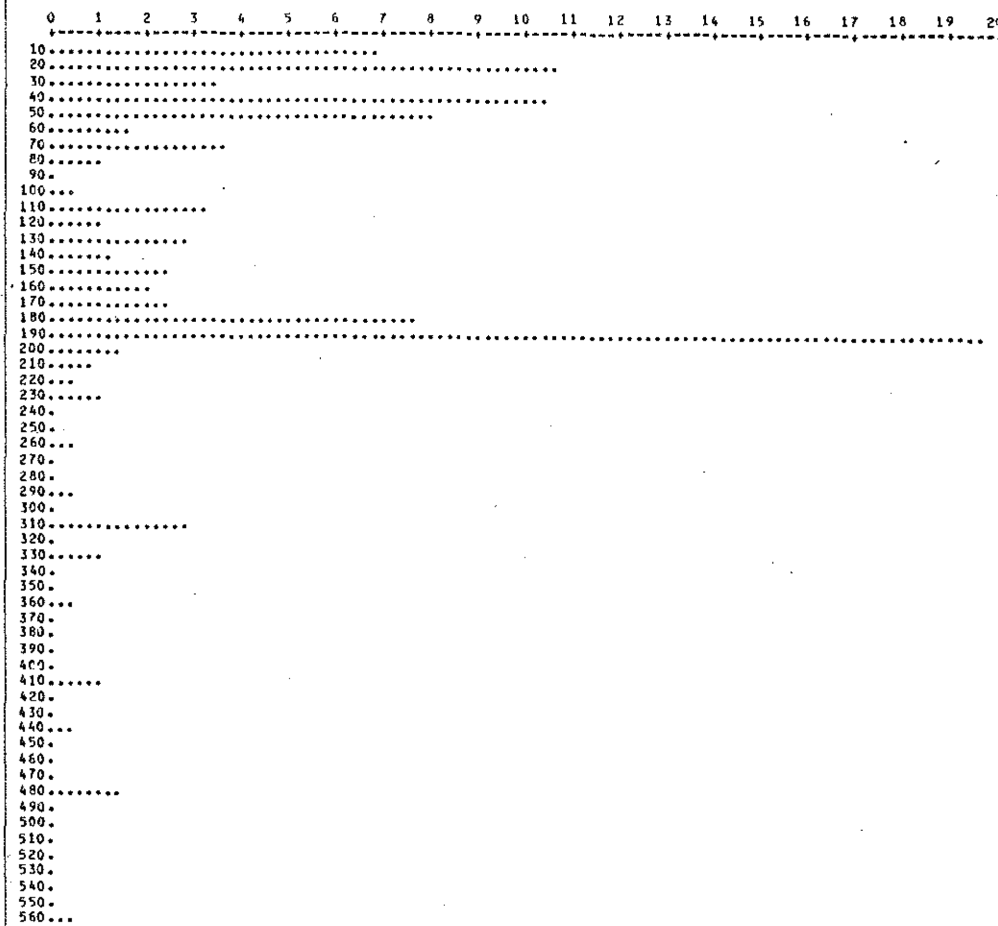

	P.C.	CUM.	ACTUAL
10	6.715	6.715	2
20	10.552	17.266	4
30	3.357	20.624	1
40	10.312	30.935	4
50	7.914	38.849	3
60	1.679	40.528	
70	3.597	44.125	1
80	0.959	45.084	
90	0.000	45.084	
100	0.480	45.564	
110	3.118	48.681	1
120	0.959	49.640	
130	2.878	52.518	1
140	1.199	53.717	
150	2.398	56.115	1
160	1.918	58.034	
170	2.398	60.432	1
180	7.674	68.106	3
190	19.664	87.770	8
200	1.439	89.209	
210	0.719	89.928	
220	0.480	90.408	
230	0.959	91.367	
240	0.000	91.367	
250	0.000	91.367	
260	0.480	91.847	
270	0.000	91.847	
280	0.000	91.847	
290	0.480	92.326	
300	0.000	92.326	
310	2.878	95.204	1
320	0.000	95.204	
330	0.959	96.163	
340	0.000	96.163	
350	0.000	96.163	
360	0.480	96.643	
370	0.000	96.643	
380	0.000	96.643	
390	0.000	96.643	
400	0.000	96.643	
410	0.959	97.602	
420	0.000	97.602	
430	0.000	97.602	
440	0.480	98.082	
450	0.000	98.082	
460	0.000	98.082	
470	0.000	98.082	
480	1.439	99.520	
490	0.000	99.520	
500	0.000	99.520	
510	0.000	99.520	
520	0.000	99.520	
530	0.000	99.520	
540	0.000	99.520	
550	0.000	99.520	
560	0.480	100.000	

MAINING VALUES ARE ALL ZERO

MBER OF OBSERVATIONS= 417 SUM= 51821. MEAN= 124.271 VAR= 10874.674 SD= 104.282

TAL TRIPS OVER MAXP = 0
TAL TRIPS OVER 255 = 0
LUME TABLE NUMBER = 204
IN TREE NUMBER = 101

23FEB78 TRIP LENGTH FREQUENCY DISTRIBUTION-REG4 PAGE 6

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUAL
10.	30.561	30.561	88
20.	31.774	62.335	91
30.	2.114	64.449	6
40.	13.721	78.170	39
50.	5.059	83.229	14
60.	0.416	83.645	1
70.	1.005	84.650	2
80.	1.213	85.863	3
90.	0.173	86.036	
100.	0.728	86.764	2
110.	0.416	87.179	1
120.	0.347	87.526	1
130.	1.143	88.669	3
140.	0.173	88.843	
150.	1.975	90.818	5
160.	4.262	95.080	12
170.	0.485	95.565	1
180.	0.762	96.327	2
190.	2.841	99.168	8
200.	0.173	99.342	
210.	0.035	99.376	
220.	0.069	99.446	
230.	0.000	99.446	
240.	0.139	99.584	
250.	0.000	99.584	
260.	0.000	99.584	
270.	0.069	99.653	
280.	0.000	99.653	
290.	0.000	99.653	
300.	0.000	99.653	
310.	0.139	99.792	
320.	0.000	99.792	
330.	0.000	99.792	
340.	0.000	99.792	
350.	0.000	99.792	
360.	0.000	99.792	
370.	0.000	99.792	
380.	0.000	99.792	
390.	0.000	99.792	
400.	0.000	99.792	
410.	0.000	99.792	
420.	0.000	99.792	
430.	0.000	99.792	
440.	0.000	99.792	
450.	0.000	99.792	
460.	0.000	99.792	
470.	0.000	99.792	
480.	0.069	99.861	
490.	0.000	99.861	
500.	0.000	99.861	
510.	0.000	99.861	
520.	0.000	99.861	
530.	0.000	99.861	
540.	0.000	99.861	
550.	0.000	99.861	
560.	0.000	99.861	
570.	0.000	99.861	
580.	0.069	99.931	
590.	0.000	99.931	
600.	0.000	99.931	
610.	0.000	99.931	
620.	0.000	99.931	
630.	0.000	99.931	
640.	0.000	99.931	
650.	0.000	99.931	
660.	0.000	99.931	
670.	0.000	99.931	
680.	0.000	99.931	
690.	0.000	99.931	
700.	0.000	99.931	
710.	0.000	99.931	
720.	0.000	99.931	
730.	0.000	99.931	
740.	0.000	99.931	
750.	0.069	100.000	

MAINING VALUES ARE ALL ZERO

MBER OF OBSERVATIONS= 2886 SUM= 118431. MEAN= 41.036 VAR= 3152.419 SD= 56.146

TAL TRIPS OVER MAXP = 2
TAL TRIPS OVER 255 = 0
LUME TABLE NUMBER = 205
IN TREE NUMBER = 101

```
     23FEB78            TRIP LENGTH FREQUENCY DISTRIBUTION-REG4                                                    PAGE   7

   0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30   32   34   36   38   40
   +----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+   P.C.   CUM.  ACTUAL
 10..............................................................................................      31.291 31.291      71
 20....................................................................................................................  38.607 69.899      87
 30.....                                                                                                 1.763 71.662       4
 40........................................                                                             13.310 84.971      3
 50......                                                                                                1.983 86.955       4
 60.                                                                                                     0.000 86.955
 70.                                                                                                     0.044 86.999
 80...                                                                                                   0.661 87.660       1
 90.                                                                                                     0.088 87.748
100.                                                                                                     0.088 87.836
110.                                                                                                     0.088 87.924
120.                                                                                                     0.000 87.924
130...                                                                                                   0.661 88.585       1
140..                                                                                                    0.264 88.850
150....                                                                                                  1.190 90.040       2
160....................                                                                                  7.492 97.532      17
170..                                                                                                    0.573 98.105       5
180....                                                                                                  1.102 99.207       2
190..                                                                                                    0.529 99.736       1
200.                                                                                                     0.000 99.736
210.                                                                                                     0.000 99.736
220.                                                                                                     0.088 99.824
230.                                                                                                     0.000 99.824
240.                                                                                                     0.000 99.824
250.                                                                                                     0.000 99.824
260.                                                                                                     0.000 99.824
270.                                                                                                     0.000 99.824
280.                                                                                                     0.000 99.824
290.                                                                                                     0.000 99.824
300.                                                                                                     0.000 99.824
310.                                                                                                     0.000 99.824
320.                                                                                                     0.000 99.824
330.                                                                                                     0.088 99.912
340.                                                                                                     0.000 99.912
350.                                                                                                     0.000 99.912
360.                                                                                                     0.000 99.912
370.                                                                                                     0.000 99.912
380.                                                                                                     0.000 99.912
390.                                                                                                     0.000 99.912
400.                                                                                                     0.000 99.912
410.                                                                                                     0.000 99.912
420.                                                                                                     0.000 99.912
430.                                                                                                     0.000 99.912
440.                                                                                                     0.000 99.912
450.                                                                                                     0.000 99.912
460.                                                                                                     0.000 99.912
470.                                                                                                     0.000 99.912
480.                                                                                                     0.088100.000
MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS=      2269          SUM=        81741.          MEAN=  36.025          VAR=      2294.035          SD=  47.896

TAL TRIPS OVER MAXP  =        0
TAL TRIPS OVER 255   =        0
LUME TABLE NUMBER    =      206
IN TREE NUMBER       =      101
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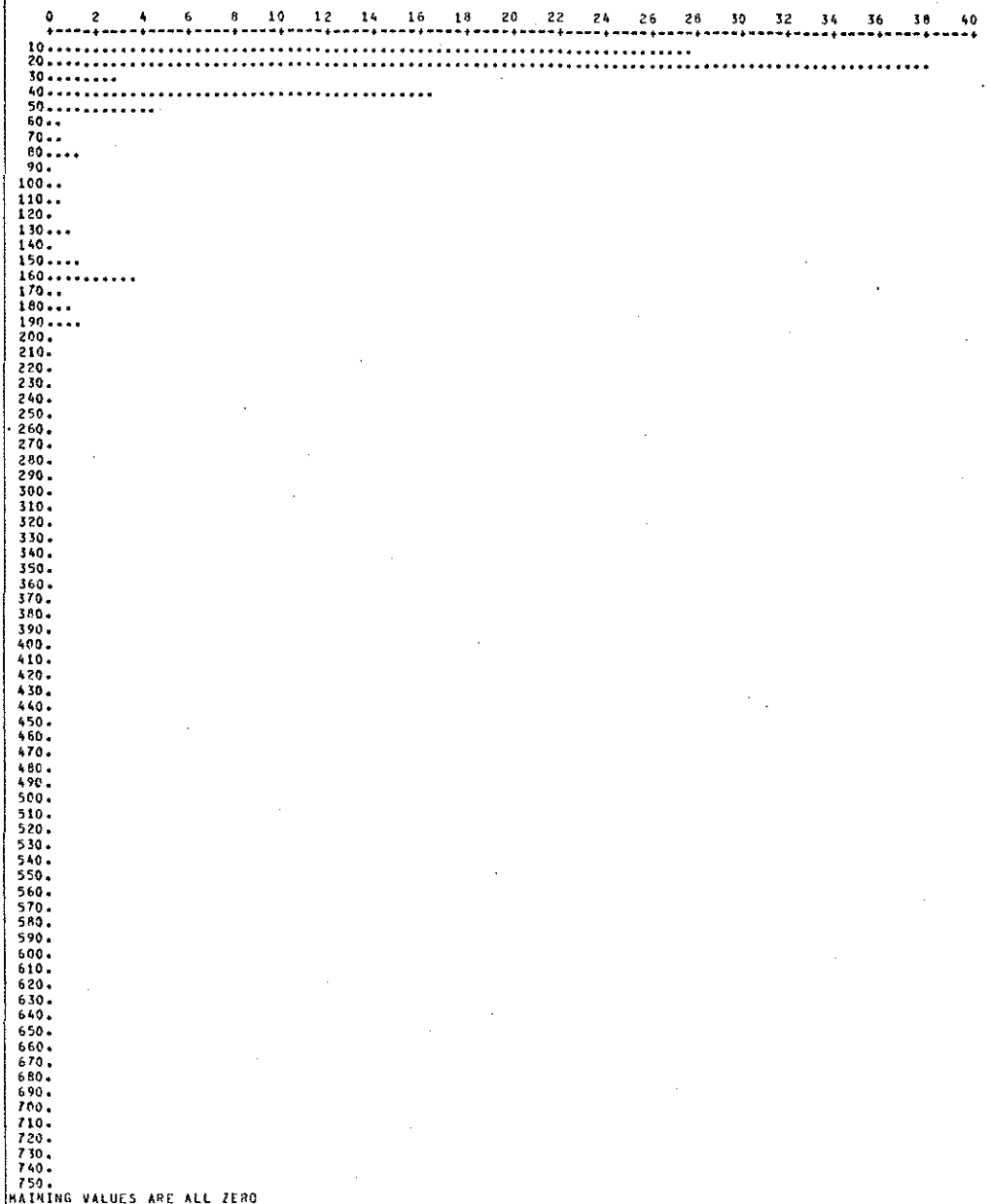
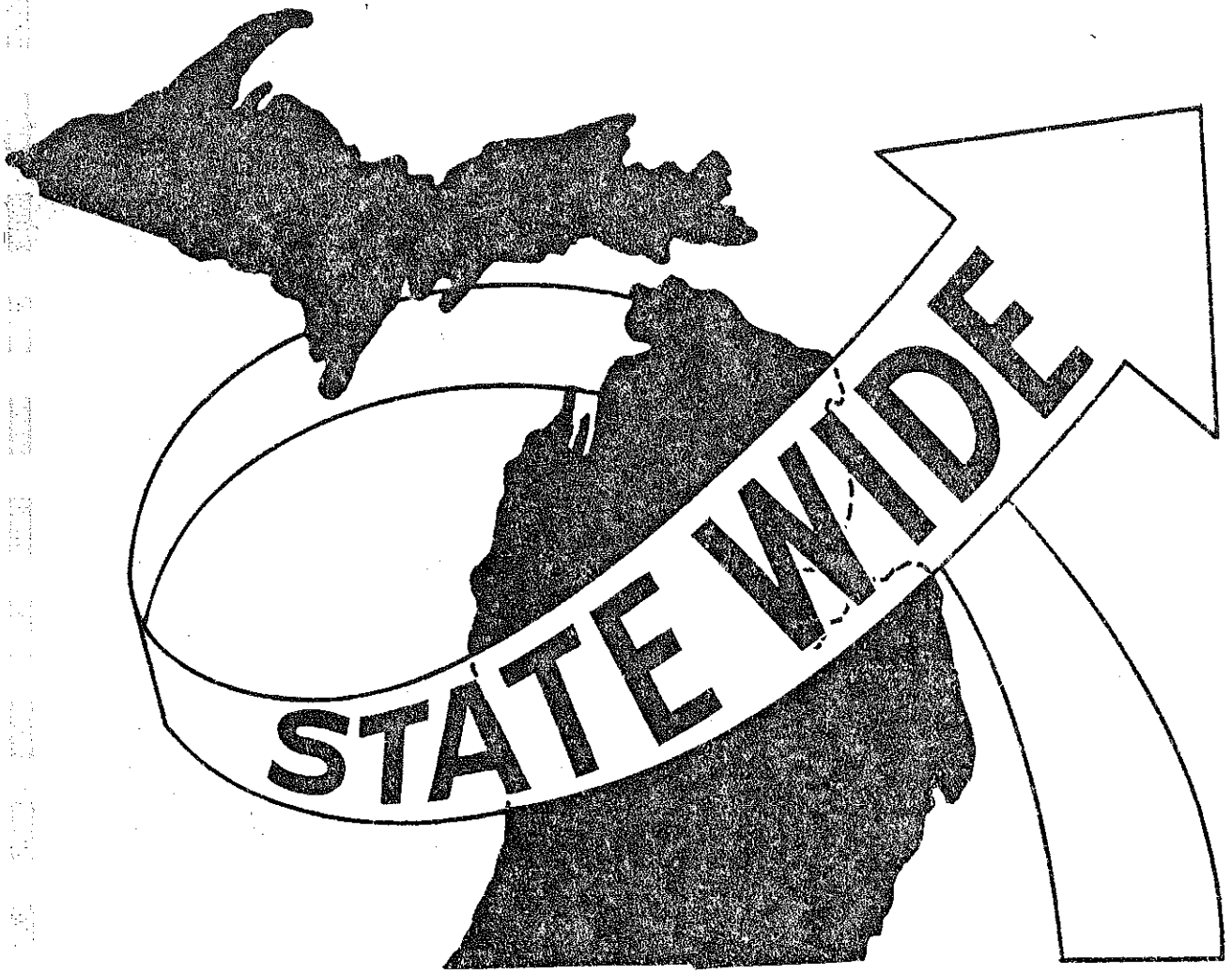


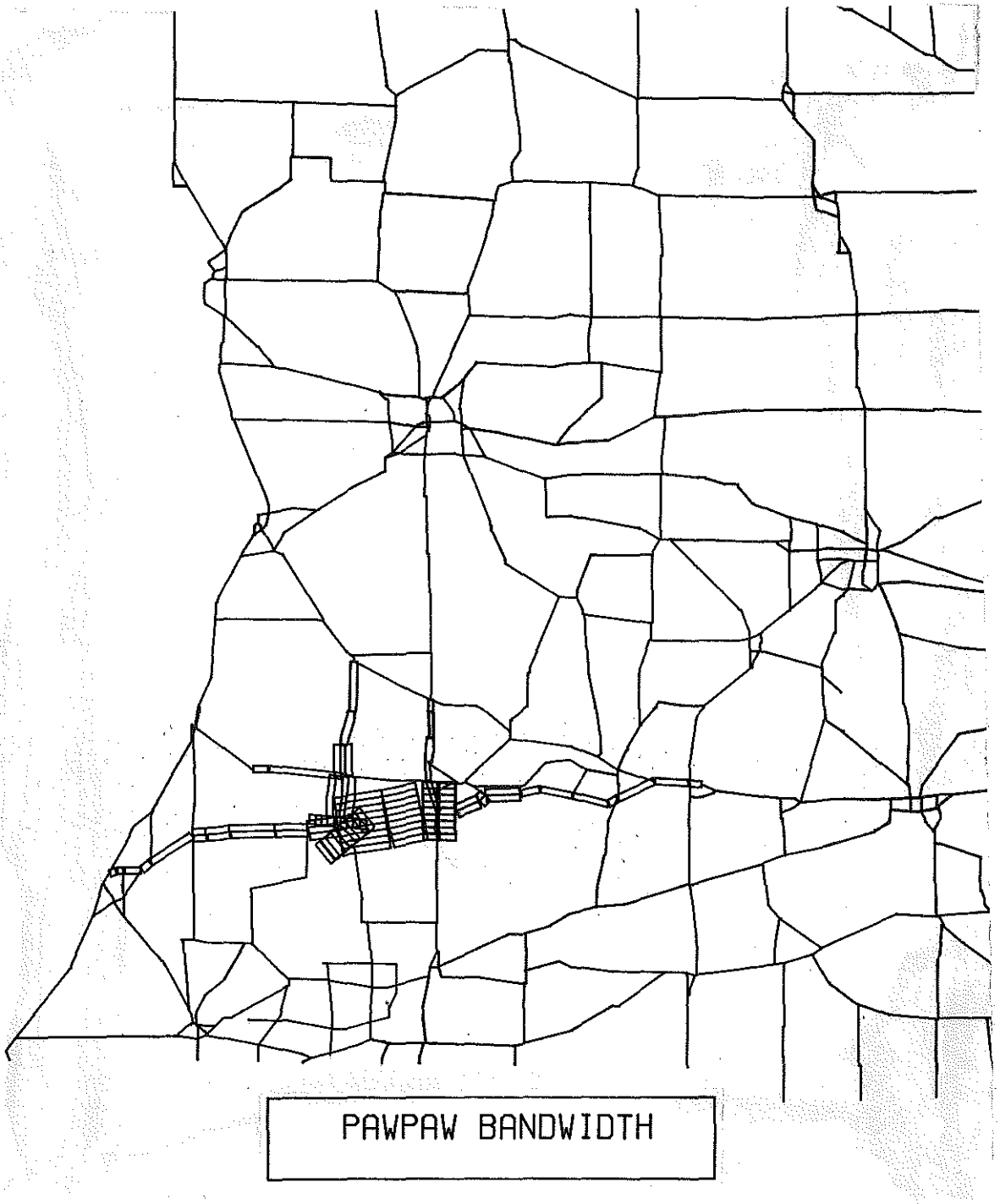
	P.C.	CUM.	ACTUAL
10	27.600	27.600	47
20	38.105	65.705	66
30	2.880	68.585	4
40	16.201	84.786	25
50	4.277	89.063	7
60	0.312	89.374	
70	0.589	89.963	1
80	1.016	90.979	1
90	0.069	91.048	
100	0.329	91.377	
110	0.265	91.643	
120	0.110	91.752	
130	0.629	92.381	1
140	0.162	92.543	
150	1.177	93.720	2
160	3.434	97.155	5
170	0.416	97.570	
180	0.670	98.240	1
190	1.166	99.406	2
200	0.104	99.509	
210	0.035	99.544	
220	0.046	99.590	
230	0.035	99.625	
240	0.023	99.648	
250	0.000	99.648	
260	0.012	99.659	
270	0.012	99.671	
280	0.000	99.671	
290	0.012	99.683	
300	0.000	99.683	
310	0.110	99.792	
320	0.000	99.792	
330	0.035	99.827	
340	0.000	99.827	
350	0.012	99.838	
360	0.012	99.850	
370	0.000	99.850	
380	0.000	99.850	
390	0.000	99.850	
400	0.000	99.850	
410	0.035	99.885	
420	0.000	99.885	
430	0.000	99.885	
440	0.023	99.908	
450	0.000	99.908	
460	0.000	99.908	
470	0.000	99.908	
480	0.058	99.965	
490	0.000	99.965	
500	0.000	99.965	
510	0.000	99.965	
520	0.000	99.965	
530	0.000	99.965	
540	0.000	99.965	
550	0.000	99.965	
560	0.012	99.977	
570	0.000	99.977	
580	0.012	99.988	
590	0.000	99.988	
600	0.000	99.988	
610	0.000	99.988	
620	0.000	99.988	
630	0.000	99.988	
640	0.000	99.988	
650	0.000	99.988	
660	0.000	99.988	
670	0.000	99.988	
680	0.000	99.988	
690	0.000	99.988	
700	0.000	99.988	
710	0.000	99.988	
720	0.000	99.988	
730	0.000	99.988	
740	0.000	99.988	
750	0.012	100.000	

MAINING VALUES ARE ALL ZERO
MBER OF OBSERVATIONS= 17326 SUM= 587126. MEAN= 33.887 VAR= 2037.782 SD= 45.142

TAL TRIPS OVER MAXP = 2
TAL TRIPS OVER 255 = 0
LUNE TABLE NUMBER = 207
IN TREE NUMBER = 101

CITY TRIP CHARACTERISTICS
BY ALPHA NAME





PAWPAW BANDWIDTH

PAWPAW

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE

VEHICLE TYPE

CAR W/O TRLR	CAR W/ TRLR	PICK-UP W/O/TRLR	PICK-UP W/ TRLR	SINGLE-UNIT TRUCKS	COMBINATION TRUCKS
80.6%	0.3%	15.2%	0.2%	2.8%	1.0%
13958	50	2627	41	479	172

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
34.8%	9.5%	23.5%	2.4%	16.7%	13.1%
6026	1653	4077	416	2886	2268

NUMBER IN VEHICLE

1	2	3	4	5	6+
56.8%	25.4%	9.5%	5.3%	1.9%	1.1%
9848	4399	1638	911	337	194

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
44.4%	34.4%	21.2%
7686	5966	3675

TOTAL TRIPS = 17327

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR PAWPAW

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	82.6% 4978	49.5% 818	46.3% 1889	2.9% 12	37.9% 1094	46.6% 1058
2	14.3% 863	30.4% 502	30.2% 1230	39.6% 165	33.0% 953	30.2% 685
3	2.1% 128	13.0% 215	13.1% 532	19.4% 81	13.9% 401	12.4% 281
4	0.6% 37	4.5% 75	6.7% 272	26.0% 108	9.9% 285	5.9% 134
5	0.3% 19	1.2% 20	2.5% 102	6.7% 28	3.3% 96	3.2% 72
6+	0.0% 1	1.4% 23	1.3% 52	5.4% 22	2.0% 57	1.7% 38
TOTAL	100% 6026	100% 1653	100% 4077	100% 416	100% 2886	100% 2268

TOTAL TERMINAL-TRIPS FOR PAWPAW = 17327

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR PAWPAW

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	70.4% 4243	85.0% 1406	84.2% 3431	89.6% 373	89.7% 2589	84.5% 1916
CAR W/ TRLR	0.0% 3	0.2% 3	0.1% 6	3.2% 13	0.6% 17	0.4% 9
PICK-UP W/O/TRLR	19.5% 1176	14.5% 240	14.9% 606	3.6% 15	9.5% 274	13.9% 316
PICK-UP W/ TRLR	0.3% 20	0.1% 1	0.1% 4	1.5% 6	0.1% 2	0.3% 7
SINGLE-UNIT TRUCKS	6.9% 413	0.2% 3	0.7% 30	2.1% 9	0.2% 5	0.9% 20
COMBINATION TRUCKS	2.9% 172	0.0% 0	0.0% 0	0.0% 0	0.0% 0	0.0% 0
TOTAL	100% 6026	100% 1653	100% 4077	100% 416	100% 2886	100% 2268

TOTAL TERMINAL-TRIPS FOR PAWPAW = 17327

Scale: 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40

	P.C.	CUM.	ACTUAL
10.	23.594	23.594	1
20.	36.652	60.246	2
30.	4.082	64.327	
40.	23.196	87.523	1
50.	6.371	93.894	
60.	0.548	94.442	
70.	0.763	95.205	
80.	1.726	96.930	
90.	0.033	96.964	
100.	0.415	97.378	
110.	0.315	97.694	
120.	0.083	97.777	
130.	0.017	97.793	
140.	0.000	97.793	
150.	1.344	99.137	
160.	0.017	99.154	
170.	0.000	99.154	
180.	0.315	99.469	
190.	0.216	99.685	
200.	0.100	99.784	
210.	0.033	99.817	
220.	0.033	99.851	
230.	0.033	99.884	
240.	0.000	99.884	
250.	0.000	99.884	
260.	0.000	99.884	
270.	0.000	99.884	
280.	0.000	99.884	
290.	0.000	99.884	
300.	0.000	99.884	
310.	0.033	99.917	
320.	0.000	99.917	
330.	0.000	99.917	
340.	0.000	99.917	
350.	0.017	99.934	
360.	0.000	99.934	
370.	0.000	99.934	
380.	0.000	99.934	
390.	0.000	99.934	
400.	0.000	99.934	
410.	0.033	99.967	
420.	0.000	99.967	
430.	0.000	99.967	
440.	0.033	100.000	

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 6027 SUM= 165905. MEAN= 27.527 VAR= 744.202 SD= 27.280

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 201
SKIM TREE NUMBER = 101

	P.C.	CUM.	ACTUAL
10.	21.416	21.416	
20.	53.358	74.773	
30.	4.658	79.431	
40.	12.523	91.954	
50.	4.416	96.370	
60.	0.242	96.612	
70.	0.544	97.157	
80.	0.363	97.520	
90.	0.121	97.641	
100.	0.181	97.822	
110.	0.000	97.822	
120.	0.000	97.822	
130.	0.121	97.943	
140.	0.302	98.246	
150.	1.331	99.577	
160.	0.000	99.577	
170.	0.000	99.577	
180.	0.121	99.698	
190.	0.242	99.940	
200.	0.000	99.940	
210.	0.000	99.940	
220.	0.000	99.940	
230.	0.000	99.940	
240.	0.000	99.940	
250.	0.000	99.940	
260.	0.000	99.940	
270.	0.000	99.940	
280.	0.000	99.940	
290.	0.000	99.940	
300.	0.000	99.940	
310.	0.060	100.000	

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 1653 SUM= 39557. MEAN= 23.930 VAR= 500.005 SD= 22.361

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 202
SKIM TREE NUMBER = 101

```
    13MAR78           TRIP LENGTH FREQUENCY DISTRIBUTION-PAWPAW                                                  PAGE    4

      0     3     6     9    12    15    18    21    24    27    30    33    36    39    42    45    48    51    54    57    60
      +-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+   P.C.    CUM.   ACTUAL
   10.....................................................................                                                     34.004  34.004
   20.................................................................................................                         47.915  81.919
   30.....                                                                                                                      2.552  84.470
   40..........................                                                                                                12.782  97.252
   50....                                                                                                                       1.742  98.994
   60.                                                                                                                          0.000  98.994
   70.                                                                                                                          0.147  99.141
   80.                                                                                                                          0.294  99.436
   90.                                                                                                                          0.025  99.460
  100.                                                                                                                          0.098  99.558
  110.                                                                                                                          0.000  99.558
  120.                                                                                                                          0.000  99.558
  130.                                                                                                                          0.000  99.558
  140.                                                                                                                          0.000  99.558
  150.                                                                                                                          0.098  99.657
  160.                                                                                                                          0.000  99.657
  170.                                                                                                                          0.000  99.657
  180.                                                                                                                          0.098  99.755
  190.                                                                                                                          0.221  99.975
  200.                                                                                                                          0.000  99.975
  210.                                                                                                                          0.000  99.975
  220.                                                                                                                          0.000  99.975
  230.                                                                                                                          0.000  99.975
  240.                                                                                                                          0.000  99.975
  250.                                                                                                                          0.000  99.975
  260.                                                                                                                          0.000  99.975
  270.                                                                                                                          0.000  99.975
  280.                                                                                                                          0.000  99.975
  290.                                                                                                                          0.000  99.975
  300.                                                                                                                          0.000  99.975
  310.                                                                                                                          0.000  99.975
  320.                                                                                                                          0.000  99.975
  330.                                                                                                                          0.000  99.975
  340.                                                                                                                          0.000  99.975
  350.                                                                                                                          0.025100.000
REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS=      4076         SUM=        78780.          MEAN=  19.328           VAR=          209.031          SD=  14.458


TOTAL TRIPS OVER MAXP   =       0
TOTAL TRIPS OVER 255    =       0
VOLUME TABLE NUMBER     =     203
SKIM TREE NUMBER    .   =     101
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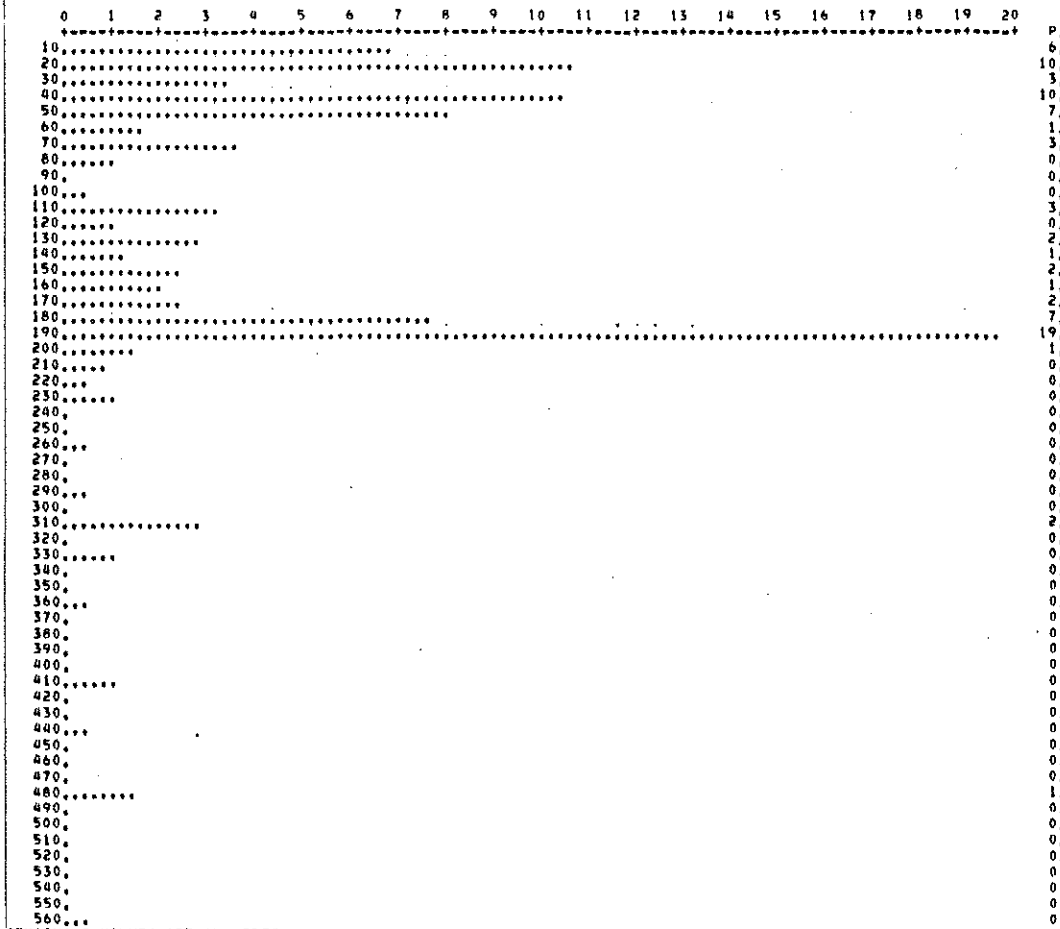
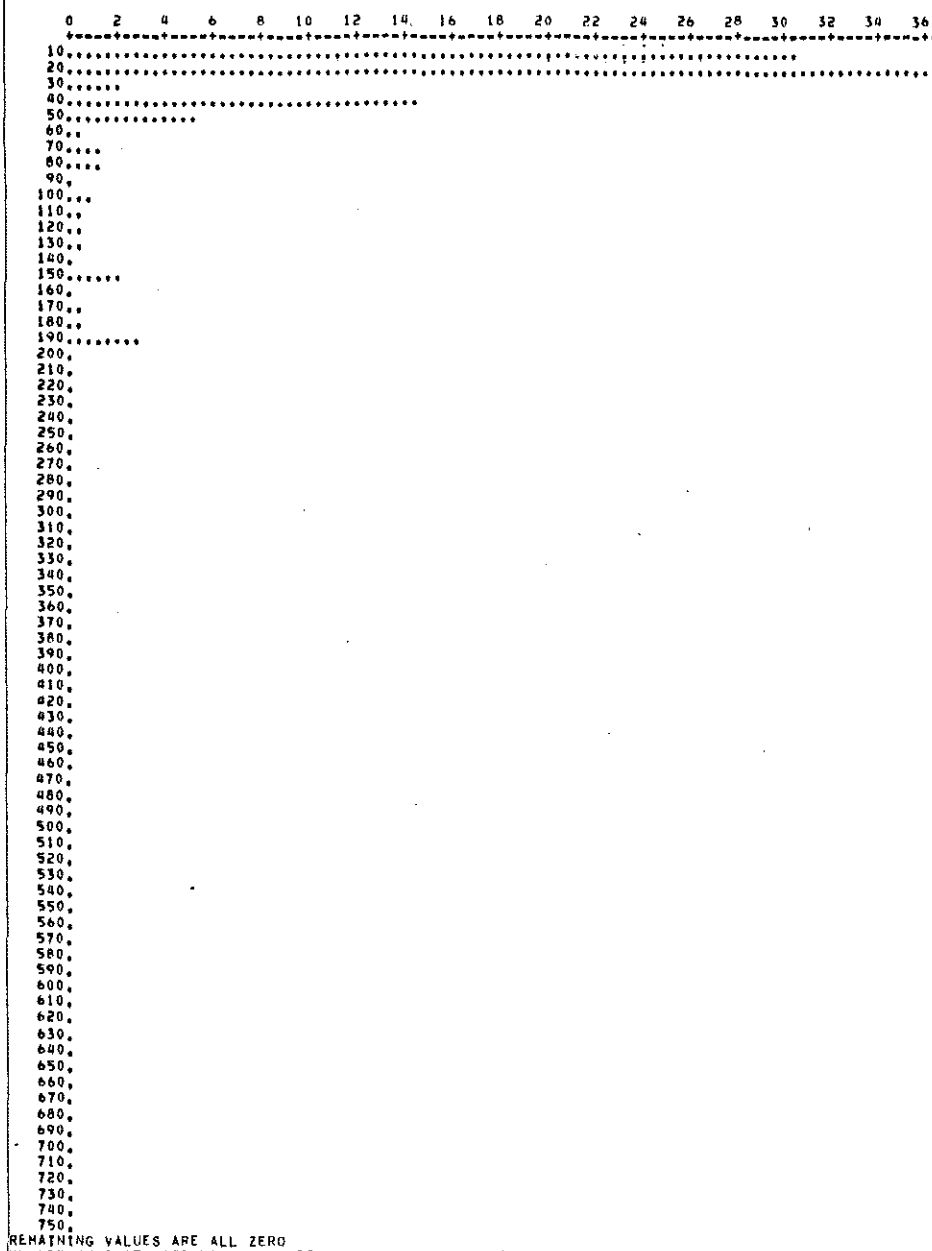
13MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-PAMPAM PAGE 5



REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 417 SUM= 51821, MEAN= 124,271 VAR= 10874,674 SD= 104,282

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 204
SKIM TREE NUMBER = 101



	P.C.	CUM.	ACTUAL
10	30.561	30.561	
20	36.036	66.597	
30	2.148	68.746	
40	14.484	83.229	
50	5.232	88.462	
60	0.416	88.877	
70	1.074	89.951	
80	1.213	91.164	
90	0.173	91.337	
100	0.728	92.065	
110	0.450	92.516	
120	0.347	92.862	
130	0.520	93.382	
140	0.173	93.555	
150	1.975	95.530	
160	0.000	95.530	
170	0.381	95.911	
180	0.589	96.500	
190	2.772	99.272	
200	0.104	99.376	
210	0.000	99.376	
220	0.069	99.446	
230	0.000	99.446	
240	0.139	99.584	
250	0.000	99.584	
260	0.000	99.584	
270	0.069	99.653	
280	0.000	99.653	
290	0.000	99.653	
300	0.000	99.653	
310	0.139	99.792	
320	0.000	99.792	
330	0.000	99.792	
340	0.000	99.792	
350	0.000	99.792	
360	0.000	99.792	
370	0.000	99.792	
380	0.000	99.792	
390	0.000	99.792	
400	0.000	99.792	
410	0.000	99.792	
420	0.000	99.792	
430	0.000	99.792	
440	0.000	99.792	
450	0.000	99.792	
460	0.000	99.792	
470	0.000	99.792	
480	0.069	99.861	
490	0.000	99.861	
500	0.000	99.861	
510	0.000	99.861	
520	0.000	99.861	
530	0.000	99.861	
540	0.000	99.861	
550	0.000	99.861	
560	0.000	99.861	
570	0.000	99.861	
580	0.069	99.931	
590	0.000	99.931	
600	0.000	99.931	
610	0.000	99.931	
620	0.000	99.931	
630	0.000	99.931	
640	0.000	99.931	
650	0.000	99.931	
660	0.000	99.931	
670	0.000	99.931	
680	0.000	99.931	
690	0.000	99.931	
700	0.000	99.931	
710	0.000	99.931	
720	0.000	99.931	
730	0.000	99.931	
740	0.000	99.931	
750	0.069	100.000	

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 2886 SUM= 98465. MEAN= 34.118 VAR= 2456.543 SD= 49.56

TOTAL TRIPS OVER MAXP = 2
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 205
SKIM TREE NUMBER = 101

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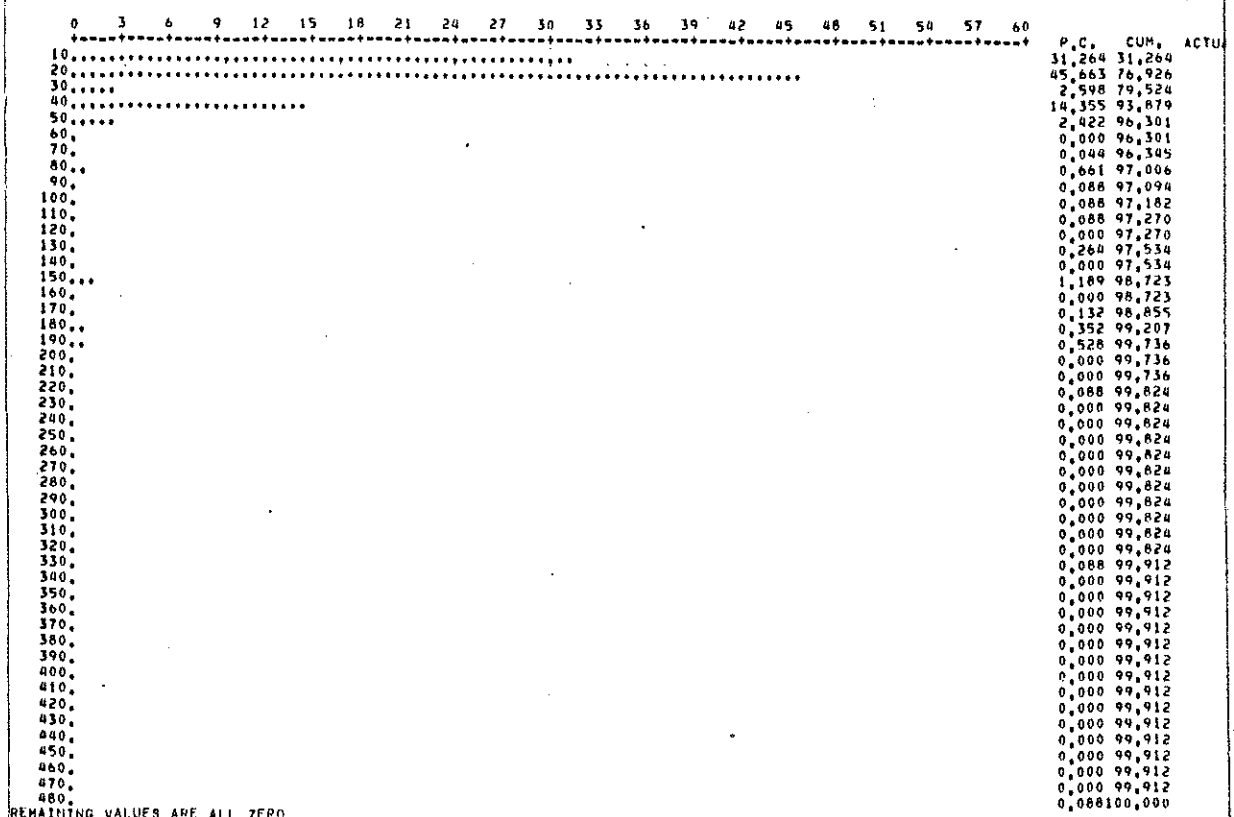
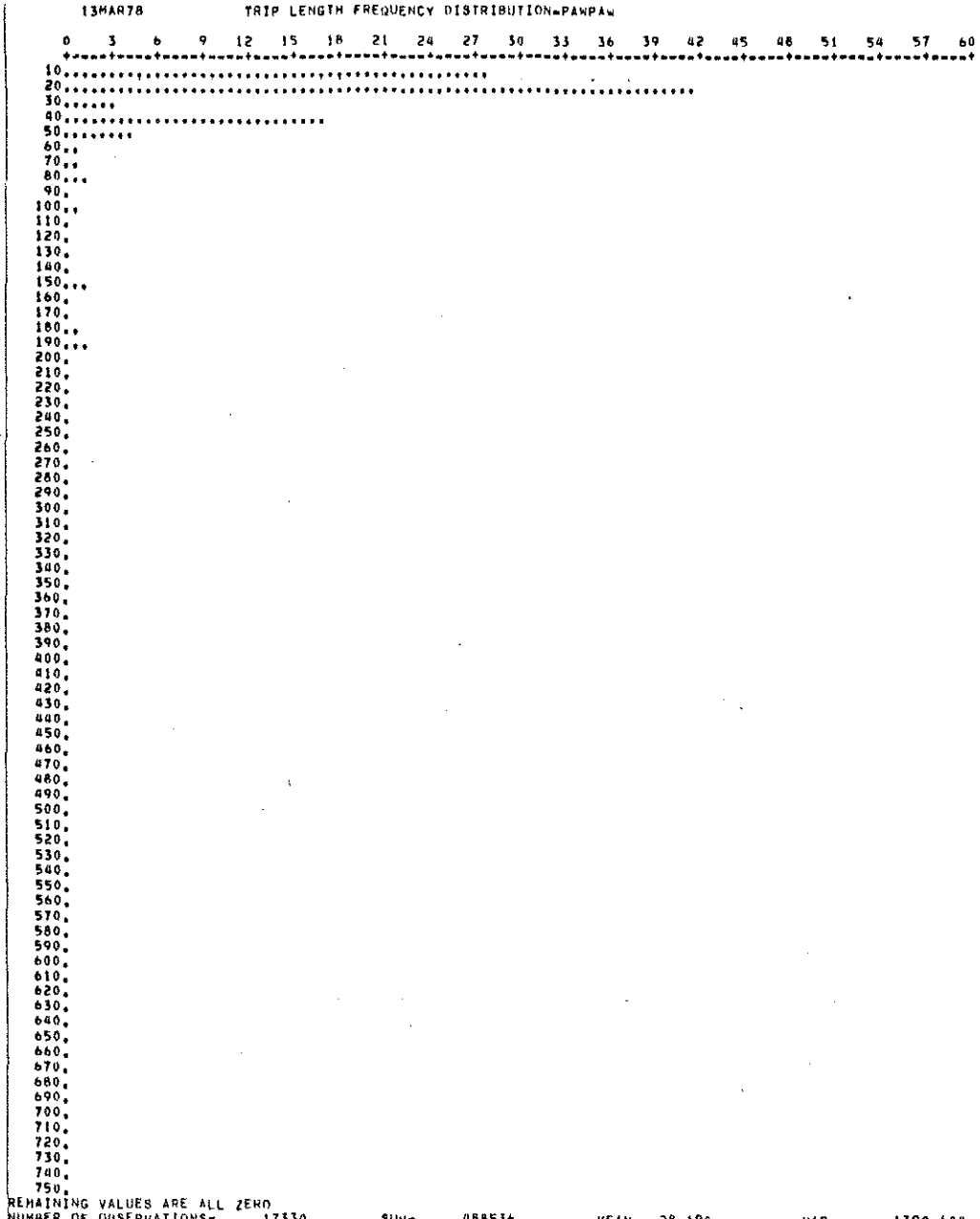


	P.C.	CUM.	ACTU
10	31.264	31.264	
20	45.663	76.926	
30	2.598	79.524	
40	14.355	93.879	
50	2.422	96.301	
60	0.000	96.301	
70	0.044	96.345	
80	0.661	97.006	
90	0.088	97.094	
100	0.088	97.182	
110	0.088	97.270	
120	0.000	97.270	
130	0.264	97.534	
140	0.000	97.534	
150	1.189	98.723	
160	0.000	98.723	
170	0.132	98.855	
180	0.352	99.207	
190	0.528	99.736	
200	0.000	99.736	
210	0.000	99.736	
220	0.088	99.824	
230	0.000	99.824	
240	0.000	99.824	
250	0.000	99.824	
260	0.000	99.824	
270	0.000	99.824	
280	0.000	99.824	
290	0.000	99.824	
300	0.000	99.824	
310	0.000	99.824	
320	0.000	99.824	
330	0.088	99.912	
340	0.000	99.912	
350	0.000	99.912	
360	0.000	99.912	
370	0.000	99.912	
380	0.000	99.912	
390	0.000	99.912	
400	0.000	99.912	
410	0.000	99.912	
420	0.000	99.912	
430	0.000	99.912	
440	0.000	99.912	
450	0.000	99.912	
460	0.000	99.912	
470	0.000	99.912	
480	0.088	100.000	

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 2271 SUM= 54008. MEAN= 23.782 VAR= 864.436 SD= 29.40

TOTAL TRIPS OVER MAXP = 0
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 206
SKIM TREE NUMBER = 101



	P.C.	CUM.	ACTUA
10	27.594	27.594	
20	41.344	68.938	
30	3.243	72.181	
40	16.809	88.990	
50	4.426	93.416	
60	0.323	93.739	
70	0.623	94.362	
80	1.016	95.378	
90	0.069	95.447	
100	0.329	95.776	
110	0.271	96.047	
120	0.110	96.157	
130	0.208	96.365	
140	0.087	96.451	
150	1.160	97.611	
160	0.052	97.663	
170	0.138	97.802	
180	0.473	98.275	
190	1.154	99.429	
200	0.087	99.515	
210	0.029	99.544	
220	0.046	99.590	
230	0.035	99.625	
240	0.023	99.648	
250	0.000	99.648	
260	0.012	99.660	
270	0.012	99.671	
280	0.000	99.671	
290	0.012	99.683	
300	0.000	99.683	
310	0.110	99.792	
320	0.000	99.792	
330	0.035	99.827	
340	0.000	99.827	
350	0.012	99.838	
360	0.012	99.850	
370	0.000	99.850	
380	0.000	99.850	
390	0.000	99.850	
400	0.000	99.850	
410	0.035	99.885	
420	0.000	99.885	
430	0.000	99.885	
440	0.023	99.908	
450	0.000	99.908	
460	0.000	99.908	
470	0.000	99.908	
480	0.058	99.965	
490	0.000	99.965	
500	0.000	99.965	
510	0.000	99.965	
520	0.000	99.965	
530	0.000	99.965	
540	0.000	99.965	
550	0.000	99.965	
560	0.012	99.977	
570	0.000	99.977	
580	0.012	99.988	
590	0.000	99.988	
600	0.000	99.988	
610	0.000	99.988	
620	0.000	99.988	
630	0.000	99.988	
640	0.000	99.988	
650	0.000	99.988	
660	0.000	99.988	
670	0.000	99.988	
680	0.000	99.988	
690	0.000	99.988	
700	0.000	99.988	
710	0.000	99.988	
720	0.000	99.988	
730	0.000	99.988	
740	0.000	99.988	
750	0.012	100.000	

REMAINING VALUES ARE ALL ZERO
NUMBER OF OBSERVATIONS= 17330 SUM= 488536. MEAN= 28.190 VAR= 1390.604 SD= 37.29

TOTAL TRIPS OVER MAXP = 2
TOTAL TRIPS OVER 255 = 0
VOLUME TABLE NUMBER = 207
SKIM TREE NUMBER = 101

APPENDIX "A"-EQUIVALENCE LIST

ZONE	COUNTY	TOWNSHIP OR CITY
001	ALCONA	ALCONA, CALEDONIA, GREENBUSH, GUSTIN, HARRISVILLE, HAWES, HAYNES, MIKADO.
002	ALCONA	CURTIS, MILLEN, MITCHELL.
003	ALGER	MUNISING(CITY).
004	ALGER	BURT, MUNISING.
005	ALGER	LIMESTONE, MATHIAS, ONOTA, ROCK RIVER.
006	ALGER	AU TRAIN, GRAND ISLAND.
007	ALLEGAN	ALLEGAN, CHESHIRE, TROWBRIDGE, VALLEY.
008	ALLEGAN	CASCO, CLYDE, GANGES, LEE.
009	ALLEGAN	GUNPLAIN, OTSEGO.
010	ALLEGAN	FILLMORE, HEATH, MANLIUS, MONTEREY, OVERISEL, SALEM.
011	ALLEGAN	LAKETOWN, SAUGATUCK.
012	ALLEGAN	DORR, HOPKINS, LEIGHTON, MARTIN, WATSON, WAYLAND.
013	ALPENA	ALPENA(CITY).
014	ALPENA	ALPENA, SANBORN.
015	ALPENA	GREEN, LONG RAPIDS, MAPLE RIDGE, OSSINEKE, WELLINGTON. WILSON.
016	ANTRIM	CHESTONIA, JORDAN, MANCELONA, STAR, WARNER.
017	ANTRIM	BANKS, CENTRAL LAKE, ECHO, TORCH LAKE.
018	ANTRIM	CUSTER, ELK RAPIDS, FOREST HOME, HELENA, KEARNEY, MILTON.
019	ARENAC	LINCOLN, STANDISH.
020	ARENAC	AU GRES, SIMS, TURNER, WHITNEY.
021	ARENAC	ADAMS, ARENAC, CLAYTON, DEEP RIVER, MASON, MOFFATT.
022	BARAGA	ARVON, LANSE.
023	BARAGA	BARAGA.
024	BARAGA	COVINGTON, SPURR.
025	BARRY	HASTINGS(CITY).
026	BARRY	CARLTON, CASTLETON, HASTINGS, IRVING, RUTLAND, WOODLAND.
027	BARRY	ASSYRIA, BALTIMORE, BARRY, HOPE, JOHNSTOWN, MAPLE GROVE.
028	BARRY	ORANGEVILLE, PRAIRIEVILLE, THORNAPPLE, YANKEE SPRINGS.
029	BAY	BAY CITY.
030	BAY	BANGOR.
031	BAY	BEAVER, KAWKAWLIN, MONITOR, WILLIAMS.
032	BAY	FRANKENLUST, HAMPTON, MERRITT, PORTSMOUTH.
033	BAY	FRASER, GARFIELD, GIBSON, MT. FOREST, PINCONNING.
034	BENZIE	CRYSTAL LAKE, LAKE.
035	BENZIE	BENZONIA, BLAINE, GILMORE, JOYFIELD, WELDON.
036	BENZIE	ALMIRA, COLFAX, HOMESTEAD, INLAND, PLATTE.
037	BERRIEN	BENTON HARBOR(CITY),ST.JOE(CITY).
038	BERRIEN	BARODA, LAKE, ORONOKO.
039	BERRIEN	BENTON, HAGAR, ST. JOSEPH.
040	BERRIEN	BAINBRIDGE, COLOMA, WATERVLIET.
041	BERRIEN	BERRIEN, PIPESTONE.
042	BERRIEN	BERTRAND, BUCHANAN, GALIEN, WEESAW.
043	BERRIEN	CHIKAMING, NEW BUFFALO, THREE OAKS.
044	BERRIEN	LINCOLN, ROYALTON, SODUS.
045	BERRIEN	NILES(CITY).
046	BERRIEN	NILES.
047	BERRIEN	BUCHANAN(CITY).

048	BRANCH	COLDWATER(CITY).
049	BRANCH	BATAVIA, MATTESON, SHERWOOD.
050	BRANCH	BETHEL, BRONSON, GILEAD, NOBLE.
051	BRANCH	BUTLER, QUINCY.
052	BRANCH	ALGANSEE, CALIFORNIA, KINDERHOOK, OVID.
053	BRANCH	GIRARD, UNION.
054	BRANCH	COLDWATER.
055	CALHOUN	BATTLE CREEK(CITY).
056	CALHOUN	ALBION, HOMER.
057	CALHOUN	ATHENS, BURLINGTON, LEROY, NEWTON.
058	CALHOUN	BATTLE CREEK.
059	CALHOUN	BEDFORD.
060	CALHOUN	CLARENCE, CLARENDON, ECKFORD, LEE, MARENGO,
061	CALHOUN	CONVIS, FREDONIA, MARSHALL.
062	CALHOUN	EMMETT.
063	CALHOUN	PENNFIELD.
064	CALHOUN	SHERIDAN.
065	CALHOUN	TEKONSHA.
066	CALHOUN	ALBION(CITY).
067	CALHOUN	MARSHALL(CITY).
068	CASS	DOWAGIAC(CITY).
069	CASS	LA GRANGE, POKAGON, SILVER CREEK, WAYNE.
070	CASS	HOWARD, MILTON.
071	CASS	JEFFERSON, ONTWA.
072	CASS	MARCELLUS, VOLINIA.
073	CASS	NEWBERG, PENN.
074	CASS	CALVIN, MASON, PORTER.
075	CHARLEVOIX	CHARLEVOIX(CITY), PEAINE, ST. JAMES.
076	CHARLEVOIX	BOYNE VALLEY, CHANDLER, HUDSON, MELROSE.
077	CHARLEVOIX	SOUTH ARM, WILSON.
078	CHARLEVOIX	BAY, CHARLEVOIX, EVANGELINE, EVELINE, HAYES, MARION, NORWOOD.
079	CHEBOYGAN	CHEBOYGAN.
080	CHEBOYGAN	BEAUGRAND, BURT, HEBRON, INVERNESS, MACKINAW, MULLETT, MUNRO.
081	CHEBOYGAN	ELLIS, FOREST, KOEHLER, MENTOR, NUNDA, TUSCARORA, WALKER, WAVERLY, WILMOT.
082	CHEBOYGAN	ALOHA, BENTON, GRANT.
083	CHIPPEWA	SAULT STE. MARIE, SUGAR ISLAND.
084	CHIPPEWA	BRUCE, PICKFORD.
085	CHIPPEWA	CHIPPEWA, HULBERT, WHITEFISH.
086	CHIPPEWA	DETOUR, DRUMMOND, RABER.
087	CHIPPEWA	KINROSS, RUDYARD, TROUT LAKE.
088	CHIPPEWA	BAY MILLS, DAFTER, SUPERIOR.
089	CLARE	GRANT, SHERIDAN.
090	CLARE	ARTHUR, FRANKLIN, FROST, HAMILTON, HATTON, HAYES.
091	CLARE	FREEMAN, GARFIELD, GREENWOOD, LINCOLN, REDDING, SUMMERFIELD, SURREY, WINTERFIELD.
092	CLINTON	ST. JOHNS(CITY).
093	CLINTON	BATH.
094	CLINTON	BENGAL, BINGHAM, ESSEX.
095	CLINTON	DALLAS, LEBANON, WESTPHALIA.
096	CLINTON	DUPLAIN, GREENBUSH.
097	CLINTON	EAGLE, RILEY, WATERTOWN.
098	CLINTON	OLIVE, VICTOR.
099	CLINTON	OVID.
100	CLINTON	DEWITT.

101	CRAWFORD	GRAYLING(CITY).
102	CRAWFORD	BEAVER CREEK, FREDERIC, GRAYLING, LOVELLS, MAPLE FOREST, SOUTH BRANCH.
103	DELTA	ESCANABA(CITY).
104	DELTA	BARK RIVER, FORD RIVER.
105	DELTA	BAY DE NOC, ENSIGN, MASONVILLE.
106	DELTA	ESCANABA, WELLS.
107	DELTA	FAIRBANKS, GARDEN, NAHMA.
108	DELTA	BALDWIN, BRAMPTON, CORNELL, MAPLE RIDGE.
109	DICKINSON	IRON MOUNTAIN(CITY).
110	DICKINSON	BREITUNG.
111	DICKINSON	BREEN, FELCH, SAGOLA, WEST BRANCH.
112	DICKINSON	NORWAY, WAUCEDAH.
113	EATON	CHARLOTTE(CITY).
114	EATON	BENTON, BROOKFIELD, EATON.
115	EATON	CARMEL, CHESTER, WALTON.
116	EATON	BELLEVUE, KALAMO.
117	EATON	DELTA.
118	EATON	EATON RAPIDS, HAMLIN.
119	EATON	ONEIDA, ROXAND.
120	EATON	SUNFIELD, VERMONTVILLE.
121	EATON	WINDSOR.
122	EATON	EATON RAPIDS(CITY).
123	EATON	GRAND LEDGE(CITY).
124	EMMET	PETOSKEY(CITY).
125	EMMET	BLISS, CARP LAKE, CROSS VILLAGE, CENTER, MCKINLEY, READMOND, WAWATAM.
126	EMMET	FRIENDSHIP, LITTLEFIELD, LITTLE TRAVERSE, MAPLE RIVER, PLEASANT VIEW, WEST TRAVERSE.
127	EMMET	BEAR CREEK, RESORT, SPRINGVALE.
128	GENESEE	FLINT(CITY).
129	GENESEE	VIENNA.
130	GENESEE	FLUSHING, MT MORRIS.
131	GENESEE	CLAYTON, FLINT.
132	GENESEE	GRAND BLANC.
133	GENESEE	BURTON(CITY).
134	GENESEE	DAVISON.
135	GENESEE	RICHFIELD.
136	GENESEE	GENESEE.
137	GENESEE	FOREST, THETFORD.
138	GENESEE	MONTROSE.
139	GENESEE	GAINES, MUNDY.
140	GENESEE	ARGENTINE, FENTON,
141	GENESEE	ATLAS.
142	GLADWIN	GLADWIN(CITY).
143	GLADWIN	BENTLEY, BILLINGS, BOURRET, BUTMAN, CLEMENT, GRIM, HAY, SECORD, SHERIDAN, TOBACCO.
144	GLADWIN	GLADWIN, SAGE, SHERMAN.
145	GLADWIN	BEAVERTON, BUCKEYE, GROUT.
146	GOGEBIC	IRONWOOD.
147	GOGEBIC	WAKEFIELD.
148	GOGEBIC	MARENISCO.
149	GOGEBIC	WATERSMEET.
150	GOGEBIC	BESSEMER, ERWIN.
151	GRAND TRAVERSE	TRAVERSE CITY(CITY)ANDPENINSULA.
152	GRAND TRAVERSE	BLAIR, GARFIELD, GREEN LAKE, LONG LAKE.

153 GRAND TRAVERSE EAST BAY, FIFE LAKE, PARADISE, UNION.
154 GRAND TRAVERSE GRANT, MAYFIELD.
155 GRAND TRAVERSE ACME, WHITEWATER.

156 GRATIOT ALMA(CITY).
157 GRATIOT ARCADA, EMERSON, HAMILTON, LAFAYETTE, NORTH STAR, NEW HAVEN, NEWARK, SUMNER.
158 GRATIOT BETHANY, PINE RIVER, SEVILLE, WHEELER.
159 GRATIOT ELBA, FULTON, NORTH SHADE, WASHINGTON.
160 GRATIOT ITHACA(CITY).

161 HILLSDALE HILLSDALE(CITY).
162 HILLSDALE ALLEN, FAYETTE.
163 HILLSDALE AMBOY, RANSOM, WRIGHT.
164 HILLSDALE CAMBRIA, HILLSDALE, WOODBRIDGE.
165 HILLSDALE CAMDEN, READING.
166 HILLSDALE JEFFERSON, PITTSFORD.
167 HILLSDALE LITCHFIELD, MOSCOW, SCIPO.
168 HILLSDALE ADAMS, SOMERSET, WHEATLAND.

169 HOUGHTON HOUGHTON(CITY).
170 HOUGHTON CALUMET, OSCEOLA, SCHOOLCRAFT.
171 HOUGHTON CHASSELL, TORCH LAKE
172 HOUGHTON DUNCAN, LAIRD.
173 HOUGHTON FRANKLIN, HANCOCK, QUINCY.
174 HOUGHTON PORTAGE.
175 HOUGHTON ADAMS, ELM RIVER, STANTON.

176 HURON BAD AXE(CITY).
177 HURON BINGHAM, PARIS, SAND BEACH, SHERMAN.
178 HURON BLOOMFIELD, LINCOLN, RIBICON, SIGEL, VERONA.
179 HURON BROOKFIELD, GRANT, SEBEWAING, SHERIDAN.
180 HURON CASEVILLE, CHANDLER, LAKE, MCKINLEY, MEADE.
181 HURON COLFAX, FAIRHAVEN, OLIVER, WINSOR.
182 HURON DWIGHT, GORE, HUME, HURON, PORT AUSTIN, POINT AUX BARQUES.

183 INGHAM LANSING(CITY),E.LANSING(CITY).
184 INGHAM MERIDIAN.
185 INGHAM DELHI.
186 INGHAM ALAIEDON, VEVAY.
187 INGHAM AURELIUS, LESLIE, ONONDAGA.
188 INGHAM BUNKER HILL, STOCKBRIDGE.
189 INGHAM INGHAM, WHITE OAK.
190 INGHAM LEROY, LOCKE.
191 INGHAM WHEATFIELD, WILLIAMSTON.

192 IONIA IONIA(CITY).
193 IONIA BERLIN, BOSTON.
194 IONIA CAMPBELL, ODESSA.
195 IONIA DANBY, SEBEWA.
196 IONIA EASTON, KEENE.
197 IONIA IONIA, RONALD.
198 IONIA LYONS, NORTH PLAINS.
199 IONIA ORANGE, PORTLAND.
200 IONIA ORLEANS, OTISCO.

201 IOSCO ALABASTER, TAWAS.
202 IOSCO AU SABLE, BALDWIN, WILBER.
203 IOSCO BURLEIGH, GRANT, PLAINFIELD, RENO, SHERMAN.
204 IOSCO OSCODA.

205 IRON IRON RIVER(CITY).
206 IRON STAMBAUGH.
207 IRON CRYSTAL FALLS.
208 IRON MANSFIELD, MASTODON.

209	IRON	BATES, HEMATITE, IRON RIVER.
210	ISABELLA	MT PLEASANT.
211	ISABELLA	CHIPPEWA, COE.
212	ISABELLA	COLDWATER, GILMORE, VERNON, WISE.
213	ISABELLA	DENVER, ISABELLA, NOTTAWA, SHERMAN.
214	ISABELLA	LINCOLN, UNION.
215	ISABELLA	BROOMFIELD, DEERFIELD, FREMONT, ROLLAND.
216	JACKSON	JACKSON(CITY).
217	JACKSON	SUMMIT.
218	JACKSON	CONCORD, HANOVER, PULASKI, SPRING ARBOR.
219	JACKSON	BLACKMAN, RIVES.
220	JACKSON	GRASS LAKE, LEONI.
221	JACKSON	NAPOLEON, NORVELL.
222	JACKSON	COLUMBIA, LIBERTY.
223	JACKSON	PARMA, SANDSTONE.
224	JACKSON	SPRINGPORT, TOMKINS.
225	JACKSON	HENRIETTA, WATERLOO.
226	KALAMAZOO	KALAMAZOO.
227	KALAMAZOO	PORTAGE.
228	KALAMAZOO	COMSTOCK.
229	KALAMAZOO	CHARLESTON.
230	KALAMAZOO	COOPER, RICHLAND, ROSS.
231	KALAMAZOO	ALAMO, OSHTEMO.
232	KALAMAZOO	PRAIRIE RONDE, TEXAS.
233	KALAMAZOO	BRADY, CLIMAX, PAVILION, SCHOOLCRAFT, WAKESHMA.
234	KALKASKA	BOARDMAN, CLEARWATER, KALKASKA, ORANGE, RAPID RIVER, SPRINGFIELD.
235	KALKASKA	BEAR LAKE, BLUE LAKE, COLD SPRINGS, EXCELSIOR, GARFIELD, OLIVER.
236	KENT	GRAND RAPIDS(CITY).
237	KENT	ADA, CASCADE.
238	KENT	ALGOMA, CANNON, COURTLAND, PLAINFIELD.
239	KENT	ALPINE, SPARTA.
240	KENT	BOWNE, CALEDONIA.
241	KENT	BYRON, GAINES.
242	KENT	GRAND RAPIDS.
243	KENT	GRATTAN, OAKFIELD, SPENCER.
244	KENT	LOWELL, VERGENNES.
245	KENT	NELSON, SOLON, TYRONE.
246	KENT	WALKER.
247	KENT	KENTWOOD.
248	KENT	WYOMING(CITY).
249	KEWEENAW	ALLOUEZ, EAGLE HARBOR, GRANT, HOUGHTON, SHERMAN.
250	LAKE	CHASE, CHERRY VALLEY, LAKE, PINORA, PLEASANT PLAIN, SWEETWATER, WEBBER, YATES.
251	LAKE	DOVER, EDEN, ELK, ELLSWORTH, NEWKIRK, PEACOCK, SAUBLE.
252	LAPEER	LAPEER(CITY).
253	LAPEER	ARCADIA, ATTICA, GOODLAND.
254	LAPEER	BURLINGTON, BURNSIDE, NORTH BRANCH.
255	LAPEER	DEERFIELD, MARATHON, RICH.
256	LAPEER	ELBA, HADLEY, METAMORA.
257	LAPEER	LAPEER, MAYFIELD, OREGON.
258	LAPEER	ALMONT, DRYDEN, IMLAY.
259	LEELANAU	LEELANAU, LELAND, SUTTONS BAY
260	LEELANAU	CLEVELAND, EMPIRE, GLEN ARBOR, KASSON.
261	LEELANAU	BINGHAM, CENTERVILLE, ELMWOOD, SOLON.

262	LENAWEE	ADRIAN(CITY).
263	LENAWEE	ADRIAN, FRANKLIN.
264	LENAWEE	BLISSFIELD, DEERFIELD, OGDEN, PALMYRA, RIGA.
265	LENAWEE	CAMBRIDGE, ROME.
266	LENAWEE	CLINTON, MACON, RAISIN, RIDGEWAY, TECUMSEH.
267	LENAWEE	DOVER, SENECA.
268	LENAWEE	FAIRFIELD, MADISON.
269	LENAWEE	HUDSON, MEDINA.
270	LENAWEE	ROLLIN, WOODSTOCK.
271	LIVINGSTON	HOWELL, MARION.
272	LIVINGSTON	COHOCTAH, CONWAY, HANDY, IOSCO.
273	LIVINGSTON	DEERFIELD, HARTLAND, OCEOLA, TYRONE.
274	LIVINGSTON	GREEN OAK, HAMBURG.
275	LIVINGSTON	BRIGHTON, GENOA.
276	LIVINGSTON	PUTNAM, UNADILLA.
277	LUCE	MCMILLAN.
278	LUCE	COLUMBUS, LAKEFIELD.
279	LUCE	PENTLAND.
280	MACKINAC	BOIS BLANC ISLAND, ST.IGNACE(CITY).
281	MACKINAC	CLARK, MARQUETTE, ST IGNACE.
282	MACKINAC	BREVORT, HENDRICKS, HUDSON, MORAN.
283	MACKINAC	GARFIELD, NEWTON, PORTAGE.
284	MACOMB	CLINTON, HARRISON.
285	MACOMB	ST CLAIR SHORES(CITY)E,DET(CITY),ROSEVILLE(CITY).
286	MACOMB	WARREN(CITY).
287	MACOMB	SHELBY.
288	MACOMB	CHESTERFIELD, MACOMB.
289	MACOMB	BRUCE, RAY, WASHINGTON.
290	MACOMB	ARMADA, LENOX, RICHMOND.
291	MANISTEE	BROWN, FILER, MANISTEE, STRONACH.
292	MANISTEE	DICKSON, NORMAN.
293	MANISTEE	CLEON, MAPLE GROVE, MARILLA, SPRINGDALE.
294	MANISTEE	ARCADIA, BEAR LAKE, ONEKAMA, PLEASANTON.
295	MARQUETTE	MARQUETTE(CITY).
296	MARQUETTE	CHOCOLAY, RICHMOND, SANDS, SKANDIA, WEST BRANCH.
297	MARQUETTE	ELY, ISHPEMING, TILDEN.
298	MARQUETTE	EWING, FORSYTH, TURIN, WELLS.
299	MARQUETTE	ISHPEMING(CITY).
300	MARQUETTE	MARQUETTE, NEGAUNEE.
301	MARQUETTE	CHAMPION, HUMBOLDT, MICHIGAMME, POWELL, REPUBLIC.
302	MASON	LUDINGTON(CITY).
303	MASON	BRANCH, CUSTER, EDEN, LOGAN.
304	MASON	FREESOIL, GRANT, HAMLIN, MEADE, SHERIDAN, SHERMAN, VICTORY.
305	MASON	AMBER, PERE MARQUETTE, RIVERTON, SUMMIT.
306	MECOSTA	BIG RAPIDS(CITY).
307	MECOSTA	BIG RAPIDS, COLFAX, GRANT, GREEN.
308	MECOSTA	CHIPPEWA, FORK, MARTINY, SHERIDAN.
309	MECOSTA	HINTON, MILLBROOK, MORTON, WHEATLAND.
310	MECOSTA	AETNA, AUSTIN, DEERFIELD, MECOSTA.
311	MENOMINEE	MENOMINEE(CITY).
312	MENOMINEE	HARRIS, MEYER, SPALDING.
313	MENOMINEE	INGALLSTON, LAKE, MELLEN, MENOMINEE, STEPHENSON.
314	MENOMINEE	CEDARVILLE, DAGGETT, FAITHORN, GOURLEY, HOLMES, NADEAU.
315	MIDLAND	MIDLAND(CITY).

316 MIDLAND GREENDALE, JASPER, LEE, PORTER.
317 MIDLAND HOMER, INGERSOLL, MIDLAND, MT. HALEY.
318 MIDLAND HOPE, LARKIN, LINCOLN, MILLS.
319 MIDLAND EDENVILLE, GENEVA, JEROME, WARREN.

320 MISSAUKEE LAKE, REEDER, RICHLAND, RIVERSIDE.
321 MISSAUKEE BLOOMFIELD, CALDWELL, FOREST, PIONEER.
322 MISSAUKEE AETNA, BUTTERFIELD, CLAM UNION, ENTERPRISE, HOLLAND, NORWICH, WEST BRANCH.

323 MONROE MONROE(CITY).
324 MONROE BEDFORD.
325 MONROE BERLIN.
326 MONROE DUNDEE.
327 MONROE ERIE.
328 MONROE EXETER, RAISINVILLE.
329 MONROE FRENCHTOWN, MONROE.
330 MONROE IDA, SUMMERFIELD.
331 MONROE LASALLE.
332 MONROE LONDON, MILAN.
333 MONROE ASH.
334 MONROE WHITEFORD.

335 MONTCALM GREENVILLE.
336 MONTCALM BLOOMER, BUSHNELL, CRYSTAL, EVERGREEN.
337 MONTCALM DAY, FERRIS, HOME, RICHLAND.
338 MONTCALM EUREKA, FAIRPLAIN, MONTCALM, SIDNEY.
339 MONTCALM MAPLE VALLEY, PIERSON, REYNOLDS, WINFIELD.
340 MONTCALM BELVIDERE, CATO, DOUGLASS, PINE.

341 MONTMORENCY ALBERT, AVERY, BRILEY, HILLMAN, LOUD, MONTMORENCY, RUST, VIENNA.

342 MUSKEGON MUSKEGON(CITY).
343 MUSKEGON LAKETON.
344 MUSKEGON MUSKEGON.
345 MUSKEGON NORTON SHORES.
346 MUSKEGON BLUE LAKE, HOLTON.
347 MUSKEGON CASNOVIA, MOORLAND.
348 MUSKEGON CEDAR CREEK, DALTON.
349 MUSKEGON EGELSTON.
350 MUSKEGON FRUITLAND, MONTAGUE, WHITE RIVER, WHITEHALL.
351 MUSKEGON FRUITPORT, RAVENNA, SULLIVAN.

352 NEWAGO FREMONT(CITY).
353 NEWAGO BARTON, BEAVER, DENVER, HOME, LILLEY, MERRILL, MONROE, NORWICH, TROY.
354 NEWAGO BIG PRAIRIE, EVERETT, GOODWELL, LINCOLN, SHERMAN, WILCOX.
355 NEWAGO BRIDGETON, DAYTON, SHERIDAN.
356 NEWAGO BROOKS, CROTON, GARFIELD.
357 NEWAGO ASHLAND, ENSLEY, GRANT.
358 OAKLAND PONTIAC(CITY).
359 OAKLAND SOUTHFIELD.
360 OAKLAND ROYAL OAK TWP, AND THE FOLLOWING CITIES) BERKLEY, CLAWSON, FERNDALE, HAZEL PARK, HUNTINGTON WOODS, MADISON HEIGHTS, OAK PARK, PLEASANT RIDGE.
361 OAKLAND BLOOMFIELD.
362 OAKLAND FARMINGTON.
363 OAKLAND LYON.
364 OAKLAND COMMERCE.
365 OAKLAND HIGHLAND, MILFORD, WHITE LAKE.
366 OAKLAND WEST BLOOMFIELD.
367 OAKLAND TROY(CITY).
368 OAKLAND AVON.
369 OAKLAND PONTIAC.

371	OAKLAND	HOLLY, ROSE.
372	OAKLAND	GROVELAND, SPRINGFIELD.
373	OAKLAND	BRANDON, INDEPENDENCE.
374	OAKLAND	OAKLAND, ORION.
375	OAKLAND	ADDISON, OXFORD.
376	OCEANA	BENONA, CLAYBANKS, SHELBY.
377	OCEANA	COLFAX, CRYSTAL, ELBRIDGE, HART, LEAVITT, WEARE.
378	OCEANA	FERRY, GRANT, GREENWOOD, NEWFIELD, OTTO.
379	OCEANA	GOLDEN, PENTWATER.
380	OGEMAW	EDWARDS, HORTON, OGEMAW, WEST BRANCH.
381	OGEMAW	CUMMING, FOSTER, GOODAR, HILL, KLACKING, ROSE.
382	OGEMAW	CHURCHILL, LOGAN, MILLS, RICHLAND.
383	ONTONAGON	ONTONAGON.
384	ONTONAGON	BOHEMIA, GREENLAND, ROCKLAND.
385	ONTONAGON	HAIGHT, INTERIOR, MCMILLAN, STANNARD.
386	ONTONAGON	BERGLAND, CARP LAKE, MATCHWOOD.
387	OSCEOLA	HERSEY, RICHMOND.
388	OSCEOLA	EVART, ORIENT, OSCEOLA, SYLVAN.
389	OSCEOLA	HARTWICK, HIGHLAND, MARION, MIDDLE BRANCH.
390	OSCEOLA	BURDELL, CEDAR, LEROY, LINCOLN, ROSE LAKE, SHERMAN.
391	OSCODA	BIG CREEK, CLINTON, COMINS, ELMER, GREENWOOD, MENTOR.
392	OTSEGO	GAYLORD(CITY).
393	OTSEGO	BAGLEY, CHARLTON, CHESTER, HAYES, OTSEGO LAKE.
394	OTSEGO	CORWITH, DOVER, ELMIRA, LIVINGSTON.
395	OTTAWA	HOLLAND(CITY).
396	OTTAWA	CHESTER, TALLMADGE, WRIGHT.
397	OTTAWA	CROCKERY, POLKTON.
398	OTTAWA	GEORGETOWN, JAMESTOWN.
399	OTTAWA	SPRING LAKE.
400	OTTAWA	GRAND HAVEN, OLIVE, PORT SHELDON, ROBINSON.
401	OTTAWA	ALLENDALE, BLENDON
402	OTTAWA	HOLLAND, PARK.
403	OTTAWA	ZEELAND.
404	PRESQUE ISLE	BELKNAP, BISMARCK, METZ, MOLTKE, ROGERS.
405	PRESQUE ISLE	ALLIS, BEARINGER, CASE, NORTH ALLIS, OCQUEOC.
406	PRESQUE ISLE	KRAKOW, POSEN, PRESQUE ISLE, PULAWSKI.
407	ROSCOMMON	DENTON, GERRISH, LAKE, LYON, MARKEY, ROSCOMMON.
408	ROSCOMMON	AU SABLE, BACKUS, HIGGINS, NESTER, RICHFIELD.
409	SAGINAW	SAGINAW(CITY).
410	SAGINAW	TITTABAWASSEE.
411	SAGINAW	CARROLLTON, KOCHVILLE, SAGINAW.
412	SAGINAW	BUENA VISTA, ZILWAUKEE.
413	SAGINAW	THOMAS.
414	SAGINAW	FRANKENMUTH.
415	SAGINAW	BRIDGEPORT.
416	SAGINAW	JAMES, ST. CHARLES, SWAN CREEK.
417	SAGINAW	FREMONT, JONESFIELD, LAKEFIELD, RICHLAND.
418	SAGINAW	BRADY, BRANT, CHAPIN, MARION.
419	SAGINAW	BLUMFIELD
420	SAGINAW	CHESANING, MAPLE GROVE.
421	SAGINAW	ALBEE, SPAULDING.
422	SAGINAW	BIRCH RUN, TAYMOUTH.
423	SANILAC	BUEL, ELK, LEXINGTON.

424	SANILAC	BRIDGEHAMPTON, CUSTER, FORESTER.
425	SANILAC	FLYNN, FREMONT, MAPLE VALLEY, SPEAKER, WORTH.
426	SANILAC	ARGYLE, AUSTIN, EVERGREEN, GREENLEAF, LAMOTTE, MOORE.
427	SANILAC	DELAWARE, MARION, MINDEN, WHEATLAND.
428	SANILAC	ELMER, MARLETTE.
429	SANILAC	SANILAC, WASHINGTON, WATERTOWN.
430	SCHOOLCRAFT	MANISTIQUE(CITY).
431	SCHOOLCRAFT	HIAWATHA, INWOOD, THOMPSON.
432	SCHOOLCRAFT	DOYLE, GERMFASK, MANISTIQUE, MUELLER, SENEY.
433	SHIAWASSEE	OWOSSO(CITY).
434	SHIAWASSEE	BENNINGTON, SCIOTA.
435	SHIAWASSEE	BURNS, VERNON.
436	SHIAWASSEE	CALEDONIA.
437	SHIAWASSEE	FAIRFIELD, MIDDLEBURY, OWOSSO.
438	SHIAWASSEE	HAZELTON, VENICE.
439	SHIAWASSEE	NEW HAVEN, RUSH.
440	SHIAWASSEE	ANTRIM, SHIAWASSEE.
441	SHIAWASSEE	PERRY, WOODHULL.
442	ST CLAIR	FORT GRATIOT, PORT HURON.
443	ST CLAIR	CASCO, CHINA, EAST CHINA, IRA.
444	ST CLAIR	CLAY, COTTRELLVILE.
445	ST CLAIR	KIMBALL.
446	ST CLAIR	COLUMBUS, ST CLAIR.
447	ST CLAIR	BURTCHVILLE, CLYDE, GRANT.
448	ST CLAIR	BROCKWAY, GREENWOOD.
449	ST CLAIR	BERLIN, EMMETT, RILEY.
450	ST CLAIR	KENOCKEE, WALES.
451	ST CLAIR	LYNN, MUSSEY.
452	ST JOSEPH	STURGIS.
453	ST JOSEPH	COLON, NOTTAWA.
454	ST JOSEPH	CONSTANTINE, FLORENCE, SHERMAN.
455	ST JOSEPH	FABIUS, FLOWERFIELD, LOCKPORT, PARK.
456	ST JOSEPH	LEONIDAS, MENDON.
457	ST JOSEPH	MOTTVILLE, WHITE PIGEON.
458	ST JOSEPH	BURR OAK, FAWN RIVER.
459	ST JOSEPH	THREE RIVERS(CITY).
460	TUSCOLA	CARO.
461	TUSCOLA	ALMER, ELLINGTON, NOVESTA.
462	TUSCOLA	ARBELA, MILLINGTON.
463	TUSCOLA	INDIANFIELDS, JUNIATA.
464	TUSCOLA	DAYTON, KINGSTON, KOYLTON, WELLS.
465	TUSCOLA	DENMARK, TUSCOLA.
466	TUSCOLA	ELKLAND, ELMWOOD.
467	TUSCOLA	FAIRGROVE, GILFORD.
468	TUSCOLA	FREMONT, VASSAR, WATERTOWN.
469	TUSCOLA	VASSAR(CITY).
470	TUSCOLA	AKRON, COLUMBIA, WISNER.
471	VAN BUREN	SOUTH HAVEN(CITY).
472	VAN BUREN	ANTWERP, DECATUR, PORTER.
473	VAN BUREN	ARLINGTON, HARTFORD, LAWRENCE.
474	VAN BUREN	BANGOR, COLUMBIA, GENEVA.
475	VAN BUREN	BLOOMINGDALE, PINE GROVE.
476	VAN BUREN	COVERT, SOUTH HAVEN.
477	VAN BUREN	HAMILTON, KEELER.
478	VAN BUREN	ALMENA, PAW PAW, WAVERLY.
479	WASHTENAW	ANN ARBOR(CITY).
480	WASHTENAW	ANN ARBOR.
481	WASHTENAW	PITTSFIELD

482	WASHTENAW	SCIO, WEBSTER.
483	WASHTENAW	YPSILANTI(CITY).
484	WASHTENAW	YPSILANTI.
485	WASHTENAW	SUPERIOR.
486	WASHTENAW	AUGUSTA, YORK.
487	WASHTENAW	LODI, SALINE.
488	WASHTENAW	BRIDGEWATER, FREEDOM, SHARON.
489	WASHTENAW	MANCHESTER.
490	WASHTENAW	LIMA, SYLVAN.
491	WASHTENAW	DEXTER, LYNDON.
492	WASHTENAW	NORTHFIELD, SALEM.
493	WAYNE	DETROIT(PART 1 OF 3), EAST OF LIVERNOIS, WEST OF JOHN R, SOUTH AND WEST OF EAST GRAND BLVD.
494	WAYNE	DEARBORN(CITY).
495	WAYNE	DETROIT(PART 2 OF 3), WEST OF LIVERNOIS, NORTH OF TIREMAN.
496	WAYNE	DETROIT (PART 3 OF 3), EAST OF JOHN R, EAST OF OAKLAND, NORTH AND EAST OF EAST GRAND BLVD.
497	WAYNE	ALLEN PARK(CITY), ECORSE(CITY), LINCOLN PARK(CITY), MELVINDALE(CITY), RIVER ROUGE(CITY), SOUTHGATE(CITY), WYANDOTTE(CITY).
498	WAYNE	TAYLOR(CITY).
499	WAYNE	BROWNSTOWN, GROSSE ISLE, HURON.
500	WAYNE	ROMULUS, SUMPTER, VAN BUREN.
501	WAYNE	CANTON.
502	WAYNE	NORTHVILLE, PLYMOUTH.
503	WAYNE	GROSSE PTE(CITY), GROSSE PTE FARMS(CITY), GROSSE PTE PARK(CITY), GROSSE PTE SHORES(CITY) GROSSE PTE WOODS(CITY), HARPER WOODS(CITY).
504	WAYNE	REDFORD.
505	WEXFORD	CADILLAC(CITY).
506	WEXFORD	BOON, CHERRY GROVE, CLAM LAKE, HARING, HENDERSON, SOUTH BRANCH, SELMA, SLAGLE.
507	WEXFORD	ANTIOCH, HANOVER, SPRINGVILLE, WEXFORD.
508	WEXFORD	CEDAR CREEK, COLFAX, GREENWOOD, LIBERTY.

ZONE	PROVINCE	MAJOR CITIES WITHIN ZONE
509	ONTARIO	LEAMINGTON, TILBURY, WINDSOR.
510	ONTARIO	SARNIA.
511	ONTARIO	FORT FRANCES, KENORA, SAULT STE. MARIE, SUDBURY, TIMMINS.
512	ONTARIO	CHATHAM, GODERICH, HAMILTON, KITCHNER, LONDON, NIAGARA FALLS, WALLACEBURG.
513	ONTARIO	KINGSTON, OTTAWA, PEMBROKE, STURGEON FALLS, TORONTO.

ZONE	STATE	COUNTY
514	WISCONSIN	IRON.
515	WISCONSIN	ASHLAND, BAYFIELD.
516	WISCONSIN	ONEIDA, VILAS.
517	WISCONSIN	FOREST.
518	WISCONSIN	FLORENCE.
519	WISCONSIN	MARINETTE.
520	WISCONSIN	BURNETT, DOUGLAS, SAWYER, WASHBURN.
521	WISCONSIN	BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, LANGLADE, LINCOLN, MARATHON, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RUSK, ST CROIX, TAYLOR, TREMPEALEAU, WOOD.
522	WISCONSIN	BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC,

		MENOMINEE, OCONTO, OUTAGAMIE, SHAWANO, SHEBOYGAN, WAUPACA, WINNEBAGO.
523	WISCONSIN	DANE, DODGE, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, ROCK, WALWORTH, WASHINGTON, WAUKESHA.
524	WISCONSIN	ADAMS, COLUMBIA, CRAWFORD, GRANT, GREEN, GREEN LAKE, IOWA, JUNEAU, LA CROSSE, LAFAYETTE, MARQUETTE, MONROE, RICHLAND, SAUK, VERNON, WAUSHARA.
525	ILLINOIS	BOONE, COOK, DE KALB, DU PAGE, GRUNDY, KANE, KENDALL, LAKE, MCHENRY, WILL, WINNEBAGO.
526	ILLINOIS	BUREAU, CARROLL, CHAMPAIGN, CHRISTIAN, COLES, DE WITT, DOUGLAS, EDGAR, FORD, FULTON, HENDERSON, HENRY, IROQUOIS, JO DAVIESS, KANKAKEE, KNOX, LA SALLE, LEE, LIVINGSTON, LOGAN, MACON, MARSHALL, MASON, MCLEAN, MENARD, MERCER, MOULTRIE, OGLE, PEORIA, PIATT, PUTNAM, ROCK ISLAND, SANGAMON, STARK, STEPHENSON, TAZEWELL, VERMILION, WARREN, WHITESIDE, WOODFORD.
527	ILLINOIS	ADAMS, ALEXANDER, BOND, BROWN, CALHOUN, CASS, CLARK, CLAY, FAYETTE, FRANKLIN, GALLATIN, GREENE, HAMILTON, HANCOCK, CLINTON, CRAWFORD, CUMBERLAND, EDWARDS, EFFINGHAM, HARDIN, JACKSON, JASPER, JEFFERSON, JERSEY, JOHNSON, LAWRENCE, MACOUPIN, MADISON, MARION, MASSAC, MCDONOUGH, MONROE, MONTGOMERY, MORGAN, PERRY, PIKE, POPE, PULASKI, RANDOLPH, RICHLAND, SALINE, SCHUYLER, SCOTT, SHELBY, ST CLAIR, UNION, WABASH, WASHINGTON, WAYNE, WHITE, WILLIAMSON.
528	INDIANA	LAKE, PORTER.
529	INDIANA	LAPORTE, STARKE.
530	INDIANA	MARSHALL, ST JOSEPH.
531	INDIANA	ELKHART, KOSCIUSKO.
532	INDIANA	ALLEN, DE KALB, LAGRANGE, NOBLE, STEUBEN, WHITLEY.
533	INDIANA	ADAMS, BENTON, BLACKFORD, BOONE, CARROLL, CASS, CLINTON, DELAWARE, FOUNTAIN, FULTON, GRANT, HENRY, HOWARD, HUNTINGTON, JASPER, JAY, MADISON, MIAMI, MONTGOMERY, NEWTON, PULASKI, RANDOLPH, TIPPECANOE, TIPTON, WABASH, WARREN, WAYNE, WELLS, WHITE.
534	INDIANA	BARTHOLOMEW, BROWN, CLARK, CLAY, CRAWFORD, DAVIESS, DEARBORN, DECATUR, DUBOIS, FAYETTE, FLOYD, FRANKLIN, GIBSON, GREENE, HAMILTON, HANCOCK, HARRISON, HENDRICKS, JACKSON, JEFFERSON, JENNINGS, JOHNSON, KNOX, LAWRENCE, MARION, MARTIN, MONROE, MORGAN, OHIO, ORANGE, OWEN, PARKE, PERRY, PIKE, POSEY, PUTNAM, RIPLEY, RUSH, SCOTT, SHELBY, SPENCER, SULLIVAN, SWITZERLAND, UNION, VANDERBURGH, VERMILLION, VIGO, WARRICK, WASHINGTON.
535	OHIO	DEFIANCE, WILLIAMS.
536	OHIO	FULTON, HENRY.
537	OHIO	LUCAS, WOOD.
538	OHIO	ALLEN, AUGLAIZE, CRAWFORD, DARKE, ERIE, HANCOCK, HARDIN, HURON, LOGAN, MARION, MERCER, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, SHELBY, VAN WERT, WYANDOT.
539	OHIO	ASHTABULA, BELMONT, CARROLL, COLUMBIANA, COSHOCTON, CUYAHOGA, DELAWARE, FAIRFIELD, FRANKLIN, GEAUGA, HAMILTON, HARRISON, JACKSON, JEFFERSON, LAKE, LORAIN, MAHONING, MEDINA, PORTAGE, STARK, SUMMIT, TRUMBULL, WARREN, WASHINGTON.
540	OHIO	ADAMS, ASHLAND, ATHENS, BROWN, BUTLER, CHAMPAIGN, CLARK, CLERMONT, CLINTON, FAYETTE, GALLIA, GREENE, GUERNSEY, HIGHLAND, HOCKING, HOLMES, KNOX, LAWRENCE, LICKING, MADISON MEIGS, MIAMI, MONROE, MONTGOMERY, MORGAN, MORROW, MUSKINGUM NOBLE, PERRY, PICKAWAY, PIKE, PREBLE, RICHLAND, ROSS, SCIOTO, TUSCARAWAS, UNION, VINTON, WAYNE.

ZONE	STATE
541	NORTH CAROLINA, VIRGINIA, WEST VIRGINIA.
542	ALABAMA, FLORIDA, GEORGIA, KENTUCKY, SOUTH CAROLINA, TENNESSEE.
543	ARIZONA, ARKINSAW, KANSAS, LOUISIANA, MISSISSIPPI, MISSOURI. NEW MEXICO, OKLAHOMA, TEXAS.
544	CALIFORNIA, COLORADO, HAWAII, IDAHO, IOWA, NEBRASKA, NEVADA. OREGON, UTAH, WYOMING.
545	ALASKA, MINNESOTA, MONTANA, NORTH DAKOTA, SOUTH DAKOTA, WASHINGTON.
546	DISTRICT OF COLUMBIA, DELAWARE, MARYLAND, NEW JERSEY, PENNSYLVANIA.
547	CONNECTICUT, MAINE, MASSACHUSETTS, NEW HAMPSHIRE, NEW YORK, RHODE ISLAND, VERMONT.