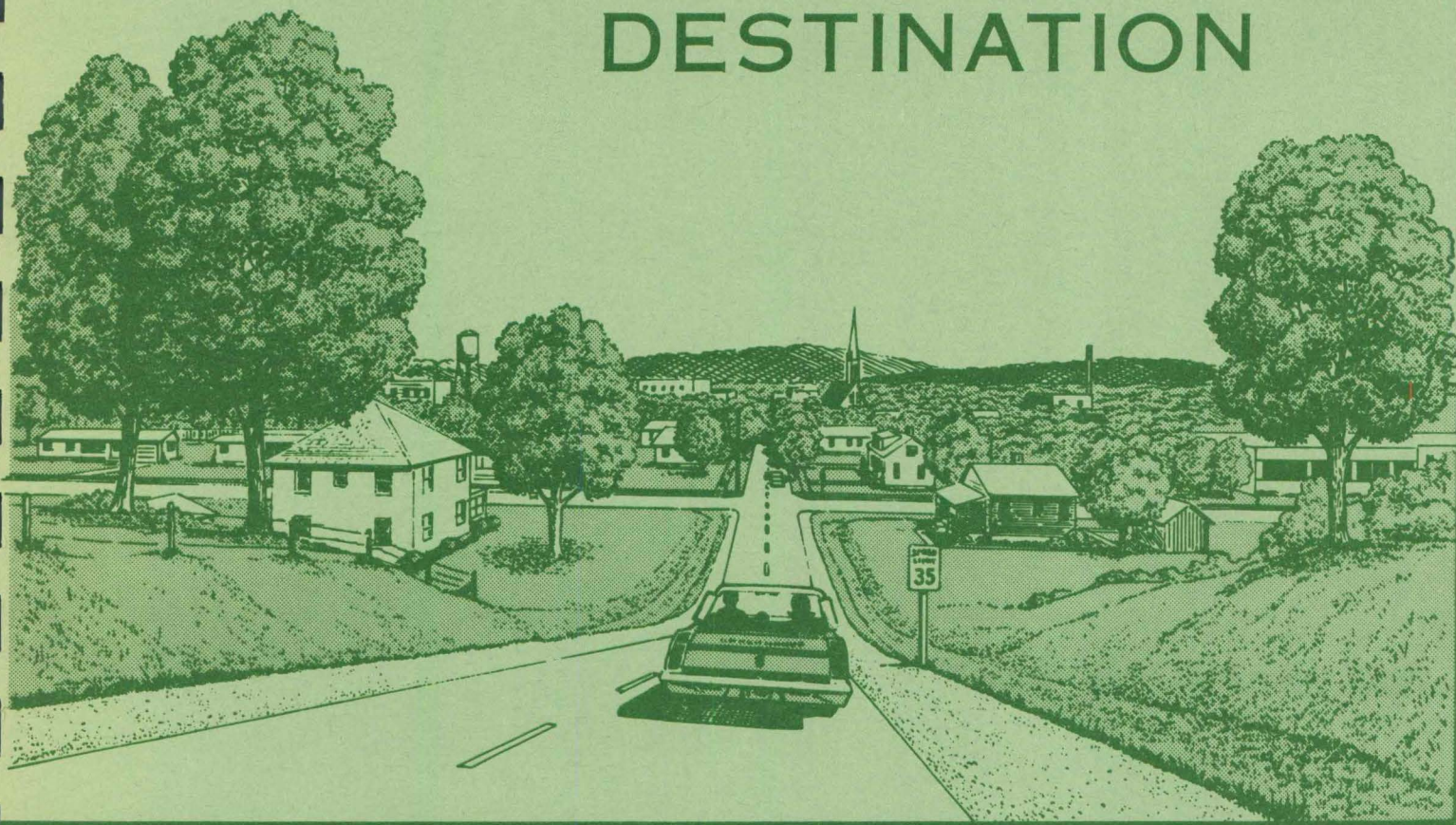


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CLARINDA

ORIGIN AND
DESTINATION



TRAFFIC REPORT

IOWA

JULY OF 1969

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Highway Planning

Origin and Destination Study

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STATE OF IOWA

CLARINDA

ORIGIN AND DESTINATION
TRAFFIC REPORT

DATA GATHERED JULY 1969

PUBLISHED APRIL 1970

PREPARED BY

HIGHWAY PLANNING SURVEYS DEPARTMENT
DIVISION OF PLANNING
IOWA STATE HIGHWAY COMMISSION

IN COOPERATION WITH THE

UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

Reproduction Cost \$3.10

INTRODUCTION

This report is based on an external origin and destination traffic survey that was made in Clarinda in July of 1969. The survey was conducted in cooperation with the United States Bureau of Public Roads and was made to determine the total number and type of vehicles entering or leaving the study area, along with specific origin-destination data from a representative sample of vehicle operators.

The purpose of this report is to summarize the data gathered in Clarinda and to present this data in a manner which will implement the determination of traffic needs and thereby provide a sound basis for street and highway planning.

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DEFINITIONS OF TECHNICAL TERMS

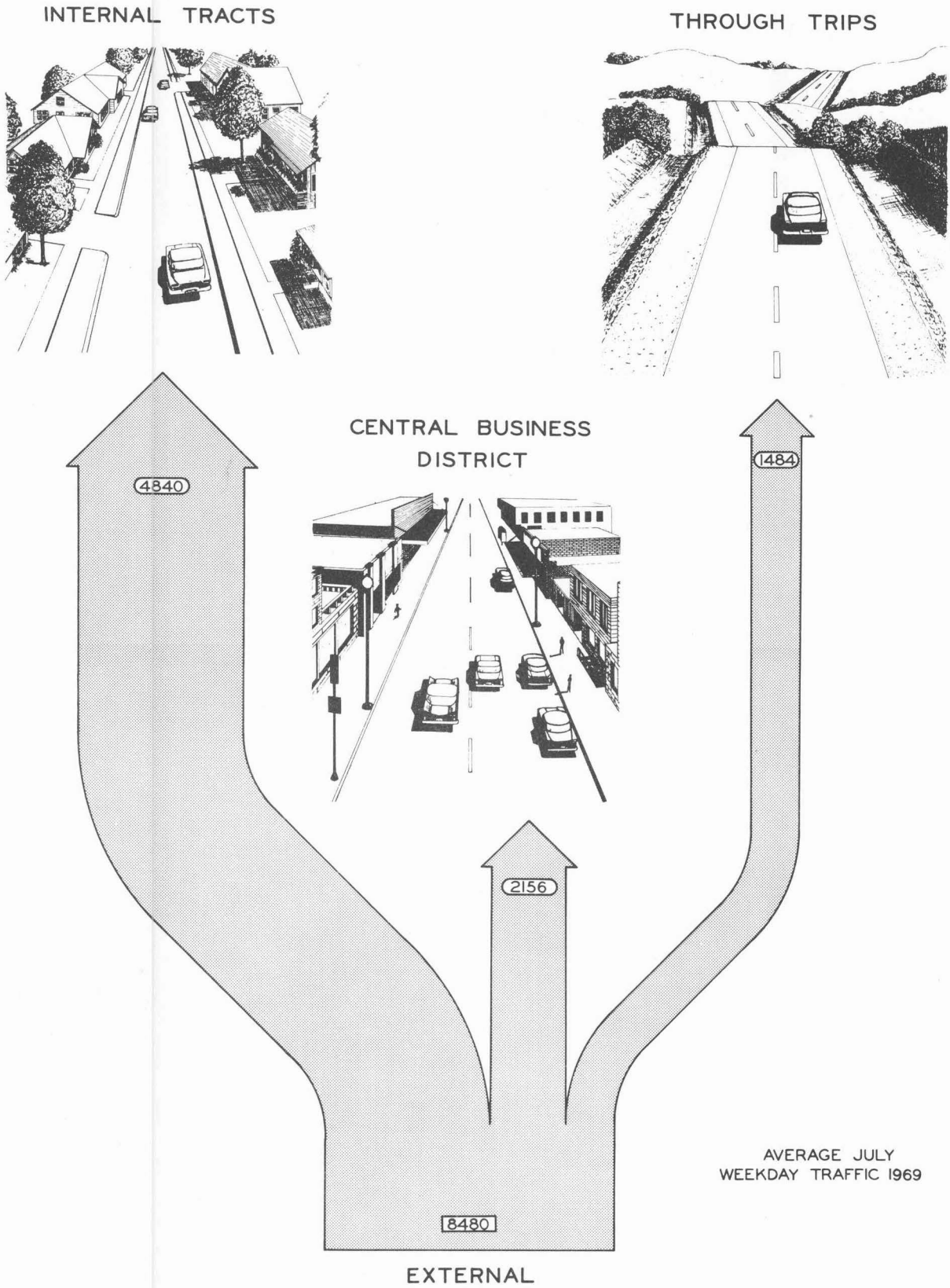
Study Area	The area enclosed by a cordon line of interview stations
Cordon Line	A hypothetical line determined by the location of traffic interview stations and used to delimit the area under study
Interview Station	A location at which vehicle drivers are stopped and interviewed
Code Station	A location on a street or highway at the point where it crosses the cordon line and at which traffic is counted but not interviewed
Central Business District	The major business district of a city
Origin	The location from which a driver started a trip
Destination	The location at which a trip was ended
Trip	The one-way travel between a point of origin and a point of destination
Internal Trip	A trip having both origin and destination within the study area
External Local Trip	A trip having either origin or destination within the study area and which passed through only one interview station in the cordon line enroute to its destination
External Through Trip	A trip having neither origin nor destination within the study area but which passes through it enroute to its destination
Traffic	The total number of vehicles passing a given point
Desire Line	A straight line between the point of origin and a point of destination without regard to routes of travel



Significant Facts



FIGURE I-1
DISTRIBUTION OF TRIPS
CLARINDA STUDY AREA



SUMMARY

The chart at left graphically illustrates some of the more significant traffic volumes derived from the Clarinda origin and destination traffic survey. An average of 8,480 trips per day passed through the external cordon line of interview stations surrounding the study area during the survey period.

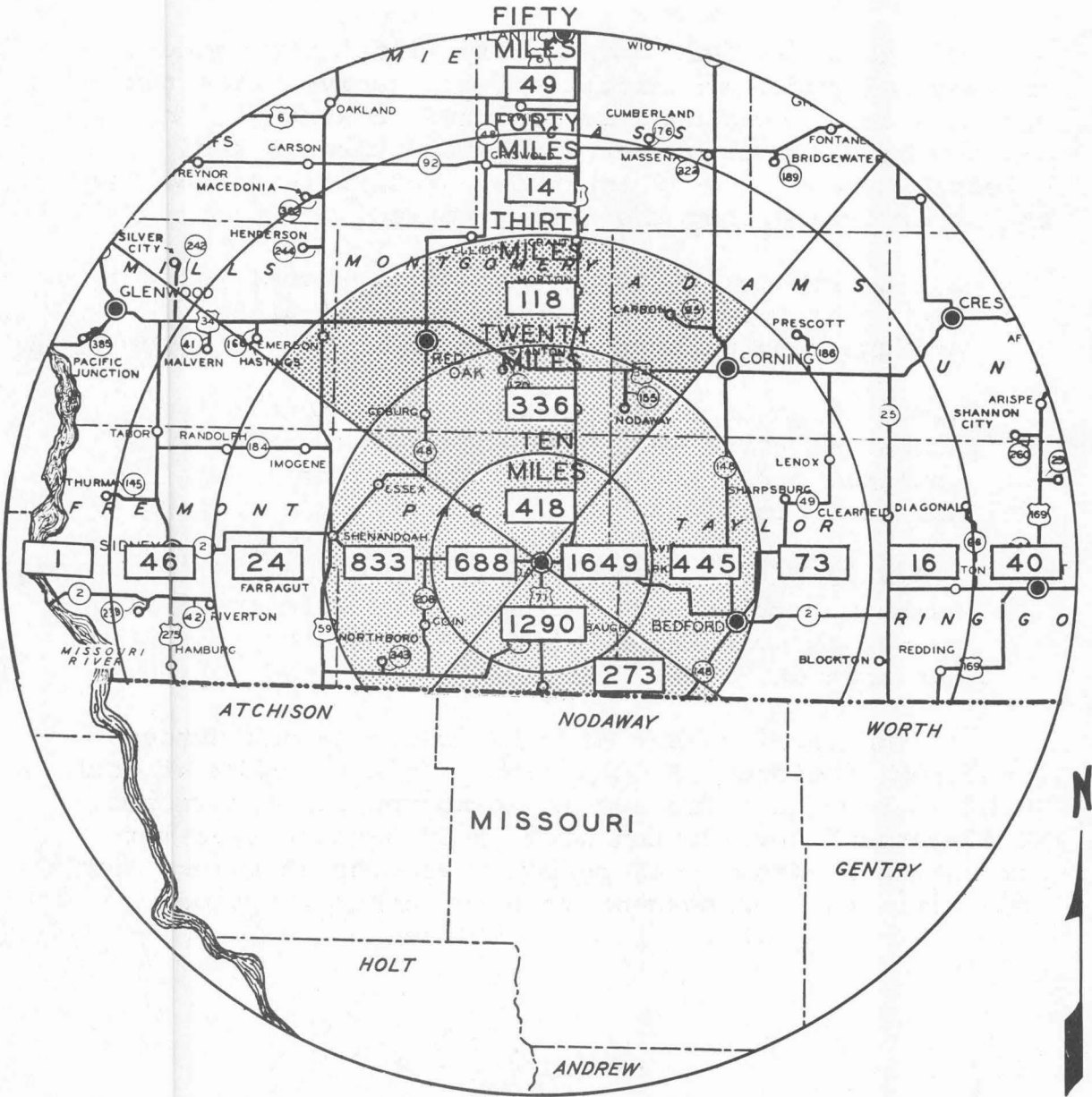
2,156 trips or 25.42 percent of the total number of trips were between external areas and the central business district.





4,840 trips or 57.08 percent of the total number of trips were between external and internal areas exclusive of the central business district.

1,484 trips or 17.50 percent of the total number of trips were through trips which passed through Clarinda enroute to another destination.

Of the total number of trips which passed through interview stations, 15.08 percent began or ended at work, 28.82 percent were for social or recreational purposes, 19.43 percent were during work, 9.00 percent were for personal business, 19.15 percent were for shopping, and the remaining 8.52 percent were for other purposes.

**FIGURE 1-2
REGIONAL INFLUENCE OF THE
CLARINDA STUDY AREA**



-  0 TO 100 TRIPS
-  100 TO 200 TRIPS
-  200 TO 400 TRIPS
-  400 AND OVER

1969 AVERAGE JULY
WEEKDAY TRAFFIC

Table 1-1
REGIONAL INFLUENCE OF THE CLARINDA STUDY AREA
IN IOWA

1969 Average July Weekday Traffic

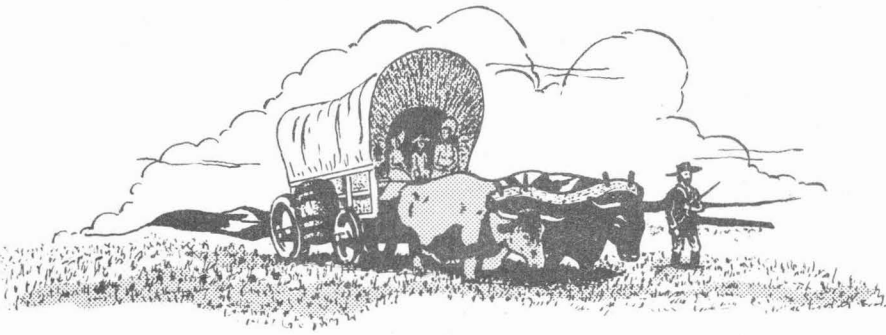
Miles From Study Area		Number of Trips	Percent of Total Trips Within a Fifty-Mile Radius
North	0 - 10	418	6.62
	10 - 20	336	5.32
	20 - 30	118	1.87
	30 - 40	14	.22
	40 - 50	49	.78
North Total		935	14.81
East	0 - 10	1,649	26.12
	10 - 20	445	7.05
	20 - 30	73	1.16
	30 - 40	16	.25
	40 - 50	40	.63
East Total		2,223	35.21
West	0 - 10	688	10.90
	10 - 20	833	13.19
	20 - 30	24	.38
	30 - 40	46	.73
	40 - 50	1	.02
West Total		1,592	25.22
South	0 - 10	1,290	20.43
	10 - 20	273	4.33
	20 - 30	--	--
	30 - 40	--	--
	40 - 50	--	--
South Total		1,563	24.76
Grand Total		6,313	100.00

TABLE 1-2
VEHICLE TYPE SUMMARY
CLARINDA STUDY AREA

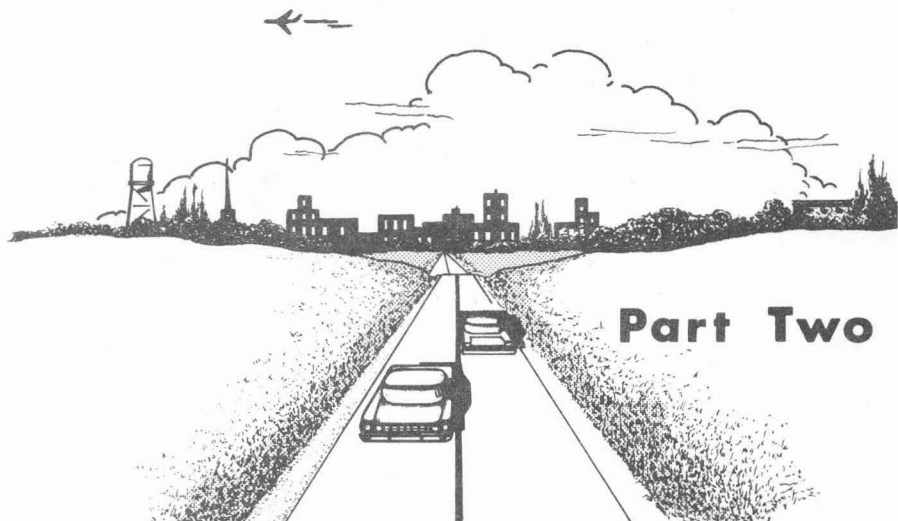
1969 AVERAGE JULY WEEKDAY TRAFFIC

Station	Location	Passenger Cars	Pickup and Panel	Single Unit Trucks	Truck Combinations	Total
701	F.A.S. 1001 North	497	86	31	21	635
705	U.S. 71, Iowa 2 East	2,756	541	330	135	3,762
706	F.A.S. 3402 Southeast	111	43	6	--	160
708	U.S. 71 South	2,028	317	150	173	2,668
711	Ia. 2 West	2,147	270	184	132	2,733
Total		7,539	1,257	701	461	9,958

The totals shown above include the duplication of those trips which passed entirely through the study area and were, therefore, interviewed twice.



*History
and
Development*



Part Two

HISTORY

Clarinda is the county seat of Page County. Organized in 1851, Page County is named for Captain John Page, killed in the Battle of Palo Alto during the Mexican War.

In 1852 the Iowa Legislature appointed John Scott, Thomas Gordon and Jacob Miller to locate and plat a county seat for Page County. The legislature chose the name Clarinda. In 1866 Clarinda was incorporated.

Clarinda's post office was founded in 1854. President Franklin Pierce appointed County Judge S. F. Snider as first postmaster. Prior to this time residents of Clarinda had picked up their mail at Boulware's Mill.

The municipal water works was established in 1886. In 1891 a municipal sewer system was added. Since then the systems have been expanded to keep pace with the growth of Clarinda.

In 1903, the Lee Electric Light Company was organized. From its central steam powered plant the company provided electric power for Clarinda citizens, and heating for nearly all downtown businesses and some residences. Electric power is now purchased from the Iowa Power and Light Company. Natural gas is furnished through a franchise with Iowa Electric Light and Power Company.

Citizens of Clarinda began soliciting subscriptions for a public library in 1904. In 1905 a letter to Andrew Carnegie brought a \$15,000 donation, used to build the library building, which is still in use.

Fire protection was provided in the early days by a volunteer fire department, organized at the same time as the town. It is now provided by a force of 20 volunteers, equipped with three firetrucks and a radio equipped rescue unit. Police protection is provided by seven fulltime officers and two radio equipped squad cars.

The first newspaper in Clarinda was the Page County Herald, founded in 1859 by C. B. Showmaker. In 1893 the Clarinda Journal was founded by J. P. Kenea and Edwin C. Lane. The two papers were later merged into the present Herald Journal which is published twice weekly.

In November 1871 the Brownsville and Nodaway Railroad was finished from Villisca to Clarinda. Railway freight service is now provided to citizens of Clarinda by the Chicago, Burlington and Quincy Railroad.

Clarinda's first school was built in 1854. Called the "Old Cottonwood School", it was taught by Elijah Miller. Educational facilities in Clarinda now include three elementary schools, one junior high school, one high school and a community college. In addition there are two parochial schools serving Clarinda.

Medical services are provided by a modern municipal hospital, a medical clinic and several private practitioners. One of three Iowa State Mental Health Hospitals is located in Clarinda.

Several industries located in Clarinda include tool and die works, plastic products, printed items, and construction.

Clarinda is served by U.S. Highway 71 and Iowa Highway 2. Six local trucking concerns and five other trucking companies make use of these highway facilities and provide freight service to other cities.

POPULATION TRENDS
CLARINDA POPULATION

Table 2-1

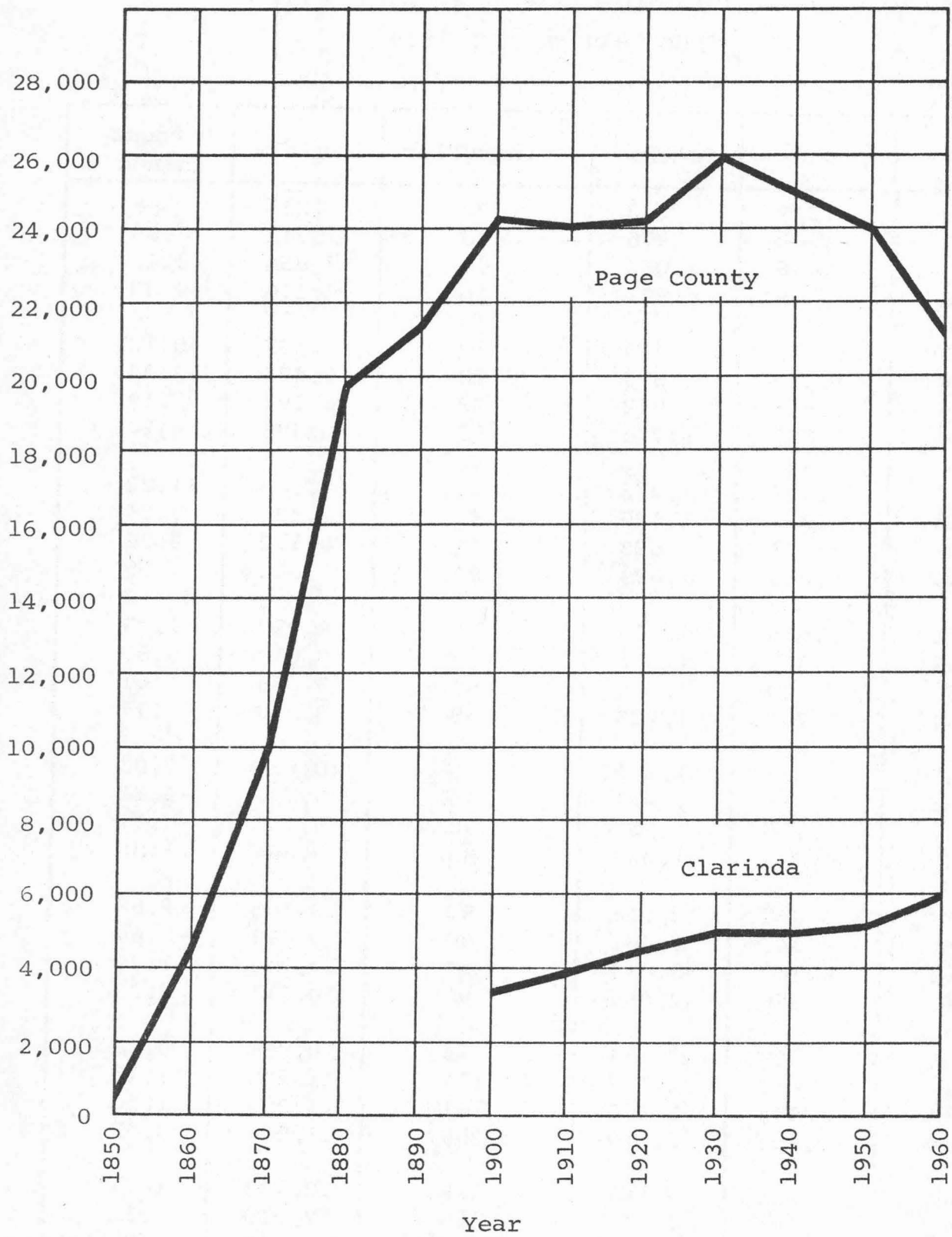
Census Year	Clarinda Population	Volume Increase or Decrease	Percent Change 10-Year Period
1900	3,276	---	---
1910	3,832	556	16.97
1920	4,511	679	17.72
1930	4,962	451	10.00
1940	4,905	- 57	- 1.15
1950	5,086	181	3.69
1960	5,901	815	16.02

PAGE COUNTY POPULATION

Table 2-2

Census Year	Page Co. Population	Volume Increase or Decrease	Percent Change 10-Year Period
1850	551	---	---
1860	4,419	3,868	702.00
1870	9,975	5,556	125.73
1880	19,667	9,692	97.16
1890	21,341	1,674	8.51
1900	24,187	2,846	13.34
1910	24,002	- 185	- .76
1920	24,137	135	.56
1930	25,904	1,767	7.32
1940	24,887	- 1,017	- 3.93
1950	23,921	- 966	- 3.88
1960	21,023	- 2,898	- 12.11

Figure 2-1
Population Trends



Year

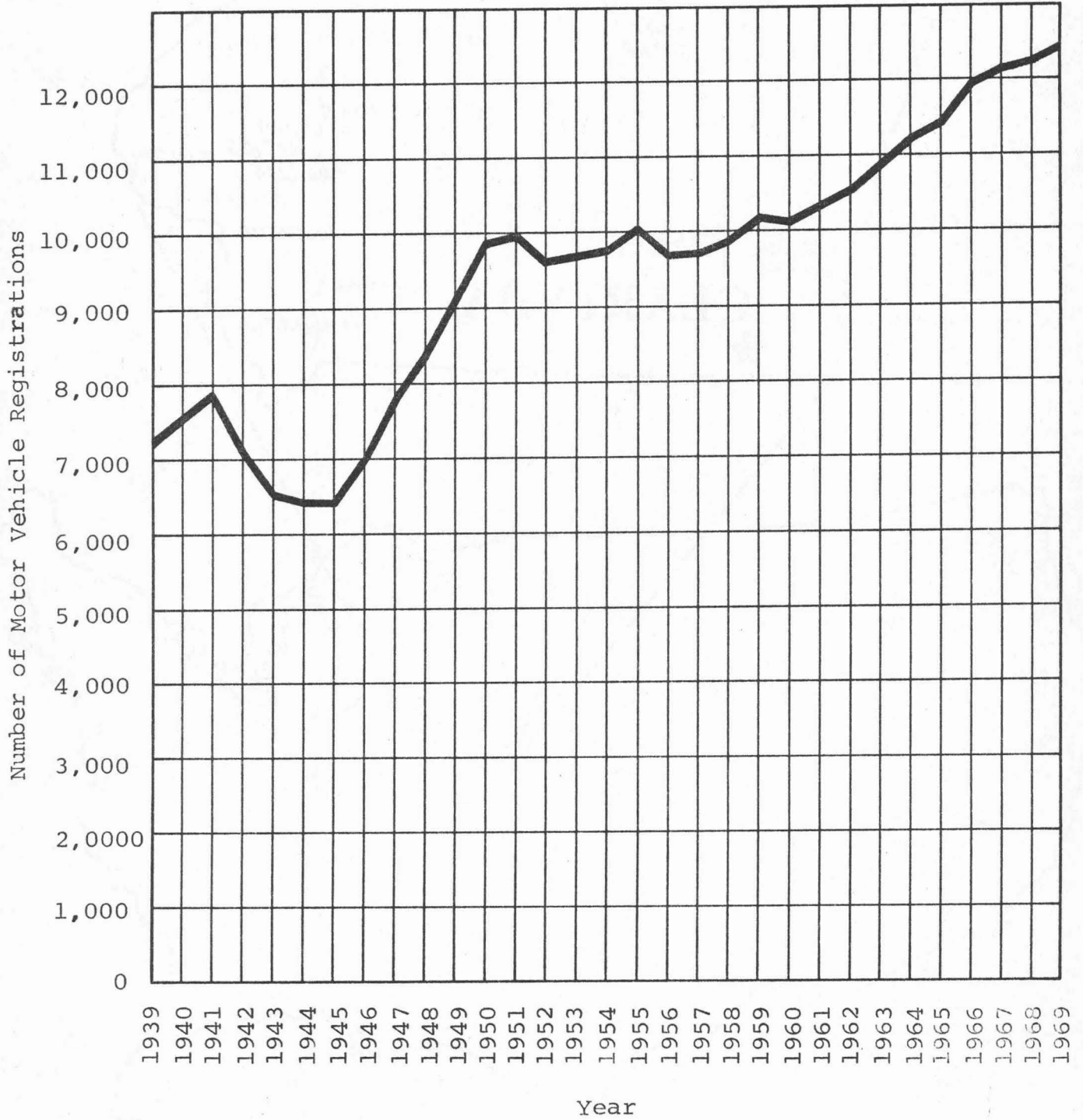
Table 2-3

MOTOR VEHICLE REGISTRATION IN PAGE COUNTY
FROM 1939 THROUGH 1969

Year	Autos	Trucks	Motorcycles	Total	Percent Change
1939	6,379	832	22	7,233	--
1940	6,549	976	18	7,543	4.29
1941	6,776	1,063	15	7,854	4.12
1942	6,149	951	16	7,116	-9.40
1943	5,596	930	12	6,538	-8.12
1944	5,493	879	13	6,385	-2.34
1945	5,463	912	22	6,397	.19
1946	5,857	1,076	55	6,988	9.24
1947	6,418	1,273	81	7,772	11.22
1948	6,830	1,420	85	8,335	7.24
1949	7,395	1,623	94	9,112	9.32
1950	8,015	1,699	89	9,803	7.58
1951	8,065	1,858	74	9,997	1.98
1952	7,696	1,852	69	9,617	-3.80
1953	7,733	1,889	54	9,676	.61
1954	7,761	1,933	58	9,752	.79
1955	8,011	1,972	55	10,038	2.93
1956	7,715	1,927	74	9,716	-3.21
1957	7,730	1,905	70	9,705	-.11
1958	7,838	1,958	88	9,884	1.84
1959	8,037	2,034	92	10,163	2.82
1960	8,047	1,961	90	10,098	-.64
1961	8,162	2,014	94	10,270	1.70
1962	8,356	2,065	90	10,511	2.35
1963	8,609	2,164	93	10,866	3.38
1964	8,817	2,277	114	11,208	3.15
1965	8,942	2,300	141	11,383	1.56
1966	9,159	2,519	265	11,943	4.92
1967	9,234	2,561	328	12,123	1.51
1968	9,181	2,669	360	12,210	.72
1969	9,291	2,781	366	12,438	1.87

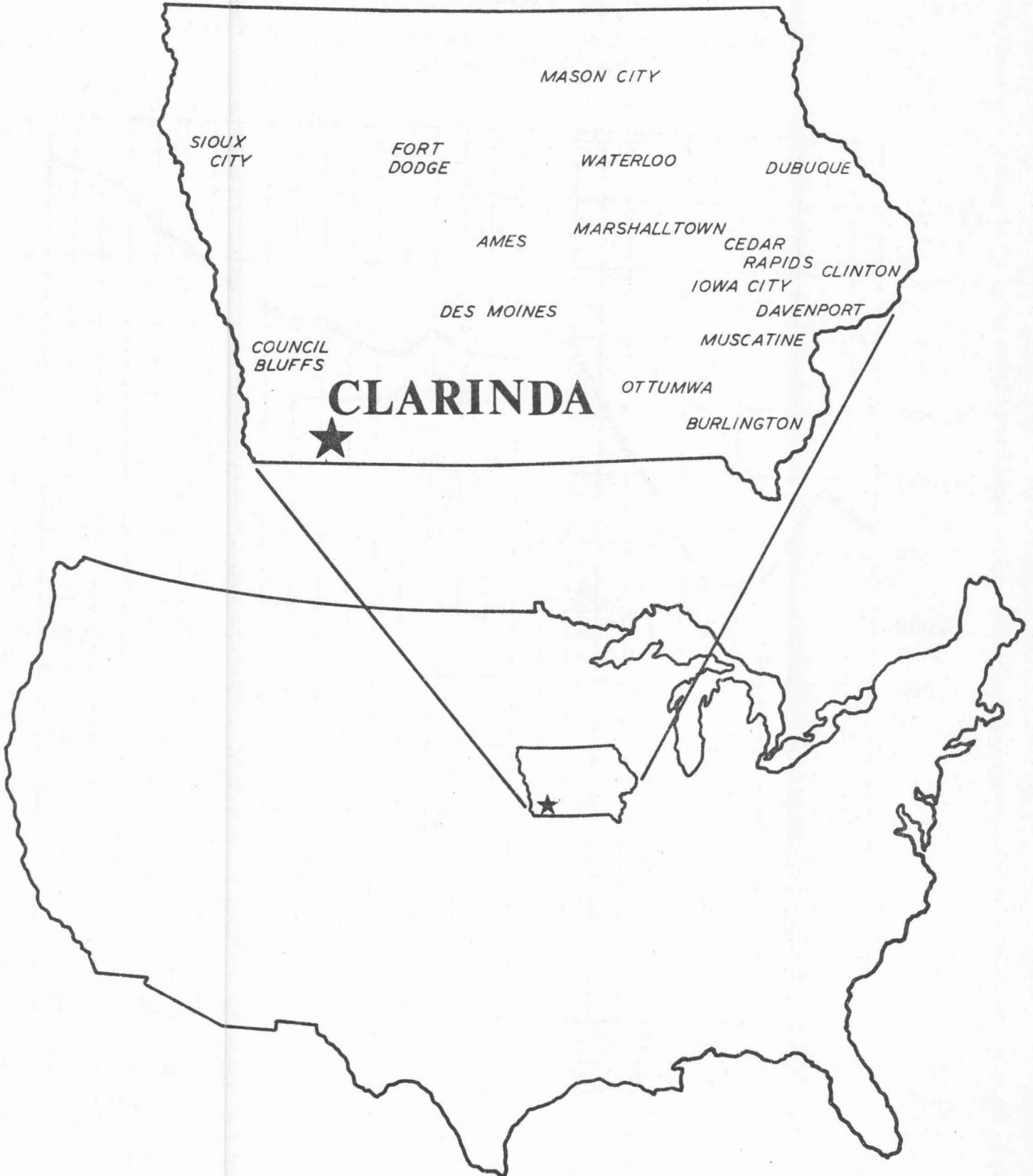
Figure 2-2

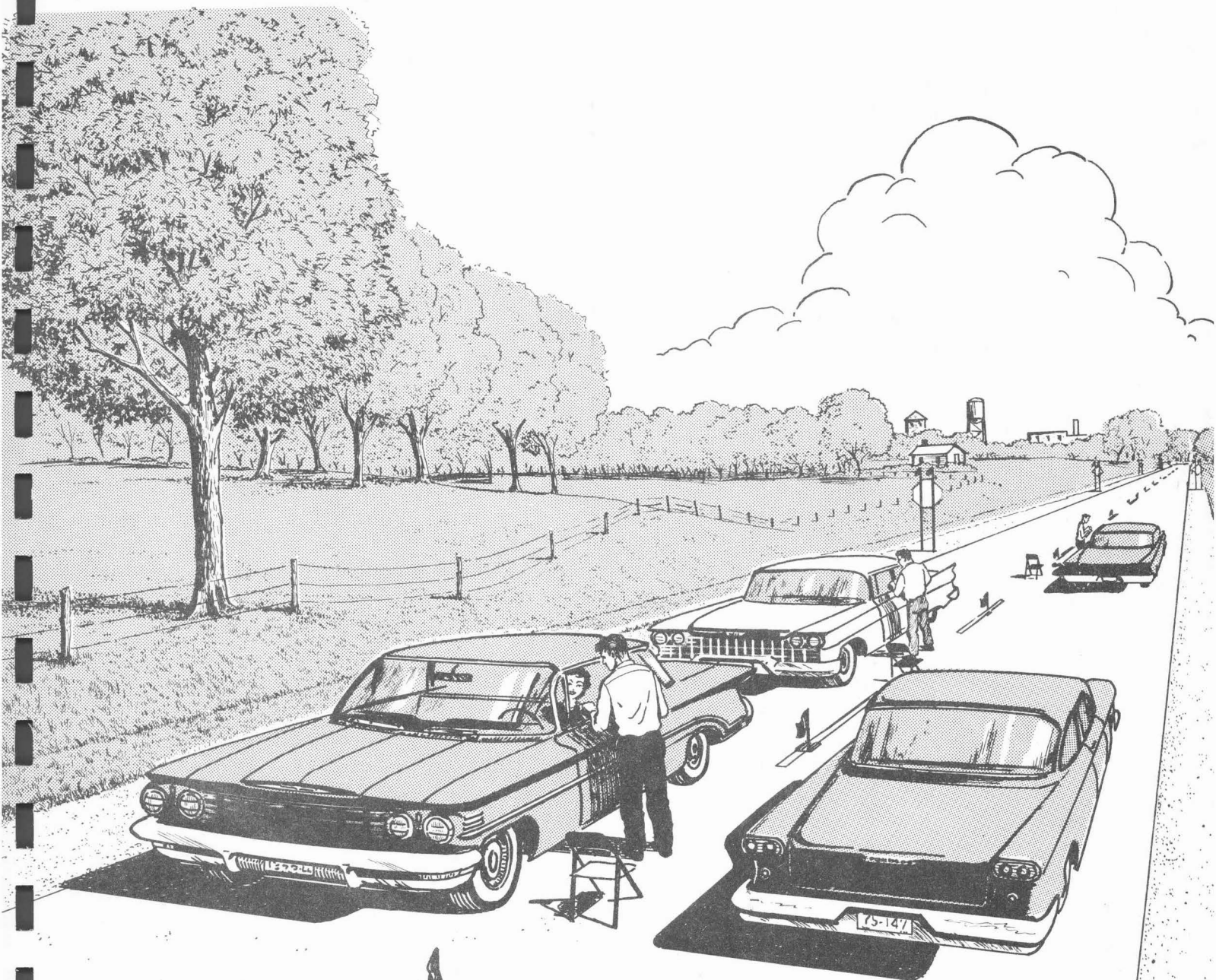
Motor Vehicle Registration in Page County
From 1939 Through 1969



Year

FIGURE 2-3
STUDY AREA POSITION





Survey

Procedures

Part Three

THE SURVEY

An external origin and destination traffic survey, of the type conducted in Clarinda, is designed primarily to determine the origin, destination, and purpose of travel, along with the number and type of all vehicles entering or leaving the study area in a given period of time.

It has been demonstrated that travel is an expression of behavior and as such, tends to be repetitive. It is this repetition which enables the statistician and the highway planner to expand and project current data for the prediction of future needs.

In order to obtain accurate information upon which to base an analysis, it is necessary to interview vehicle drivers at strategically located interview stations. A cordon line composed of interview stations and code stations was located around the perimeter of the study area. Interview stations were located on all major roads entering the study area and all other roads were assigned station code numbers to facilitate the organization of interview data for those through trips which passed through only one interview station. The study area was divided into 15 tracts, and all trips which had either their origin or their destination within the study area were traced to one of these tracts.

Interviewing for the Clarinda survey was done between July 15th and 18th in 1969. All vehicles passing through interview stations during a 15-hour period from 6 a.m. to 9 p.m. were questioned concerning the origin, destination, and purpose of the trip in progress. In addition, the vehicle type was recorded along with the location where it was normally parked or garaged, the place of registration, direction of travel, and number of occupants.

Mechanical traffic recorders were placed at the location of each interview station and were operated continuously for a period of five weekdays, including the day on which the interviewing was done. Manual vehicle classification counts were also taken and, together with the data provided by the mechanical recorders, were used to expand the interview data to 24-hour average July weekday traffic for 1969.

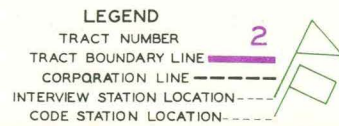
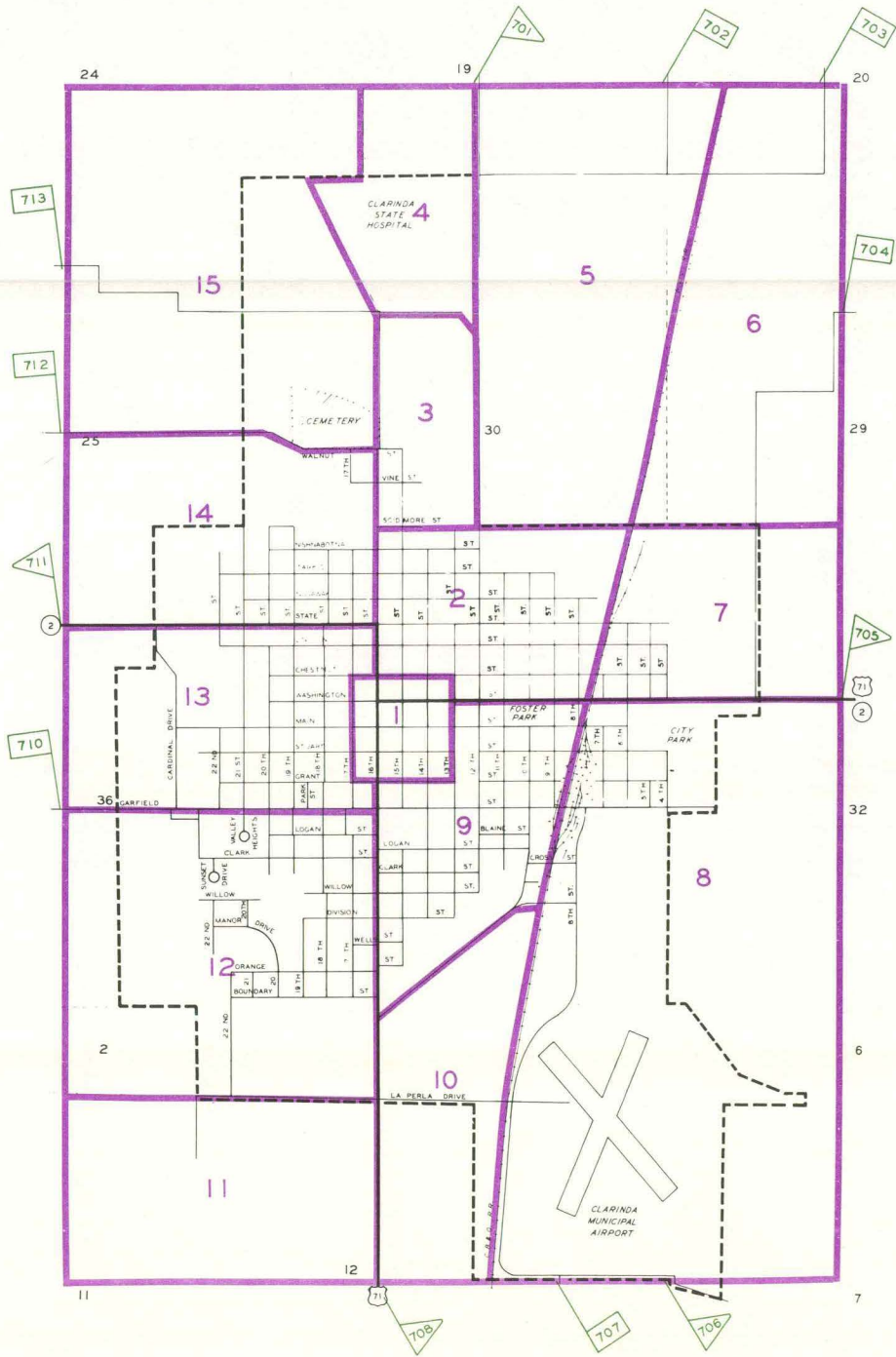
At the conclusion of the field work, the data pertaining to each trip were coded and punched on tabulating cards. These cards were then sorted and tabulated by machine according to the tract of origin or destination and the station or stations through which each trip passed.

In an external survey of this type, all trips are placed in two main categories composed of "external local trips" and "external through trips". External local trips have only one terminal (which may be either the origin or destination) within the study area and, therefore, pass through only one interview station while enroute to their destination. Trips which have neither origin nor destination within the study area, but must pass through it enroute to another destination, are classified as external through trips. Trips in this category must cross the cordon line at least twice while enroute to their destination.

Traffic flow charts indicating trip termini by tract of origin or destination are included in this report along with a series of desire line charts showing desired routes of travel in straight lines between interview stations and internal tracts.

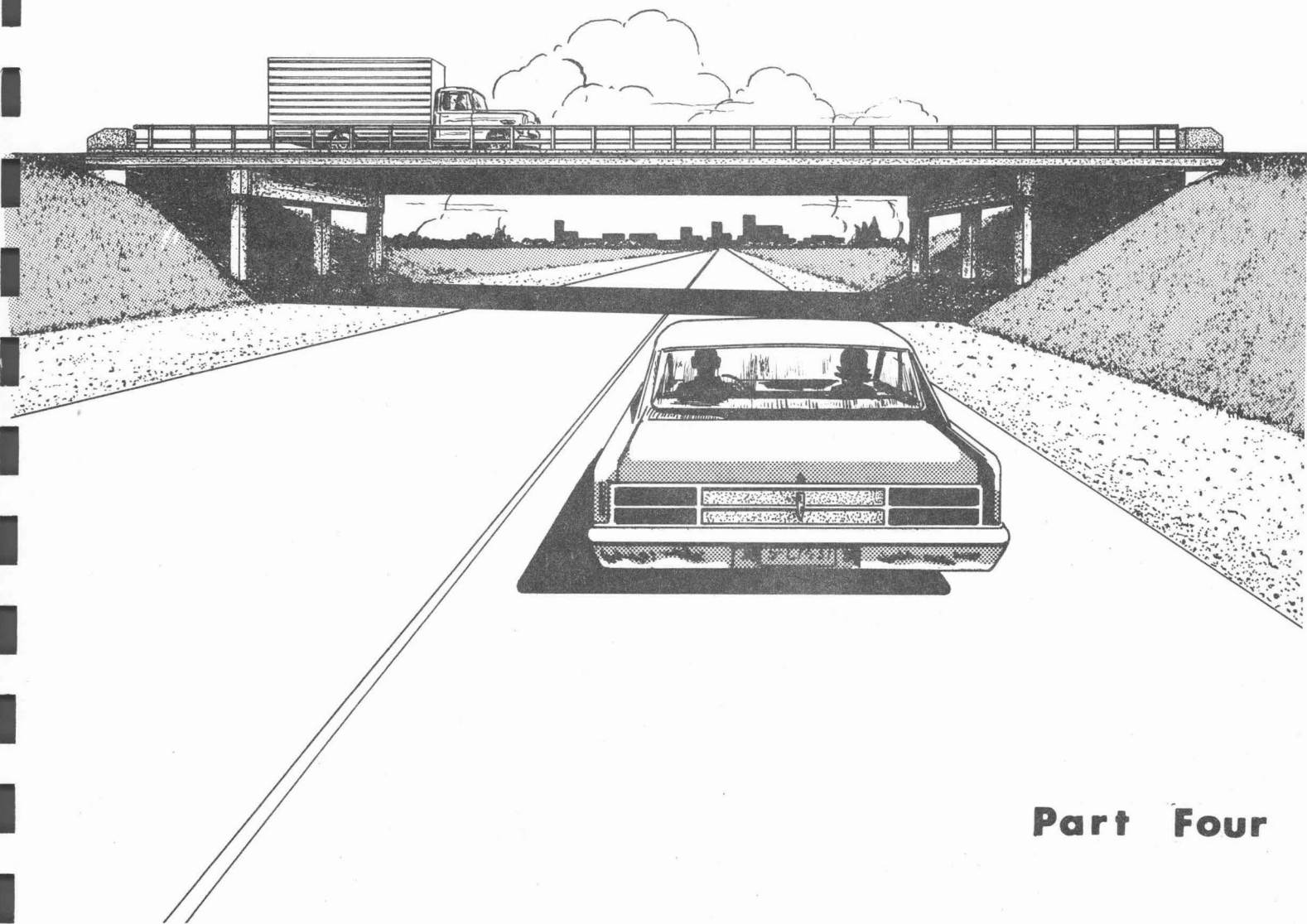
FIGURE 3-1
TRACT MAP OF THE
CLARINDA STUDY AREA

JULY 1969



Traffic

Movements



Part Four

TRAFFIC FLOW CHARTS

The following traffic flow charts illustrate the internal dispersion of trips between points of origin and/or destination through the stations indicated. These charts are not intended to show exact routes, but rather to show trip volume by tract of origin or destination and the number of trips passing through each external interview station. Trip origins and destinations are not differentiated and the tract or station totals shown include both origins and destinations.

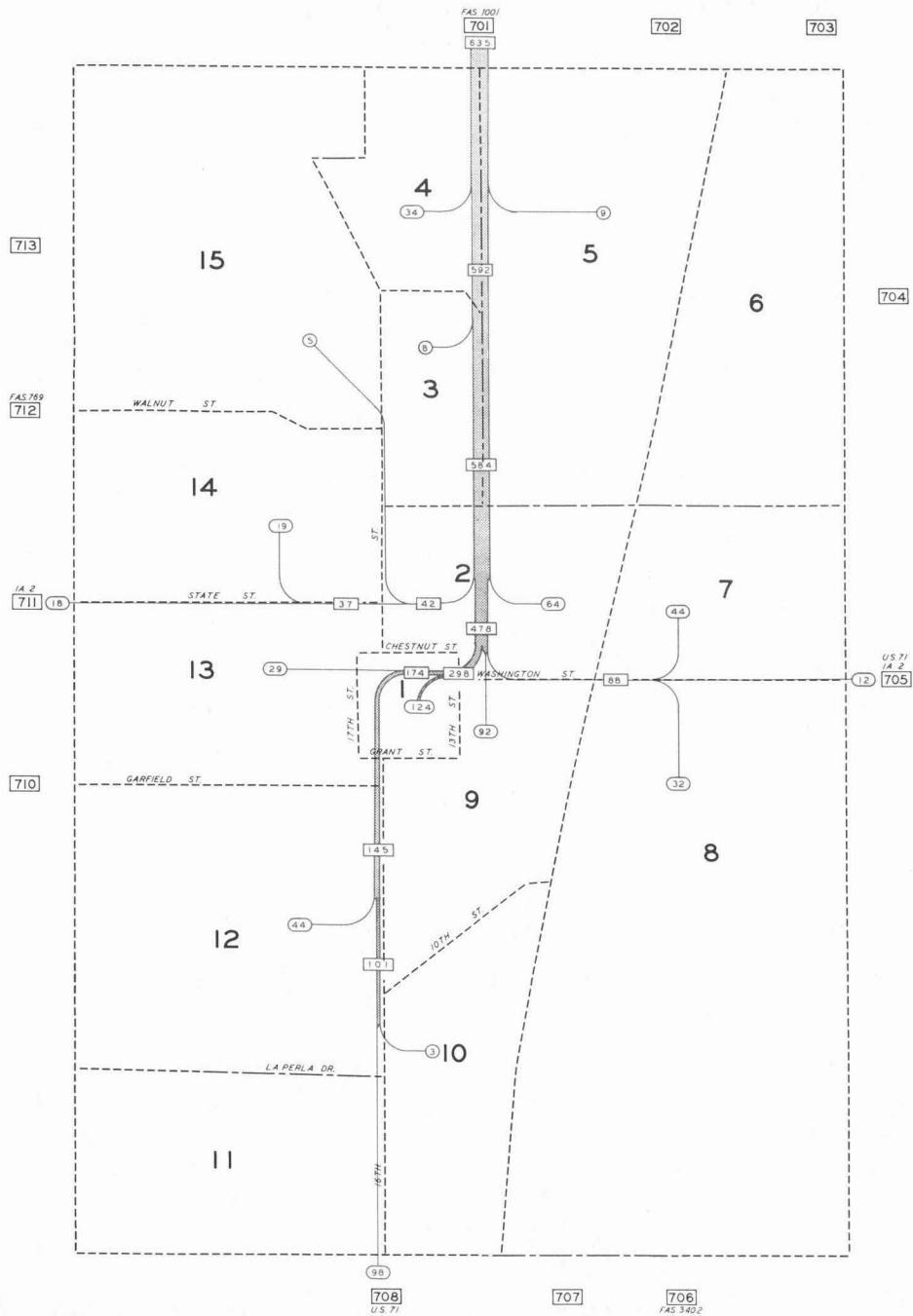
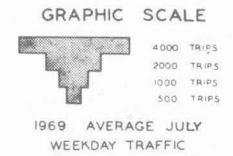


FIGURE 4-1
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 701-FAS 1001 NORTH
 OF THE
 CLARINDA STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)



LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -



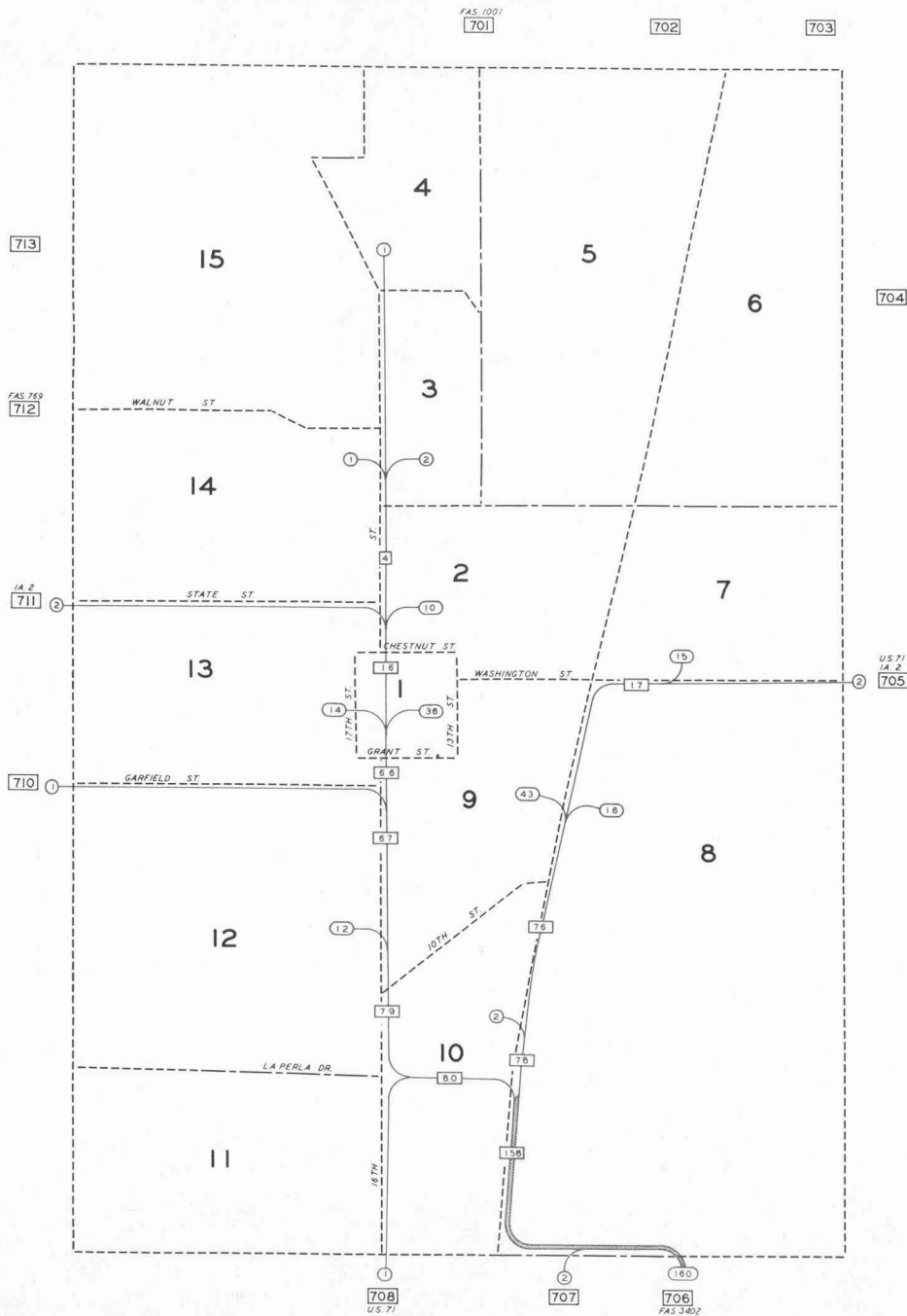
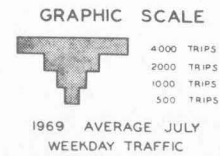


FIGURE 4-3
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 706-FAS 3402 SOUTHEAST
 OF THE
 CLARINDA STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)

LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -



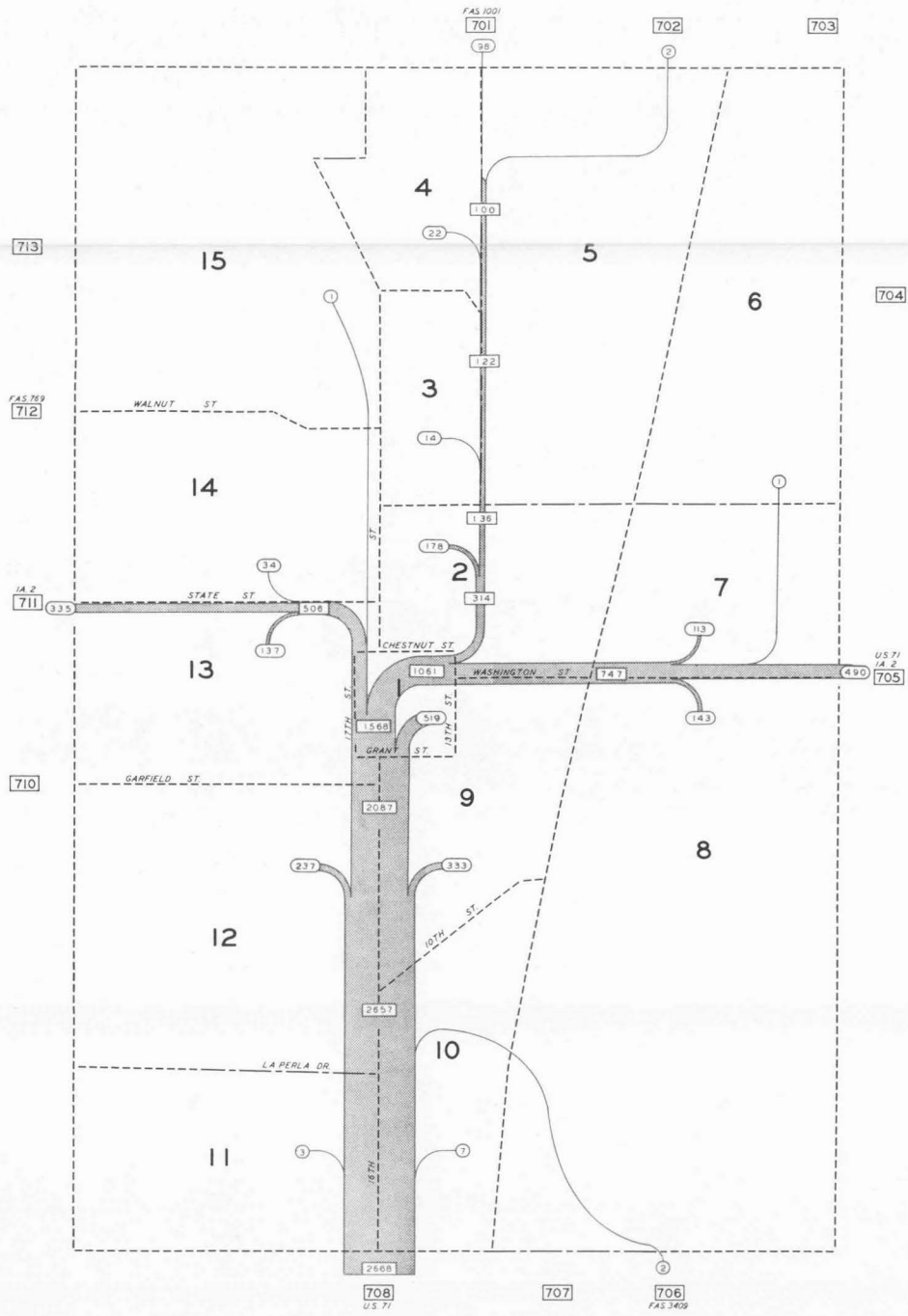
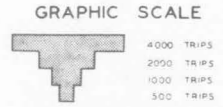


FIGURE 4-4
INTERNAL DISPERSION OF
ALL VEHICULAR TRIPS PASSING THROUGH
STATION 708-US. 71 SOUTH
OF THE
CLARINDA STUDY AREA
(ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)



LEGEND
TRACT BOUNDARY LINE - - - -
CORPORATION LINE - - - -



1969 AVERAGE JULY
WEEKDAY TRAFFIC

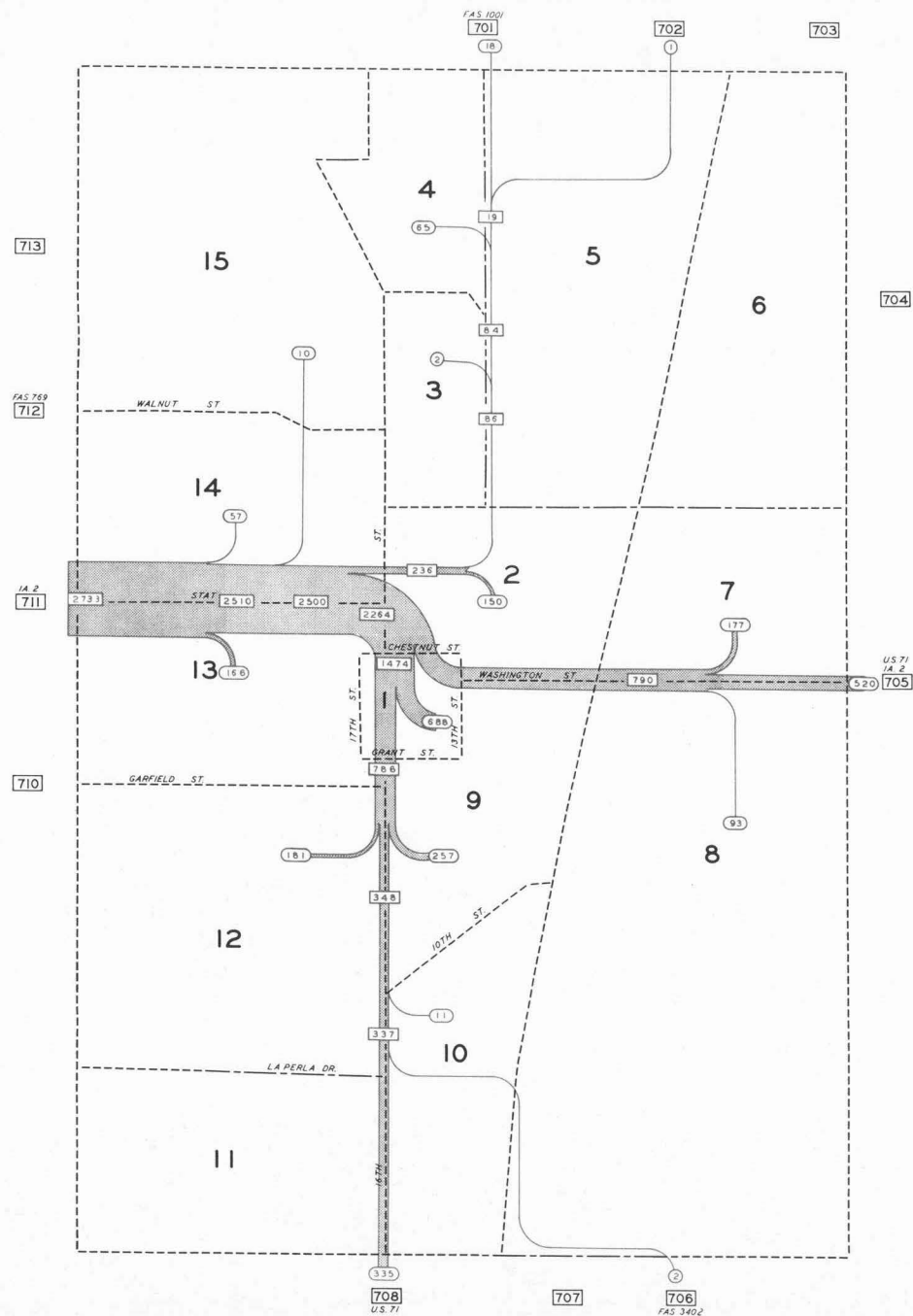
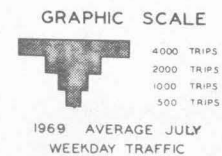


FIGURE 4-5
 INTERNAL DISPERSION OF
 ALL VEHICULAR TRIPS PASSING THROUGH
 STATION 711-IOWA 2 WEST
 OF THE
 CLARINDA STUDY AREA
 (ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES)



LEGEND
 TRACT BOUNDARY LINE - - - - -
 CORPORATION LINE - - - - -



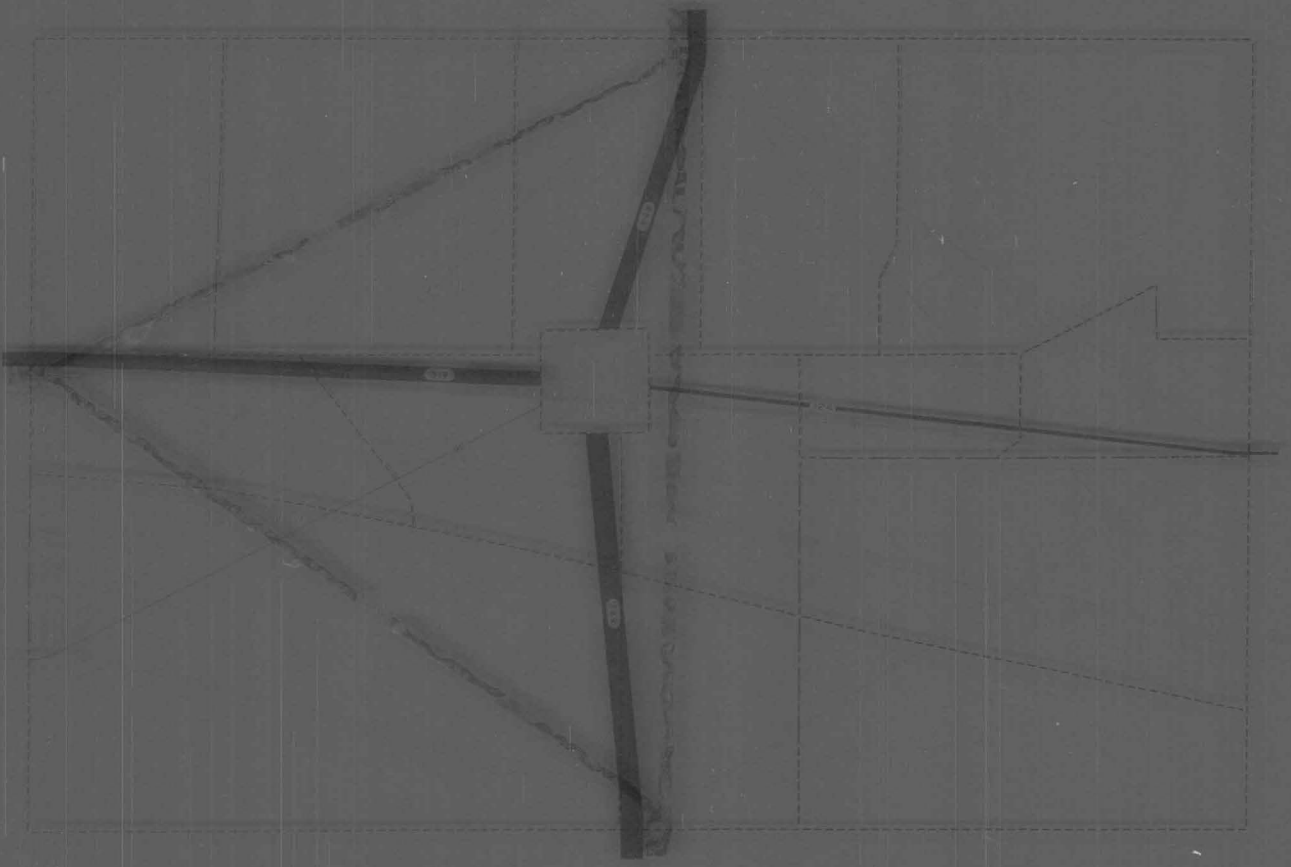


FIGURE 4-6
FIGURE 4-6

THE CENTRAL BUSINESS DISTRICT

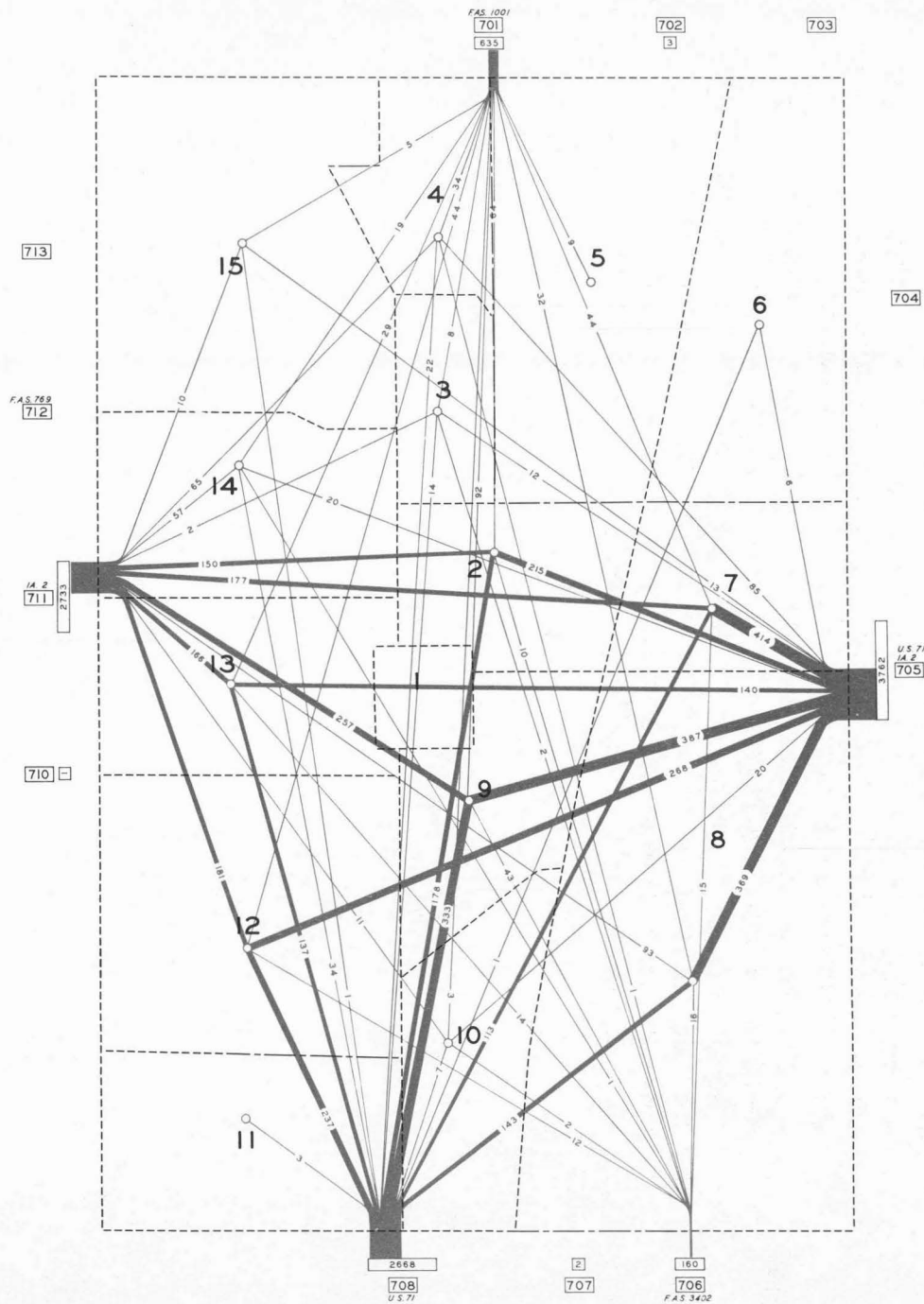
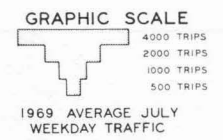


FIGURE 4-8
DESIRE LINES OF TRAVEL OF TRIPS
TO OR FROM
EXTERNAL ENTRANCES OF THE
CLARINDA STUDY AREA
AND
INTERNAL TRACTS

LEGEND
TRACT BOUNDARY LINE - - - - -
CORPORATION LINE _____



EXTERNAL TRIP TERMINI

Table 4-1 on the adjoining page shows a tabulation of the number and percent of those trips which had termini in Page County, rural areas adjacent to the study area, other counties in Iowa, and other states.

The following traffic flow charts illustrate the data shown in Table 4-1 and point out the Iowa termini of all trips which passed through the Clarinda study area at the time of the survey. Figure 4-9 shows the external termini of all trips which originated or terminated beyond Page County. Those trips which had termini in other states are shown entering or leaving Iowa on routes which appear to be most direct to the study area. Figure 4-10 is a continuation of Figure 4-9 and shows the external termini of those trips which originated or terminated in Page County beyond the cordon line surrounding the study area. All routes shown are approximate and should be interpreted as such.

TABLE 4-1
SUMMARY OF TRIPS ENTERING OR LEAVING
THE CLARINDA STUDY AREA

1969 AVERAGE JULY WEEKDAY TRAFFIC

Origin or Destination	Station Location		F.A.S. 1001 North		U.S. 71, Ia. 2 East		F.A.S. 3402 Southeast		U.S. 71 South		Ia. 2 West	
	Station 701		Station 705		Station 706		Station 708		Station 711			
	Vol.	%	Vol.	%	Vol.	%	Vol.	%	Vol.	%		
Blanchard								27	1.01	26	.95	
Braddyville					5	3.13		327	12.26			
Coin								26	.97	124	4.54	
College Springs					1	.62		296	11.09	175	6.41	
Essex	10	1.57	1	.02						97	3.55	
Hepburn	109	17.17	39	1.04								
Northboro								5	.19	17	.62	
Norwich										11	.40	
Shambaugh					24	15.00		553	20.73			
Shenandoah										853	31.21	
Yorktown										234	8.56	
Total to Towns	119	18.74	40	1.06	30	18.75	1,234	46.25	1,537	56.24		
Rural Page County	299	47.09	972	25.84	120	75.00	415	15.55	512	18.73		
Other Counties	195	30.71	2,569	68.29	9	5.63	6	.23	273	9.99		
Out-of-State	22	3.46	181	4.81	1	.62	1,013	37.97	411	15.04		
Grand Total	635	100.00	3,762	100.00	160	100.00	2,668	100.00	2,733	100.00		

FIGURE 4-9
DISPERSION OF EXTERNAL TRIPS
BETWEEN THE CLARINDA STUDY AREA
AND POINTS IN IOWA BEYOND PAGE COUNTY

ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES

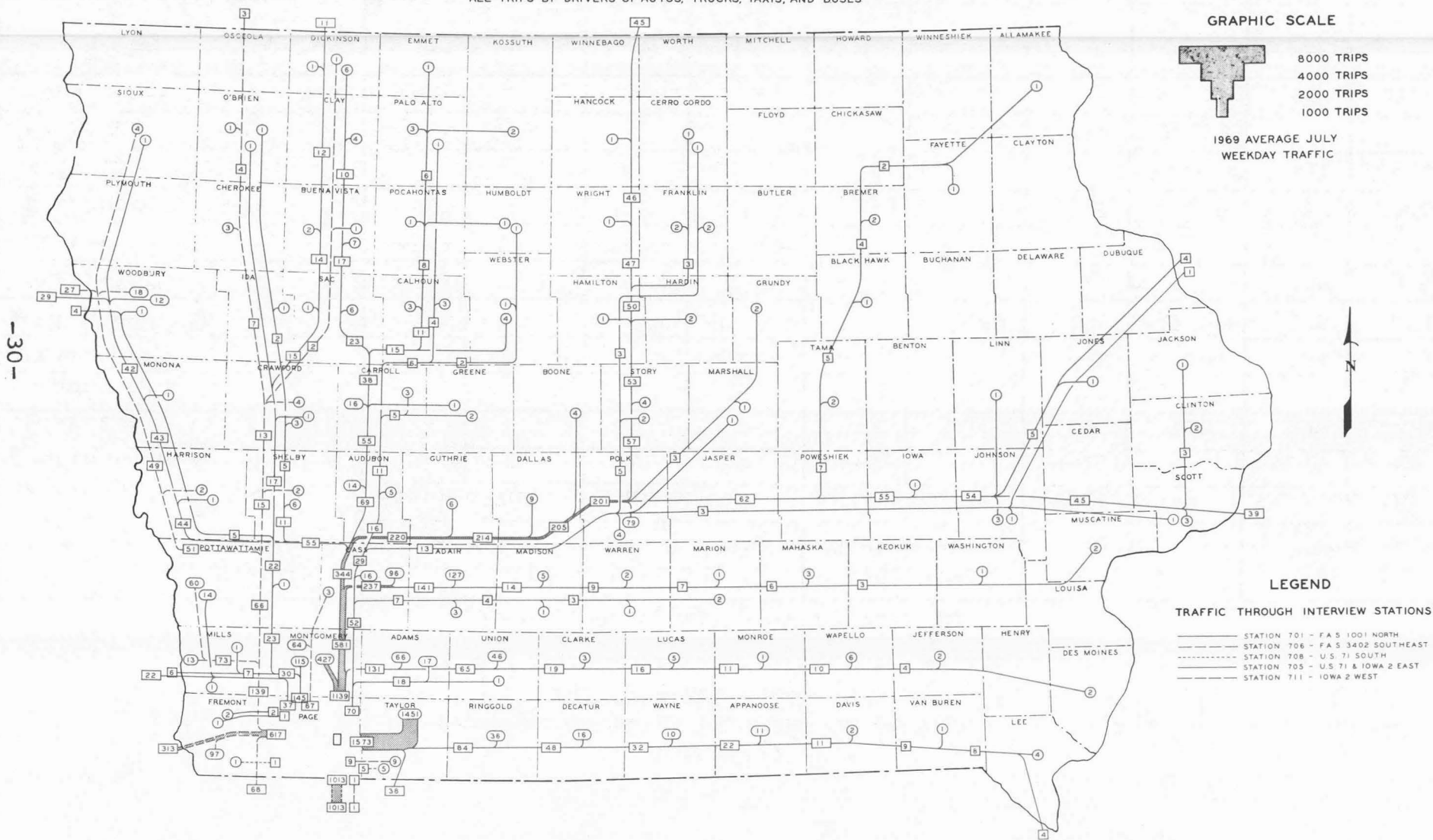
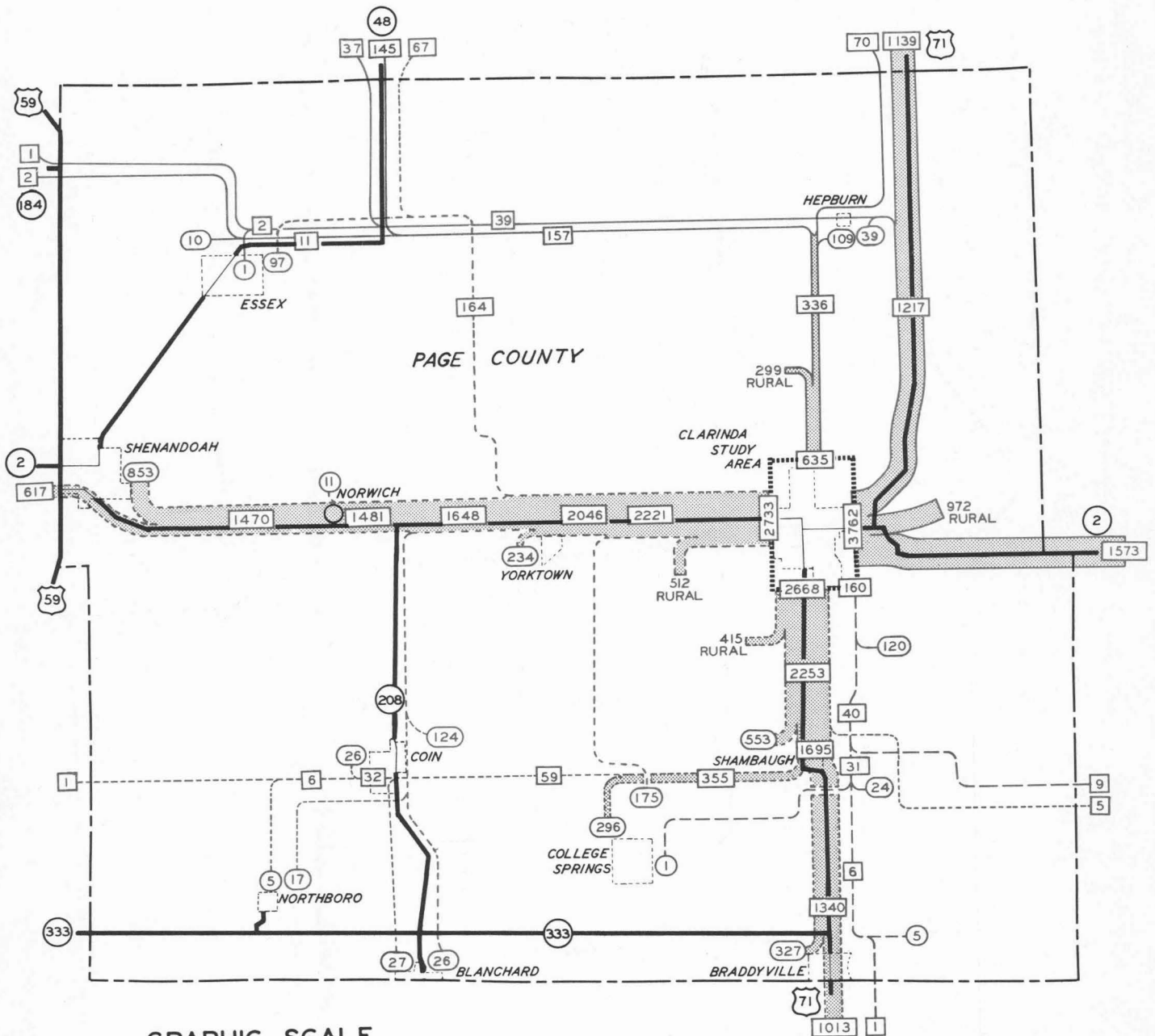
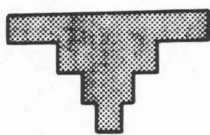


FIGURE 4-10
DISPERSION OF EXTERNAL TRIPS
BETWEEN THE CLARINDA STUDY AREA
AND POINTS WITHIN PAGE COUNTY
 ALL TRIPS BY DRIVERS OF AUTOS, TRUCKS, TAXIS, AND BUSES



GRAPHIC SCALE



8000 TRIPS
 4000 TRIPS
 2000 TRIPS
 1000 TRIPS

1969 AVERAGE JULY
 WEEKDAY TRAFFIC

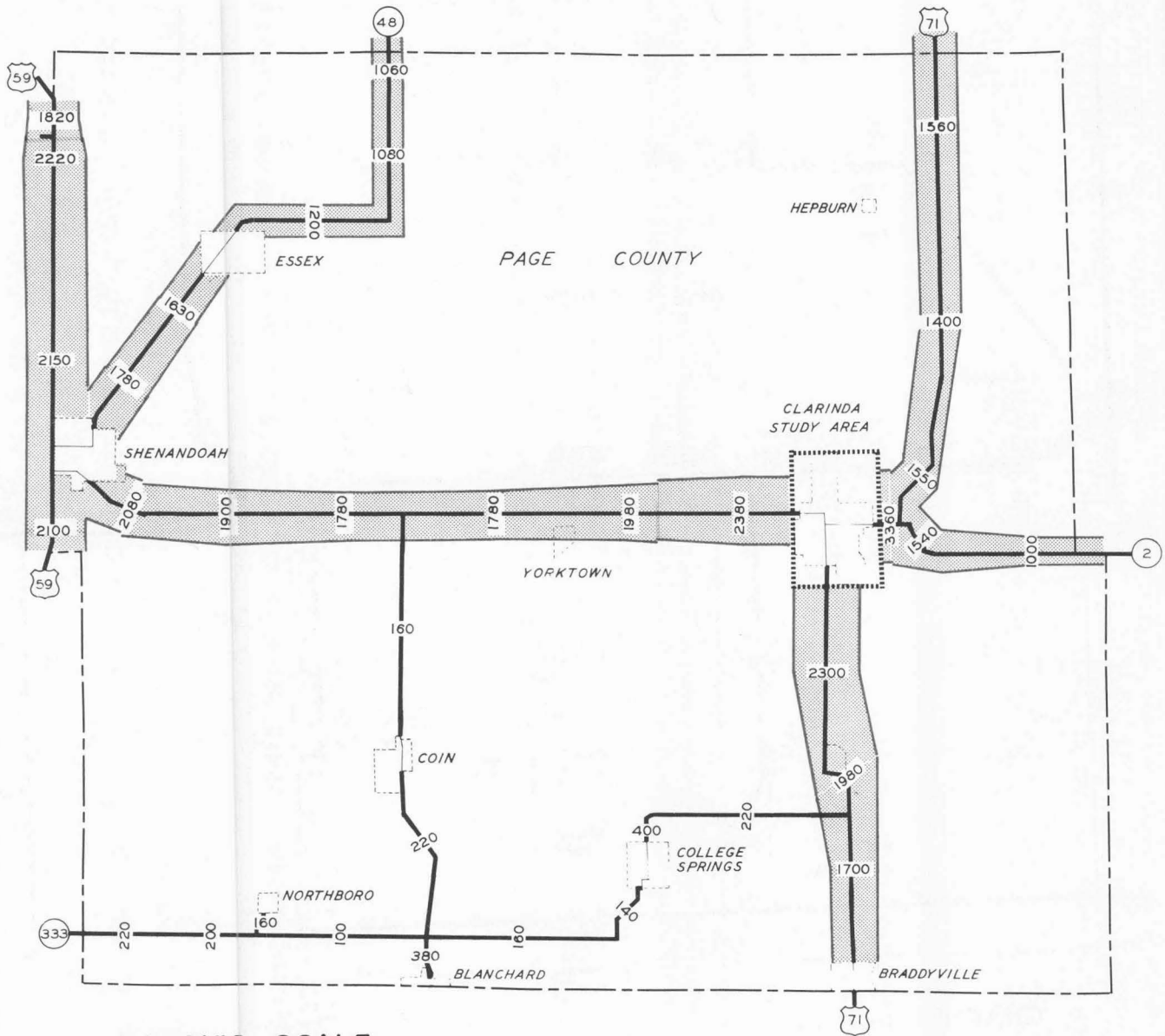


LEGEND

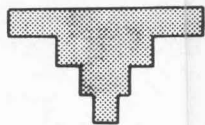
TRAFFIC THROUGH INTERVIEW STATIONS

- STATION 701 - F.A.S. 1001 NORTH
- - - STATION 706 - F.A.S. 3402 SOUTHEAST
- · - · - STATION 708 - U.S. 71 SOUTH
- STATION 705 - U.S. 71, IA. 2 EAST
- · - · - STATION 711 - IOWA 2 WEST
- · · · · CORPORATION LINE
- CORDON LINE

FIGURE 4-11
 TRAFFIC VOLUMES ON
 RURAL PRIMARY HIGHWAYS
 IN PAGE COUNTY



GRAPHIC SCALE



- 6000 TRIPS
- 3000 TRIPS
- 1500 TRIPS
- 750 TRIPS

1969 AVERAGE ANNUAL DAILY TRAFFIC



LEGEND

- 0 TO 1000 TRIPS
- 1000 TO 2000 TRIPS
- 2000 AND OVER
- CORPORATION LINE
- CORDON LINE

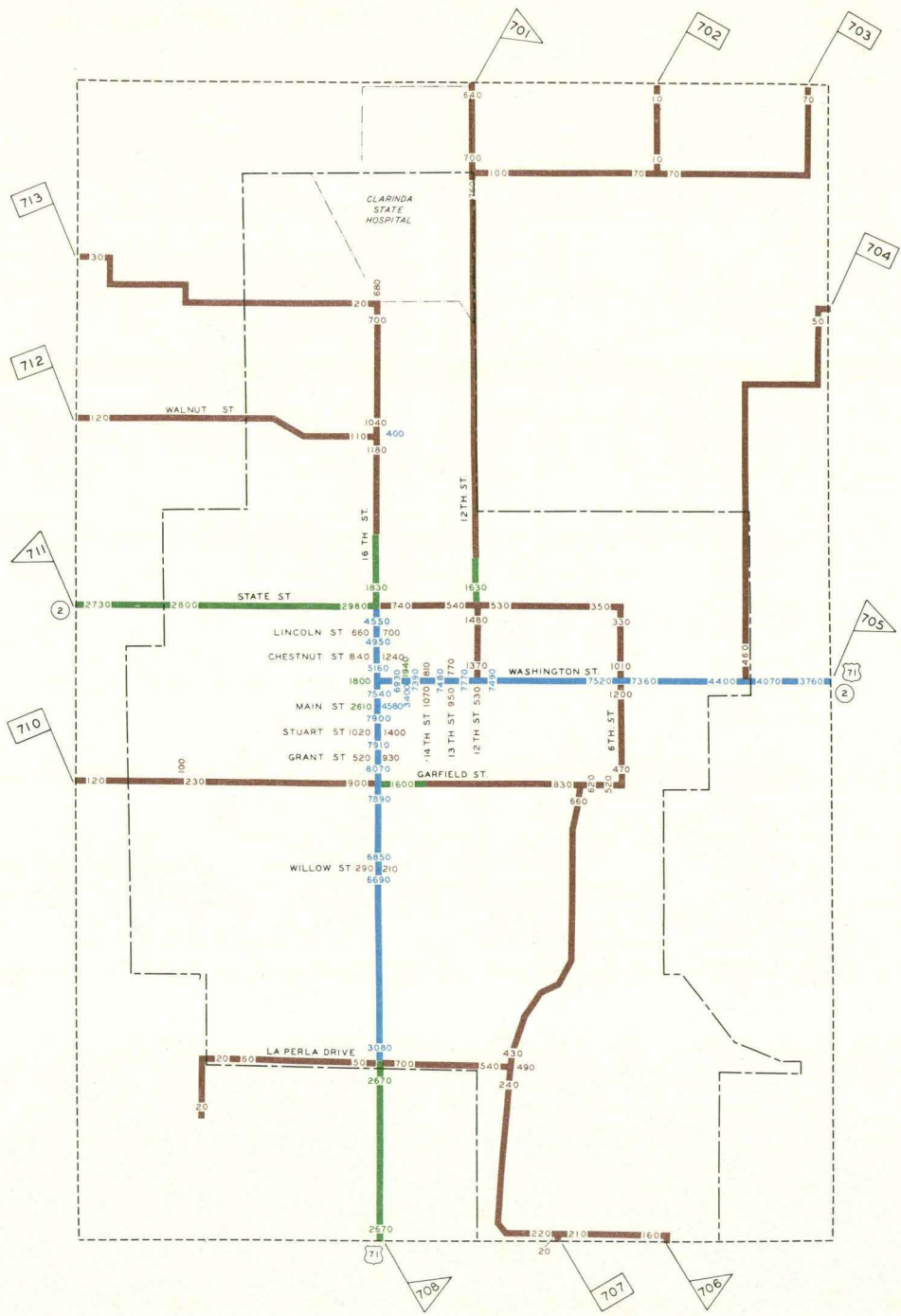


FIGURE 4-12
TRAFFIC VOLUMES ON
PRIMARY ROAD EXTENSIONS
AND MAJOR STREETS IN THE
CLARINDA STUDY AREA

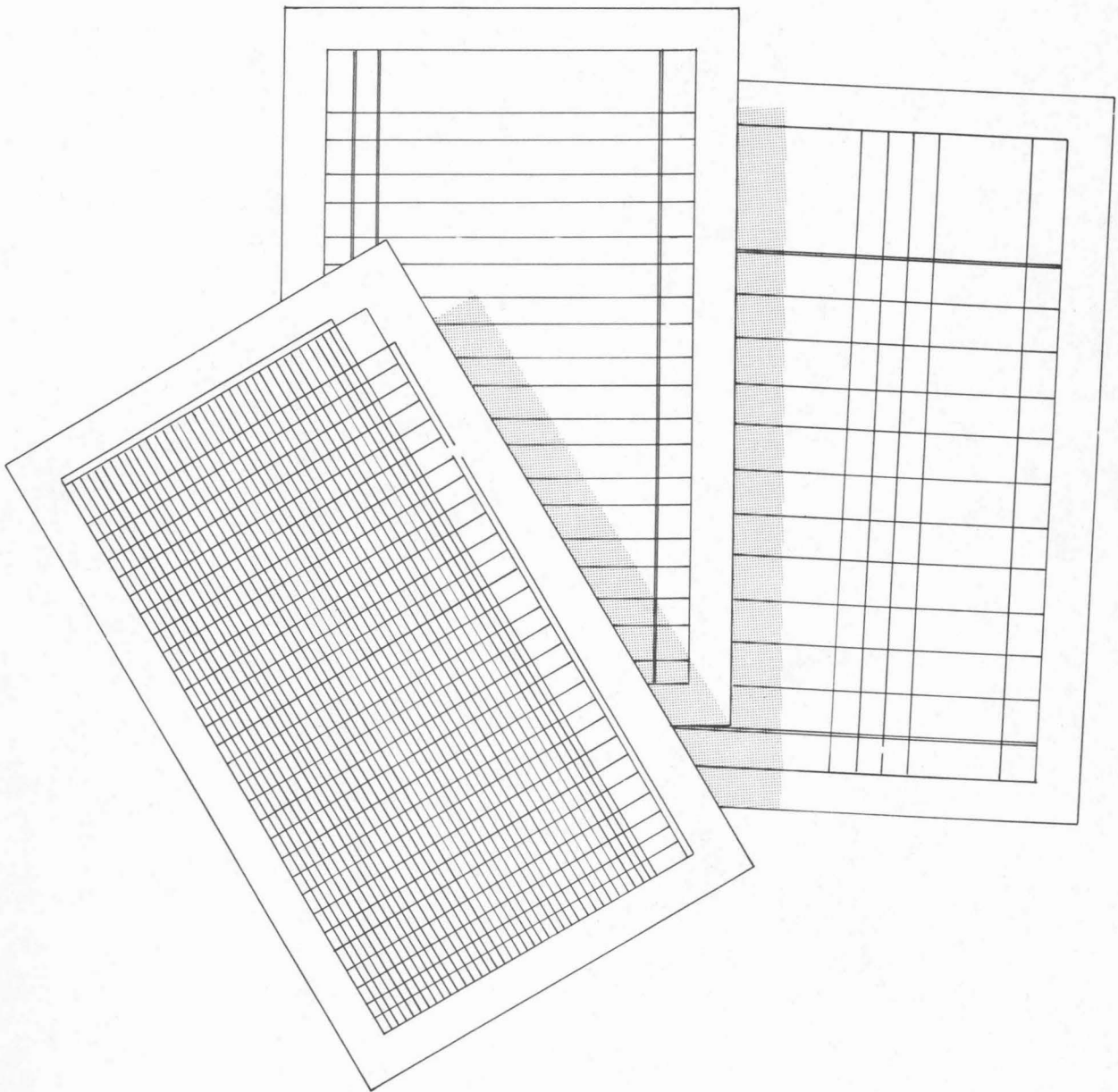
1969 AVERAGE JULY WEEKDAY TRAFFIC

LEGEND

- 0 TO 1500 TRIPS
- 1500 TO 3000 TRIPS
- 3000 TRIPS AND OVER

INTERVIEW STATION LOCATIONS
CODE STATION LOCATIONS
CORPORATION LINE
CORDON LINE

Appendix



CLARINDA STUDY AREA
TRIP PURPOSE OF EXTERNAL TRIPS
(ALL VEHICLE TYPES)
1969 AVERAGE JULY WEEKDAY TRAFFIC

Table B-2a(1) EXTERNAL LOCAL TRIPS

Station Trip Purpose	701	705	706	708	711	Total Traffic
	F.A.S. 1001 North	U.S. 71, Ia. 2 East	F.A.S. 3402 Southeast	U.S. 71 South	Ia. 2 West	
Work	83	557	30	260	276	1,206
Personal Business	38	305	3	186	168	700
During Work	55	455	20	204	345	1,079
Medical or Dental	5	89	2	20	37	153
School	3	28	2	29	46	108
Social or Recreation	174	595	48	517	430	1,764
Eat	20	101	2	69	49	241
Shop	117	549	39	423	469	1,597
Serve Passengers	12	59	6	34	37	148
Total Traffic	507	2,738	152	1,742	1,857	6,996

Table B-2a(2) EXTERNAL THROUGH TRIPS

Station Trip Purpose	701	705	706	708	711	Total Traffic
	F.A.S. 1001 North	U.S. 71, Ia. 2 East	F.A.S. 3402 Southeast	U.S. 71 South	Ia. 2 West	
Work	9	52	1	39	45	146
Personal Business	3	47	2	38	35	125
During Work	40	394	1	362	339	1,136
Medical or Dental	2	3		2	4	11
School	7	25		51	27	110
Social or Recreation	66	472	3	420	396	1,357
Eat		3		2	1	6
Shop	1	23		8	22	54
Serve Passengers		5	1	4	7	17
Total Traffic	128	1,024	8	926	876	2,962

Table B-2a(3) SUMMARY - ALL EXTERNAL TRIPS

Station Trip Purpose	701	705	706	708	711	Total Traffic
	F.A.S. 1001 North	U.S. 71, Ia. 2 East	F.A.S. 3402 Southeast	U.S. 71 South	Ia. 2 West	
Work	92	609	31	299	321	1,352
Personal Business	41	352	5	224	203	825
During Work	95	849	21	566	684	2,215
Medical or Dental	7	92	2	22	41	164
School	10	53	2	80	73	218
Social or Recreation	240	1,067	51	937	826	3,121
Eat	20	104	2	71	50	247
Shop	118	572	39	431	491	1,651
Serve Passengers	12	64	7	38	44	165
Total Traffic	635	3,762	160	2,668	2,733	9,958

CLARINDA STUDY AREA
AVERAGE CAR OCCUPANCY BY TRIP PURPOSE
1969 AVERAGE JULY WEEKDAY TRAFFIC

Table B-3a (1)

EXTERNAL LOCAL TRIPS

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home	
Work		3.678		1.497		1.580	2.185	2.345	1.000	1.429	1.464
Personal Business	1.000	3.251	2.000			2.903		1.415		1.690	1.776
During Work			1.210			1.692	1.667			1.000	1.214
Medical or Dental			1.000							2.160	2.134
School					4.000	2.726	1.000	2.505		1.498	1.615
Social or Recreation	1.491	2.181	1.000		4.000	2.979	2.339	2.733	3.642	2.328	2.455
Eat	1.609		1.000			2.881		4.000		2.649	2.605
Shop	3.000	2.291	1.000		3.000	2.846		1.878	2.000	1.999	2.069
Serve Passengers	3.247					2.616			1.500	2.360	2.428
Home	1.344	1.893	1.446	2.075	1.412	2.343	2.179	2.046	2.872		2.031
Average Occupancy	1.378	1.960	1.214	2.058	1.711	2.439	2.155	2.080	2.837	1.943	1.975

Table B-3a (2)

EXTERNAL THROUGH TRIPS

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy			
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home				
Work										1.850		1.847	1.848	
Personal Business		2.586				4.000						2.010	2.095	
During Work			1.264									1.367	1.267	
Medical or Dental												2.511	2.511	
School					4.000	1.000						2.209	2.189	
Social or Recreation		5.000			1.000	2.981				2.995	2.731	2.811		
Eat						2.000						1.663	1.800	
Shop												2.171	2.171	
Serve Passengers										3.547		5.000	1.959	2.836
Home	1.286	2.125	1.224	2.529	2.095	2.798				2.849	2.346		2.598	
Average Occupancy	1.286	2.220	1.261	2.529	2.086	2.843				2.849	3.014	2.485	2.397	

Table B-3a (3)

SUMMARY - ALL EXTERNAL TRIPS

Trip Purpose Origin	Trip Purpose - Destination										Average Occupancy
	Work	Personal Business	During Work	Medical or Dental	School	Social or Recreation	Eat	Shop	Serve Pass.	Home	
Work		3.678		1.497		1.608	2.185	2.345	1.000	1.437	1.490
Personal Business	1.000	3.116	2.000			2.695		1.415		1.721	1.807
During Work			1.224			1.692	1.667			1.129	1.228
Medical or Dental			1.000							2.176	2.150
School					4.000	2.037	1.000	2.505		1.744	1.806
Social or Recreation	1.491	2.318	1.000		3.006	2.980	2.339	2.733	3.489	2.456	2.576
Eat	1.609		1.000			2.843		4.000		2.634	2.590
Shop	3.000	2.291	1.000		3.000	2.846		1.878	2.000	2.003	2.072
Serve Passengers	3.247					2.768			2.200	2.336	2.460
Home	1.342	1.911	1.349	2.087	1.634	2.450	2.179	2.059	2.857		2.102
Average Occupancy	1.375	1.979	1.227	2.070	1.830	2.554	2.155	2.091	2.846	2.020	2.040

TABLE E-1

CLARINDA STUDY AREA
DIRECTIONAL TRIPS BETWEEN STATIONS AND TRACTS
1969 AVERAGE JULY WEEKDAY TRAFFIC

VEHICLE TRIPS							VEHICLE TRIPS						
From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
001	701	49	13	1		63	001	711	257	41	20	2	320
002	701	26	7	5		38	002	711	57	12	18		87
003	701	3	1			4	003	711	1				1
004	701	13	1	1	2	17	004	711	29		1		30
005	701	4	2			6	007	711	72	12	2		86
007	701	21	2			23	008	711	36	8	4		48
008	701	8	7	1		16	009	711	96	21	5	4	126
009	701	36	6	2		44	010	711	9	1			10
010	701		1			1	012	711	74	9		2	85
012	701	16	2			18	013	711	82	4	2		88
013	701	10	1			11	014	711	20	2	1		23
014	701	12				12	015	711	3				3
015	701	2				2	Cl. 2 Total		736	110	53	8	907
Cl. 2 Total		200	43	10	2	255							
001	705	270	61	23		354	701	001	52	9			61
002	705	91	23	3		117	701	002	19	3	4		26
003	705	5	1	1		7	701	003	1	2		1	4
004	705	44	2	2		48	701	004	12	4	1		17
006	705			1	2	3	701	005	1	2			3
007	705	164	38	14	5	221	701	007	18	1	2		21
008	705	119	42	30	2	193	701	008	12	3	1		16
009	705	147	40	12	1	200	701	009	37	8	3		48
010	705	7	3		1	11	701	010	1	1			2
012	705	115	16	3		134	701	012	25		1		26
013	705	58	10			68	701	013	17	1			18
014	705	11	2			13	701	014	7				7
015	705	3				3	701	015	2	1			3
Cl. 2 Total		1,034	238	89	11	1,372	Cl. 3 Total		204	35	12	1	252
001	706	8	7	1		16	705	001	344	63	23	5	435
002	706	6				6	705	002	75	19	4		98
003	706	1				1	705	003	5				5
004	706	1				1	705	004	35	1	1		37
007	706	4	4			8	705	006	1	1	1		3
008	706	3	6	1		10	705	007	140	34	18	1	193
009	706	19	5			24	705	008	89	52	34		176
012	706	7	1			8	705	009	152	26	7	2	187
013	706	7				7	705	010	6	1		2	9
014	706	1				1	705	012	118	16			134
Cl. 2 Total		57	23	2		82	705	013	60	12			72
							705	014	7				7
001	708	187	36	4		227	705	015	9	1			10
002	708	70	16	3		89	Cl. 3 Total		1,041	226	88	11	1,366
003	708	5				5							
004	708	12				12	706	001	14	5	1		20
007	708	56	10		2	68	706	002	3	1			4
008	708	39	14	9	6	68	706	003	1				1
009	708	167	28	3		198	706	007	3	4			7
010	708	6				6	706	008	1	5			6
011	708		1			1	706	009	15	3	1		19
012	708	120	7	1		128	706	010	2				2
013	708	69	7			76	706	012	3	1			4
014	708	16				16	706	013	7				7
015	708		1			1	Cl. 3 Total		49	19	2		70
Cl. 2 Total		747	120	20	8	895							

VEHICLE TRIPS							VEHICLE TRIPS						
From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	From	To	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
708	001	233	49	7	3	292	705	701	4	1		1	6
708	002	66	15	8		89	705	706	1				1
708	003	8	1			9	705	708	167	24	48	36	275
708	004	5	2		3	10	705	711	177	16	27	23	243
708	006			1		1	701	705	5		1		6
708	007	34	10	1		45	706	705	1				1
708	008	43	21	8	3	75	708	705	138	14	32	31	215
708	009	118	11	3	3	135	711	705	188	22	45	22	277
708	010	1				1	Cl.4	Total	681	77	153	113	1,024
708	011		2			2							
708	012	91	17	1		109	706	705	1		2		1
708	013	54	7			61	706	707					2
708	014	16	1	1		18	706	708	1				1
Cl. 3	Total	699	136	30	12	847	706	711	1				1
							705	706	1				1
711	001	307	43	16	2	368	710	706		1			1
711	002	47	8	8		63	711	706	1				1
711	003	1				1	Cl.4	Total	5	1	2		8
711	004	33	2			35							
711	007	77	8	6		91	708	701	44	4	3	8	59
711	008	39	4	2		45	708	702		2			2
711	009	93	25	5	8	131	708	705	138	14	32	31	215
711	010			1		1	708	711	118	7	7	32	164
711	012	89	6	1		96	701	708	25	2	3	9	39
711	013	72	4	2		78	705	708	167	24	48	36	275
711	014	28	6			34	706	708	1				1
711	015	5				7	711	708	119	8	7	37	171
Cl. 3	Total	791	106	43	10	950	Cl.4	Total	612	61	100	153	926
701	705	5		1		6	711	701	7	1	1		9
701	708	25	2	3	9	39	711	702	1				1
701	711	8		1		9	711	705	188	22	45	22	277
705	701	4	1		1	6	711	706	1				1
708	701	44	4	3	8	59	711	708	119	8	7	37	171
711	701	7	1	1		9	701	711	8		1		9
Cl. 4	Total	93	8	9	18	128	705	711	177	16	27	23	243
							706	711	1		7		1
							708	711	118	7	7	32	164
							Cl.4	Total	620	54	88	114	876

TABLE E-2

CLARINDA STUDY AREA
NONDIRECTIONAL TRIPS BETWEEN STATIONS AND TRACTS
1969 AVERAGE JULY WEEKDAY TRAFFIC

VEHICLE TRIPS							VEHICLE TRIPS						
Between	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total	Between	Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total		
701	001	101	22	1		124	705	001	614	124	46	5	789
701	002	45	10	9		64	705	002	166	42	7		215
701	003	4	3		1	8	705	003	10	1	1		12
701	004	25	5	2	2	34	705	004	79	3	3		85
701	005	5	4			9	705	006	1	1	2	2	6
701	007	39	3	2		44	705	007	304	72	32	6	414
701	008	20	10	2		32	705	008	208	94	64	3	369
701	009	73	14	5		92	705	009	299	66	19	3	387
701	010	1	2			3	705	010	13	4		3	20
701	012	41	2	1		44	705	012	233	32	3		268
701	013	27	2			29	705	013	118	22			140
701	014	19				19	705	014	18	2			20
701	015	4	1			5	705	015	12	1			13
Cl.2&3	Total	404	78	22	3	507	Cl.2&3	Total	2,075	464	177	22	2,738

VEHICLE TRIPS						
Between		Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
706	001	22	12	2		36
706	002	9	1			10
706	003	2				2
706	004	1				1
706	007	7	8			15
706	008	4	11	1		16
706	009	34	8	1		43
706	010	2				2
706	012	10	2			12
706	013	14				14
706	014	1				1
Cl.2&3	Total	106	42	4		152
708	001	420	85	11	3	519
708	002	136	31	11		178
708	003	13	1			14
708	004	17	2		3	22
708	006			1		1
708	007	90	20	1	2	113
708	008	82	35	17	9	143
708	009	285	39	6	3	333
708	010	7				7
708	011		3			3
708	012	211	24	2		237
708	013	123	14			137
708	014	32	1	1		34
708	015		1			1
Cl.2&3	Total	1,416	256	50	20	1,742
711	001	564	84	36	4	688
711	002	104	20	26		150
711	003	2				2
711	004	62	2	1		65
711	007	149	20	8		177
711	008	75	12	6		93
711	009	189	46	10	12	257
711	010	9	1	1		11
711	012	163	15	1	2	181
711	013	154	8	4		166
711	014	48	8	1		57
711	015	8		2		10
Cl.2&3	Total	1,527	216	96	18	1,857

VEHICLE TRIPS						
Between		Auto	Pickup and Panel	Single Unit & Bus	Semi Truck	Total
701	705	9	1	1	1	12
701	708	69	6	6	17	98
701	711	15	1	2		18
Cl.4	Total	93	8	9	18	128
Cl.2&3	Total	404	78	22	3	507
701	Total	497	86	31	21	635
705	701	9	1	1	1	12
705	706	2				2
705	708	305	38	80	67	490
705	711	365	38	72	45	520
Cl.4	Total	681	77	153	113	1,024
Cl.2&3	Total	2,075	464	177	22	2,738
705	Total	2,756	541	330	135	3,762
706	705	2				2
706	707			2		2
706	708	1				1
706	710		1			1
706	711	2				2
Cl.4	Total	5	1	2		8
Cl.2&3	Total	106	42	4		152
706	Total	111	43	6		160
708	701	69	6	6	17	98
708	702		2			2
708	705	305	38	80	67	490
708	706	1				1
708	711	237	15	14	69	335
Cl.4	Total	612	61	100	153	926
Cl.2&3	Total	1,416	256	50	20	1,742
708	Total	2,028	317	150	173	2,668
711	701	15	1	2		18
711	702	1				1
711	705	365	38	72	45	520
711	706	2				2
711	708	237	15	14	69	335
Cl.4	Total	620	54	88	114	876
Cl.2&3	Total	1,527	216	96	18	1,857
711	Total	2,147	270	184	132	2,733

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