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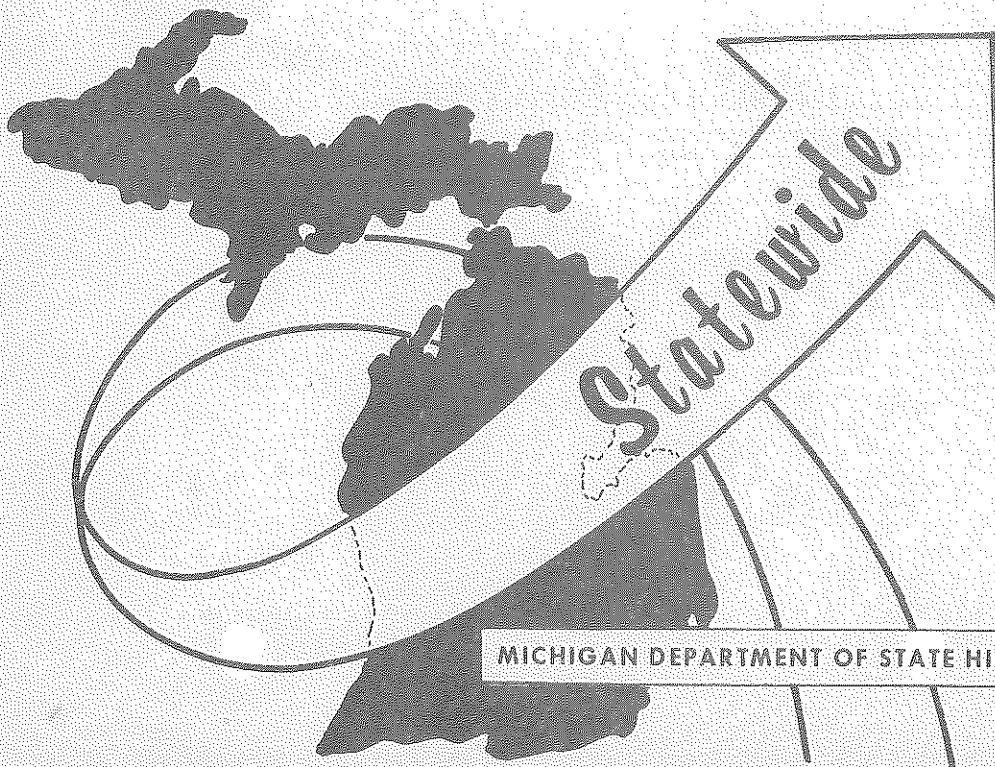
# Statewide Transportation Analysis & Research

MICHIGAN'S STATEWIDE  
TRANSPORTATION MODELING SYSTEM  
REFERENCE HANDBOOK NO. 3

MINOR ORIGIN & DESTINATION  
TRAVEL CHARACTERISTICS  
REGION 8

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 8**

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**SEPTEMBER, 1978**

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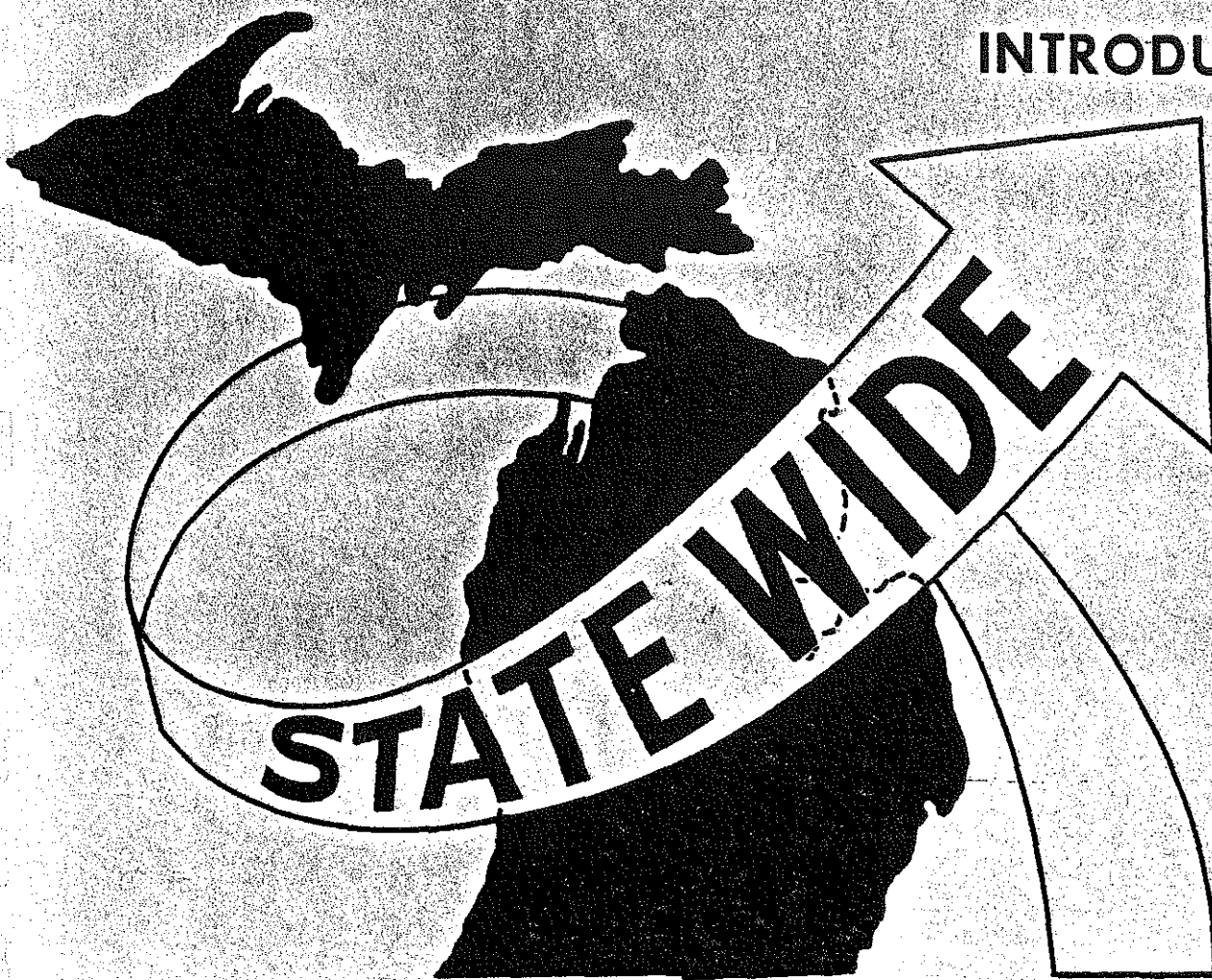
## MINOR ORIGIN AND DESTINATION

### TRAVEL CHARACTERISTICS

BY: DAVID R SCHADE

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**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

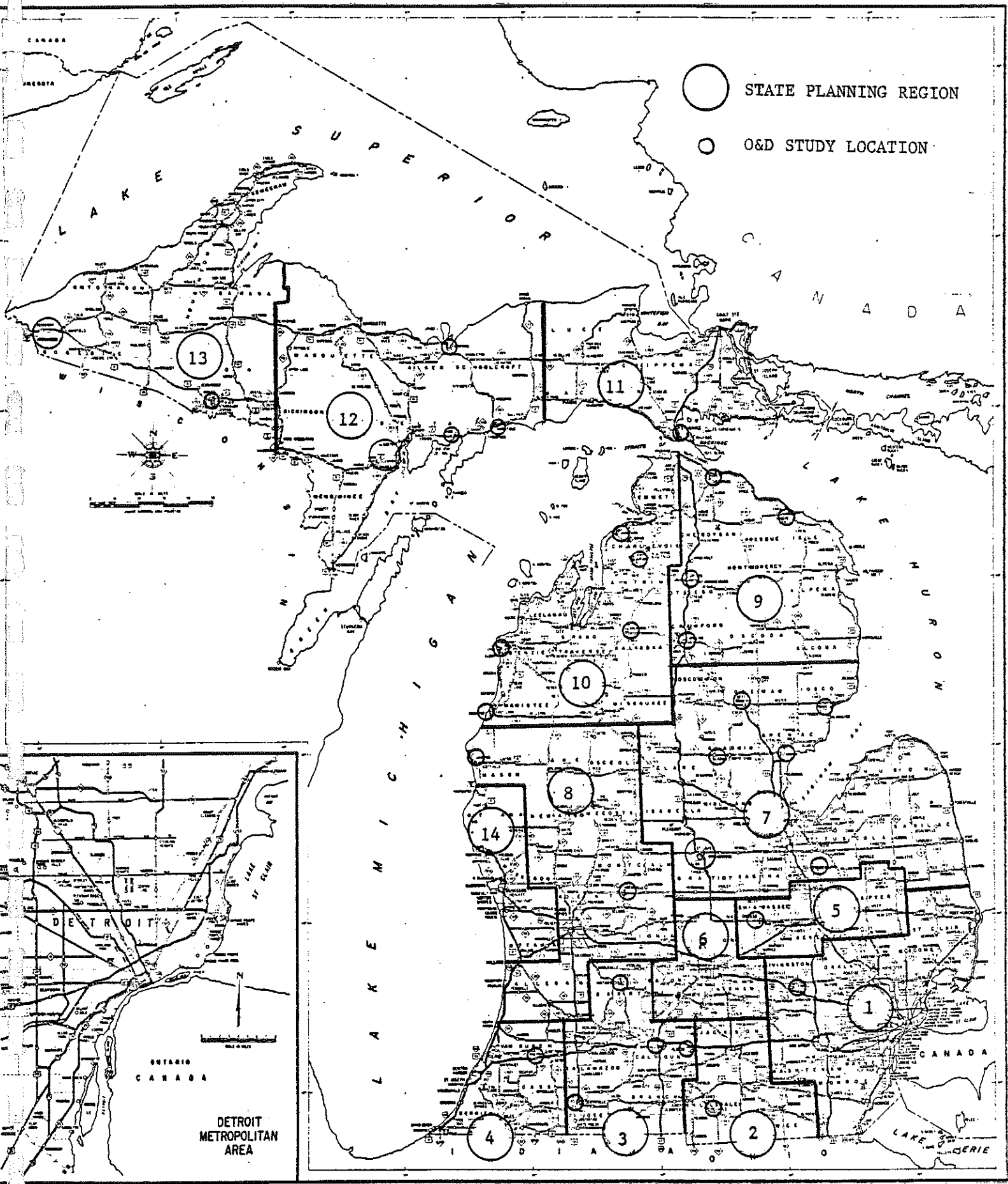
- REPORT 1 - COMMUNITY COLLEGE SERVICE - AREA ANALYSIS
- REPORT 2 - PROXIMITY OF PEOPLE TO GENERAL PURPOSE HOSPITALS
- REPORT 3 - INDUSTRIAL PARK PROXIMITY ANALYSIS
- REPORT 4 - PROXIMITY OF AUTOMOBILE INJURY ACCIDENTS TO HOSPITALS
- REPORT 5 - PROXIMITY OF AIRPORTS WITH SCHEDULED SERVICE TO POPULATION
- 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
- REPORT 13 - A METHOD FOR FUNCTIONALLY CLASSIFYING RURAL ARTERIAL HIGHWAYS
- 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

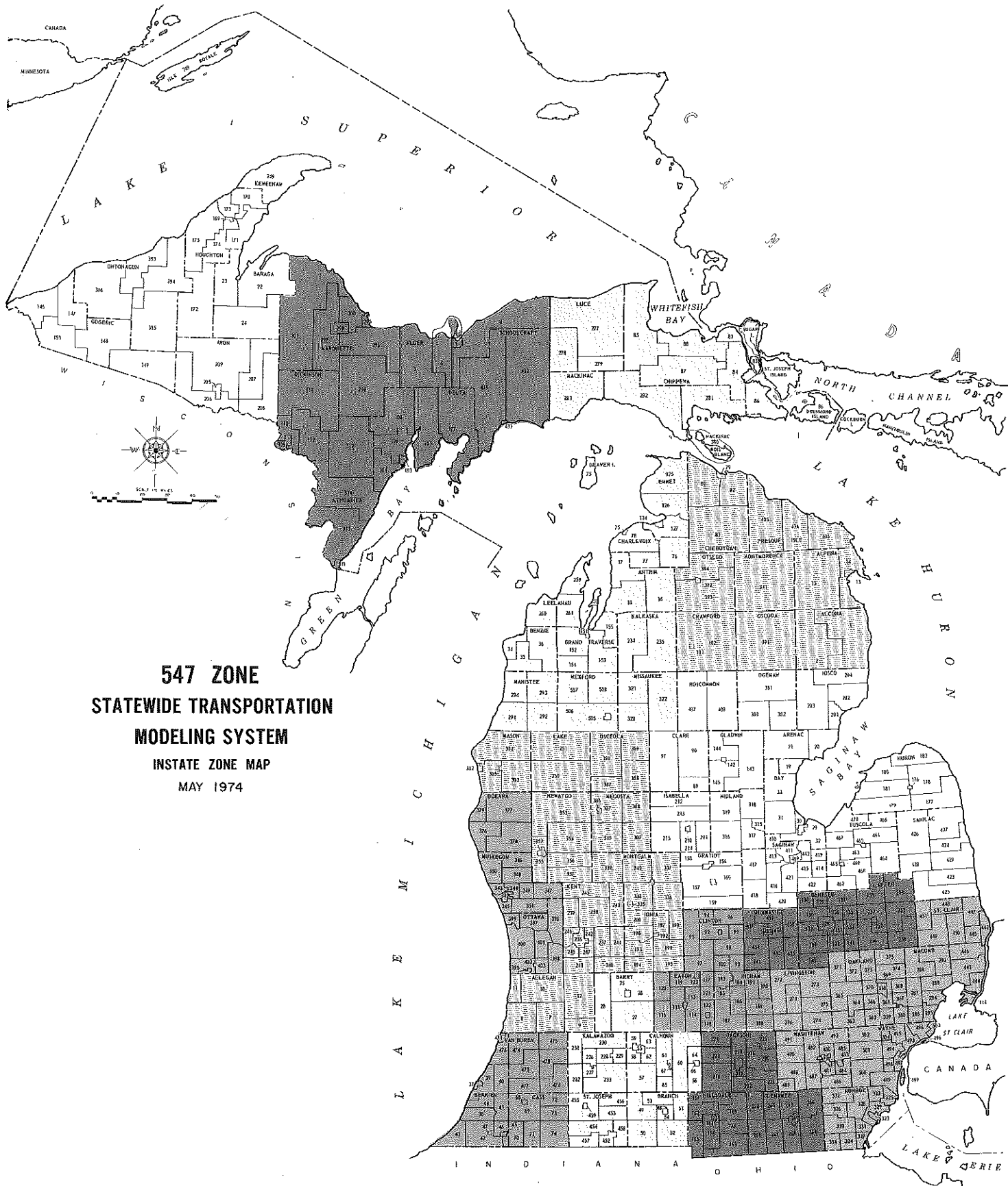
## STATEWIDE SYSTEM REFERENCE HANDBOOKS

- 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





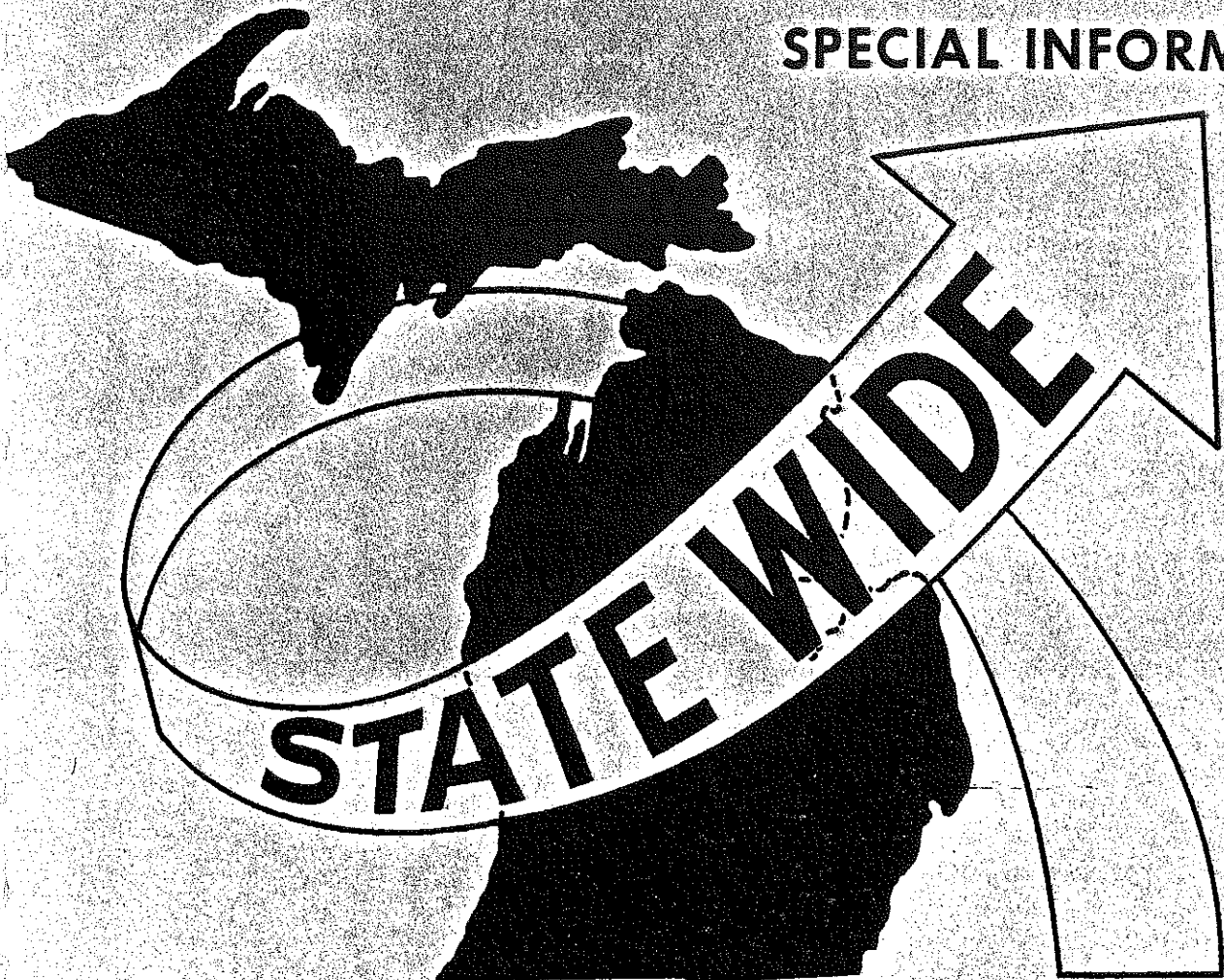
**547 ZONE**  
**STATEWIDE TRANSPORTATION**  
**MODELING SYSTEM**  
**INSTATE ZONE MAP**  
**MAY 1974**

# MICHIGAN'S TRANSPORTATION MODELING SYSTEM

## 547 ZONE OUTSTATE ANALYSIS ZONES



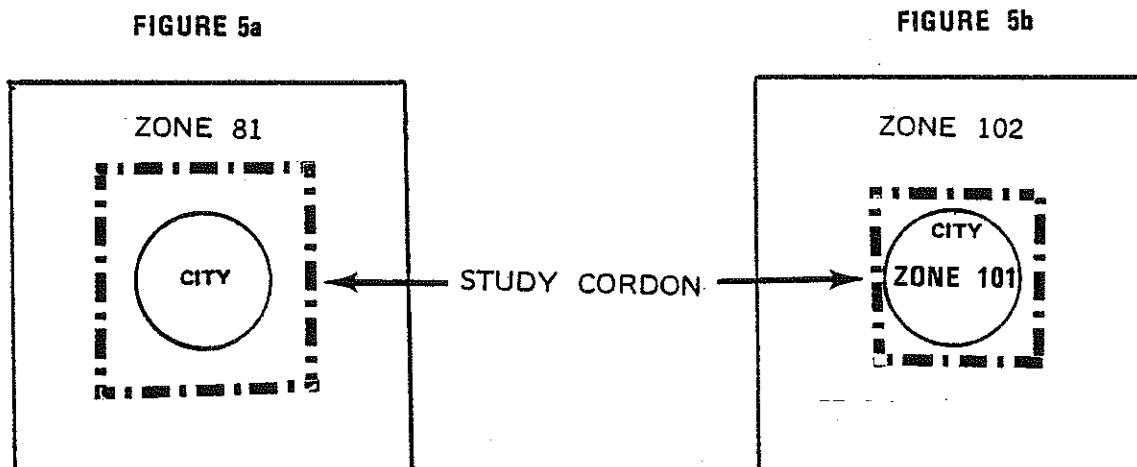
**SPECIAL INFORMATION**



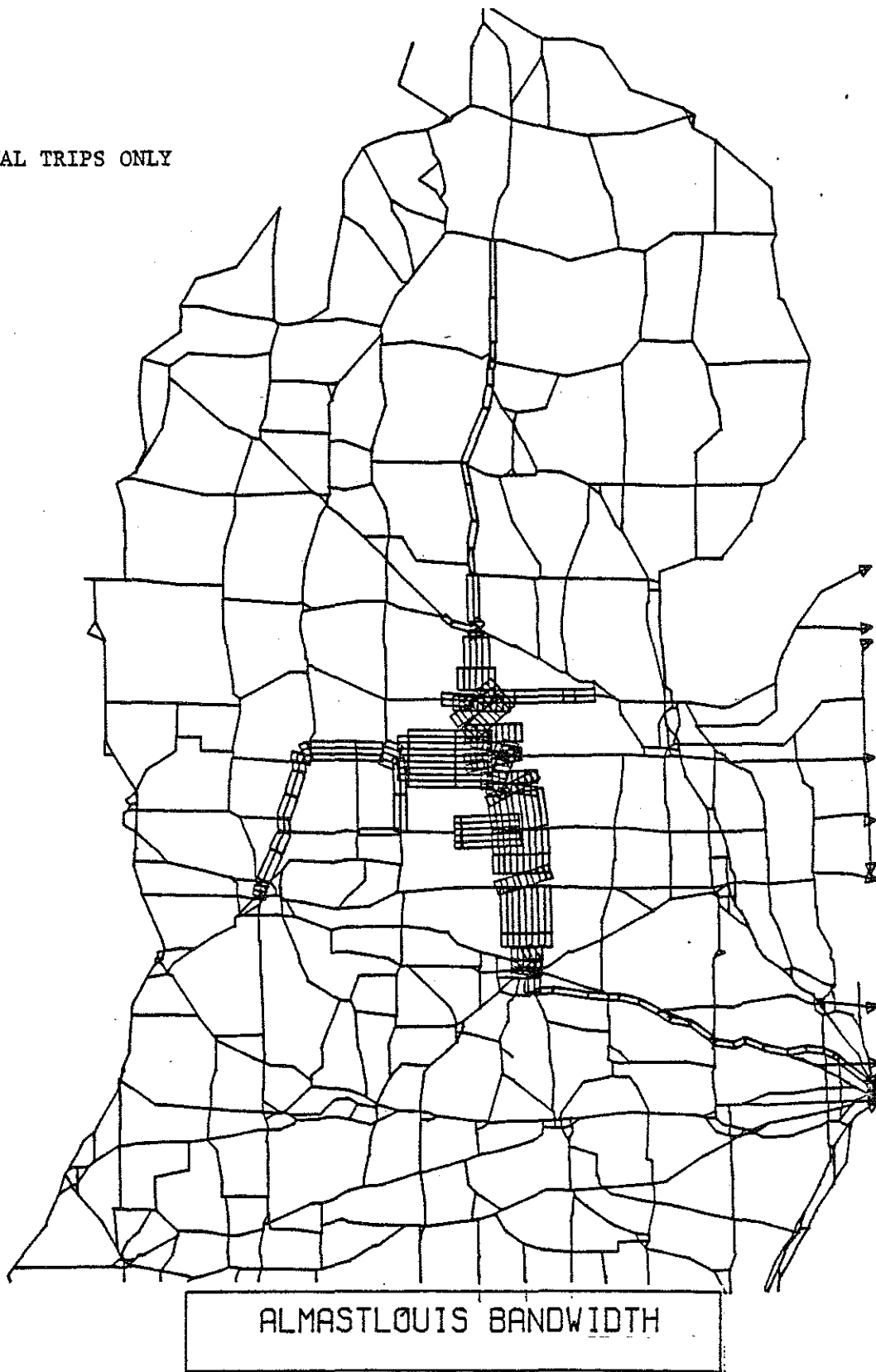
# SPECIAL INFORMATION

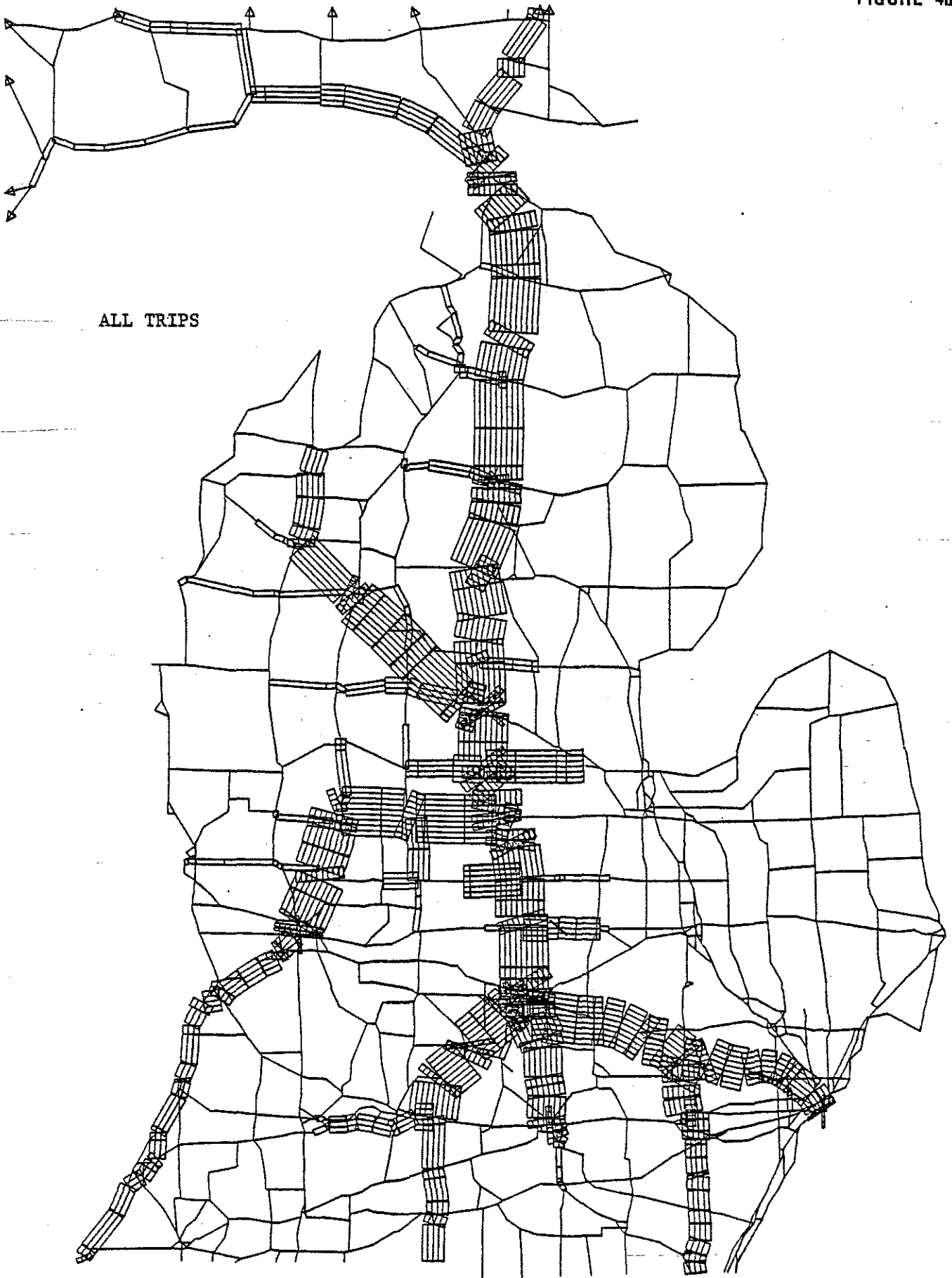
To properly evaluate the following handbook information, it is important to understand how the data is used. Each handbook has been set up to analyze the travel characteristics of minor O&D studies. It was necessary to use only terminal trips to analyze the travel impacts generated as a result of a specific 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.



TERMINAL TRIPS ONLY





ALL TRIPS

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 summarizes 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

VEHICLE TYPE

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

TRIP PURPOSE

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

NUMBER OF TRIPS

NUMBER IN VEHICLE

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

VEHICLE GARAGED AT

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

TOTAL TRIPS = 11783

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW  
 TERMINAL-TRIP SUMMARY TABLE FOR CHEBOYGAN

TRIP PURPOSE

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

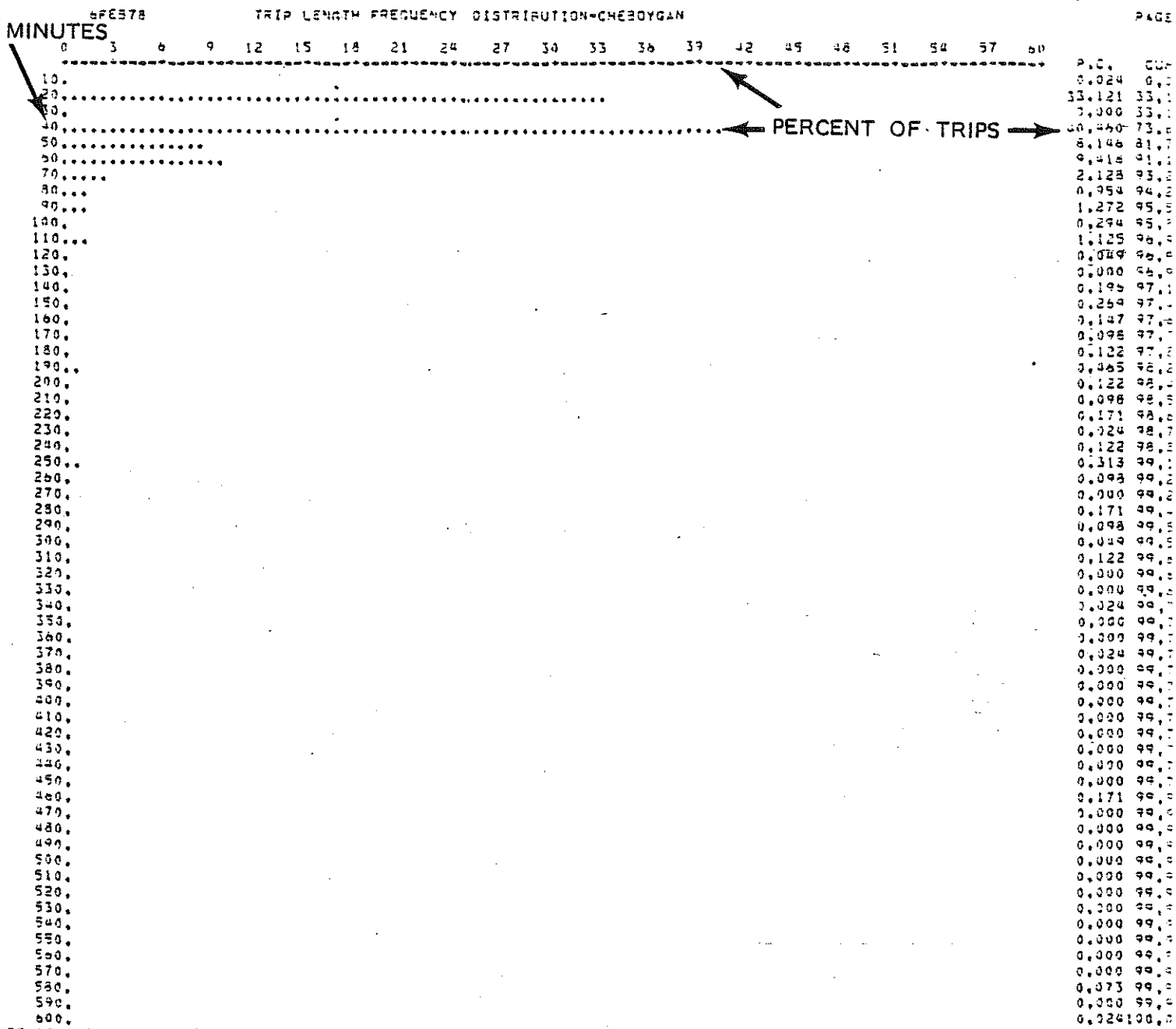
At the bottom left of the TLD, the "volume table number" designates the trip purpose:

- 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



REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 4028 SUM= 159647. MEAN= 39.653 VAR= 1634.962 SD=42.8

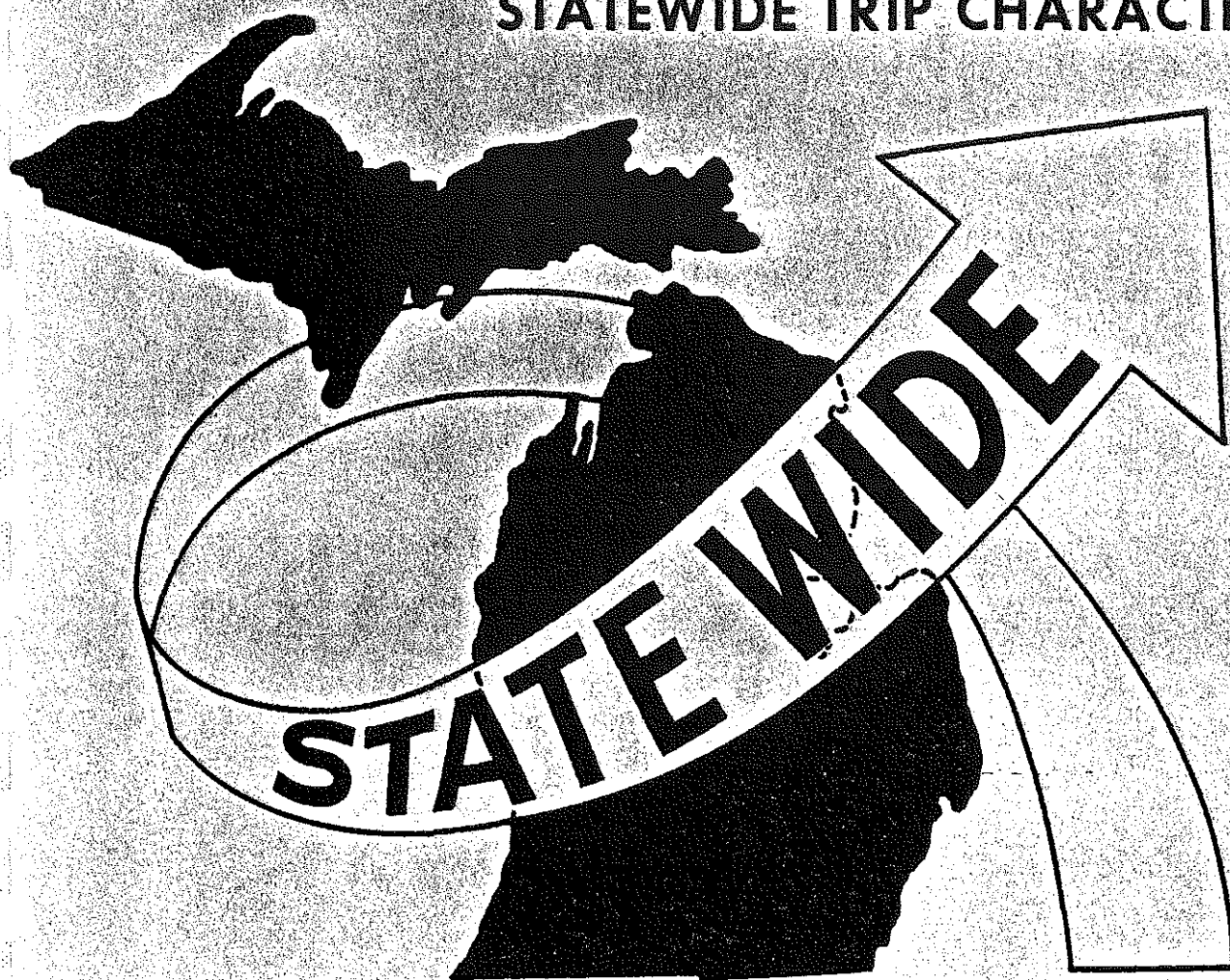
TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 201 ← WORK TRIPS  
 SKIM TREE NUMBER = 101

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
TATE	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 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

TRIP PURPOSE

REGION	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	18.6% 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
TATE	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 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

NUMBER IN VEHICLE

REGION	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
TATE	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 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

## VEHICLE GARAGED AT

REGION	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
TATE	42.4% 205492	33.7% 163438	23.8% 115335

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

# IN VEH.	WORK	PERS BIZ	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.

1MART8 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.....																						17.038	17.038	51407	
20.....																							31.697	48.735	59361
30.....																							16.806	65.541	31474
40.....																							13.858	79.399	25578
50.....																							7.157	86.556	13403
60.....																							3.848	90.404	7206
70.....																							1.944	92.348	3649
80.....																							1.561	93.909	2924
90.....																							1.170	95.079	2192
100.....																							0.837	95.916	1192
110.....																							0.908	96.824	1701
120.....																							0.591	97.415	1107
130.....																							0.399	97.814	748
140.....																							0.232	97.946	434
150.....																							0.214	98.160	400
160.....																							0.372	98.532	696
170.....																							0.140	98.672	262
180.....																							0.140	98.812	274
190.....																							0.173	98.985	324
200.....																							0.135	99.120	253
210.....																							0.075	99.195	141
220.....																							0.086	99.281	164
230.....																							0.133	99.414	250
240.....																							0.075	99.489	141
250.....																							0.138	99.627	259
260.....																							0.061	99.688	114
270.....																							0.056	99.744	104
280.....																							0.029	99.773	54
290.....																							0.059	99.832	110
300.....																							0.030	99.862	57
310.....																							0.022	99.884	41
320.....																							0.038	99.922	71
330.....																							0.020	99.942	49
340.....																							0.024	99.966	45
350.....																							0.014	99.980	64
360.....																							0.014	99.994	27
370.....																							0.034	100.028	64
380.....																							0.011	100.039	21
390.....																							0.010	100.049	16
400.....																							0.014	100.063	27
410.....																							0.004	100.067	7
420.....																							0.011	100.078	20
430.....																							0.008	100.086	15
440.....																							0.036	100.122	66
450.....																							0.012	100.134	22
460.....																							0.015	100.149	26
470.....																							0.017	100.166	31
480.....																							0.006	100.172	12
490.....																							0.011	100.183	20
500.....																							0.003	100.186	5
510.....																							0.004	100.190	8
520.....																							0.008	100.198	15
530.....																							0.002	100.200	4
540.....																							0.006	100.206	11
550.....																							0.003	100.209	5
560.....																							0.005	100.214	11
570.....																							0.003	100.217	5
580.....																							0.006	100.223	15
590.....																							0.004	100.227	11
600.....																							0.003	100.230	5
610.....																							0.005	100.235	10
620.....																							0.001	100.236	2
630.....																							0.000	100.236	0
640.....																							0.000	100.236	0
650.....																							0.001	100.237	1
660.....																							0.003	100.240	5
670.....																							0.002	100.242	3
680.....																							0.001	100.243	1
690.....																							0.005	100.248	9
700.....																							0.001	100.249	2
710.....																							0.000	100.249	0
720.....																							0.000	100.249	0
730.....																							0.000	100.249	0
740.....																							0.002	100.251	4
750.....																							0.000	100.251	0

MINIMUM VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 197274      SUM= 6066431      MEAN= 32.393      VARS 1745.697      SD= 41.786

ALL TRIPS OVER MAXP \* 17  
 ALL TRIPS OVER 255 \* 0  
 TIME TABLE NUMBER \* 201  
 TREE NUMBER \* 101

WORK TRIPS

1MAR78

TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTUAL
0	.....	19.028	19.028	749
2	.....	35.341	54.369	1392
4	.....	17.227	71.596	678
6	.....	12.598	84.192	496
8	.....	4.900	89.092	191
10	.....	3.007	92.099	114
12	.....	1.540	93.639	60
14	.....	1.108	94.745	43
16	.....	0.812	95.557	32
18	.....	0.467	96.024	19
20	.....	0.787	96.811	31
22	.....	0.370	97.201	14
24	.....	0.279	97.480	11
26	.....	0.186	97.666	7
28	.....	0.218	97.884	8
30	.....	0.520	98.404	20
32	.....	0.140	98.544	5
34	.....	0.119	98.663	4
36	.....	0.185	98.848	6
38	.....	0.137	98.987	5
40	.....	0.104	99.071	4
42	.....	0.084	99.155	3
44	.....	0.061	99.218	2
46	.....	0.069	99.287	2
48	.....	0.089	99.355	2
50	.....	0.071	99.427	2
52	.....	0.089	99.515	3
54	.....	0.036	99.551	1
56	.....	0.023	99.574	1
58	.....	0.053	99.627	2
60	.....	0.020	99.647	1
62	.....	0.028	99.675	1
64	.....	0.025	99.701	1
66	.....	0.028	99.728	1
68	.....	0.025	99.754	1
70	.....	0.000	99.754	0
72	.....	0.020	99.774	1
74	.....	0.005	99.779	0
76	.....	0.005	99.784	0
78	.....	0.005	99.789	0
80	.....	0.006	99.797	0
82	.....	0.018	99.815	0
84	.....	0.013	99.827	0
86	.....	0.005	99.833	0
88	.....	0.005	99.838	0
90	.....	0.010	99.848	0
92	.....	0.020	99.868	0
94	.....	0.008	99.876	0
96	.....	0.000	99.876	0
98	.....	0.010	99.886	0
100	.....	0.005	99.891	0
102	.....	0.013	99.904	0
104	.....	0.006	99.911	0
106	.....	0.008	99.919	0
108	.....	0.000	99.919	0
110	.....	0.005	99.924	0
112	.....	0.005	99.929	0
114	.....	0.005	99.934	0
116	.....	0.008	99.942	0
118	.....	0.003	99.944	0
120	.....	0.005	99.949	0
122	.....	0.010	99.959	0
124	.....	0.000	99.959	0
126	.....	0.005	99.964	0
128	.....	0.015	99.980	0
130	.....	0.003	99.982	0
132	.....	0.008	99.990	0
134	.....	0.005	99.995	0
136	.....	0.000	99.995	0
138	.....	0.000	99.995	0
140	.....	0.000	99.995	0
142	.....	0.005	100.000	0

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

MAX TRIPS OVER MAXD \* 2  
 MAX TRIPS OVER 255 \* 0  
 THE TABLE NUMBER \* 202  
 THE TREE NUMBER \* 161

PERS. BUSINESS TRIPS

1MAR78 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	12319
50																						4.805	90.986	4632
60																						2.457	93.444	2471
70																						0.927	94.371	932
80																						1.060	95.431	1085
90																						0.554	95.985	558
100																						0.263	96.249	265
110																						0.862	97.110	862
120																						0.288	97.410	290
130																						0.281	97.700	281
140																						0.215	97.914	215
150																						0.064	97.978	64
160																						0.199	98.177	199
170																						0.063	98.239	63
180																						0.125	98.364	125
190																						0.180	98.544	180
200																						0.106	98.651	106
210																						0.095	98.746	95
220																						0.067	98.813	67
230																						0.178	98.990	178
240																						0.090	99.081	90
250																						0.093	99.174	93
260																						0.201	99.375	201
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																						0.006	99.858	6
440																						0.023	99.881	23
450																						0.018	99.899	18
460																						0.017	99.916	17
470																						0.001	99.919	1
480																						0.003	99.921	3
490																						0.008	99.929	8
500																						0.015	99.942	15
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																						0.002	99.987	2
650																						0.000	99.987	0
660																						0.000	99.987	0
670																						0.004	99.991	4
680																						0.002	99.993	2
690																						0.001	99.994	1
700																						0.000	99.994	0
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																						0.000	99.994	0

MINIMUM VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS 100035      SUM 2616970      MEAN 27.992      VAR 1603.356      SD 40.042

L TRIPS OVER MAXP \* 0  
 L TRIPS OVER 25% \* 0  
 ME TABLE NUMBER \* 203  
 TREE NUMBER \* 101

SHOPPING TRIPS

IMARTS TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTUAL
0	.....	5.883	5.883	119
10	.....	8.715	14.598	182
20	.....	5.592	19.990	117
30	.....	12.167	32.157	255
40	.....	3.342	35.499	70
50	.....	7.838	43.137	169
60	.....	2.565	45.702	53
70	.....	5.507	51.209	115
80	.....	4.105	55.313	86
90	.....	1.836	57.149	38
100	.....	3.280	60.429	66
110	.....	1.778	62.207	37
120	.....	2.207	64.415	46
130	.....	1.754	66.169	36
140	.....	0.882	67.051	18
150	.....	2.532	69.583	53
160	.....	1.440	71.023	30
170	.....	1.411	72.434	29
180	.....	1.874	74.308	39
190	.....	1.383	75.690	29
200	.....	1.545	77.235	32
210	.....	0.658	77.893	13
220	.....	1.528	79.421	32
230	.....	1.235	80.653	25
240	.....	1.218	81.869	25
250	.....	1.769	83.638	37
260	.....	1.492	85.130	31
270	.....	0.987	86.117	20
280	.....	0.853	86.970	17
290	.....	1.125	88.095	23
300	.....	0.988	89.083	20
310	.....	0.808	89.891	16
320	.....	1.087	90.978	22
330	.....	0.234	91.212	4
340	.....	0.482	91.694	9
350	.....	0.319	92.013	6
360	.....	0.420	92.433	8
370	.....	0.277	92.710	5
380	.....	0.319	93.029	6
390	.....	0.298	93.327	6
400	.....	0.287	93.614	5
410	.....	0.488	94.102	10
420	.....	0.305	94.407	6
430	.....	1.025	95.432	21
440	.....	0.287	95.719	5
450	.....	0.191	95.910	4
460	.....	0.343	96.253	7
470	.....	0.324	96.577	6
480	.....	0.200	96.777	4
490	.....	0.178	96.955	3
500	.....	0.234	97.189	4
510	.....	0.191	97.380	4
520	.....	0.036	97.416	0
530	.....	0.191	97.607	0
540	.....	0.180	97.787	3
550	.....	0.138	97.925	2
560	.....	0.143	98.068	3
570	.....	0.033	98.101	1
580	.....	0.110	98.211	2
590	.....	0.024	98.235	0
600	.....	0.243	98.478	5
610	.....	0.095	98.573	2
620	.....	0.091	98.664	1
630	.....	0.029	98.693	0
640	.....	0.024	98.717	0
650	.....	0.010	98.727	0
660	.....	0.200	98.927	0
670	.....	0.010	98.937	0
680	.....	0.119	99.056	2
690	.....	0.057	99.113	1
700	.....	0.010	99.123	0
710	.....	0.029	99.152	0
720	.....	0.057	99.209	1
730	.....	0.057	99.266	1
740	.....	0.057	99.323	1
750	.....	0.415	99.738	8

INING VALUES ARE ALL ZERO  
 ER OF OBSERVATIONS= 21975      SUM= 2821726      MEAN= 134.528      VAR= 20258.672      SD= 142.333  
 L TRIPS OVER MAXP = 87  
 L TRIPS OVER 255 = 0  
 ME TABLE NUMBER = 204  
 TREE NUMBER = 101

VACATION TRIPS



1MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

TRIP LENGTH	FREQ	P.C.	CUM.	ACTUAL
0	10	17.917	17.917	1444
2	20	34.385	52.301	2782
4	30	51.558	83.860	1258
6	40	68.738	102.598	888
8	50	85.908	128.506	536
10	60	103.078	161.584	276
12	70	120.248	191.832	134
14	80	137.418	229.250	69
16	90	154.588	273.838	35
18	100	171.758	325.596	18
20	110	188.928	384.524	9
22	120	206.098	450.622	5
24	130	223.268	523.890	3
26	140	240.438	604.328	2
28	150	257.608	692.936	1
30	160	274.778	789.714	1
32	170	291.948	894.662	1
34	180	309.118	1007.780	1
36	190	326.288	1129.068	1
38	200	343.458	1258.526	1
40	210	360.628	1396.154	1
42	220	377.798	1542.952	1
44	230	394.968	1697.920	1
46	240	412.138	1860.058	1
48	250	429.308	2029.366	1
50	260	446.478	2205.844	1
52	270	463.648	2389.492	1
54	280	480.818	2580.310	1
56	290	497.988	2778.298	1
58	300	515.158	2983.456	1
60	310	532.328	3195.784	1
62	320	549.498	3415.282	1
64	330	566.668	3641.950	1
66	340	583.838	3875.788	1
68	350	600.998	4116.786	1
70	360	618.168	4364.954	1
72	370	635.338	4620.292	1
74	380	652.508	4882.800	1
76	390	669.678	5152.478	1
78	400	686.848	5429.326	1
80	410	704.018	5713.344	1
82	420	721.188	6004.532	1
84	430	738.358	6302.890	1
86	440	755.528	6608.418	1
88	450	772.698	6921.116	1
90	460	789.868	7241.984	1
92	470	807.038	7570.022	1
94	480	824.208	7906.230	1
96	490	841.378	8250.608	1
98	500	858.548	8603.156	1
100	510	875.718	8963.874	1
102	520	892.888	9332.762	1
104	530	910.058	9709.820	1
106	540	927.228	10095.048	1
108	550	944.398	10488.446	1
110	560	961.568	10889.914	1
112	570	978.738	11299.652	1
114	580	995.908	11717.560	1
116	590	1013.078	12143.638	1
118	600	1030.248	12577.886	1
120	610	1047.418	13020.304	1
122	620	1064.588	13470.892	1
124	630	1081.758	13929.650	1
126	640	1098.928	14396.578	1
128	650	1116.098	14871.676	1
130	660	1133.268	15354.944	1
132	670	1150.438	15846.382	1
134	680	1167.608	16345.990	1
136	690	1184.778	16853.768	1
138	700	1201.948	17369.716	1
140	710	1219.118	17893.834	1
142	720	1236.288	18426.122	1
144	730	1253.458	18967.580	1
146	740	1270.628	19518.208	1
148	750	1287.798	20078.006	1
150	760	1304.968	20647.074	1
152	770	1322.138	21225.412	1
154	780	1339.308	21813.120	1
156	790	1356.478	22410.598	1
158	800	1373.648	23017.846	1
160	810	1390.818	23634.864	1
162	820	1407.988	24261.652	1
164	830	1425.158	24898.210	1
166	840	1442.328	25544.538	1
168	850	1459.498	26199.746	1
170	860	1476.668	26864.814	1
172	870	1493.838	27539.652	1
174	880	1511.008	28224.260	1
176	890	1528.178	28918.438	1
178	900	1545.348	29622.286	1
180	910	1562.518	30335.804	1
182	920	1579.688	31059.092	1
184	930	1596.858	31792.150	1
186	940	1614.028	32535.178	1
188	950	1631.198	33288.176	1
190	960	1648.368	34051.144	1
192	970	1665.538	34824.182	1
194	980	1682.708	35607.290	1
196	990	1699.878	36399.468	1
200	1000	1717.048	37200.516	1

MINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS: 21908 SUM= 3226356 MEANS 17.430 VARS 3367.270 SD= 58.028

L TRIPS OVER 445P = 19  
 L TRIPS OVER 245 = 0  
 ME TABLE NUMBER = 205  
 TREE NUMBER = 101

OTHER SOC. OR REC. TRIPS

1-MAR78 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

TRIP LENGTH	F.C.	CUM.	ACTUAL
0	20.460	20.460	1050
2	35.123	55.583	1001
4	15.978	71.561	420
6	11.242	82.803	577
8	3.050	85.853	259
10	2.807	88.660	144
12	1.313	91.972	67
14	1.190	93.162	61
16	0.843	94.005	41
18	0.510	94.516	26
20	0.795	95.310	40
22	0.871	96.181	44
24	0.547	96.728	28
26	0.251	96.979	12
28	0.259	97.238	11
30	0.545	97.784	22
32	0.148	97.932	7
34	0.179	98.111	9
36	0.208	98.319	10
38	0.105	98.424	5
40	0.105	98.530	5
42	0.082	98.611	4
44	0.156	98.767	8
46	0.107	98.874	5
48	0.175	99.050	6
50	0.189	99.159	5
52	0.105	99.264	5
54	0.047	99.311	2
56	0.082	99.392	4
58	0.045	99.437	2
60	0.027	99.464	1
62	0.029	99.494	1
64	0.058	99.552	1
66	0.019	99.572	1
68	0.025	99.597	1
70	0.014	99.610	1
72	0.031	99.642	1
74	0.019	99.661	1
76	0.010	99.671	1
78	0.014	99.684	1
80	0.016	99.700	1
82	0.019	99.720	1
84	0.021	99.741	1
86	0.039	99.780	1
88	0.012	99.792	1
90	0.008	99.799	1
92	0.021	99.821	1
94	0.019	99.840	1
96	0.012	99.852	1
98	0.018	99.870	1
100	0.018	99.887	1
102	0.008	99.895	1
104	0.008	99.899	1
106	0.008	99.905	1
108	0.008	99.910	1
110	0.000	99.910	1
112	0.004	99.914	1
114	0.008	99.922	1
116	0.000	99.922	1
118	0.002	99.924	1
120	0.008	99.932	1
122	0.010	99.942	1
124	0.000	99.942	1
126	0.002	99.944	1
128	0.014	99.957	1
130	0.000	99.957	1
132	0.012	99.969	1
134	0.000	99.969	1
136	0.002	99.971	1
138	0.010	99.981	1
140	0.000	99.981	1
142	0.004	99.984	1
144	0.008	99.992	1
146	0.002	99.998	1
148	0.008	100.000	1
150	0.000	100.000	1

MINING VALUES ARE ALL ZERO  
 NO OF OBSERVATIONS: 51345      SUM: 1622116      MEAN: 31.592      VAR: 2262.102      SD: 47.562

L TRIPS OVER MAXP = 3  
 L TRIPS OVER 265 = 0  
 ME TABLE NUMBER = 200  
 TRHE NUMBER = 101

ALL OTHER TRIPS

IMART6 TRIP LENGTH FREQUENCY DISTRIBUTION-TOT

	4	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																						10.026	10.026	66621
20																						33.044	51.070	158793
30																						15.773	66.843	75798
40																						12.456	79.301	59868
50																						5.461	84.763	27302
60																						3.470	88.233	16674
70																						1.613	90.005	7750
80																						1.563	91.468	7512
90																						1.106	92.715	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																						0.246	96.140	1173
160																						0.461	96.602	2310
170																						0.202	96.805	972
180																						0.214	97.019	1029
190																						0.286	97.322	1573
200																						0.207	97.529	904
210																						0.170	97.699	615
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																						0.497	98.975	444
300																						0.102	98.977	690
310																						0.083	99.060	399
320																						0.070	99.130	337
330																						0.087	99.217	417
340																						0.029	99.246	136
350																						0.448	99.294	233
360																						0.026	99.326	125
370																						0.934	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																						0.061	99.618	393
450																						0.026	99.643	123
460																						0.022	99.665	105
470																						0.011	99.690	57
480																						0.024	99.714	110
490																						0.019	99.740	91
500																						0.019	99.759	69
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	46
580																						0.007	99.880	33
590																						0.006	99.886	39
600																						0.005	99.893	23
610																						0.015	99.908	74
620																						0.007	99.918	35
630																						0.006	99.922	31
640																						0.002	99.924	12
650																						0.006	99.932	38
660																						0.001	99.934	7
670																						0.013	99.947	43
680																						0.002	99.949	9
690																						0.006	99.957	40
700																						0.005	99.962	22
710																						0.001	99.962	5
720																						0.002	99.964	10
730																						0.003	99.966	16
740																						0.004	99.972	21
750																						0.026	100.000	134

MINING VALUES ARE ALL ZERO  
 EP OF OBSERVATIONS# 46547

SUM# 17521382. MEAN# 36.461 VARI# 3294.507 SD# 57.398

L TRIPS OVER MAXP \* 134  
 L TRIPS OVER 255 \* 0  
 ME TABLE NUMBER \* 207  
 TREE NUMFR \* 101

TOTAL TRIPS

# MINOR ORIGIN AND DESTINATION STUDIES

## MEAN TRIP LENGTHS BY PURPOSE

### REGION 1

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

### REGION 2

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

### REGION 3

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

<u>TRIP PURPOSE</u>
1 WORK
2 PERS. BUSINESS
3 SHOPPING
4 VACATION
5 OTHER SOC. OR REC.
6 ALL OTHER

REGION 4

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

REGION 5

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

REGION 7

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

REGION 8

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

REGION 9

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

REGION 10

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

REGION 11

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

REGION 12

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

REGION 13

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

STATEWIDE AVERAGE

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

**REGIONAL TRIP CHARACTERISTICS**





REGION 8

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
80.0%	0.7%	14.0%	0.3%	3.4%	1.5%
49134	447	8620	203	2074	912

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
39.4%	8.0%	22.4%	2.7%	17.1%	10.4%
24196	4905	13776	1665	10481	6367

NUMBER IN VEHICLE

1	2	3	4	5	6+
54.0%	26.3%	9.6%	5.6%	2.5%	2.0%
33121	16140	5922	3437	1517	1254

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
43.4%	35.0%	21.5%
26671	21496	13223

TOTAL TRIPS = 61390

MINOR

EXTERNAL ORIGIN=DESTINATION INTERVIEW  
 TERMINAL=TRIP SUMMARY TABLE FOR REGION 8

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC=REC	OTHER
1	79.4% 19782	51.2% 2597	36.4% 5144	9.1% 155	34.8% 3762	40.3% 2643
2	15.2% 3777	29.4% 1489	35.1% 4957	38.2% 646	33.0% 3565	32.8% 2150
3	3.5% 867	10.3% 522	14.5% 2053	16.6% 281	14.0% 1517	13.3% 873
4	1.3% 313	5.9% 300	7.8% 1101	20.3% 342	9.1% 980	7.9% 517
5	0.4% 99	1.7% 87	3.8% 531	8.4% 142	4.5% 484	3.2% 210
6+	0.3% 78	1.5% 75	2.4% 338	7.4% 125	4.6% 502	2.6% 172
TOTAL	100% 24916	100% 5070	100% 14124	100% 1690	100% 10810	100% 6565

TOTAL TERMINAL=TRIPS FOR ALL STUDIES IN REGION = 63175

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 8

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC=REC	OTHER
CAR W/O TRLR	68.2% 16991	83.9% 4254	87.5% 12365	86.6% 1465	88.6% 9573	87.7% 5757
CAR W/ TRLR	0.3% 64	0.5% 24	0.4% 60	5.6% 95	1.5% 165	0.8% 55
PICK-UP W/O/TRLR	19.9% 4959	14.6% 741	11.3% 1600	2.0% 33	8.9% 960	10.6% 694
PICK-UP W/ TRLR	0.4% 104	0.2% 11	0.1% 11	2.3% 38	0.4% 39	0.3% 19
SINGLE=UNIT TRUCKS	7.6% 1895	0.5% 24	0.6% 83	2.6% 44	0.5% 54	0.6% 38
COMBINATION TRUCKS	3.6% 903	0.3% 16	0.0% 5	0.9% 15	0.2% 19	0.0% 2
TOTAL	100% 24916	100% 5070	100% 14124	100% 1690	100% 10810	100% 6565

TOTAL TERMINAL=TRIPS FOR ALL STUDIES IN REGION = 63175

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-REG8

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																					25.174	25.174	611	
20																						16.368	41.742	396
30																						26.023	67.765	679
40																						11.197	78.962	27
50																						11.982	90.944	289
60																						0.926	91.870	22
70																						1.143	93.013	27
80																						1.831	94.846	44
90																						1.013	95.859	24
100																						0.314	96.173	7
110																						0.570	96.743	13
120																						0.777	97.520	16
130																						0.434	97.954	10
140																						0.070	98.024	1
150																						0.236	98.260	5
160																						0.070	98.330	1
170																						0.244	98.574	5
180																						0.306	98.880	7
190																						0.211	99.091	5
200																						0.120	99.211	2
210																						0.021	99.231	
220																						0.041	99.273	
230																						0.025	99.297	1
240																						0.099	99.397	
250																						0.037	99.434	2
260																						0.012	99.446	
270																						0.008	99.454	
280																						0.099	99.554	2
290																						0.066	99.620	1
300																						0.004	99.624	
310																						0.600	99.624	
320																						0.116	99.740	2
330																						0.000	99.740	
340																						0.000	99.740	
350																						0.000	99.740	
360																						0.000	99.740	
370																						0.000	99.740	
380																						0.000	99.740	
390																						0.000	99.740	
400																						0.033	99.773	
410																						0.000	99.773	
420																						0.000	99.773	
430																						0.000	99.773	
440																						0.000	99.773	
450																						0.091	99.864	2
460																						0.000	99.864	
470																						0.000	99.864	
480																						0.300	99.864	
490																						0.004	99.868	
500																						0.058	99.926	1
510																						0.000	99.926	
520																						0.000	99.926	
530																						0.000	99.926	
540																						0.000	99.926	
550																						0.000	99.926	
560																						0.000	99.926	
570																						0.000	99.926	
580																						0.004	99.930	
590																						0.004	99.934	
600																						0.008	99.942	
610																						0.000	99.942	
620																						0.000	99.942	
630																						0.000	99.942	
640																						0.000	99.942	
650																						0.000	99.942	
660																						0.017	99.959	
670																						0.000	99.959	
680																						0.000	99.959	
690																						0.037	99.996	
700																						0.000	99.996	
710																						0.000	99.996	
720																						0.000	99.996	
730																						0.000	99.996	
740																						0.000	99.996	
750																						0.004	100.000	

MAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS=	24194	SUM=	762461.	MEAN=	31.514	VAR=	1604.290	SD=	40.054
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TOTAL TRIPS OVER MAXP	=	1
TOTAL TRIPS OVER 255	=	0
VOLUME TABLE NUMBER	=	231
IM FREE NUMBER	=	101

23FEB70

TRIP LENGTH FREQUENCY DISTRIBUTION-REG8

PAGE 3

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																					26.143	26.143	128	
20																						16.796	42.939	82
30																						35.020	77.959	171
40																						10.449	88.408	51
50																						5.980	94.388	29
60																						0.878	95.265	4
70																						0.592	95.857	2
80																						1.327	97.184	6
90																						0.449	97.633	2
100																						0.367	98.000	1
110																						0.449	98.449	2
120																						0.347	98.796	1
130																						0.384	98.796	1
140																						0.061	99.041	
150																						0.245	99.286	1
160																						0.000	99.286	
170																						0.082	99.367	
180																						0.184	99.551	
190																						0.102	99.653	
200																						0.000	99.653	
210																						0.000	99.653	
220																						0.000	99.653	
230																						0.041	99.694	
240																						0.000	99.694	
250																						0.041	99.735	
260																						0.041	99.776	
270																						0.000	99.776	
280																						0.020	99.796	
290																						0.000	99.796	
300																						0.000	99.796	
310																						0.000	99.796	
320																						0.000	99.796	
330																						0.041	99.837	
340																						0.000	99.837	
350																						0.000	99.837	
360																						0.000	99.837	
370																						0.000	99.837	
380																						0.000	99.837	
390																						0.000	99.837	
400																						0.000	99.837	
410																						0.000	99.837	
420																						0.000	99.837	
430																						0.000	99.837	
440																						0.000	99.837	
450																						0.000	99.837	
460																						0.000	99.837	
470																						0.000	99.837	
480																						0.000	99.837	
490																						0.000	99.837	
500																						0.000	99.837	
510																						0.000	99.837	
520																						0.000	99.837	
530																						0.000	99.837	
540																						0.061	99.898	
550																						0.000	99.898	
560																						0.000	99.898	
570																						0.000	99.898	
580																						0.000	99.898	
590																						0.041	99.939	
600																						0.061	100.000	

WARNING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 4900

SUM= 128598.

MEAN= 26.244

VAR= 1029.552

SD= 32.087

TOTAL TRIPS OVER MAXP = 0  
 TOTAL TRIPS OVER 255 = 0  
 PLUME TABLE NUMBER = 202  
 LIM TREE NUMBER = 101

23FE678

TRIP LENGTH FREQUENCY DISTRIBUTION-REG8

PAGE 4

	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.....																						24.860	24.860	34																					
20.....																							22.321	47.181	31																				
30.....																							33.894	81.075	44																				
40.....																							9.604	90.676	11																				
50.....																							6.451	97.126	1																				
60..																							0.359	97.485																					
70..																							0.294	97.783																					
80..																							0.639	98.421																					
90..																							0.312	98.733																					
100..																							0.152	99.386																					
110..																							0.015	99.100																					
120..																							0.214	99.318																					
130..																							0.138	99.456																					
140..																							0.022	99.478																					
150..																							0.051	99.528																					
160..																							0.022	99.551																					
170..																							0.044	99.594																					
180..																							0.065	99.659																					
190..																							0.051	99.710																					
200..																							0.044	99.753																					
210..																							0.022	99.775																					
220..																							0.000	99.775																					
230..																							0.015	99.790																					
240..																							0.000	99.790																					
250..																							0.015	99.804																					
260..																							0.044	99.848																					
270..																							0.000	99.848																					
280..																							0.087	99.935																					
290..																							0.015	99.949																					
300..																							0.000	99.949																					
310..																							0.000	99.949																					
320..																							0.029	99.978																					
330..																							0.000	99.978																					
340..																							0.000	99.978																					
350..																							0.000	99.978																					
360..																							0.022	100.000																					
TRAINING VALUES ARE ALL ZERO																																													
NUMBER OF OBSERVATIONS=																							13781																						
SUM=																							326637.																						
MEAN=																							23.702																						
VAR=																							434.737																						
SD=																							20.851																						
TOTAL TRIPS OVER MAXP =																							0																						
TOTAL TRIPS OVER 255 =																							0																						
PLUME TABLE NUMBER =																							203																						
PLUM TREE NUMBER =																							101																						

23FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-REG8

TRIP LENGTH	FREQUENCY	P-C.	CUM.	ACTUAL
0				
2				
4				
6				
8				
10				
12				
14				
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				
36				
38				
40				
10	.....	7.246	7.246	1
20	....	0.778	8.024	
30	.....	25.968	34.012	4
40	.....	1.916	35.928	
50	.....	7.006	42.934	1
60	....	0.778	43.713	
70	....	0.958	44.671	
80	.....	3.293	47.964	
90	.....	1.617	49.581	
100	.....	1.497	51.078	
110	.....	1.257	52.335	
120	.....	3.353	55.689	
130	.....	5.389	61.078	
140	.....	0.479	61.557	
150	.....	0.778	62.335	
160	.....	1.437	63.772	
170	.....	2.395	66.168	
180	.....	0.958	67.126	
190	.....	2.036	69.162	
200	.....	1.078	70.240	
210	.....	1.139	71.377	
220	.....	0.599	71.976	
230	.....	2.395	74.371	
240	.....	0.778	75.150	
250	.....	0.778	75.928	
260	.....	1.377	77.305	
270	.....	0.479	77.784	
280	.....	5.968	83.752	1
290	.....	1.174	84.926	
300	.....	0.479	85.405	
310	.....	0.359	85.764	
320	.....	3.892	91.657	
330	.....	0.240	91.897	
340	.....	0.000	91.897	
350	.....	0.419	92.316	
360	.....	1.018	93.334	
370	.....	0.000	93.334	
380	.....	0.000	93.334	
390	.....	0.000	93.334	
400	.....	0.299	93.633	
410	.....	0.000	93.633	
420	.....	0.000	93.633	
430	.....	0.000	93.633	
440	.....	2.096	95.729	
450	.....	0.000	95.729	
460	.....	0.000	95.729	
470	.....	0.000	95.729	
480	.....	0.000	95.729	
490	.....	0.000	95.729	
500	.....	0.299	96.028	
510	.....	0.000	96.028	
520	.....	0.000	96.028	
530	.....	0.180	96.208	
540	.....	0.000	96.208	
550	.....	1.357	97.565	
560	.....	0.180	97.745	
570	.....	0.000	97.745	
580	.....	0.180	97.925	
590	.....	0.000	97.925	
600	.....	0.419	98.344	
610	.....	0.000	98.344	
620	.....	0.180	98.524	
630	.....	0.000	98.524	
640	.....	0.000	98.524	
650	.....	0.000	98.524	
660	.....	0.000	98.524	
670	.....	0.000	98.524	
680	.....	0.000	98.524	
690	.....	0.539	99.063	
700	.....	0.000	99.063	
710	.....	0.000	99.063	
720	.....	0.000	99.063	
730	.....	0.000	99.063	
740	.....	0.000	99.063	
750	.....	0.000	99.063	
750	.....	0.659	100.000	

MAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 1670

SUM= 242802. MEAN= 145.390 VAR= 21841.968 SD= 147.790

TOTAL TRIPS OVER MAXP = 11  
TOTAL TRIPS OVER 255 = 0  
PLUME TABLE NUMBER = 204  
SIM TREE NUMBER = 101

23FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-REG8

PAGE 6

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.....																						24.466	24.466	256
20.....																						13.588	38.053	142
30.....																						40.315	78.368	422
40.....																						6.298	84.666	66
50.....																						5.821	90.487	61
60.....																						0.792	91.279	8
70.....																						0.735	92.011	7
80.....																						1.479	93.492	15
90.....																						0.729	94.218	7
100.....																						0.324	94.542	3
110.....																						0.344	94.885	3
120.....																						0.926	95.811	9
130.....																						0.735	96.546	7
140.....																						0.296	96.842	3
150.....																						0.802	97.643	8
160.....																						0.086	97.729	
170.....																						0.277	98.006	2
180.....																						0.286	98.292	3
190.....																						0.372	98.664	5
200.....																						0.134	98.798	1
210.....																						0.019	98.817	
220.....																						0.057	98.874	
230.....																						0.153	99.027	1
240.....																						0.086	99.113	
250.....																						0.067	99.179	
260.....																						0.067	99.246	
270.....																						0.010	99.256	
280.....																						0.124	99.380	1
290.....																						0.177	99.552	1
300.....																						0.000	99.552	
310.....																						0.000	99.552	
320.....																						0.057	99.609	
330.....																						0.019	99.628	
340.....																						0.019	99.647	
350.....																						0.000	99.647	
360.....																						0.000	99.647	
370.....																						0.000	99.647	
380.....																						0.000	99.647	
390.....																						0.000	99.647	
400.....																						0.000	99.647	
410.....																						0.000	99.647	
420.....																						0.000	99.647	
430.....																						0.000	99.647	
440.....																						0.000	99.647	
450.....																						0.095	99.741	
460.....																						0.010	99.751	
470.....																						0.000	99.751	
480.....																						0.000	99.751	
490.....																						0.000	99.751	
500.....																						0.014	99.765	
510.....																						0.000	99.765	
520.....																						0.000	99.765	
530.....																						0.000	99.765	
540.....																						0.076	99.841	
550.....																						0.000	99.841	
560.....																						0.000	99.841	
570.....																						0.000	99.841	
580.....																						0.000	99.841	
590.....																						0.000	99.841	
600.....																						0.044	99.914	
610.....																						0.010	99.924	
620.....																						0.000	99.924	
630.....																						0.038	99.962	
640.....																						0.000	99.962	
650.....																						0.000	99.962	
660.....																						0.000	99.962	
670.....																						0.000	99.962	
680.....																						0.000	99.962	
690.....																						0.000	99.962	
700.....																						0.000	99.962	
710.....																						0.000	99.962	
720.....																						0.000	99.962	
730.....																						0.000	99.962	
740.....																						0.000	99.962	
750.....																						0.000	99.962	

MAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 10480      SUM= 343379      MEAN= 32.765      VAR= 2227.181      SD= 47.193  
 TOTAL TRIPS OVER MAXP = 4  
 TOTAL TRIPS OVER 255 = 0  
 PLUME TABLE NUMBER = 205  
 ILM TREE NUMBER = 101



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TRIP LENGTH FREQUENCY DISTRIBUTION-RE88

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.....																						30.165	30.165	192	
20.....																							18.137	48.295	115
30.....																							30.259	78.555	192
40.....																							7.086	85.640	45
50.....																							7.290	92.930	46
60..																							0.534	93.464	3
70...																							0.943	94.407	6
80.....																							1.603	96.009	10
90.....																							0.691	96.701	4
100..																							0.294	96.995	1
110.																							0.173	97.078	1
120..																							0.456	97.533	2
130...																							0.691	98.225	4
140.																							0.000	98.225	0
150..																							0.361	98.586	2
160.																							0.110	98.695	1
170..																							0.204	98.900	1
180.																							0.110	99.010	0
190.																							0.189	99.199	1
200.																							0.094	99.293	0
210.																							0.031	99.324	0
220.																							0.000	99.324	0
230.																							0.000	99.324	0
240.																							0.031	99.356	0
250.																							0.031	99.387	0
260.																							0.079	99.466	0
270.																							0.000	99.466	0
280.																							0.110	99.576	0
290..																							0.299	99.874	1
300.																							0.000	99.874	0
310.																							0.000	99.874	0
320.																							0.031	99.906	0
330.																							0.000	99.906	0
340.																							0.000	99.906	0
350.																							0.000	99.906	0
360.																							0.000	99.906	0
370.																							0.000	99.906	0
380.																							0.000	99.906	0
390.																							0.000	99.906	0
400.																							0.000	99.906	0
410.																							0.000	99.906	0
420.																							0.000	99.906	0
430.																							0.016	99.921	0
440.																							0.016	99.937	0
450.																							0.000	99.937	0
460.																							0.000	99.937	0
470.																							0.000	99.937	0
480.																							0.000	99.937	0
490.																							0.000	99.937	0
500.																							0.000	99.937	0
510.																							0.000	99.937	0
520.																							0.000	99.937	0
530.																							0.000	99.937	0
540.																							0.000	99.937	0
550.																							0.031	99.969	0
560.																							0.000	99.969	0
570.																							0.000	99.969	0
580.																							0.000	99.969	0
590.																							0.000	99.969	0
600.																							0.000	99.969	0
610.																							0.000	99.969	0
620.																							0.000	99.969	0
630.																							0.000	99.969	0
640.																							0.000	99.969	0
650.																							0.000	99.969	0
660.																							0.000	99.969	0
670.																							0.000	99.969	0
680.																							0.000	99.969	0
690.																							0.000	99.969	0
700.																							0.000	99.969	0
710.																							0.000	99.969	0
720.																							0.000	99.969	0
730.																							0.000	99.969	0
740.																							0.000	99.969	0
750.																							0.000	99.969	0

MAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 6365      SUM= 173628.      MEAN= 27.279      VAR= 1206.514      SD= 35.868  
 TOTAL TRIPS OVER MAXP = 2  
 TOTAL TRIPS OVER 255 = 0  
 PLUME TABLE NUMBER = 206  
 IN TREE NUMBER = 101

23FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-REG8

PAGE 8

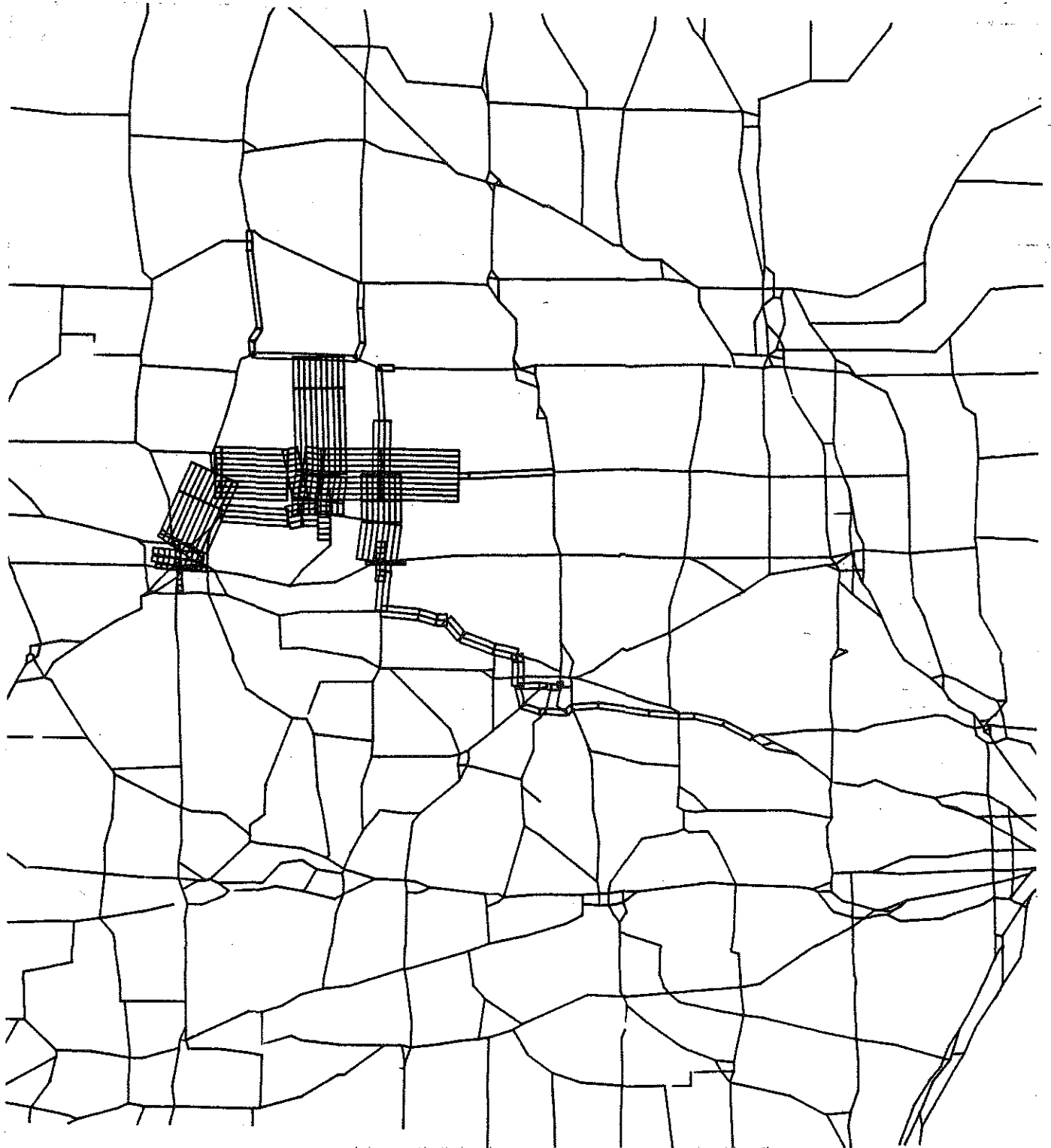
	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.	ACTUAL	
10.....																						25.169	25.169	1549	
20.....																							17.022	42.191	1049
30.....																							31.386	73.577	1929
40.....																							9.284	82.861	568
50.....																							8.588	91.449	527
60.....																							0.772	92.201	47
70.....																							0.814	93.015	58
80.....																							1.479	94.494	97
90.....																							0.744	95.239	45
100...																							0.305	95.543	18
110...																							0.375	95.918	23
120...																							0.679	96.597	41
130...																							0.560	97.158	34
140...																							0.101	97.259	8
150...																							0.319	97.578	19
160...																							0.098	97.676	4
170...																							0.246	97.921	13
180...																							0.236	98.158	14
190...																							0.241	98.399	14
200...																							0.119	98.518	7
210...																							0.050	98.568	4
220...																							0.042	98.611	2
230...																							0.108	98.718	8
240...																							0.078	98.796	4
250...																							0.057	98.853	3
260...																							0.075	98.928	4
270...																							0.018	98.946	1
280...																							0.256	99.202	15
290...																							0.176	99.378	11
300...																							0.015	99.392	1
310...																							0.010	99.402	1
320...																							0.174	99.576	10
330...																							0.010	99.586	1
340...																							0.000	99.586	0
350...																							0.015	99.601	1
360...																							0.037	99.638	2
370...																							0.000	99.638	0
380...																							0.000	99.638	0
390...																							0.000	99.638	0
400...																							0.021	99.660	1
410...																							0.000	99.660	0
420...																							0.000	99.660	0
430...																							0.002	99.661	0
440...																							0.111	99.772	6
450...																							0.002	99.774	0
460...																							0.000	99.774	0
470...																							0.000	99.774	0
480...																							0.002	99.775	1
490...																							0.033	99.808	2
500...																							0.000	99.808	0
510...																							0.000	99.808	0
520...																							0.005	99.813	0
530...																							0.000	99.813	0
540...																							0.360	99.873	5
550...																							0.000	99.881	0
560...																							0.000	99.881	0
570...																							0.005	99.886	0
580...																							0.002	99.888	0
590...																							0.016	99.904	1
600...																							0.007	99.920	0
610...																							0.000	99.927	0
620...																							0.007	99.933	0
630...																							0.000	99.933	0
640...																							0.000	99.933	0
650...																							0.000	99.941	0
660...																							0.000	99.941	0
670...																							0.000	99.941	0
680...																							0.000	99.941	0
690...																							0.000	99.941	0
700...																							0.000	99.941	0
710...																							0.000	99.971	0
720...																							0.000	99.971	0
730...																							0.000	99.971	0
740...																							0.000	99.971	0
750...																							0.000	99.971	0
MAINING VALUES ARE ALL ZERO																							0.029	100.000	1

NUMBER OF OBSERVATIONS= 61390      SUM= 1977505      MEAN= 32.212      VAR= 2290.108      SD= 47.855

TOTAL TRIPS OVER MAXP = 18  
TOTAL TRIPS OVER 255 = 0  
PLUME TABLE NUMBER = 207  
PLUM TREE NUMBER = 101

**CITY TRIP CHARACTERISTICS  
BY ALPHA NAME**





GREENVILLE BANDWIDTH

GREENVILLE

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
78.5% 14188	0.4% 74	15.8% 2857	0.2% 37	3.4% 614	1.7% 302

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC=REC	OTHER
46.4% 8381	8.1% 1455	23.8% 4298	0.2% 37	11.4% 2060	10.2% 1842

NUMBER IN VEHICLE

1	2	3	4	5	6+
58.2% 10517	24.9% 4507	9.0% 1628	4.6% 826	1.9% 340	1.4% 255

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
47.4% 8559	38.1% 6883	14.6% 2630

TOTAL TRIPS = 18072

	P.C.	CUM. A
0		
2		
4		
6		
8		
10		
12		
14		
16		
18		
20		
22		
24		
26		
28		
30		
32		
34		
36		
38		
40		
10	27.811	27.811
20	26.259	54.070
30	0.020	54.090
40	21.413	75.507
50	15.923	91.430
60	1.301	92.731
70	1.289	94.020
80	1.898	95.918
90	1.301	97.219
100	0.131	97.350
110	0.462	97.792
120	0.251	98.042
130	0.179	98.222
140	0.143	98.365
150	0.187	98.532
160	0.936	98.566
170	0.119	98.687
180	0.585	99.272
190	0.084	99.355
200	0.048	99.403
210	0.012	99.415
220	0.020	99.430
230	0.000	99.430
240	0.048	99.487
250	0.095	99.582
260	0.000	99.582
270	0.000	99.582
280	0.131	99.714
290	0.000	99.714
300	0.000	99.714
310	0.000	99.714
320	0.012	99.725
330	0.000	99.725
340	0.000	99.725
350	0.000	99.725
360	0.000	99.725
370	0.000	99.725
380	0.000	99.725
390	0.000	99.725
400	0.012	99.737
410	0.000	99.737
420	0.000	99.737
430	0.000	99.737
440	0.227	99.964
450	0.000	99.964
460	0.000	99.964
470	0.000	99.964
480	0.012	99.976
490	0.000	99.976
500	0.000	99.976
510	0.000	99.976
520	0.000	99.976
530	0.000	99.976
540	0.000	99.976
550	0.000	99.976
560	0.000	99.976
570	0.000	99.976
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= 6374      SUM= 255262      MEAN= 39.971      VAR= 1307.060      SD=

TOTAL TRIPS OVER MAXP = 1  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 201  
 SKIM TREE NUMBER = 101

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TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

PAGE

	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.
10.....																						37.672	37.672
20.....																						31.680	69.353
30.....																						0.000	69.353
40.....																						16.004	86.157
50.....																						9.160	95.317
60..																						0.482	95.799
70...																						0.968	96.763
80....																						1.171	97.934
90...																						0.551	98.485
100..																						0.000	98.485
110...																						0.620	99.105
120...																						0.138	99.242
130..																						0.138	99.380
140..																						0.000	99.380
150..																						0.275	99.655
160..																						0.000	99.655
170..																						0.118	99.793
180..																						0.207	100.000
REMAINING VALUES ARE ALL ZERO																							
NUMBER OF OBSERVATIONS=	1452	SUM=	32342.	MEANS	22.274	VARS	452.623	SD=															
TOTAL TRIPS OVER MAXP	=	0																					
TOTAL TRIPS OVER 255	=	0																					
VOLUME TABLE NUMBER	=	202																					
SKIN TREE NUMBER	=	101																					

7FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

PAGE

	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.
10.....																						35.280	35.280
20.....																						32.976	68.257
30.....																						0.023	68.280
40.....																						21.596	89.877
50.....																						7.773	97.650
60..																						0.535	98.185
70...																						0.675	98.860
80..																						0.349	99.209
90..																						0.349	99.558
100.																						0.000	99.558
110.																						0.000	99.558
120.																						0.047	99.604
130.																						0.070	99.674
140.																						0.000	99.674
150.																						0.163	99.837
160.																						0.000	99.837
170.																						0.000	99.837
180.																						0.163	100.000

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 4297      SUM= 90176      MEAN= 20.986      VAR= 286.968      SD= 17.084

TOTAL TRIPS OVER MAXP = 0  
TOTAL TRIPS OVER 255 = 0  
VOLUME TABLE NUMBER = 203  
SKIM TREE NUMBER = 191



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TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

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.	
10																							13.514	13.514
20																							0.108	21.622
30																							0.000	21.622
40																							5.405	27.027
50																							5.405	32.432
60																							0.108	40.541
70																							0.000	40.541
80																							2.703	43.243
90																							5.405	48.649
100																							0.000	48.649
110																							10.919	67.568
120																							0.000	67.568
130																							0.000	67.568
140																							0.000	67.568
150																							0.000	67.568
160																							0.000	67.568
170																							10.811	78.378
180																							5.405	83.784
190																							0.000	83.784
200																							0.000	83.784
210																							0.000	83.784
220																							0.000	83.784
230																							0.000	83.784
240																							0.000	83.784
250																							2.703	86.486
260																							0.000	86.486
270																							0.000	86.486
280																							8.108	94.595
290																							0.000	94.595
300																							0.000	94.595
310																							0.000	94.595
320																							0.000	94.595
330																							0.000	94.595
340																							0.000	94.595
350																							0.000	94.595
360																							0.000	94.595
370																							0.000	94.595
380																							0.000	94.595
390																							0.000	94.595
400																							0.000	94.595
410																							0.000	94.595
420																							0.000	94.595
430																							0.000	94.595
440																							0.000	94.595
450																							0.000	94.595
460																							0.000	94.595
470																							0.000	94.595
480																							0.000	94.595
490																							5.405	100.000
REMAINING VALUES ARE ALL ZERO																								
NUMBER OF OBSERVATIONS= 37      SUM= 4433.      MEAN= 119.811      VAR= 13605.622      SD= 117																								
TOTAL TRIPS OVER MAXP * 0																								
TOTAL TRIPS OVER 255 * 0																								
VOLUME TABLE NUMBER * 204																								
SKIN TREE NUMBER * 101																								

7FER7A

TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

PAGE

TRIP LENGTH	FREQUENCY	P.C.	CUM.
0			
2			
4			
6			
8			
10			
12			
14			
16			
18			
20			
22			
24			
26			
28			
30			
32			
34			
36			
38			
40			
10	35,597	35,597	35,597
20	32,541	68,138	68,138
30	0,000	68,138	68,138
40	15,664	83,802	83,802
50	7,614	91,416	91,416
60	1,552	92,968	92,968
70	1,067	94,035	94,035
80	1,309	95,344	95,344
90	0,582	95,926	95,926
100	0,242	96,169	96,169
110	0,291	96,460	96,460
120	0,650	97,110	97,110
130	0,679	97,789	97,789
140	0,242	98,031	98,031
150	0,776	98,807	98,807
160	0,000	98,807	98,807
170	0,242	99,049	99,049
180	0,145	99,194	99,194
190	0,194	99,388	99,388
200	0,145	99,533	99,533
210	0,000	99,533	99,533
220	0,000	99,533	99,533
230	0,242	99,775	99,775
240	0,046	99,821	99,821
250	0,145	99,966	99,966
260	0,000	99,966	99,966
270	0,000	99,966	99,966
280	0,000	99,966	99,966
290	0,000	99,966	99,966
300	0,000	99,966	99,966
310	0,000	99,966	99,966
320	0,000	99,966	99,966
330	0,000	99,966	99,966
340	0,000	99,966	99,966
350	0,000	99,966	99,966
360	0,000	99,966	99,966
370	0,000	99,966	99,966
380	0,000	99,966	99,966
390	0,000	99,966	99,966
400	0,000	99,966	99,966
410	0,000	99,966	99,966
420	0,000	99,966	99,966
430	0,000	99,966	99,966
440	0,000	99,966	99,966
450	0,046	100,000	100,000

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS# 2062      SUM# 53450      MEAN# 25.921      VAR# 1026,546      SD#

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

7FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

PAGE 7

TRIP LENGTH	FREQUENCY	P.C.	CUM.
0	.....		
2	.....		
4	.....		
6	.....		
8	.....		
10	.....		
12	.....		
14	.....		
16	.....		
18	.....		
20	.....		
22	.....		
24	.....		
26	.....		
28	.....		
30	.....		
32	.....		
34	.....		
36	.....		
38	.....		
40	.....		
10	.....	36.122	36.122
20	.....	32.426	68.550
30	.....	0.000	68.550
40	.....	14.829	83.379
50	.....	9.940	93.319
60	.....	0.706	94.025
70	.....	1.847	95.872
80	.....	1.793	97.664
90	.....	0.978	98.642
100	.....	0.000	98.642
110	.....	0.163	98.805
120	.....	0.163	98.968
130	.....	0.272	99.240
140	.....	0.000	99.240
150	.....	0.272	99.511
160	.....	0.109	99.620
170	.....	0.380	100.000

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS# 1841      SUM# 43119      MEAN# 23.422      VAR# 512.003      SD# 22.629

TOTAL TRIPS OVER MAXP # 0

TOTAL TRIPS OVER 255 # 0

VOLUME TABLE NUMBER # 206

SKIN TREE NUMBER # 101

7FEB78

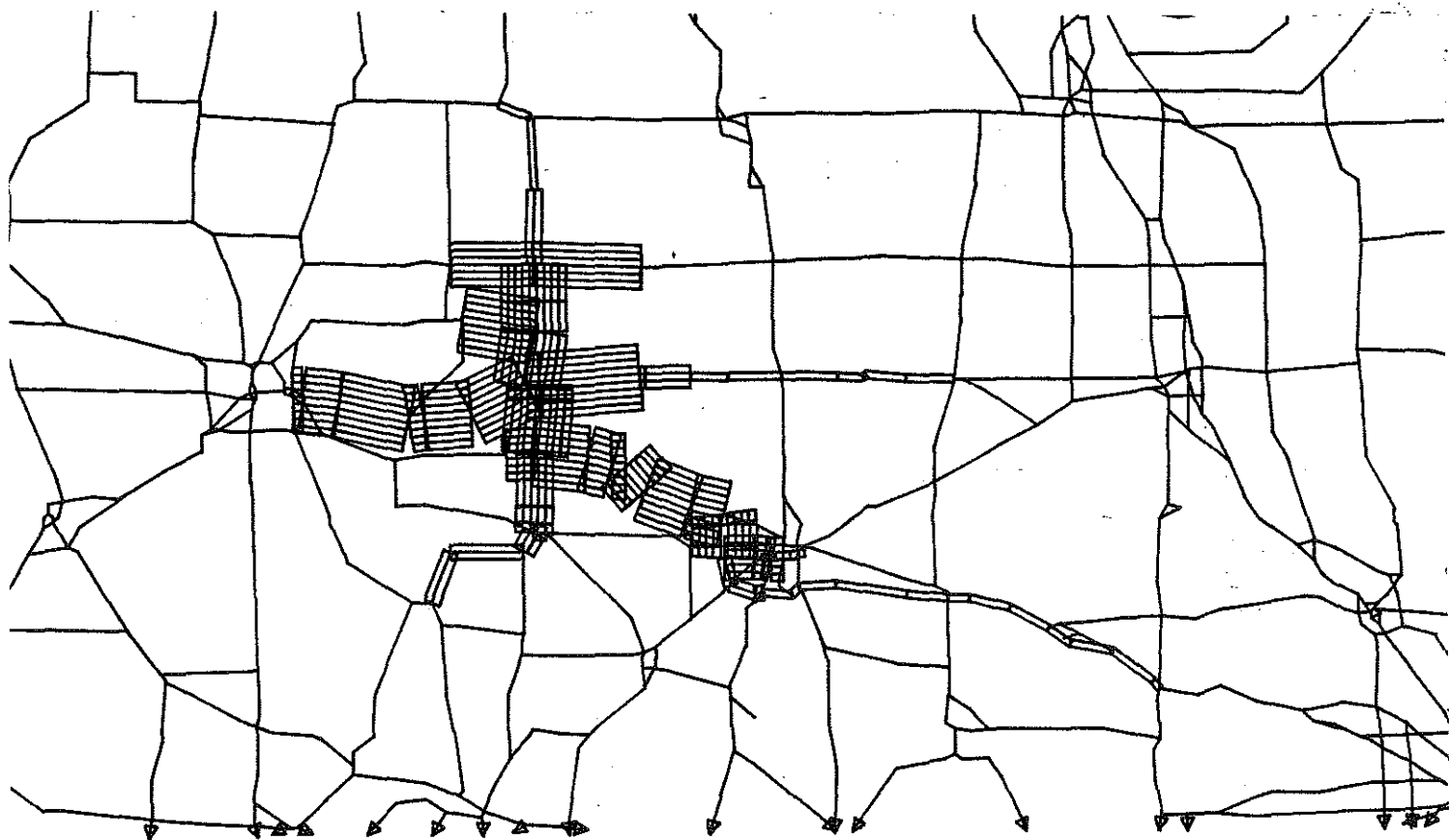
TRIP LENGTH FREQUENCY DISTRIBUTION-GREENVILLE

PAGE

TRIP LENGTH	FREQUENCY	P.C.	CUM.
0	0		
2	0		
4	0		
6	0		
8	0		
10	0		
12	0		
14	0		
16	0		
18	0		
20	0		
22	0		
24	0		
26	0		
28	0		
30	0		
32	0		
34	0		
36	0		
38	0		
40	0		
10	32,086	32.086	32.086
20	29,601	61.687	61.687
30	0,017	61.704	61.704
40	19,727	61.430	61.430
50	11,861	93.292	93.292
60	1,035	94.327	94.327
70	1,146	95.472	95.472
80	1,395	96.867	96.867
90	0,908	97.775	97.775
100	0,089	97.864	97.864
110	0,343	98.207	98.207
120	0,227	98.434	98.434
130	0,216	98.649	98.649
140	0,094	98.744	98.744
150	0,255	98.998	98.998
160	0,026	99.026	99.026
170	0,155	99.181	99.181
180	0,354	99.535	99.535
190	0,061	99.596	99.596
200	0,035	99.635	99.635
210	0,006	99.640	99.640
220	0,011	99.651	99.651
230	0,028	99.679	99.679
240	0,028	99.707	99.707
250	0,044	99.751	99.751
260	0,000	99.751	99.751
270	0,000	99.751	99.751
280	0,077	99.828	99.828
290	0,000	99.828	99.828
300	0,000	99.828	99.828
310	0,000	99.828	99.828
320	0,006	99.834	99.834
330	0,000	99.834	99.834
340	0,000	99.834	99.834
350	0,000	99.834	99.834
360	0,000	99.834	99.834
370	0,000	99.834	99.834
380	0,000	99.834	99.834
390	0,000	99.834	99.834
400	0,006	99.840	99.840
410	0,000	99.840	99.840
420	0,000	99.840	99.840
430	0,000	99.840	99.840
440	0,105	99.945	99.945
450	0,006	99.951	99.951
460	0,000	99.951	99.951
470	0,000	99.951	99.951
480	0,006	99.957	99.957
490	0,011	99.968	99.968
500	0,000	99.968	99.968
510	0,000	99.968	99.968
520	0,000	99.968	99.968
530	0,000	99.968	99.968
540	0,000	99.968	99.968
550	0,000	99.968	99.968
560	0,000	99.968	99.968
570	0,000	99.968	99.968
580	0,006	99.974	99.974
590	0,000	99.974	99.974
600	0,000	99.974	99.974
610	0,000	99.974	99.974
620	0,000	99.974	99.974
630	0,000	99.974	99.974
640	0,000	99.974	99.974
650	0,000	99.974	99.974
660	0,000	99.974	99.974
670	0,000	99.974	99.974
680	0,000	99.974	99.974
690	0,000	99.974	99.974
700	0,000	99.974	99.974
710	0,000	99.974	99.974
720	0,000	99.974	99.974
730	0,000	99.974	99.974
740	0,000	99.974	99.974
750	0,006	100.000	100.000

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 18667      SUM= 478602      MEAN= 26.501      VAR= 942.994      SD=

TOTAL TRIPS OVER MAXP = 1  
 TOTAL TRIPS OVER 245 = 0  
 VOLUME TABLE NUMBER = 207  
 SKIM TREE NUMBER = 101



IONIA BANDWIDTH

IONIA

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.
79.0% 17744	0.4% 82	15.6% 3497	0.4% 87	3.3% 739	1.3% 301

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC=REC	OTHER
39.7% 8914	10.7% 2401	20.2% 4525	0.7% 157	16.8% 3763	12.0% 2691

NUMBER IN VEHICLE

1	2	3	4	5	6+
57.0% 12794	25.8% 5793	9.1% 2038	4.8% 1069	1.8% 415	1.5% 341

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
46.2% 10368	36.3% 8149	17.5% 3933

TOTAL TRIPS = 22450

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW  
 TERMINAL-TRIP SUMMARY TABLE FOR IONIA

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	79.2% 7056	53.9% 1293	41.2% 1866	13.4% 21	37.5% 1413	42.5% 1144
2	15.5% 1379	27.1% 651	35.1% 1589	47.7% 75	32.7% 1231	32.3% 869
3	3.6% 320	10.6% 254	13.2% 598	11.2% 18	14.4% 542	11.4% 308
4	1.2% 111	5.5% 132	6.4% 290	16.8% 26	7.8% 293	8.1% 218
5	0.3% 26	1.8% 43	2.2% 98	6.3% 10	4.0% 150	3.3% 89
6+	0.2% 22	1.2% 29	1.9% 84	4.6% 7	3.6% 135	2.3% 63
TOTAL	100% 8914	100% 2401	100% 4525	100% 157	100% 3763	100% 2691

TOTAL TERMINAL-TRIPS FOR IONIA = 22450

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW

TERMINAL-TRIP SUMMARY TABLE FOR IONIA

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	69.7% 6213	82.0% 1968	84.8% 3837	85.8% 134	87.8% 3303	85.0% 2288
CAR W/ TRLR	0.2% 20	0.5% 11	0.4% 20	3.2% 5	0.4% 15	0.4% 10
PICK-UP W/O/TRLR	18.6% 1661	16.7% 400	14.1% 637	3.6% 6	11.5% 434	13.4% 360
PICK-UP W/ TRLR	0.6% 57	0.2% 6	0.1% 6	2.5% 4	0.1% 3	0.4% 12
SINGLE-UNIT TRUCKS	7.6% 674	0.3% 7	0.5% 25	3.5% 6	0.2% 8	0.7% 20
COMBINATION TRUCKS	3.2% 289	0.4% 9	0.0% 0	1.5% 2	0.0% 0	0.0% 1
TOTAL	100% 8914	100% 2401	100% 4525	100% 157	100% 3763	100% 2691

TOTAL TERMINAL-TRIPS FOR IONIA = 22450



696978 TRIP LENGTH FREQUENCY DISTRIBUTION-IONIA

	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.	ACTU		
10																							21.373	21.373		
20																								19.744	41.120	
30																								31.594	72.714	
40																								8.255	80.969	
50																								13.104	94.054	
60																								1.144	95.198	
70																								1.459	96.657	
80																								0.426	97.083	
90																								0.856	97.949	
100																								0.474	98.423	
110																								0.426	98.849	
120																								0.079	98.928	
130																								0.067	99.035	
140																								0.056	99.091	
150																								0.317	99.428	
160																								0.054	99.461	
170																								9.135	99.596	
180																								0.112	99.708	
190																								0.000	99.708	
200																								0.065	99.753	
210																								0.000	99.753	
220																								0.036	99.787	
230																								0.000	99.787	
240																								0.000	99.787	
250																								0.000	99.787	
260																								0.000	99.787	
270																								0.000	99.787	
280																								0.067	99.854	
290																								0.011	99.865	
300																								0.000	99.865	
310																								0.000	99.865	
320																								0.011	99.877	
330																								0.000	99.877	
340																								0.000	99.877	
350																								0.000	99.877	
360																								0.000	99.877	
370																								0.000	99.877	
380																								0.000	99.877	
390																								0.000	99.877	
400																								0.079	99.955	
410																								0.000	99.955	
420																								0.000	99.955	
430																								0.000	99.955	
440																								0.000	99.955	
450																								0.000	99.955	
460																								0.000	99.955	
470																								0.000	99.955	
480																								0.000	99.955	
490																								0.000	99.955	
500																								0.000	99.955	
510																								0.000	99.955	
520																								0.000	99.955	
530																								0.000	99.955	
540																								0.000	99.955	
550																								0.000	99.955	
560																								0.000	99.955	
570																								0.000	99.955	
580																								0.000	99.955	
590																								0.000	99.955	
600																								0.000	99.955	
610																								0.000	99.955	
620																								0.000	99.955	
630																								0.000	99.955	
640																								0.000	99.955	
650																								0.000	99.955	
660																								0.065	100.000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 8913      SUM= 238424      MEAN= 26.750      VAR= 802.236      SD= 28.31

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

SPED76 TRIP LENGTH FREQUENCY DISTRIBUTION-IONIA

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																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.085	21.085																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.136	36.222																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	43.036	79.258																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.342	90.200																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5.755	95.955																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.501	97.456																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.626	98.082																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.125	98.207																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.083	98.290																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.500	98.791																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.542	99.333																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.209	99.541																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.083	99.625																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.042	99.666																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.083	99.750																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.000	99.750																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.000	99.750																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.167	99.917																					
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.083	100.000																					
REMAINING VALUES ARE ALL ZERO																																												
NUMBER OF OBSERVATIONS																						2396	SUM	57227	MEAN	23.869	VAR	326.012	SD	18.04														
TOTAL TRIPS OVER MAXP																						0																						
TOTAL TRIPS OVER 255																						0																						
VOLUME TABLE NUMBER																						202																						
SKIM TREE NUMBER																						101																						

SP878

TRIP LENGTH FREQUENCY DISTRIBUTION-IONIA

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.	ACTU																						
10.....																							23.123	23.123																						
20.....																								36.639	59.761																					
30.....																								31.162	90.923																					
40.....																								4.351	95.274																					
50.....																								1.224	96.498																					
60.....																								0.817	97.315																					
70.....																								0.044	97.360																					
80.....																								0.155	97.514																					
90.....																								0.022	97.536																					
100.....																								0.155	97.691																					
110.....																								0.044	97.735																					
120.....																								0.066	97.801																					
130.....																								0.000	97.801																					
140.....																								0.000	97.801																					
150.....																								0.000	97.801																					
160.....																								0.066	97.867																					
170.....																								0.066	97.934																					
180.....																								0.044	97.978																					
190.....																								0.022	100.000																					
REMAINING VALUES ARE ALL ZERO																																														
NUMBER OF OBSERVATIONS											4528	SUM	63825	MEAN	16.513	VAR	171.735	SD	13.1																											
TOTAL TRIPS OVER MAXP	n	0																																												
TOTAL TRIPS OVER 255	n	0																																												
VOLUME TABLE NUMBER	n	203																																												
SKIN TREE NUMBER	n	101																																												

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTU.
0	0	0.000	0.000	0.000
2	0	0.000	0.000	0.000
4	0	0.000	0.000	0.000
6	0	0.000	0.000	0.000
8	0	0.000	0.000	0.000
10	0	0.000	0.000	0.000
12	0	0.000	0.000	0.000
14	0	0.000	0.000	0.000
16	0	0.000	0.000	0.000
18	0	0.000	0.000	0.000
20	0	0.000	0.000	0.000
22	0	0.000	0.000	0.000
24	0	0.000	0.000	0.000
26	0	0.000	0.000	0.000
28	0	0.000	0.000	0.000
30	0	0.000	0.000	0.000
32	0	0.000	0.000	0.000
34	0	0.000	0.000	0.000
36	0	0.000	0.000	0.000
38	0	0.000	0.000	0.000
40	0	0.000	0.000	0.000
10	1	0.454	4.545	4.545
20	1	0.454	11.039	11.039
30	1	0.454	20.779	20.779
40	1	0.454	31.818	31.818
50	1	0.454	40.909	40.909
60	1	0.454	51.948	51.948
70	1	0.454	59.545	59.545
80	1	0.454	67.792	67.792
90	1	0.454	76.390	76.390
100	1	0.454	85.286	85.286
110	1	0.454	94.482	94.482
120	1	0.454	103.978	103.978
130	1	0.454	113.774	113.774
140	1	0.454	123.870	123.870
150	1	0.454	134.266	134.266
160	1	0.454	144.962	144.962
170	1	0.454	155.958	155.958
180	1	0.454	167.254	167.254
190	1	0.454	178.850	178.850
200	1	0.454	190.746	190.746
210	1	0.454	202.942	202.942
220	1	0.454	215.438	215.438
230	1	0.454	228.234	228.234
240	1	0.454	241.330	241.330
250	1	0.454	254.726	254.726
260	1	0.454	268.422	268.422
270	1	0.454	282.418	282.418
280	1	0.454	296.714	296.714
290	1	0.454	311.310	311.310
300	1	0.454	326.206	326.206
310	1	0.454	341.402	341.402
320	1	0.454	356.898	356.898
330	1	0.454	372.694	372.694
340	1	0.454	388.790	388.790
350	1	0.454	405.186	405.186
360	1	0.454	421.882	421.882
370	1	0.454	438.878	438.878
380	1	0.454	456.174	456.174
390	1	0.454	473.770	473.770
400	1	0.454	491.666	491.666
410	1	0.454	509.862	509.862
420	1	0.454	528.358	528.358
430	1	0.454	547.154	547.154
440	1	0.454	566.250	566.250
450	1	0.454	585.646	585.646
460	1	0.454	605.342	605.342
470	1	0.454	625.338	625.338
480	1	0.454	645.634	645.634
490	1	0.454	666.230	666.230
500	1	0.454	687.126	687.126
510	1	0.454	708.322	708.322
520	1	0.454	729.818	729.818
530	1	0.454	751.614	751.614
540	1	0.454	773.710	773.710
550	1	0.454	796.106	796.106
560	1	0.454	818.802	818.802
570	1	0.454	841.798	841.798
580	1	0.454	865.094	865.094
590	1	0.454	888.690	888.690
600	1	0.454	912.486	912.486
610	1	0.454	936.482	936.482
620	1	0.454	960.678	960.678
630	1	0.454	985.074	985.074
640	1	0.454	1009.670	1009.670
650	1	0.454	1034.466	1034.466
660	1	0.454	1059.462	1059.462

REMAINING VALUES ARE ALL ZERO

NUMBER OF OBSERVATIONS= 154      SUM= 14856      MEAN= 96.468      VAR= 11646.435      SD= 107.9

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

	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.....																							25.780	25.780	
20.....																							20.011	45.791	
30.....																							37.102	82.893	
40.....																							4.430	87.323	
50.....																							4.086	91.409	
60.....																							0.784	92.193	
70.....																							0.783	92.976	
80.....																							0.264	93.240	
90.....																							0.718	93.958	
100.....																							0.319	94.277	
110.....																							0.558	94.835	
120.....																							0.213	95.048	
130.....																							0.213	95.261	
140.....																							0.438	95.699	
150.....																							0.450	96.149	
160.....																							0.080	96.229	
170.....																							0.027	96.256	
180.....																							0.133	96.389	
190.....																							0.027	96.416	
200.....																							0.000	96.416	
210.....																							0.000	96.416	
220.....																							0.159	96.575	
230.....																							0.000	96.575	
240.....																							0.000	96.575	
250.....																							0.053	96.628	
260.....																							0.027	96.655	
270.....																							0.053	96.708	
280.....																							0.000	96.708	
290.....																							0.053	96.761	
300.....																							0.000	96.761	
310.....																							0.000	96.761	
320.....																							0.000	96.761	
330.....																							0.000	96.761	
340.....																							0.000	96.761	
350.....																							0.000	96.761	
360.....																							0.000	96.761	
370.....																							0.000	96.761	
380.....																							0.000	96.761	
390.....																							0.000	96.761	
400.....																							0.000	96.761	
410.....																							0.000	96.761	
420.....																							0.000	96.761	
430.....																							0.000	96.761	
440.....																							0.000	96.761	
450.....																							0.000	96.761	
460.....																							0.000	96.761	
470.....																							0.000	96.761	
480.....																							0.000	96.761	
490.....																							0.000	96.761	
500.....																							0.000	96.761	
510.....																							0.000	96.761	
520.....																							0.000	96.761	
530.....																							0.000	96.761	
540.....																							0.000	96.761	
550.....																							0.000	96.761	
560.....																							0.000	96.761	
570.....																							0.000	96.761	
580.....																							0.000	96.761	
590.....																							0.000	96.761	
600.....																							0.080	100.000	
REMAINING VALUES ARE ALL ZERO																									
NUMBER OF OBSERVATIONS																								3763	
																								SUM	
																								93338.	
																								MEAN	
																								24.804	
																								VAR	
																								976.582	
																								SD	
																								31.2	
TOTAL TRIPS OVER MAXP																								0	
TOTAL TRIPS OVER 255																								0	
VOLUME TABLE NUMBER																								205	
SKIN TREE NUMBER																								101	

SPED78 TRIP LENGTH FREQUENCY DISTRIBUTION-IONIA

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTUAL
0	0			
2	0			
4	0			
6	0			
8	0			
10	0			
12	0			
14	0			
16	0			
18	0			
20	0			
22	0			
24	0			
26	0			
28	0			
30	0			
32	0			
34	0			
36	0			
38	0			
40	0			
18	28,375	28.375		
20	20,714	20.714	49.089	
30	34,846	34.846	83.935	
40	5,578	5.578	89.513	
50	6,843	6.843	96.356	
60	0,403	0.403	96.759	
70	0,595	0.595	97.354	
80	0,550	0.550	97.902	
90	0,223	0.223	98.125	
100	0,298	0.298	98.423	
110	0,223	0.223	98.646	
120	0,298	0.298	98.944	
130	0,000	0.000	98.944	
140	0,000	0.000	98.944	
150	0,000	0.000	98.944	
160	0,921	0.921	99.865	
170	0,186	0.186	99.740	
180	0,000	0.000	99.740	
190	0,000	0.000	99.740	
200	0,037	0.037	99.777	
210	0,074	0.074	99.851	
220	0,000	0.000	99.851	
230	0,000	0.000	99.851	
240	0,000	0.000	99.851	
250	0,000	0.000	99.851	
260	0,000	0.000	99.851	
270	0,000	0.000	99.851	
280	0,000	0.000	99.851	
290	0,000	0.000	99.851	
300	0,000	0.000	99.851	
310	0,000	0.000	99.851	
320	0,000	0.000	99.851	
330	0,000	0.000	99.851	
340	0,000	0.000	99.851	
350	0,000	0.000	99.851	
360	0,000	0.000	99.851	
370	0,000	0.000	99.851	
380	0,000	0.000	99.851	
390	0,000	0.000	99.851	
400	0,000	0.000	99.851	
410	0,000	0.000	99.851	
420	0,000	0.000	99.851	
430	0,037	0.037	100.000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS: 2669      SUM: 59402      MEAN: 22.091      VAR: 506,758      SD: 22.5

TOTAL TRIPS OVER MAXP    0  
 TOTAL TRIPS OVER 255    0  
 VOLUME TABLE NUMBER    206  
 SKIM TREE NUMBER        191

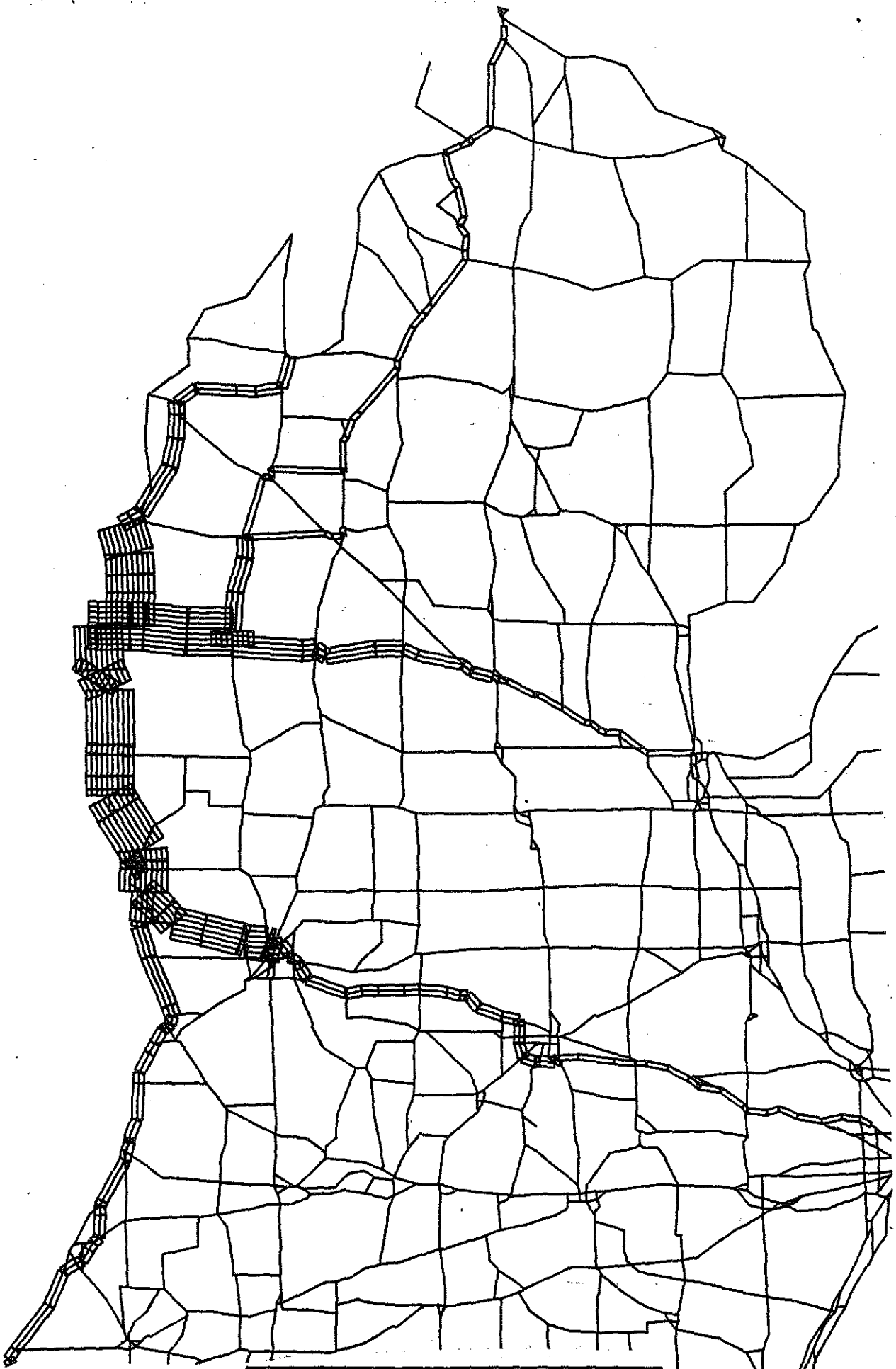
0PE878 TRIP LENGTH FREQUENCY DISTRIBUTION-IONIA

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTUAL
0	.....			
2	.....			
4	.....			
6	.....			
8	.....			
10	.....			
12	.....			
14	.....			
16	.....			
18	.....			
20	.....			
22	.....			
24	.....			
26	.....			
28	.....			
30	.....			
32	.....			
34	.....			
36	.....			
38	.....			
40	.....			
10	.....	25.725	23.725	
20	.....	22.731	46.456	
30	.....	35.130	79.586	
40	.....	7.129	86.714	
50	.....	8.285	95.099	
60	.....	0.980	96.079	
70	.....	0.913	96.993	
80	.....	0.383	97.376	
90	.....	0.539	97.915	
100	.....	0.197	98.112	
110	.....	0.379	98.491	
120	.....	0.138	98.629	
130	.....	0.085	98.714	
140	.....	0.140	98.854	
150	.....	0.370	99.224	
160	.....	0.071	99.295	
170	.....	0.089	99.384	
180	.....	0.098	99.482	
190	.....	0.022	99.504	
200	.....	0.036	99.540	
210	.....	0.018	99.558	
220	.....	0.053	99.611	
230	.....	0.008	99.619	
240	.....	0.009	99.628	
250	.....	0.004	99.632	
260	.....	0.031	99.663	
270	.....	0.000	99.663	
280	.....	0.040	99.703	
290	.....	0.008	99.711	
300	.....	0.009	99.720	
310	.....	0.000	99.720	
320	.....	0.009	99.729	
330	.....	0.000	99.729	
340	.....	0.000	99.729	
350	.....	0.000	99.729	
360	.....	0.000	99.729	
370	.....	0.000	99.729	
380	.....	0.000	99.729	
390	.....	0.000	99.729	
400	.....	0.053	99.782	
410	.....	0.000	99.782	
420	.....	0.000	99.782	
430	.....	0.000	99.782	
440	.....	0.008	99.790	
450	.....	0.000	99.790	
460	.....	0.000	99.790	
470	.....	0.000	99.790	
480	.....	0.000	99.790	
490	.....	0.000	99.790	
500	.....	0.000	99.790	
510	.....	0.000	99.790	
520	.....	0.000	99.790	
530	.....	0.000	99.790	
540	.....	0.000	99.790	
550	.....	0.000	99.790	
560	.....	0.000	99.790	
570	.....	0.000	99.790	
580	.....	0.000	99.790	
590	.....	0.008	99.798	
600	.....	0.013	99.811	
610	.....	0.000	99.811	
620	.....	0.000	99.811	
630	.....	0.000	99.811	
640	.....	0.000	99.811	
650	.....	0.000	99.811	
660	.....	0.022	100.000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS: 22849      SUM: 547082      MEAN: 24.374      VAR: 738.304      SD: 27.11

TOTAL TRIPS OVER MAXP: 0  
 TOTAL TRIPS OVER 255: 0  
 VOLUME TABLE NUMBER: 207  
 SKIN TREE NUMBER: 101

R  
R  
U  
U  
V  
O  
R  
S  
R  
M  
H  
N  
A  
K  
U  
O



LUDINGTON BANDWIDTH



LUDINGTON

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
82.4% 17203	1.4% 290	10.9% 2265	0.4% 79	3.5% 720	1.5% 309

TRIP PURPOSE

WORK	PERS BIZ	SHOP	VACATION	SOC=REC	OTHER
33.1% 6902	5.0% 1049	23.7% 4953	7.1% 1471	22.3% 4658	8.8% 1834

NUMBER IN VEHICLE

1	2	3	4	5	6+
47.0% 9810	28.0% 5840	10.8% 2255	7.4% 1542	3.7% 762	3.2% 659

VEHICLE GARAGED AT

ORIGIN	DESTIN	OTHER
37.1% 7743	31.0% 6464	31.9% 6660

TOTAL TRIPS = 20867

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW  
 TERMINAL-TRIP SUMMARY TABLE FOR LUDINGTON

TRIP PURPOSE

# IN VEH.	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
1	79.8% 5505	51.0% 535	30.5% 1510	8.6% 126	31.1% 1448	37.4% 686
2	14.4% 997	31.7% 333	35.6% 1762	37.2% 547	34.4% 1601	32.7% 600
3	3.6% 251	8.8% 92	14.9% 740	17.3% 254	14.0% 652	14.5% 266
4	1.3% 93	5.7% 60	9.4% 466	20.8% 307	10.0% 468	8.1% 148
5	0.4% 30	2.3% 24	5.8% 285	8.4% 123	5.0% 231	3.8% 69
6+	0.4% 27	0.5% 5	3.8% 189	7.8% 114	5.6% 259	3.5% 64
TOTAL	100% 6902	100% 1049	100% 4953	100% 1471	100% 4658	100% 1834

TOTAL TERMINAL-TRIPS FOR LUDINGTON = 20867

MINOR

EXTERNAL ORIGIN-DESTINATION INTERVIEW  
 TERMINAL-TRIP SUMMARY TABLE FOR LUDINGTON

TRIP PURPOSE

VEH TYPE	WORK	PERS BIZ	SHOP	VACATION	SOC-REC	OTHER
CAR W/O TRLR	68.2% 4705	86.0% 902	91.0% 4508	87.1% 1281	89.0% 4147	90.5% 1659
CAR W/ TRLR	0.4% 29	0.4% 4	0.5% 26	5.7% 83	2.7% 127	1.1% 20
PICK-UP W/O/TRLR	18.8% 1296	11.7% 123	7.7% 380	1.5% 22	6.3% 296	8.1% 148
PICK-UP W/ TRLR	0.1% 9	0.1% 1	0.0% 2	2.2% 33	0.7% 33	0.1% 2
SINGLE-UNIT TRUCKS	8.6% 594	1.2% 13	0.7% 34	2.6% 39	0.8% 36	0.3% 5
COMBINATION TRUCKS	3.9% 270	0.6% 6	0.1% 3	0.9% 13	0.4% 18	0.0% 0
TOTAL	100% 6902	100% 1049	100% 4953	100% 1471	100% 4658	100% 1834

TOTAL TERMINAL-TRIPS FOR LUDINGTON = 20867

6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACT
0				
3				
6				
9				
12				
15				
18				
21				
24				
27				
30				
33				
36				
39				
42				
45				
48				
51				
54				
57				
60				
10	27,582	27,582	27,582	
20	0,000	27,582		
30	50,384	77,966		
40	2,622	80,588		
50	5,751	86,339		
60	0,188	86,528		
70	0,585	87,113		
80	3,580	90,693		
90	0,828	91,521		
100	0,308	91,829		
110	0,913	92,742		
120	2,318	95,060		
130	1,217	96,277		
140	0,000	96,277		
150	0,188	96,465		
160	0,159	96,624		
170	0,536	97,160		
180	0,217	97,377		
190	0,637	98,014		
200	0,304	98,318		
210	0,058	98,376		
220	0,072	98,448		
230	0,087	98,535		
240	0,290	98,825		
250	0,014	98,839		
260	0,083	98,922		
270	0,029	98,951		
280	0,101	99,052		
290	0,217	99,269		
300	0,014	99,283		
310	0,000	99,283		
320	0,377	99,660		
330	0,000	99,660		
340	0,000	99,660		
350	0,000	99,660		
360	0,000	99,660		
370	0,000	99,660		
380	0,000	99,660		
390	0,000	99,660		
400	0,000	99,660		
410	0,000	99,660		
420	0,000	99,660		
430	0,000	99,660		
440	0,043	99,703		
450	0,000	99,703		
460	0,000	99,703		
470	0,000	99,703		
480	0,000	99,703		
490	0,000	99,703		
500	0,203	99,906		
510	0,000	99,906		
520	0,000	99,906		
530	0,000	99,906		
540	0,000	99,906		
550	0,000	99,906		
560	0,000	99,906		
570	0,000	99,906		
580	0,000	99,906		
590	0,014	99,920		
600	0,029	99,949		
610	0,000	99,949		
620	0,000	99,949		
630	0,000	99,949		
640	0,000	99,949		
650	0,000	99,949		
660	0,000	99,949		
670	0,000	99,949		
680	0,000	99,949		
690	0,130	100,079		

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 6903      SUM= 266755,      MEAN= 38,933      VAR= 2914,958      SD= 53.8

TOTAL TRIPS OVER MAXP \* 0  
 TOTAL TRIPS OVER 255 \* 0  
 VOLUME TABLE NUMBER \* 201  
 SKIN TREE NUMBER \* 101

6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

PAGE 3

	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	P.C.	CUM.	AC	
10																							20.381	20.381	
20																							0.000	20.381	
30																							65.143	85.524	
40																							1.905	87.429	
50																							2.095	89.524	
60																							0.000	89.524	
70																							0.000	89.524	
80																							0.286	91.810	
90																							1.143	93.952	
100																							0.571	94.524	
110																							0.000	94.524	
120																							0.952	96.476	
130																							0.476	96.952	
140																							0.190	97.143	
150																							0.571	97.714	
160																							0.000	97.714	
170																							0.190	97.905	
180																							0.190	98.095	
190																							0.286	98.381	
200																							0.000	98.381	
210																							0.000	98.381	
220																							0.000	98.381	
230																							0.190	98.571	
240																							0.000	98.571	
250																							0.190	98.762	
260																							0.190	98.952	
270																							0.000	98.952	
280																							0.095	99.048	
290																							0.000	99.048	
300																							0.000	99.048	
310																							0.000	99.048	
320																							0.190	99.238	
330																							0.000	99.238	
340																							0.000	99.238	
350																							0.000	99.238	
360																							0.000	99.238	
370																							0.000	99.238	
380																							0.000	99.238	
390																							0.000	99.238	
400																							0.000	99.238	
410																							0.000	99.238	
420																							0.000	99.238	
430																							0.000	99.238	
440																							0.000	99.238	
450																							0.000	99.238	
460																							0.000	99.238	
470																							0.000	99.238	
480																							0.000	99.238	
490																							0.000	99.238	
500																							0.000	99.238	
510																							0.000	99.238	
520																							0.000	99.238	
530																							0.000	99.238	
540																							0.286	99.524	
550																							0.000	99.524	
560																							0.000	99.524	
570																							0.000	99.524	
580																							0.000	99.524	
590																							0.190	99.714	
600																							0.286	100.000	

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 1050      SUM= 19019      MEAN= 37.161      VAR= 3279.063      SD= 57.27

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

6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

PAGE 8

TRIP LENGTH	FREQ	P.C.	CUM.	ACT
0				
4				
8				
12				
16				
20				
24				
28				
32				
36				
40				
44				
48				
52				
56				
60				
64				
68				
72				
76				
80				
10		17.413	17.413	
20		0.000	17.413	
30		65.759	83.172	
40		3.995	87.167	
50		8.253	95.420	
60		0.343	95.763	
70		0.202	95.965	
80		1.332	97.297	
90		0.545	97.842	
100		0.282	98.124	
110		0.000	98.124	
120		0.504	98.628	
130		0.323	98.951	
140		0.041	99.011	
150		0.000	99.011	
160		0.000	99.011	
170		0.061	99.072	
180		0.000	99.072	
190		0.121	99.193	
200		0.121	99.314	
210		0.061	99.374	
220		0.000	99.374	
230		0.040	99.415	
240		0.000	99.415	
250		0.040	99.455	
260		0.121	99.576	
270		0.000	99.576	
280		0.242	99.818	
290		0.040	99.858	
300		0.000	99.858	
310		0.000	99.858	
320		0.081	99.939	
330		0.000	99.939	
340		0.000	99.939	
350		0.000	99.939	
360		0.061	100.000	

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 9956 SUM= 152636 MEAN= 30.798 VAR= 721.771 SDR 26.0

TOTAL TRIPS OVER MAXP = 0  
TOTAL TRIPS OVER 255 = 0  
VOLUME TABLE NUMBER = 203  
SKIN TREE NUMBER = 101

6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	P.C.	CUM.	ACT
10																					7.370	7.370	
20																					0.000	7.370	
30																					27.191	34.550	
40																					1.082	35.632	
50																					6.826	42.458	
60																					0.406	42.864	
70																					0.788	43.652	
80																					3.351	47.003	
90																					1.285	48.288	
100																					0.609	48.897	
110																					1.786	50.683	
120																					5.862	56.545	
130																					0.135	56.680	
140																					0.541	57.221	
150																					1.487	58.708	
160																					2.164	60.872	
170																					0.870	61.742	
180																					2.299	64.041	
190																					1.082	65.123	
200																					1.014	66.137	
210																					0.473	66.610	
220																					2.637	72.247	
230																					0.879	73.126	
240																					0.811	74.937	
250																					1.420	76.357	
260																					0.541	76.898	
270																					6.491	83.389	
280																					3.584	86.973	
290																					0.406	87.379	
300																					4.127	91.506	
310																					0.270	91.776	
320																					0.000	91.776	
330																					0.473	92.249	
340																					1.140	93.389	
350																					0.000	93.389	
360																					0.000	93.389	
370																					0.000	93.389	
380																					0.000	93.389	
390																					0.000	93.389	
400																					0.000	93.389	
410																					0.000	93.389	
420																					0.000	93.389	
430																					0.000	93.389	
440																					2.366	95.755	
450																					0.000	95.755	
460																					0.000	95.755	
470																					0.000	95.755	
480																					0.000	95.755	
490																					0.203	95.958	
500																					0.000	95.958	
510																					0.000	95.958	
520																					0.203	96.161	
530																					0.000	96.161	
540																					1.758	97.919	
550																					0.203	98.122	
560																					0.000	98.122	
570																					0.203	98.325	
580																					0.000	98.325	
590																					0.406	98.731	
600																					0.000	98.731	
610																					0.203	98.934	
620																					0.000	98.934	
630																					0.000	98.934	
640																					0.000	98.934	
650																					0.000	98.934	
660																					0.000	98.934	
670																					0.000	98.934	
680																					0.000	98.934	
690																					0.609	99.543	
700																					0.000	99.543	
710																					0.000	99.543	
720																					0.000	99.543	
730																					0.000	99.543	
740																					0.000	99.543	
750																					0.744	100.287	

REMAINING VALUES ARE ALL ZERO  
NUMBER OF OBSERVATIONS= 1479      SUM= 223513      MEAN= 151.124      VAR= 22610.948      SD= 151

TOTAL TRIPS OVER MAXP \* 11  
TOTAL TRIPS OVER 255 \* 0  
VOLUME TABLE NUMBER \* 204  
SKIM TREE NUMBER \* 101

6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

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TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTI
0	16,047	16.047	16.047	
4	0.000	16.047	16.047	
8	64,812	80.859	80.859	
12	1,719	82.578	82.578	
16	4,812	87.390	87.390	
20	0.494	87.884	87.884	
24	0.387	88.271	88.271	
28	2.535	90.806	90.806	
32	0.705	91.511	91.511	
36	0.365	91.876	91.876	
40	0.193	92.069	92.069	
44	1.633	93.702	93.702	
48	1.182	94.873	94.873	
52	0.043	95.016	95.016	
56	0.771	95.789	95.789	
60	0.129	95.918	95.918	
64	0.494	96.412	96.412	
68	0.473	96.885	96.885	
72	0.730	97.615	97.615	
76	0.236	97.852	97.852	
80	0.043	97.895	97.895	
84	0.000	97.895	97.895	
88	0.236	98.131	98.131	
92	0.129	98.260	98.260	
96	0.064	98.324	98.324	
100	0.107	98.432	98.432	
104	0.021	98.453	98.453	
108	0.236	98.690	98.690	
112	0.387	99.076	99.076	
116	0.000	99.076	99.076	
120	0.129	99.205	99.205	
124	0.043	99.248	99.248	
128	0.000	99.248	99.248	
132	0.043	99.291	99.291	
136	0.064	99.356	99.356	
140	0.000	99.356	99.356	
144	0.000	99.356	99.356	
148	0.000	99.356	99.356	
152	0.000	99.356	99.356	
156	0.000	99.356	99.356	
160	0.000	99.356	99.356	
164	0.000	99.356	99.356	
168	0.000	99.356	99.356	
172	0.000	99.356	99.356	
176	0.000	99.356	99.356	
180	0.000	99.356	99.356	
184	0.000	99.356	99.356	
188	0.000	99.356	99.356	
192	0.000	99.356	99.356	
196	0.000	99.356	99.356	
200	0.000	99.356	99.356	
204	0.000	99.356	99.356	
208	0.000	99.356	99.356	
212	0.000	99.356	99.356	
216	0.000	99.356	99.356	
220	0.000	99.356	99.356	
224	0.000	99.356	99.356	
228	0.000	99.356	99.356	
232	0.000	99.356	99.356	
236	0.000	99.356	99.356	
240	0.000	99.356	99.356	
244	0.000	99.356	99.356	
248	0.000	99.356	99.356	
252	0.000	99.356	99.356	
256	0.000	99.356	99.356	
260	0.000	99.356	99.356	
264	0.000	99.356	99.356	
268	0.000	99.356	99.356	
272	0.000	99.356	99.356	
276	0.000	99.356	99.356	
280	0.000	99.356	99.356	
284	0.000	99.356	99.356	
288	0.000	99.356	99.356	
292	0.000	99.356	99.356	
296	0.000	99.356	99.356	
300	0.000	99.356	99.356	
304	0.000	99.356	99.356	
308	0.000	99.356	99.356	
312	0.000	99.356	99.356	
316	0.000	99.356	99.356	
320	0.000	99.356	99.356	
324	0.000	99.356	99.356	
328	0.000	99.356	99.356	
332	0.000	99.356	99.356	
336	0.000	99.356	99.356	
340	0.000	99.356	99.356	
344	0.000	99.356	99.356	
348	0.000	99.356	99.356	
352	0.000	99.356	99.356	
356	0.000	99.356	99.356	
360	0.000	99.356	99.356	
364	0.000	99.356	99.356	
368	0.000	99.356	99.356	
372	0.000	99.356	99.356	
376	0.000	99.356	99.356	
380	0.000	99.356	99.356	
384	0.000	99.356	99.356	
388	0.000	99.356	99.356	
392	0.000	99.356	99.356	
396	0.000	99.356	99.356	
400	0.000	99.356	99.356	
404	0.000	99.356	99.356	
408	0.000	99.356	99.356	
412	0.000	99.356	99.356	
416	0.000	99.356	99.356	
420	0.000	99.356	99.356	
424	0.000	99.356	99.356	
428	0.000	99.356	99.356	
432	0.000	99.356	99.356	
436	0.000	99.356	99.356	
440	0.000	99.356	99.356	
444	0.000	99.356	99.356	
448	0.000	99.356	99.356	
452	0.000	99.356	99.356	
456	0.000	99.356	99.356	
460	0.000	99.356	99.356	
464	0.000	99.356	99.356	
468	0.000	99.356	99.356	
472	0.000	99.356	99.356	
476	0.000	99.356	99.356	
480	0.000	99.356	99.356	
484	0.000	99.356	99.356	
488	0.000	99.356	99.356	
492	0.000	99.356	99.356	
496	0.000	99.356	99.356	
500	0.000	99.356	99.356	
504	0.000	99.356	99.356	
508	0.000	99.356	99.356	
512	0.000	99.356	99.356	
516	0.000	99.356	99.356	
520	0.000	99.356	99.356	
524	0.000	99.356	99.356	
528	0.000	99.356	99.356	
532	0.000	99.356	99.356	
536	0.000	99.356	99.356	
540	0.000	99.356	99.356	
544	0.000	99.356	99.356	
548	0.000	99.356	99.356	
552	0.000	99.356	99.356	
556	0.000	99.356	99.356	
560	0.000	99.356	99.356	
564	0.000	99.356	99.356	
568	0.000	99.356	99.356	
572	0.000	99.356	99.356	
576	0.000	99.356	99.356	
580	0.000	99.356	99.356	
584	0.000	99.356	99.356	
588	0.000	99.356	99.356	
592	0.000	99.356	99.356	
596	0.000	99.356	99.356	
600	0.000	99.356	99.356	
604	0.000	99.356	99.356	
608	0.000	99.356	99.356	
612	0.000	99.356	99.356	
616	0.000	99.356	99.356	
620	0.000	99.356	99.356	
624	0.000	99.356	99.356	
628	0.000	99.356	99.356	
632	0.000	99.356	99.356	
636	0.000	99.356	99.356	
640	0.000	99.356	99.356	
644	0.000	99.356	99.356	
648	0.000	99.356	99.356	
652	0.000	99.356	99.356	
656	0.000	99.356	99.356	
660	0.000	99.356	99.356	
664	0.000	99.356	99.356	
668	0.000	99.356	99.356	
672	0.000	99.356	99.356	
676	0.000	99.356	99.356	
680	0.000	99.356	99.356	
684	0.000	99.356	99.356	
688	0.000	99.356	99.356	
692	0.000	99.356	99.356	
696	0.000	99.356	99.356	
700	0.000	99.356	99.356	
704	0.000	99.356	99.356	
708	0.000	99.356	99.356	
712	0.000	99.356	99.356	
716	0.000	99.356	99.356	
720	0.000	99.356	99.356	
724	0.000	99.356	99.356	
728	0.000	99.356	99.356	
732	0.000	99.356	99.356	
736	0.000	99.356	99.356	
740	0.000	99.356	99.356	
744	0.000	99.356	99.356	
748	0.000	99.356	99.356	
752	0.000	99.356	99.356	
756	0.000	99.356	99.356	
760	0.000	99.356	99.356	
764	0.000	99.356	99.356	
768	0.000	99.356	99.356	
772	0.000	99.356	99.356	
776	0.000	99.356	99.356	
780	0.000	99.356	99.356	
784	0.000	99.356	99.356	
788	0.000	99.356	99.356	
792	0.000	99.356	99.356	
796	0.000	99.356	99.356	
800	0.000	99.356	99.356	
804	0.000	99.356	99.356	
808	0.000	99.356	99.356	
812	0.000	99.356	99.356	
816	0.000	99.356	99.356	
820	0.000	99.356	99.356	
824	0.000	99.356	99.356	
828	0.000	99.356	99.356	
832	0.000	99.356	99.356	
836	0.000	99.356	99.356	
840	0.000	99.356	99.356	
844	0.000	99.356	99.356	
848	0.000	99.356	99.356	
852	0.000	99.356	99.356	
856	0.000	99.356	99.356	
860	0.000	99.356	99.356	
864	0.000	99.356	99.356	
868	0.000	99.356	99.356	
872	0.000	99.356	99.356	
876	0.000	99.356	99.356	
880	0.000	99.356	99.356	
884	0.000	99.356	99.356	
888	0.000	99.356	99.356	
892	0.000	99.356	99.356	
896	0.000	99.356	99.356	
900	0.000	99.356	99.356	
904	0.000	99.356	99.356	
908	0.000	99.356	99.356	
912	0.000	99.356	99.356	
916	0.000	99.356	99.356	
920	0.000	99.356	99.356	
924	0.000	99.356	99.356	
928	0.000	99.356	99.356	
932	0.000	99.356	99.356	
936	0.000	99.356	99.356	
940	0.000	99.356	99.356	
944	0.000	99.356	99.356	
948	0.000	99.356	99.356	
952	0.000	99.356	99.356	
956	0.000	99.356	99.356	
960	0.000	99.356	99.356	
964	0.000	99.356	99.356	
968	0.000	99.356	99.356	
972	0.000	99.356	99.356	
976	0.000	99.356	99.356	
980	0.000	99.356	99.356	
984	0.000	99.356	99.356	
988	0.000	99.356	99.356	
992	0.000	99.356	99.356	



6FEB78

TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

PAGE 7

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACTI
0	0			
3	0			
6	0			
9	0			
12	0			
15	0			
18	0			
21	0			
24	0			
27	0			
30	0			
33	0			
36	0			
39	0			
42	0			
45	0			
48	0			
51	0			
54	0			
57	0			
60	0			
10	26,812	26.812	26.812	
20	0,000	0.000	26.812	
30	53,896	53.896	80,708	
40	1,526	1.526	82,234	
50	5,266	5.266	87,500	
60	0,436	0.436	87,936	
70	0,545	0.545	88,481	
80	2,943	2.943	91,424	
90	1,090	1.090	92,514	
100	0,272	0.272	92,786	
110	0,109	0.109	92,895	
120	0,981	0.981	93,876	
130	2,125	2.125	96,001	
140	0,000	0.000	96,001	
150	0,218	0.218	96,219	
160	0,000	0.000	96,219	
170	0,327	0.327	96,546	
180	0,381	0.381	96,927	
190	0,599	0.599	97,526	
200	0,218	0.218	97,744	
210	0,109	0.109	97,853	
220	0,000	0.000	97,853	
230	0,000	0.000	97,853	
240	0,109	0.109	97,962	
250	0,109	0.109	98,071	
260	0,109	0.109	98,180	
270	0,000	0.000	98,180	
280	0,381	0.381	98,561	
290	1,035	1.035	99,596	
300	0,000	0.000	99,596	
310	0,000	0.000	99,596	
320	0,109	0.109	99,705	
330	0,000	0.000	99,705	
340	0,000	0.000	99,705	
350	0,000	0.000	99,705	
360	0,000	0.000	99,705	
370	0,000	0.000	99,705	
380	0,000	0.000	99,705	
390	0,000	0.000	99,705	
400	0,000	0.000	99,705	
410	0,000	0.000	99,705	
420	0,000	0.000	99,705	
430	0,000	0.000	99,705	
440	0,054	0.054	99,759	
450	0,000	0.000	99,759	
460	0,000	0.000	99,759	
470	0,000	0.000	99,759	
480	0,000	0.000	99,759	
490	0,800	0.800	99,759	
500	0,000	0.000	99,759	
510	0,000	0.000	99,759	
520	0,000	0.000	99,759	
530	0,000	0.000	99,759	
540	0,000	0.000	99,759	
550	0,109	0.109	99,868	
560	0,000	0.000	99,868	
570	0,000	0.000	99,868	
580	0,000	0.000	99,868	
590	0,000	0.000	99,868	
600	0,000	0.000	99,868	
610	0,000	0.000	99,868	
620	0,000	0.000	99,868	
630	0,000	0.000	99,868	
640	0,000	0.000	99,868	
650	0,000	0.000	99,868	
660	0,000	0.000	99,868	
670	0,000	0.000	99,868	
680	0,000	0.000	99,868	
690	0,000	0.000	99,868	
700	0,000	0.000	99,868	
710	0,000	0.000	99,868	
720	0,000	0.000	99,868	
730	0,000	0.000	99,868	
740	0,000	0.000	99,868	
750	0,109	0.109	100,000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 1635      SUM= 71107      MEAN= 36,750      VAR= 3026,242      SD= 54,7

TOTAL TRIPS OVER MAXP = 2  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 206  
 SKIN TREE NUMBER = 101

6FEB78

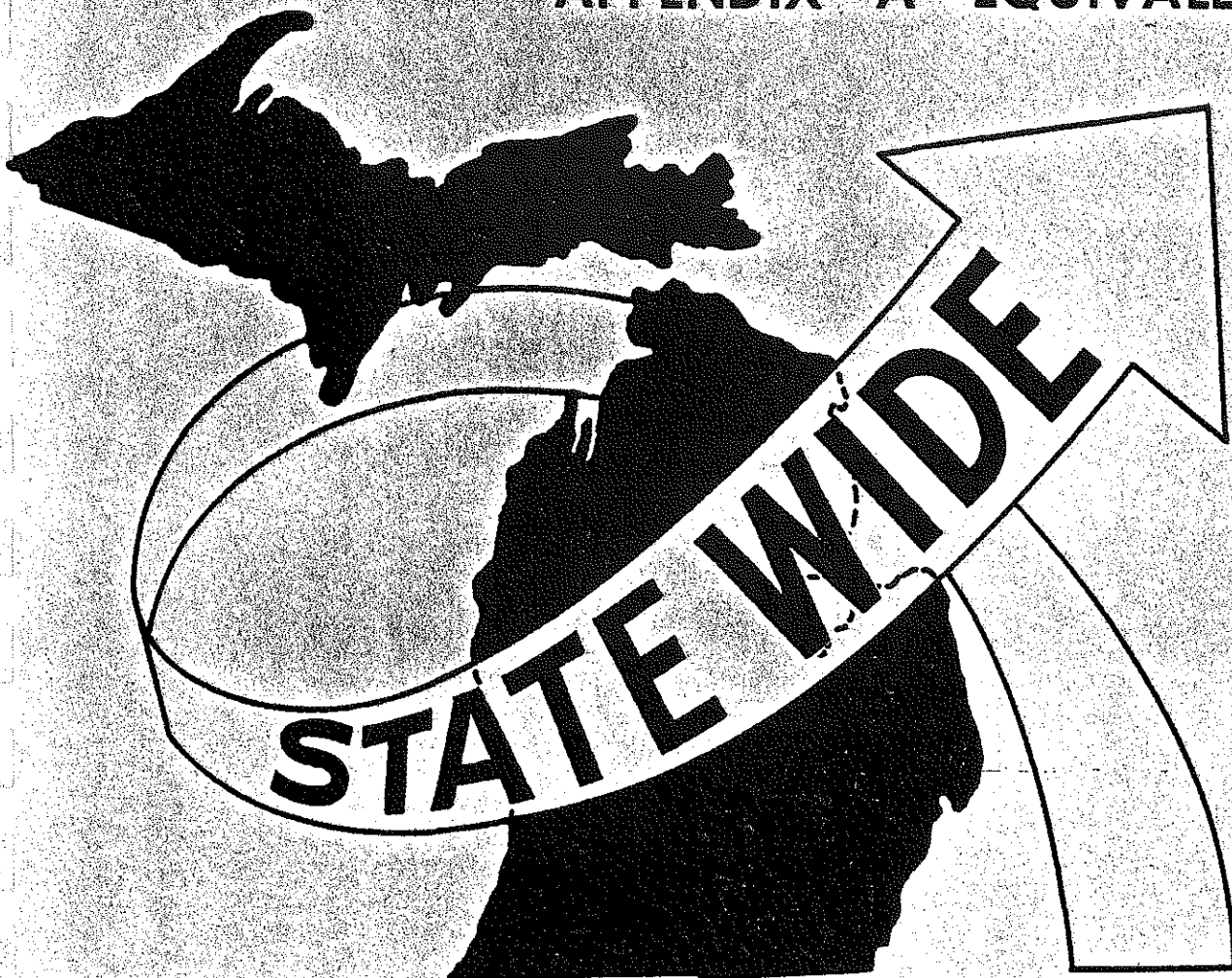
TRIP LENGTH FREQUENCY DISTRIBUTION-LUDINGTON

TRIP LENGTH	FREQUENCY	P.C.	CUM.	ACT
0	10	20.735	20.735	
3	20	0.000	20.735	
6	30	56.658	77.392	
9	40	2.505	79.897	
12	50	5.973	85.870	
15	60	0.321	86.191	
18	70	0.421	86.613	
21	80	2.773	89.386	
24	90	0.824	90.210	
27	100	0.393	90.603	
30	110	0.398	91.000	
33	120	1.652	92.653	
36	130	1.370	94.022	
39	140	0.043	94.066	
42	150	0.321	94.386	
45	160	0.187	94.573	
48	170	0.493	95.067	
51	180	0.283	95.349	
54	190	0.632	95.981	
57	200	0.278	96.259	
60	210	0.125	96.384	
	220	0.057	96.441	
	230	0.287	96.729	
	240	0.196	96.925	
	250	0.105	97.030	
	260	0.187	97.217	
	270	0.053	97.270	
	280	0.622	97.892	
	290	0.513	98.405	
	300	0.034	98.439	
	310	0.029	98.468	
	320	0.498	98.966	
	330	0.029	99.013	
	340	0.000	99.013	
	350	0.043	99.056	
	360	0.110	99.167	
	370	0.000	99.167	
	380	0.000	99.167	
	390	0.000	99.167	
	400	0.000	99.167	
	410	0.000	99.167	
	420	0.000	99.167	
	430	0.000	99.167	
	440	0.235	99.401	
	450	0.000	99.401	
	460	0.000	99.401	
	470	0.000	99.401	
	480	0.000	99.401	
	490	0.086	99.487	
	500	0.000	99.487	
	510	0.000	99.487	
	520	0.014	99.502	
	530	0.000	99.502	
	540	0.177	99.679	
	550	0.024	99.703	
	560	0.000	99.703	
	570	0.014	99.717	
	580	0.000	99.717	
	590	0.043	99.761	
	600	0.832	99.794	
	610	0.019	99.813	
	620	0.000	99.813	
	630	0.019	99.832	
	640	0.000	99.832	
	650	0.000	99.832	
	660	0.000	99.832	
	670	0.000	99.832	
	680	0.000	99.832	
	690	0.056	99.919	
	700	0.000	99.919	
	710	0.000	99.919	
	720	0.000	99.919	
	730	0.000	99.919	
	740	0.000	99.919	
	750	0.081	100.000	

REMAINING VALUES ARE ALL ZERO  
 NUMBER OF OBSERVATIONS= 20878      SUM= 951621      MEAN= 45.580      VAR= 4851.158      SD= 69.6

TOTAL TRIPS OVER MAXP = 17  
 TOTAL TRIPS OVER 255 = 0  
 VOLUME TABLE NUMBER = 207  
 SKIN TREE NUMBER = 101

**APPENDIX "A"-EQUIVALENCE LIST**



ZONE	COUNTY	TOWNSHIP OR CITY
-----	-----	-----
001	ALCONA	ALCONA, CALEDONIA, GRENBUSH, 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, SPURF.
025	BARRY	HASTINGS(CITY).
026	BARRY	CARLTON, CASTLETON, HASTINGS, IRVING, RUTLAND, WOODLAND.
027	BARRY	ASSYRIA, BALTIMORE, BARPY, HOPE, JOHNSTOWN, MAPLE GROVE.
028	BARRY	ORANGEVILLE, PRAIRIEVILLE, THORNAPPLE, YANKEE SPRINGS.
029	RAY	BAY CITY.
030	RAY	BANGOR.
031	RAY	BEAVER, KAWKAWLIN, MONITOR, WILLIAMS.
032	RAY	FRANKENLUST, HAMPTON, MERRITT, PORTSMOUTH.
033	RAY	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, DRONOKO.
039	BERRIEN	BENTON, HAGAR, ST. JOSEPH.
040	BERRIEN	BAINBRIDGE, COLOMA, WATERVLIET.
041	BERRIEN	BERRIEN, PIPESTONE.
042	BERRIEN	BERTRAND, BUCHANAN, GAIEN, 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, NORLE.
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, GREENRUSH.
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) AND PENINSULA.
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	DUNGAN, 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	DATES, HEMATITE, IRON RIVER.
210	ISABELLA	MT PLEASANT.
211	ISABELLA	CHIPPEWA, COF.
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, LIRERTY.
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, OSHTENO.
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, FLMWOOD, 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.

370 OAKLAND	HOLLY, ROSE.
371 OAKLAND	GROVELAND, SPRINGFIELD.
372 OAKLAND	BRANDON, INDEPENDENCE.
373 OAKLAND	OAKLAND, ORION.
374 OAKLAND	ADDISON, OXFORD.
375 OAKLAND	
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, CARR 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, TALLMAUGE, 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, RICHLAND.
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, COTTRELLVILLE.  
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), REDFORD.
504	WAYNE	
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.
509	ONTARIO	LEAMINGTON, TILBURY, WINDSOR.
510	ONTARIO	SARNIA.
511	ONTARIO	FORT FRANCES, KENORA, SAULT STE. MARIE, SUDBURY, TIMMINS.
512	ONTARIO	CHATHAM, GODFRICH, HAMILTON, KITCHNER, LONDON, NIAGARA FALLS, WALLACEBURG.
513	ONTARIO	KINGSTON, OTTAWA, PEMBROKE, STURGEON FALLS, TORONTO.
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, TREMPLEAU, WOOD.
522	WISCONSIN	BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC,

523 WISCONSIN MENOMINEE, MONTO, OUTAGAMIE, SHAWANO, SHEBOYGAN, WAUPACA, WINNEBAGO.  
 524 WISCONSIN DANE, DODGE, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, ROCK, WALWORTH, WASHINGTON, WAUKESHA.  
 525 ILLINOIS ADAMS, COLUMBIA, CRAWFORD, GRANT, GREEN, GREEN LAKE, IOWA, JUNEAU, LA CROSSE, LAFAYETTE, MARQUETTE, MONROE, RICHLAND, SAUK, VERNON, WAUSHARA.  
 526 ILLINOIS BOONE, COOK, DE KALB, DU PAGE, GRUNDY, KANE, KENDALL, LAKE, MCHENRY, WILL, WINNEBAGO.  
 527 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, MCLFAN, MENARD, MERCER, MOULTRIE, OGLE, PEORIA, PIATT, PUTNAM, ROCK ISLAND, SANGAMON, STARK, STEPHENSON, TAZEVELL, VERMILION, WARREN, WHITESIDE, WOODFORD.  
 528 INDIANA ADAMS, ALEXANDER, BOND, BROWN, CALHOUN, CASS, CLARK, CLAY, FAYETTE, FRANKLIN, GALLATIN, GREENE, HAMILTON, HANCOCK, CLINTON, CRAWFORD, CUMPERLAND, 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.  
 529 INDIANA LAKE, PORTER.  
 530 INDIANA LAPORTE, STARKE.  
 531 INDIANA MARSHALL, ST JOSEPH.  
 532 INDIANA ELKHART, KOSCIUSKO.  
 533 INDIANA ALLEN, DE KALB, LAGRANGE, NOBLE, STEUBEN, WHITLEY.  
 534 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.  
 535 OHIO 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.  
 536 OHIO DEFIANCE, WILLIAMS.  
 537 OHIO FULTON, HENRY.  
 538 OHIO LUCAS, WOOD.  
 539 OHIO ALLEN, AUGLAIZE, CRAWFORD, DARKE, ERIE, HANCOCK, HARDIN, HURON, LOGAN, MARION, MERCER, OTTAWA, PAULDING, PUTNAM, SANDUSKY, SENECA, SHELBY, VAN WERT, WYANDOT.  
 540 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.  
 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, ARKANSAS, 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.