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JOINT HIGHWAY RESEARCH PROJECT

JHRP-74-17

TRAFFIC SPEED REPORT NO. 92

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TRAFFIC SPEED REPORT NO. 92

TO: J. F. McLaughlin, Director
Joint Highway Research Project

FROM: H. L. Michael, Associate Director
Joint Highway Research Project

November 13, 1974

File: 8-3-3

Project: C-36-10C

The attached Progress Report No. 92 on Traffic Speeds is the report of the 1974 study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, 4-lane and 2-lane highways in Indiana. The report has been prepared by Mr. A. A. Gadallah, and T. M. Borg, Graduate Instructors in Research on our staff, under the direction of Professor H. L. Michael. The data were collected by Mr. G. K. Stafford.

The results indicate that average speeds for passengers cars are 7.4 mph less for 1974 than for 1973 and 3.7 mph for trucks. This reduction, of course, is undoubtedly due to the change in maximum speed limits to 55 mph. The decrease occurred with implementation of the mandatory speed limit in March 1974 and remained about the same through August 1974. The findings also indicate that vehicle speeds on highway types are much less variable than 1973, a factor which reduces conflict between vehicles and improves safety.

Copies of this report are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Department of Traffic Safety and Vehicle Inspection as a normal procedure for these reports. Copies will also be sent to the Federal Highway Administration and several departments within the ISHC. The report is presented for the record and for release as noted.

Respectfully submitted,

Harold L. Michael
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Interim Report
TRAFFIC SPEED REPORT NO. 92

by

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File No. 8-3-3

Project No.: C-36-10C

Engineering Experiment Station
Purdue University
In Cooperation With
Indiana State Highway Commission

Purdue University
West Lafayette, Indiana
November 13, 1974

ABSTRACT

This report is the annual continuing study of speeds of vehicles on rural Indiana Highways. Observations of spot speeds were taken on interstate, four-lane, and two-lane highways throughout the state during the months of June, July, August and September 1974.

Analysis of the speeds showed the overall average speed for passenger cars was 57.80 miles per hour. The overall average speed for heavy trucks was 55.14 miles per hour. This was a reduction of 7.4 miles per hour for the overall average speed for passenger cars and a reduction of 3.6 miles per hour for heavy trucks as compared to data collected at the same locations in 1973.

There will not be any attempt to perform simple linear regression analysis in this year's report because the results of 1974 are significantly different from those of previous years.

TRAFFIC SPEED REPORT NO. 92

This report is an analysis of spot speed observations made during June, July, August, and September 1974. All observations were made of free-flowing vehicles on level, tangent sections of rural highways during daylight and under favorable conditions. The same locations on selected Federal and State highways as used in 1973 were used again. All locations except station 9 have been the same for many years. Stations were classified as two-lane, four-lane, or interstate highways. A representative sample of spot speeds was obtained at each of the four stations in each classification. The site locations were as follows: (See Figure A)

Interstate Highways

1. I-69	3.3 miles south of Junction of SR 18
2. I-65	1.0 miles west of Junction of SR 334
3. I-74	1.0 miles east of Junction of Post Road
4. I-65	7.5 miles north of Junction of SR 160

Four Lane Highways

5. U.S. 31	1.2 miles south of Junction of SR 38
6. U.S. 52	1.0 miles east of Junction of SR 28
7. U.S. 41	1.0 miles north of South Junction of SR 2
8. U.S. 52	1.0 miles west of Klondike

Two Lane Highways

9. U.S. 35	1.5 miles east of Junction of I-69
10. S.R. 73	2.0 miles south of Chalmers
11. U.S. 31	3.0 miles south of Rochester
12. S.R. 25	0.7 miles west of Americus

FIG. A - LOCATIONS OF SPEED-STUDY STATIONS

The vehicles were classified as Indiana or Non-Indiana Passenger Cars and Light (less than 5000 lbs. gross weight) or Heavy (equal to or exceeding 5000 lbs. gross weight) Trucks. The analysis was performed as classified and combined passenger cars and trucks.

The maximum speed limit in Indiana is 55 miles per hour, both on Interstate and other rural highways.

Equipment and Field Procedure

The observation for this study was obtained by use of an "Electromatic" Radar Speed Meter. The meter was placed approximately four feet from the edge of the pavement at an angle less than 10° with the highway centerline. No corrections of speeds were necessary at this small angle. At the beginning of the study the accuracy of the meter was checked and any constant discrepancy of readings was corrected accordingly.

Results of Analysis

The data collected were analyzed and are summarized in Tables 1 to 12 in the Appendix. Tables 13, 14 and 15 summarize the data for interstate, four lane, and two lane highways, respectively. Table 16 is the summary of all highways.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger Cars:</u>			
Indiana	58.29	57.98	56.84
Non-Indiana	59.26	57.88	55.88
85 Percentile (all)	62.60	63.09	61.81
<u>Trucks</u>			
Less than 5000 lbs.	56.70	56.81	55.26
5000 lbs. or more	56.35	54.36	54.49

The percent of vehicles exceeding the speed limit for each classification of vehicles and each type of highway was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger Cars:</u>			
Indiana	73.52	67.35	57.00
Non-Indiana	82.30	68.32	52.99
<u>Trucks</u>			
Less than 5000 lbs.	56.98	56.74	48.70
5000 lbs. or more	63.44	48.25	47.15

The percent of vehicles traveling more than 5 miles per hour above the speed limit for each case was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger Cars:</u>			
Indiana	28.59	28.89	23.41
Non-Indiana	36.03	26.09	16.24
<u>Trucks</u>			
Less than 5000 lbs.	21.23	24.72	15.54
5000 lbs. or more	11.87	13.64	11.79

The reduction in speeds from those taken in 1973 when the maximum speed limit was 70 mph on Interstate and 65 mph on all other roads was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger Cars:</u>			
Mean Speed	9.9	6.0	5.4
85% Speed	12.2	7.8	6.9
<u>Trucks</u>			
Light Trucks, mean	7.4	4.0	3.4
Heavy Trucks, mean	5.2	3.4	1.9

The difference for 1973 and 1974 between the 85th percentile speed of passenger cars (the fastest group) and the 15th percentile speed of heavy trucks (the slowest group) was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
1973	18.9	22.1	19.3
1974	10.4	16.4	13.6

The results of this study and similar studies conducted since 1964 are tabulated in Table A. While simple linear regression analysis on previous years data was of value, the lowering of the speed limit in Indiana caused such a drastic change in observed speeds for 1974 that regression analysis including 1974 would be of little value. As a consequence such analysis was not performed.

A graphical representation of Table A, however, is given in Figure B.

TABLE A
SUMMARY OF SPOT SPEED OBSERVATION ON INDIANA HIGHWAYS
(Free-moving Vehicles on Level, Tangent Sections)

		Passenger Cars				Trucks		
		Ind. Mean	Non-Ind Mean	All Mean	All 85%	Light Mean	Heavy Mean	All Mean
Two-Lane Highways								
July	'64	59.1	60.1	59.5	66.6	53.9	51.7	52.4
Sept.	'65	58.2	57.9	58.1	64.6	54.3	50.6	51.7
Sept.	'66	60.1	59.5	59.9	65.5	55.4	50.8	52.0
Aug.	'67	61.0	61.9	61.3	68.0	53.8	51.9	52.7
June	'68	61.2	62.4	61.5	68.1	54.4	54.2	54.3
July	'69	64.7	64.6	64.7	71.9	60.5	55.9	57.9
July	'70	62.3	62.8	62.3	68.9	59.0	54.8	56.7
July	'71	61.4	60.9	61.3	68.0	58.0	54.0	55.6
June	'72	62.0	62.4	62.0	68.7	53.3	55.6	56.7
Aug.	'73	62.1	61.4	62.1	68.7	58.7	56.4	57.3
Sept.	'74	56.8	55.9	56.7	61.8	55.3	54.5	54.8
Four-Lane Highways								
July	'64	61.3	63.0	62.0	69.4	55.1	54.5	54.7
Sept.	'65	60.1	62.2	61.0	67.2	55.5	53.1	53.7
Sept.	'66	63.1	64.3	63.5	69.0	58.7	52.8	54.2
Aug.	'67	64.3	65.7	65.0	70.3	57.0	54.0	54.9
June	'68	64.2	66.2	64.9	70.4	58.4	55.4	56.2
July	'69	67.7	68.3	67.9	74.6	64.0	58.0	59.6
July	'70	64.6	64.3	64.5	70.6	59.7	55.0	54.2
July	'71	64.3	65.4	64.7	70.7	59.8	56.4	57.4
June	'72	64.3	64.3	64.3	70.9	59.4	55.2	57.1
Aug.	'73	64.0	63.7	64.0	70.9	60.8	57.8	59.1
Sept.	'74	58.0	57.9	58.0	63.1	56.8	54.4	55.3
Interstate Highways								
July	'64	61.9	64.0	62.7	70.5	56.8	54.6	55.2
Sept.	'65	61.2	62.1	61.5	67.7	54.9	53.6	53.9
Sept.	'66	62.1	63.3	62.5	68.5	56.1	54.9	55.3
Aug.	'67	66.4	68.3	67.1	73.6	60.0	56.9	57.5
June	'68	66.2	67.9	66.8	72.4	60.5	57.9	58.5
July	'69	70.2	71.2	70.6	76.6	65.3	59.9	61.4
July	'70	69.1	69.2	69.2	74.6	63.8	59.6	60.5
July	'71	68.3	68.7	68.5	73.7	64.8	59.4	60.8
June	'72	69.1	69.6	69.3	74.4	63.7	60.9	61.8
Aug.	'73	69.3	70.1	69.6	74.8	64.1	61.6	62.3
Sept.	'74	58.3	59.3	58.7	62.6	56.7	56.4	56.5
All Highways								
July	'64	60.8	62.4	61.5	69.2	55.2	53.7	54.1
Sept.	'65	59.9	60.9	60.3	66.7	54.9	52.6	53.1
Sept.	'66	61.8	62.4	62.0	68.0	56.7	52.7	53.8
Aug.	'67	63.9	65.8	64.5	71.4	56.3	54.6	55.1
June	'68	63.8	66.6	64.5	70.8	57.2	56.2	56.5
July	'69	67.3	68.8	67.9	75.1	62.7	57.9	59.5
July	'70	65.1	66.3	65.5	72.2	60.3	56.4	57.5
July	'71	64.3	66.2	64.9	71.9	60.3	56.8	57.9
June	'72	64.8	66.9	65.2	72.2	60.1	57.6	58.6
Aug.	'73	64.7	67.1	65.2	72.4	60.9	58.8	59.6
Sept.	'74	57.6	58.4	57.8	62.6	56.2	55.1	55.6

FIG. B - INDIANA RURAL SPEED TRENDS 1963 - 1974

Summary and Conclusions

The average speeds in this study were found for passenger cars to be 57.8 miles per hour, a drop of 7.4 mph from 1973. Heavy trucks were found to travel 55.1 miles per hour, a drop of 3.7 mph from 1973.

The decrease in speed of passenger cars and trucks were most on Interstate facilities where cars decreased 10.9 mph since 1973 and heavy trucks 5.3 mph. On two-lane highways the decrease for passenger cars was only 5.4 mph and 1.9 mph for heavy trucks.

On the other hand the 85th percentile speed of passenger cars decreased 9.8 mph from 1973 on all highways to 62.6 mph with a decrease of 12.2 mph on interstate and 6.9 mph on two-lane facilities to 62.6 mph on the interstate and 61.8 on two-lane. The 85th percentile of speeds of passenger cars on all facilities in 1974, the percentile which often is used to indicate proper speed limits, was between 61.8 and 63.1.

Of considerable importance was the decrease noted in the difference between the 85th percentile of passenger cars and the 15th percentile of heavy trucks, the "reasonable" fastest and slowest groups. In 1973 on the interstate this difference was 18.9 mph; in 1974 it was 10.4. On other facilities the decrease was 5.7 mph. This means that more vehicles in 1974 were travelling at similar speeds than in 1973, a factor which reduces conflict between vehicles and reduces accidents.

A comparison of speeds as found on the several types of highway for passenger cars and trucks of the 1974 data with that of 1973 and that obtained at a portion of the stations at two

other times in 1974 is made in Table B. After a significant reduction of speed between 1973 and the period of a voluntary 55 mph speed limit and a further reduction during the beginning of the mandatory 55 mph speed limit, no further significant changes have occurred. The speeds during June-August 1974 were similar to those obtained earlier in May 1974. No trend of increase in travel speeds is as yet apparent under the 55 mph maximum speed limit.

TABLE B: AVERAGE SPEEDS ON INTERSTATE HIGHWAYS

	<u>June-Sept 74</u> <u>Speed Limit</u> <u>55 mph</u>	<u>May 1974</u> <u>Speed Limit</u> <u>55 mph</u>	<u>Jan-Feb 1974</u> <u>Voluntary 55</u> <u>mph Speed Limit</u>	<u>June-Aug 1973</u> <u>Speed Limit</u> <u>70 mph</u>
<u>Passenger Cars:</u>				
Indiana	58.3	59.96	63.75	69.25
Non-Indiana	59.3	59.76	66.77	70.14
All Passenger Cars	58.7	59.92	64.32	69.58
85 Percentile (all)	62.6	62.96	71.30	74.78
<u>Trucks:</u>				
less than 5000 lbs.	56.7	58.00	58.86	64.05
5000 lbs or more	56.4	57.00	59.47	61.56

TABLE 2: AVERAGE SPEEDS ON FOUR-LANE HIGHWAYS

	<u>June-Sept 74</u> <u>Speed Limit</u> <u>55 mph</u>	<u>May 1974</u> <u>Speed Limit</u> <u>55 mph</u>	<u>Jan-Feb 1974</u> <u>Voluntary 55</u> <u>mph Speed Limit</u>	<u>June-Aug 1973</u> <u>Speed Limit</u> <u>70 mph</u>
<u>Passenger Cars:</u>				
Indiana	58.0	56.74	60.11	63.98
Non-Indiana	57.9	55.87	57.78	63.70
All Passenger Cars	58.0	56.62	59.89	63.94
85 Percentile (all)	63.1	62.38	67.66	70.85
<u>Trucks:</u>				
less than 5000 lbs.	56.8	55.32	58.12	60.78
5000 lbs or more	54.4	53.22	55.09	57.77

TABLE 3: AVERAGE SPEEDS ON TWO-LANE HIGHWAYS

	<u>June-Sept 74</u> <u>Speed Limit</u> <u>55 mph</u>	<u>May 1974</u> <u>Speed Limit</u> <u>55 mph</u>	<u>Jan-Feb 1974</u> <u>Voluntary 55</u> <u>mph Speed Limit</u>	<u>June-Aug 1973</u> <u>Speed Limit</u> <u>70 mph</u>
<u>Passenger Cars:</u>				
Indiana	56.8	58.70	59.60	62.14
Non-Indiana	55.9	57.14	60.40	61.38
All Passenger Cars	56.7	58.66	59.64	62.06
85 Percentile (all)	61.8	62.77	66.16	68.72
<u>Trucks:</u>				
less than 5000 lbs.	55.3	55.86	57.18	58.66
5000 lbs. or more	54.5	53.89	54.80	56.42

Determination of Sample Size

APPENDIX A

Determination of Sample Size

Determination of Sample Size

It was desired that a 95% confidence interval of the true mean of the speed of passenger cars should not be wider than 2 mph. For trucks weighing 5000 lbs. or more a 95% confidence interval with a 4 mph band was desired.

Assuming a normal distribution of speeds and using the standard deviation of the 1973 data, the minimum sample size requirements were determined by:

$$N = \left(\frac{2t S}{L} \right)^2$$

N = sample size required

t = tabulated "t" value for the required level of significance

S = estimated standard deviation

L = width of the interval

For Passenger Cars:

$$N = \left(\frac{2 \times 1.96 \times 7.90}{2} \right)^2 = 240 \text{ observations}$$

For Heavy Trucks:

$$N = \left(\frac{2 \times 1.96 \times 7.02}{4} \right)^2 = 48 \text{ observations}$$

NOTES:

At all stations at least 280 passenger car observations and 49 heavy truck observations were obtained for the study reported herein.

APPENDIX B**Speed Data (Tables 1 to 16)**

TABLE 1 SPEED DATA

Station	1	Highway	I - 69	Location	3.3 miles South of S.R. 18
No. of Lanes	4	Type of Surface	Portland Cement Concrete	Weather	PTCY (Cloudy)
This Observation					
Date	8-5-74	Last Previous Observation (Speed Report No. 91)			
Time	11:20 - 1:10 p.m.	Date	August 21, 1973		
		Time	10:40 - 12:30 p.m.		

	OBSERVATION	PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
All Vehicles	No. of vehicles obs.	282	280	189	158	93	122	109	108	25	35	84	73
	Ave. speed (m.p.h.)	69.31	58.56	69.27	58.03	69.39	59.26	62.39	56.46	65.40	55.54	61.50	56.90
	Standard deviation	6.061	4.521	6.222	4.682	5.752	4.221	6.113	4.107	5.937	3.175	5.908	4.438
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93	0.0	0.0	0.0	1.37
	49 m.p.h.	0.0	2.14	0.0	2.53	0.0	1.64	2.57	2.78	0.0	2.86	3.57	2.74
	54 m.p.h.	2.13	16.43	2.12	18.99	2.15	13.11	6.42	28.70	0.00	28.57	8.33	28.77
	59 m.p.h.	6.74	58.93	6.35	53.29	7.53	53.20	33.03	79.63	12.00	88.57	39.29	75.34
	64 m.p.h.	20.21	89.64	21.16	90.51	16.13	88.52	66.06	98.15	52.00	100.0	70.24	97.26
	69 m.p.h.	47.87	98.93	49.74	98.73	44.09	99.18	86.24	99.07	76.00	100.0	89.29	98.63
	74 m.p.h.	84.40	100.0	83.60	100.0	86.02	100.0	99.08	100.0	96.00	100.0	100.0	100.0
Bnd	No. of vehicles obs.	141	140	93	82	48	58	96	54	12	16	84	38
	Average speed	69.15	58.79	69.13	58.41	69.19	59.31	62.17	57.33	66.83	55.94	61.50	57.92
	No. of vehicles obs.	141	140	96	76	45	64	13	54	13	19	0	35
	Average speed	69.47	58.34	69.41	57.61	69.60	59.22	64.08	55.59	64.08	55.21	0	55.80

TABLE 2 SPEED DATA

Station 2 Highway I-65 Location 1.0 mile West of S.R. 334
 No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Cloudy
 This Observation Last Previous Observation (Speed Report No. 91)
 Date June 19, 1974 Date August 27, 1973
 Time 11:20 - 1:55 p.m. Time 10:15 - 12:25 p.m.

	OBSERVATION	PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
All Vehicles # of vehicles traveling at or less than Ave. speed (m.p.h.)	No. of vehicles obs.	280	283	158	161	122	122	108	172	35	57	73	115
	Ave. speed (m.p.h.)	69.95	57.76	69.90	57.52	70.01	58.09	62.27	55.44	64.14	56.09	61.37	55.12
	Standard deviation	5.984	4.552	5.966	4.598	6.031	4.489	5.924	4.840	5.766	5.761	5.825	4.305
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.58	0.0	0.0	0.0	0.87
	44 m.p.h.	0.0	0.35	0.0	0.62	0.0	0.0	0.93	1.16	0.0	0.0	1.37	1.74
	49 m.p.h.	0.36	2.12	0.0	3.11	0.82	0.82	0.93	10.47	0.0	15.79	1.37	7.83
	54 m.p.h.	1.43	24.03	0.63	25.47	2.46	22.13	10.19	40.70	5.71	38.60	12.33	41.74
	59 m.p.h.	3.93	66.08	2.53	69.57	5.74	61.48	34.26	82.56	28.57	77.19	36.99	85.22
	64 m.p.h.	17.14	92.58	17.72	91.93	16.39	93.44	59.26	97.67	45.71	94.74	65.75	99.13
	69 m.p.h.	41.43	98.94	45.57	99.38	36.07	98.36	89.81	98.84	80.00	96.49	94.52	100.0
End	74 m.p.h.	81.43	100.0	79.75	100.0	83.61	100.0	98.15	100.0	97.14	100.0	98.63	100.0
	79 m.p.h.	94.29	100.0	93.04	100.0	95.90	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	84 m.p.h.	99.64	100.0	99.37	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	89 m.p.h.	99.64	100.0	99.37	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
End	No. of vehicles obs.	140	148	78	88	62	60	54	95	21	32	33	63
	Average speed	68.65	58.93	68.73	58.61	68.55	59.38	61.41	56.55	62.95	56.78	60.42	56.43
	No. of vehicles obs.	140	135	80	73	60	62	58	77	14	25	40	52
	Average speed	71.24	56.49	71.04	56.19	71.52	56.84	63.13	54.08	65.93	55.20	62.15	53.54

TABLE 3 SPEED DATA

Station 3 Highway I-74 Location 1.0 mile East of Post Road
 No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Clear
 This Observation
 Date Aug. 6, 1974 Last Previous Observation (Speed Report No. 91)
 Time 11:30 - 1:10 p.m. Date Aug. 16, 1973
 Time 2:05 - 3:50 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	280	284	202	206	78	78	108	109	46	54	62	55
Ave. speed (m.p.h.)	69.05	58.58	68.37	58.36	70.82	59.14	62.42	58.17	63.76	57.72	61.42	58.60
Standard deviation	6.149	4.422	6.294	4.370	5.405	4.535	6.930	5.490	7.648	6.772	6.221	3.857
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.0	0.35	0.0	0.49	0.0	0.0	1.85	1.83	2.17	1.85	1.61	1.82
49 m.p.h.	0.0	1.41	0.0	1.94	0.0	0.0	3.70	3.67	2.17	5.56	4.84	1.82
54 m.p.h.	2.50	15.49	3.47	16.99	0.0	11.54	9.26	22.02	13.04	37.04	6.45	7.27
59 m.p.h.	7.86	61.62	9.41	63.11	3.85	57.69	34.26	66.97	32.61	62.96	35.48	70.91
64 m.p.h.	21.07	91.55	24.26	92.23	12.82	89.74	61.11	89.91	45.65	83.33	72.58	96.36
69 m.p.h.	46.07	98.24	50.50	98.54	34.26	97.44	85.19	97.25	80.43	94.44	88.71	100.0
74 m.p.h.	84.64	99.30	86.63	99.51	79.49	98.72	97.22	99.08	93.48	98.15	100.0	100.0
79 m.p.h.	97.14	100.0	98.02	100.0	94.87	100.0	99.07	100.0	97.84	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Vehicles												
No. of vehicles obs.	140	142	85	98	55	44	54	54	26	27	28	27
Average speed	68.51	58.77	67.34	58.32	70.33	59.80	62.87	57.63	62.27	57.33	63.43	57.93
No. of vehicles obs.	140	142	117	108	23	34	54	55	20	27	34	28
Average speed	69.59	58.38	69.12	58.41	72.00	58.29	61.96	58.69	65.70	58.11	59.76	59.25

TABLE 4 SPEED DATA

Station 4 Highway I-65 Location 7.5 miles North of S.R. 160
 No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Ptly Cloudy
 This Observation
 Date Sept. 4, 1974 Last Previous Observation (Speed Report No. 91)
 Time 12:05 - 2:05 p.m. Date August 23, 1973
 Time 11:55 - 2:00 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	283	283	158	136	125	147	114	110	27	33	87	77
Ave. speed (m.p.h.)	70.02	59.87	69.72	59.40	70.39	60.31	62.17	56.43	63.15	57.30	61.86	56.05
Standard deviation	6.462	4.990	6.775	5.265	6.049	4.697	5.139	4.489	6.407	4.997	4.756	4.233
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91	0.0	0.0	0.0	1.39
44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.91	0.0	0.0	0.0	1.39
49 m.p.h.	0.71	0.35	0.63	0.74	0.80	0.0	0.0	4.55	0.0	0.0	0.0	6.49
54 m.p.h.	1.77	12.37	2.53	16.18	0.80	8.84	7.89	31.82	11.11	33.33	6.90	31.17
59 m.p.h.	6.01	49.12	6.33	50.00	5.60	48.30	28.95	79.09	33.33	66.67	27.59	84.82
64 m.p.h.	16.25	86.57	16.46	86.03	16.00	87.07	67.54	96.36	55.56	93.94	71.26	97.40
69 m.p.h.	42.76	95.41	46.84	94.12	37.60	96.60	92.11	99.09	81.48	96.97	95.40	100.0
74 m.p.h.	81.27	99.65	82.91	100.0	79.20	99.32	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	92.93	99.65	91.77	100.0	94.40	99.32	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	98.59	100.0	97.47	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	99.65	100.0	99.37	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	140	141	83	72	57	69	60	55	12	19	48	36
Average speed	70.36	59.84	69.92	59.78	71.02	59.90	62.38	56.47	63.50	57.68	62.10	55.83
No. of vehicles obs.	143	142	75	64	68	78	54	55	15	41	39	41
Average speed	69.68	59.91	69.51	58.98	69.87	60.67	61.93	56.38	62.87	56.79	61.56	56.24

TABLE 5 SPEED DATA

Station	5	Highway	U.S. 31	Location	1.2 miles South of S.R. 38
No. of Lanes	4	Type of Surface	Asphalt Concrete	Weather	Hazy
This Observation					
Date	June 20, 1974	Last Previous Observation (Speed Report No. 91)			
Time	11:50 - 2:15 p.m.	Date	August 16, 1973		
		Time	10:50 - 12:45 p.m.		

	OBSERVATION	PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
All Vehicles	No. of vehicles obs.	280	280	234	248	46	32	108	139	43	31	65	108
	Ave. speed (m.p.h.)	66.37	58.81	66.10	58.80	67.76	58.87	61.22	55.53	62.95	57.23	60.08	55.05
	Standard deviation	6.590	5.120	6.472	5.069	7.075	5.587	6.501	5.163	7.108	5.045	5.845	5.116
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.71	0.71	0.85	0.40	0.0	3.13	1.85	1.44	2.33	0.0	1.54	1.85
	49 m.p.h.	1.43	3.21	1.71	3.23	0.0	3.13	4.63	12.23	6.98	3.23	3.08	14.81
	54 m.p.h.	4.29	16.79	5.13	17.74	0.0	9.38	13.89	43.17	11.63	38.71	15.38	44.44
	59 m.p.h.	13.21	57.14	12.39	57.26	17.39	56.25	36.11	77.70	27.91	70.97	41.54	79.63
	64 m.p.h.	36.79	86.79	37.61	86.29	32.61	90.63	71.30	96.40	53.49	87.10	83.08	99.07
	69 m.p.h.	71.79	97.86	73.50	97.98	63.04	96.88	91.67	100.0	86.05	100.0	95.38	100.0
	74 m.p.h.	92.50	99.64	93.59	100.0	86.96	96.88	99.07	100.0	97.67	100.0	100.0	100.0
Bnd	79 m.p.h.	96.79	100.0	97.86	100.0	91.30	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	84 m.p.h.	99.29	100.0	99.57	100.0	97.83	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	No. of vehicles obs.	140	140	119	119	21	21	54	70	25	16	29	54
	Average speed	66.71	58.76	66.66	58.72	67.05	59.00	62.93	56.97	64.96	59.12	61.17	56.33
Bnd	No. of vehicles obs.	140	140	115	129	25	11	54	69	18	15	36	54
	Average speed	66.03	58.85	65.52	58.87	68.36	58.64	59.52	54.07	60.17	55.20	59.19	53.76

TABLE 6 SPEED DATA

Station 6 Highway U.S. 52 Location 1.0 mile East of S.R. 28
 No. of Lanes 4 Type of Surface Asphalt Concrete Weather Hot & Hazy
 This Observation
 Date July 8, 1974 Last Previous Observation (Speed Report No. 91)
 Time 10:00 a.m. - 3:00 p.m. Date August 13, 1973
 Time 9:55 a.m. - 3:40 p.m.

	OBSERVATION	PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
		Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent
All Vehicles	No. of vehicles obs.	288	251	252	217	36	34	110	109	49	55	61	54
	Ave. speed (m.p.h.)	66.20	58.63	66.15	58.70	66.56	58.21	61.14	57.01	63.86	57.67	59.05	56.33
	Standard deviation	8.013	6.464	8.345	6.659	5.190	5.104	9.304	7.948	9.081	8.682	8.990	7.143
	24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.92	0.0	1.82	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.92	0.0	1.82	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.91	0.92	0.0	1.82	1.64	0.0
	44 m.p.h.	0.69	0.80	0.79	0.92	0.0	0.0	4.55	6.42	2.04	7.27	6.56	5.56
	49 m.p.h.	2.08	7.17	1.98	7.37	2.78	5.88	12.73	13.76	8.16	12.73	16.39	14.81
	54 m.p.h.	6.94	24.30	7.54	24.88	2.78	20.59	23.64	37.61	14.29	32.73	31.15	42.59
	59 m.p.h.	17.36	57.77	19.05	58.06	5.56	55.88	42.73	67.89	30.61	61.82	52.46	74.07
	64 m.p.h.	42.01	84.06	44.05	83.41	27.78	88.24	62.73	83.49	53.06	76.36	70.49	90.74
	69 m.p.h.	67.71	93.63	67.06	93.09	72.22	97.06	82.73	93.58	73.47	90.91	90.16	96.30
Ind	74 m.p.h.	88.54	98.80	86.90	98.62	100.0	100.0	94.55	98.17	89.80	100.0	98.36	96.30
	79 m.p.h.	95.14	99.60	94.44	99.54	100.0	100.0	98.18	100.0	95.92	100.0	100.0	100.0
	84 m.p.h.	98.26	100.0	98.02	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	89 m.p.h.	99.31	100.0	99.21	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ind	No. of vehicles obs.	145	126	126	113	19	13	55	48	28	23	27	25
	Average speed	67.26	59.32	67.38	59.34	66.42	59.15	63.64	57.46	65.04	58.35	62.19	56.64
	No. of vehicles obs.	143	125	126	104	17	21	55	61	21	32	34	29
	Average speed	65.14	57.94	64.93	58.01	66.71	57.62	58.75	56.66	62.29	57.19	56.56	56.07

TABLE 7 SPEED DATA

Station 7 Highway 41 Location 1.0 mile North of S.R. 2

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Hazy

This Observation Last Previous Observation (Speed Report No. 91)

Date June 26, 1974 Date August 20, 1973

Time 11:15 - 2:45 p.m. Time 10:50 - 2:20 p.m.

	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Last	Pres- ent	Last
OBSERVATION												
No. of vehicles obs.	288	281	213	207	75	74	109	108	28	32	81	76
Ave. speed (m.p.h.)	62.56	57.95	62.67	57.90	62.23	58.07	56.50	55.43	60.14	59.53	55.23	53.70
Standard deviation	8.652	6.997	8.453	7.438	9.245	5.626	8.613	7.734	7.570	6.988	8.633	7.412
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.36	0.0	0.48	0.0	0.0	1.83	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	1.04	0.36	0.47	0.48	2.67	0.0	3.67	3.70	0.0	0.0	4.94	5.26
44 m.p.h.	3.13	2.49	2.82	3.38	4.00	0.0	9.17	10.19	3.57	0.0	11.11	14.47
49 m.p.h.	6.25	5.34	6.10	6.28	6.67	2.70	22.02	17.59	10.71	0.0	25.93	25.00
54 m.p.h.	17.71	31.32	16.90	31.88	20.00	29.73	35.74	39.81	21.43	21.88	40.74	47.37
59 m.p.h.	32.99	65.12	32.86	66.18	33.33	62.16	60.55	72.22	42.86	59.38	66.67	77.63
64 m.p.h.	61.46	84.34	60.56	84.54	64.00	83.78	87.16	87.96	75.00	75.00	91.36	93.42
69 m.p.h.	79.51	93.24	79.81	92.27	78.67	95.95	95.41	97.22	92.86	93.75	96.30	98.68
74 m.p.h.	93.40	98.93	93.90	98.55	92.00	100.0	98.17	99.07	96.49	96.88	98.77	100.0
79 m.p.h.	96.88	98.93	96.71	98.55	97.33	100.0	100.0	99.07	100.0	96.88	100.0	100.0
84 m.p.h.	99.31	99.64	99.53	99.52	98.67	100.0	100.0	99.07	100.0	96.88	100.0	100.0
89 m.p.h.	100.0	99.64	100.0	99.52	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	148	141	116	96	32	45	55	54	19	17	36	37
Average speed	60.47	56.11	61.16	55.92	57.97	56.51	52.65	50.98	58.84	55.24	49.39	49.03
No. of vehicles obs.	140	140	97	111	43	29	54	54	9	15	45	39
Average speed	64.76	59.80	64.47	59.62	63.40	60.80	60.41	59.87	62.89	64.40	59.91	58.13

All Vehicles

Bnd

Bnd

TABLE 8 SPEED DATA

Station	8	Highway	U.S. 52	Location	1.0 mile West of Klondike	Weather	Hazy
No. of Lanes	4	Type of Surface	Asphalt Concrete				
This Observation							
Date	June 4, 1974	Last Previous Observation (Speed Report No. 91.)					
Time	9:20 - 2:05 p.m.	Date	June 11, 1973				
		Time	1:45 - 4:20 p.m.				

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	280	280	253	259	27	21	108	108	74	60	34	48
Ave. speed (m.p.h.)	60.59	56.54	60.96	56.67	57.04	55.19	57.53	53.14	57.72	54.35	57.12	51.62
Standard deviation	7.836	5.752	7.720	5.744	8.169	5.810	7.345	6.894	7.484	5.883	7.124	7.781
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.93	0.0	0.0	0.0	2.08
39 m.p.h.	0.71	0.36	0.79	0.39	0.0	0.0	0.0	2.78	0.0	1.67	0.0	4.17
44 m.p.h.	3.93	2.14	3.95	1.93	3.70	4.76	7.41	12.96	6.76	5.00	8.82	22.92
49 m.p.h.	9.29	8.21	7.91	7.72	22.22	14.29	14.81	24.07	16.22	15.00	11.76	35.42
54 m.p.h.	20.00	36.07	18.18	35.52	37.04	42.86	31.48	54.63	27.03	53.33	41.18	56.25
59 m.p.h.	39.64	71.07	37.55	70.27	59.26	80.95	60.19	84.26	58.11	81.67	64.71	87.50
64 m.p.h.	70.00	92.50	68.38	92.28	85.19	95.24	77.78	97.22	77.03	96.67	79.41	97.92
69 m.p.h.	88.93	98.93	88.54	98.84	92.59	100.0	96.30	100.0	97.30	100.0	94.12	100.0
74 m.p.h.	97.50	100.0	97.23	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	99.29	100.0	99.21	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	140	140	129	127	11	13	54	54	38	29	16	25
Average speed	61.56	56.40	62.02	56.24	56.18	57.92	59.11	54.30	58.68	55.90	60.12	52.44
No. of vehicles obs.	140	140	124	132	16	8	54	54	36	31	18	22
Average speed	59.61	56.72	59.87	57.08	57.62	50.75	55.94	51.98	56.69	52.90	54.44	50.74

All Vehicles

and

and

and

TABLE 9 SPEED DATA

Station 9 Highway U.S. 35 Location 1.5 miles East of Junction I-69
 No. of Lanes 2 Type of Surface Asphalt Concrete Weather Cloudy
 This Observation Last Previous Observation (Speed Report No. 91)
 Date Aug. 27, 1974 Date August 21, 1973
 Time 11:40 - 2:00 p.m. Time 2:10 - 4:20 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	282	286	263	259	19	27	109	111	47	38	62	73
Ave. speed (m.p.h.)	61.26	56.95	61.27	56.90	61.11	57.41	58.43	54.74	61.89	55.55	55.81	54.32
Standard deviation	7.048	5.993	7.080	5.944	6.765	6.553	7.413	5.765	7.844	6.110	5.886	5.572
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.35	0.35	0.38	0.39	0.0	0.0	0.92	0.90	0.0	0.0	1.61	1.37
49 m.p.h.	4.61	8.39	4.56	9.27	5.26	0.0	2.75	4.50	2.13	2.63	3.23	5.48
54 m.p.h.	16.31	33.57	16.33	32.43	15.79	44.44	11.93	11.71	6.38	7.89	16.13	16.44
59 m.p.h.	38.30	71.33	39.16	71.43	26.32	70.37	30.28	45.05	17.02	39.47	40.32	47.95
64 m.p.h.	70.57	91.61	69.96	91.89	78.95	88.89	50.46	81.08	29.79	81.58	66.13	80.82
69 m.p.h.	87.59	96.50	87.45	96.91	89.47	92.59	82.57	97.30	70.21	97.37	91.94	97.26
74 m.p.h.	96.81	98.95	96.96	99.23	94.74	96.30	92.66	99.10	82.98	97.37	100.0	100.0
79 m.p.h.	99.29	99.65	99.24	99.61	100.0	100.0	97.25	99.10	93.62	97.37	100.0	100.0
84 m.p.h.	99.65	99.65	99.62	99.61	100.0	100.0	100.0	99.10	100.0	97.37	100.0	100.0
89 m.p.h.	100.0	99.65	100.0	99.61	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	140	143	130	125	10	18	55	55	24	22	31	33
Average speed	61.11	57.41	61.25	57.29	59.40	58.22	58.96	55.36	63.00	57.23	55.84	54.12
No. of vehicles obs.	142	143	133	134	9	9	54	56	23	16	22	40
Average speed	61.41	56.50	61.30	56.54	63.00	55.78	57.89	54.12	60.74	53.25	55.77	54.47

TABLE 10 SPEED DATA

Station 10 Highway U.S. 43 Location 2.0 miles South of Chalmers
 No. of Lanes 2 Type of Surface Asphalt Concrete Weather Clear
 This Observation Last Previous Observation (Speed Report No. 91)
 Date Aug. 30, 1974 Date August 29, 1973
 Time 10:30 - 1:05 p.m. Time 9:20 - 12:00 a.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent	Last	Pres- ent
No. of vehicles obs.	281	282	269	268	12	14	108	111	49	61	59	50
Ave. speed (m.p.h.)	64.56	59.09	64.38	59.07	68.42	59.50	57.69	57.09	57.67	57.26	57.69	56.88
Standard deviation	7.426	7.343	7.461	7.409	5.534	6.149	7.093	6.337	7.116	7.164	7.135	5.216
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	1.07	0.71	1.12	0.75	0.0	0.0	2.78	2.70	2.04	3.28	3.39	2.00
49 m.p.h.	3.91	6.38	4.09	6.34	0.0	7.14	11.11	12.61	10.20	16.39	11.86	8.00
54 m.p.h.	7.47	27.30	7.81	27.24	0.0	28.57	32.41	28.83	40.82	24.59	25.42	34.00
59 m.p.h.	22.06	54.61	23.05	55.22	0.0	42.86	58.33	66.67	61.22	62.30	55.93	72.00
64 m.p.h.	47.33	82.98	48.33	82.84	25.00	85.71	83.33	92.79	77.55	93.44	88.14	92.00
69 m.p.h.	77.58	91.84	77.70	91.79	75.00	92.86	94.44	97.30	95.92	95.08	93.22	100.0
74 m.p.h.	93.24	96.45	93.31	96.27	91.67	100.0	100.0	98.20	100.0	96.72	100.0	100.0
79 m.p.h.	97.86	98.94	98.14	98.88	91.67	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	99.64	99.29	99.63	99.25	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	99.65	100.0	99.63	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	141	141	135	134	6	7	54	55	17	30	37	25
Average speed	64.47	58.87	64.37	88.71	66.67	62.00	58.13	56.33	58.82	56.03	57.81	56.68
No. of vehicles obs.	140	141	134	134	6	7	54	56	32	31	22	25
Average speed	64.64	59.31	64.40	59.43	70.17	57.00	57.24	57.84	57.06	58.45	57.50	57.08

All Vehicles

TABLE 11 SPEED DATA

Station 11 Highway U.S. 31 Location 3.0 miles South of Rochester
 No. of Lanes 2 Type of Surface Asphalt Concrete Weather Clear
 This Observation Last Previous Observation (Speed Report No. 91)
 Date June 27, 1974 Date August 13, 1973
 Time 11:15 - 1:55 p.m. Time 11:25 - 2:15 p.m.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	284	281	221	224	63	57	108	109	33	41	75	68
Ave. speed (m.p.h.)	61.02	55.15	61.14	55.27	60.57	54.70	56.60	54.21	56.82	54.39	56.51	54.10
Standard deviation	6.757	5.685	6.976	5.722	5.953	5.561	6.117	5.709	6.678	6.352	5.899	5.331
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.71	0.0	0.45	0.0	1.75	0.0	1.83	0.0	2.44	0.0	1.47
44 m.p.h.	1.06	2.85	0.90	2.68	1.59	3.51	5.56	4.59	3.03	7.32	6.67	2.94
49 m.p.h.	4.23	11.74	4.07	10.27	4.76	17.54	12.04	19.27	9.09	14.61	13.33	22.06
54 m.p.h.	16.20	47.33	16.74	47.32	14.29	47.37	27.78	47.71	36.36	41.46	24.00	51.47
59 m.p.h.	40.49	78.29	41.18	77.68	38.10	80.70	70.37	84.40	66.67	80.49	72.00	86.76
64 m.p.h.	72.18	94.66	71.49	93.75	74.60	98.25	92.59	98.17	87.88	95.12	94.67	100.0
69 m.p.h.	90.14	99.64	88.69	99.55	95.24	100.0	98.15	99.08	93.94	97.56	100.0	100.0
74 m.p.h.	97.18	100.0	96.38	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
No. of vehicles obs.	143	140	112	107	31	33	54	54	13	25	41	29
Average speed	60.96	54.30	61.25	54.59	59.90	53.36	57.09	54.13	56.08	54.00	57.41	54.24
No. of vehicles obs.	141	141	109	117	32	24	54	55	20	16	34	39
Average speed	61.08	56.00	61.04	55.89	61.22	56.54	56.11	54.29	57.30	55.00	55.41	54.00

All Vehicles

TABLE 12 SPEED DATA

Station <u>12</u>	Highway <u>S.R. 25</u>	Location <u>0.7 mile West of Americas</u>	Weather <u>Overcast</u>
No. of Lanes <u>2</u>	Type of Surface <u>Asphalt Concrete</u>	Last Previous Observation (Speed Report No. <u>21</u>)	
This Observation		Date <u>August 17, 1973</u>	
Date <u>June 6, 1974</u>		Time <u>10:30 - 1:05 p.m.</u>	
Time <u>12:40 - 2:35 p.m.</u>			

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Pres-ent		Last	Pres-ent		Last	Pres-ent		Last	Pres-ent	
No. of vehicles obs.	287	289		264	270		23	19		110	108	
Ave. speed (m.p.h.)	61.44	55.78		61.55	55.86		60.17	54.58		56.55	53.23	
Standard deviation	6.987	5.280		7.050	5.295		6.213	5.048		6.425	4.948	
24 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
29 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
34 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
39 m.p.h.	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
44 m.p.h.	0.35	0.69		0.38	0.74		0.00	0.00		4.55	3.70	
49 m.p.h.	3.14	7.96		3.03	7.41		4.35	15.79		10.91	19.44	
54 m.p.h.	15.33	43.25		15.53	43.33		13.04	42.11		37.27	56.48	
59 m.p.h.	38.33	80.28		37.50	80.00		47.83	84.21		67.27	90.74	
64 m.p.h.	68.99	94.12		68.56	93.70		73.91	100.0		87.27	100.0	
69 m.p.h.	89.55	98.27		89.02	98.15		95.65	100.0		98.18	100.0	
74 m.p.h.	95.82	99.65		95.45	99.63		100.0	100.0		100.0	100.0	
79 m.p.h.	98.61	100.0		98.48	100.0		100.0	100.0		100.0	100.0	
84 m.p.h.	99.65	100.0		99.62	100.0		100.0	100.0		100.0	100.0	
89 m.p.h.	99.65	100.0		99.62	100.0		100.0	100.0		100.0	100.0	
All Vehicles												
No. of vehicles obs.	146	149		126	136		20	13		56	54	
Average speed	60.90	55.54		61.00	55.58		60.25	55.15		57.04	54.09	
No. of vehicles obs.	141	140		138	134		3	6		54	54	
Average speed	62.00	56.03		62.05	56.15		59.67	53.33		56.06	52.37	
Trucks												
No. of vehicles obs.	146	149		126	136		20	13		56	54	
Average speed	60.90	55.54		61.00	55.58		60.25	55.15		57.04	54.09	
No. of vehicles obs.	141	140		138	134		3	6		54	54	
Average speed	62.00	56.03		62.05	56.15		59.67	53.33		56.06	52.37	

TABLE 13. SPEED DATA

Station	1,2,3,4,	Highway	Interstate	Location	See Individual Stations
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No. of Lanes	Type of Surface	Weather
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This Observation	Last Previous Observation (Speed Report No. 91)
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Date _____	Date _____
Time _____	Time _____

[illegible]

TABLE 14 SPEED DATA

Station 5,6,7,8 Highway 4 - Lanes Location See Individual Stations
 No. of Lanes _____ Type of Surface _____ Weather _____
 This Observation _____ Last Previous Observation (Speed Report No. 91) _____
 Date _____ Date _____
 Time _____ Time _____

[illegible]

TABLE 15 SPEED DATA

Station 9,10,11,12 Highway 2 - Lane Location See Individual Stations Weather _____

No. of Lanes _____ Type of Surface _____

This Observation _____ Last Previous Observation (Speed Report No. 91)

Date _____ Date _____

Time _____ Time _____

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	1134	1138	1017	1021	117	117	435	439	175	193	260	246
Ave. speed (m.p.h.)	62.06	56.74	62.14	56.84	61.38	55.88	57.32	54.83	58.66	55.26	56.42	54.49
Standard deviation	7.193	6.292	7.269	6.321	6.485	5.986	6.804	5.871	7.281	6.272	6.319	5.525
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	.18	0.0	.10	0.0	.85	0.23	.91	0.0	1.04	0.38	0.81
44 m.p.h.	0.71	1.14	0.69	1.08	0.85	1.71	3.91	3.87	2.86	3.11	4.62	4.47
49 m.p.h.	3.97	8.61	3.93	8.23	4.27	11.97	11.49	16.17	9.14	14.51	13.08	17.48
54 m.p.h.	13.84	37.87	13.96	37.22	12.82	43.59	31.95	44.42	30.29	40.93	33.08	47.15
59 m.p.h.	34.83	71.18	34.91	70.81	34.19	74.36	61.61	80.64	54.29	77.72	66.54	82.93
64 m.p.h.	64.81	90.86	64.21	90.40	70.09	94.87	86.44	97.04	79.43	96.37	91.15	97.56
69 m.p.h.	86.24	96.57	85.55	96.47	92.31	97.44	95.86	98.86	92.00	97.41	98.46	100.0
74 m.p.h.	95.77	98.77	95.48	98.73	98.29	99.15	99.31	99.32	98.29	98.45	100.0	100.0
79 m.p.h.	98.94	99.65	98.92	99.61	99.15	100.0	100.0	99.77	100.0	99.48	100.0	100.0
84 m.p.h.	99.74	99.74	99.71	99.71	100.0	100.0	100.0	99.77	100.0	100.0	100.0	100.0
89 m.p.h.	99.91	99.82	99.90	99.80	100.0	100.0	100.0	99.77	100.0	100.0	100.0	100.0

All Vehicles

% of vehicles
traveling at or less
than

TABLE 16 SPEED DATA

Station	1-12	Highway	Location	Weather
No. of Lanes		Type of Surface		
This Observation				
Date				Last Previous Observation (Speed Report No. 91)
Time				Date
				Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	3395	3360	2676	2613	719	747	1309	1402	502	550	807	852
Ave. speed (m.p.h.)	65.18	57.80	64.67	57.61	67.06	58.44	59.59	55.57	60.90	56.23	58.77	55.14
Standard deviation	7.904	5.814	7.880	5.971	7.710	5.181	7.387	5.995	7.772	6.393	7.019	5.687
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	.03	0.0	.04	0.0	0.0	0.15	.14	0.0	.18	0.25	.12
39 m.p.h.	0.15	.12	0.11	.11	0.28	.13	0.46	1.07	0.0	.73	0.74	1.29
44 m.p.h.	0.94	0.95	1.01	1.07	0.70	.54	3.44	4.07	2.79	2.55	3.84	5.05
49 m.p.h.	3.06	5.36	3.10	5.93	2.64	3.35	8.94	12.70	7.77	10.55	9.67	14.08
54 m.p.h.	9.37	27.41	10.13	29.24	6.54	21.02	22.15	39.80	20.32	38.36	23.30	40.73
59 m.p.h.	22.30	64.38	23.99	65.82	15.99	59.30	47.98	77.96	42.63	73.64	51.30	80.75
64 m.p.h.	45.42	89.35	48.47	89.17	34.08	89.96	74.87	94.79	65.94	91.27	80.42	97.07
69 m.p.h.	69.31	96.82	72.76	96.59	56.47	97.59	91.90	98.43	87.25	96.73	94.80	99.53
74 m.p.h.	90.57	99.29	91.37	99.23	87.62	99.46	98.62	99.50	97.01	99.09	99.63	99.77
79 m.p.h.	96.94	99.76	97.12	99.73	96.24	99.87	99.69	99.86	99.20	99.64	100.0	100.0
84 m.p.h.	99.47	99.88	99.40	99.85	99.72	100.0	100.0	99.93	100.0	99.82	100.0	100.0
89 m.p.h.	99.85	99.91	99.81	99.89	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

All Vehicles

of vehicles
traveling at or less
than