

SCHOOL OF CIVIL ENGINEERING



JOINT HIGHWAY
RESEARCH PROJECT

JHRP-77-16

TRAFFIC SPEED REPORT NO. 101

G. S. Toft

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PURDUE UNIVERSITY
INDIANA STATE HIGHWAY COMMISSION

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TRAFFIC SPEED REPORT NO. 101

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

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

September 7, 1977
File: 8-3-3
Project: C-36-10C

The attached Progress Report No. 101 on Traffic Speeds is the report of the April-June 1977 quarterly study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, 4-lane and 2-lane and on urban interstate highways in Indiana. The report has been prepared by Mr. G. S. Toft, a Graduate Instructor in Research on our staff, under the direction of Professor H. L. Michael. The data collection was directed by Mr. G. K. Stafford of our staff.

The results indicate that the average speed of passenger cars was similar while that of trucks was 2.0 mph greater than the respective average speeds for the preceding quarterly period. For the first time since the initiation of these speed studies, the average speed of heavy trucks (58.6) exceeded that of passenger cars (58.1).

Copies of the report will be sent to the Federal Highway Administration and the ISHC for review, comment and acceptance as fulfillment of the objectives of this HPR Part I Study. Copies of the report are requested for release to the Indiana State Police and the Indiana Office of Traffic Safety as a normal procedure for these reports.

Respectfully submitted,

Harold L. Michael
Harold L. Michael
Associate Director

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Interim Report
TRAFFIC SPEED REPORT NO. 101

by
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Joint Highway Research Project
Project No.: C-36-10C
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Purdue University
in cooperation with the
Indiana State Highway Commission
and the
U. S. Department of Transportation
Federal Highway Administration

The opinions, findings and conclusions expressed in this publication
are those of the authors and not necessarily those of the Federal
Highway Administration.

Purdue University
West Lafayette, Indiana
September 7, 1977

TRAFFIC SPEED REPORT NO. 101

This report is an analysis of spot speed observations made during April-June 1977. All observations were made of free-flowing vehicles on level, tangent sections of rural and urban highways during daylight and under favorable conditions.

The speed monitoring stations for each highway classification are divided into two groups. The first group is identified as "control stations" and studied from the same locations on selected Federal and State highways as used in the previous annual studies. These "control stations" are used in each quarterly study. The second group is selected at random for each quarterly study.

Fourteen speed monitoring stations were used for the reported study. Seven of these stations were the control stations noted above. The other seven stations were selected at random for this quarterly study.

Stations were classified as two-lane, four-lane, rural interstate, or urban interstate highways. A representative sample of spot speeds was obtained at each station in each classification. The site locations were as follows: (See Figure A).

Rural Interstate Highways

*RI-21 (I-69)	1.6 miles south of junction of SR 18
*RI-6 (I-65)	7.5 miles north of junction of SR 160
RI-33 (I-65)	4.6 miles north of junction of SR 28
**RI-25 (I-80)-TR	12.2 miles east of junction of SR 9

Four-Lane Highways

*4L-32 (U.S. 30)	2.9 miles west of Wanatah city limit sign
*4L-17 (U.S. 52)	just east of Co. Rd. 475W, near Klondike
4L-27 (U.S. 24)	3.5 miles east of junction of SR 9
4L-29 (U.S. 30)	1.3 miles east of junction of SR 13

Two-Lane Highways

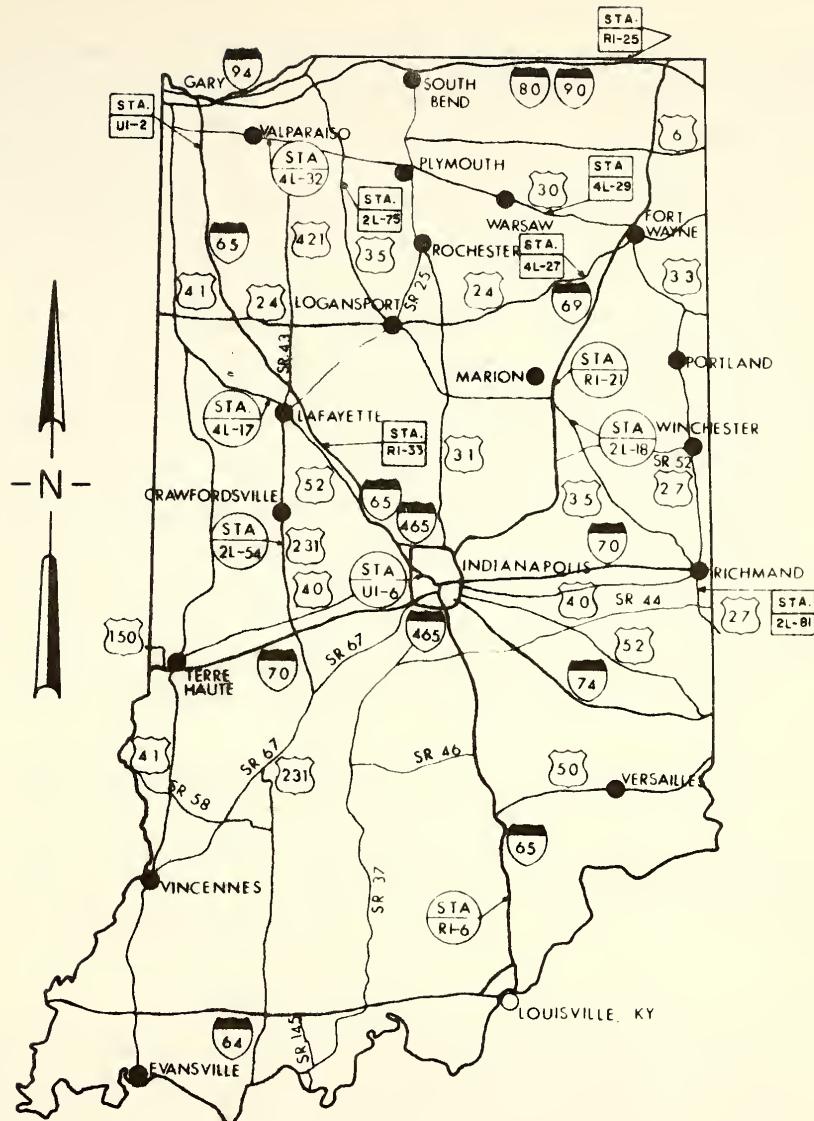
*2L-18 (U.S. 35)	2.5 miles east of junction of I-69
*2L-54 (U.S. 231)	1.1 miles south of junction of SR 234
2L-75 (U.S. 35)	2.7 miles north of Knox city limit sign
2L-81 (U.S. 27)	0.6 miles south of Union-Wayne county line

Urban Interstate Highways

*UI-6 (I-65)	East of White River Bridge
UI-2 (I-65)	0.9 miles north of junction of SR 8

*Control stations

**Toll Road



NOTE

- Circle Primary control stations
- Square Random stations

FIGURE 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 more than 5000 lbs. gross weight) Trucks. The analysis was performed as classified and combined, passenger cars or trucks.

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

Equipment and Field Procedure

The observations for this study were obtained by use of a Radar Speed Meter. The meter was located in a van type vehicle parked as a disabled vehicle on the right shoulder. The van was equipped with one-way vision windows on the rear and side facing traffic so that approaching vehicles could not observe the speed measurement process. The observers were also equipped with CB radio equipment so as to monitor possible radio notification of the speed measurement and of police vehicles in the area. When any such incidents occurred speeds were not taken for at least a following 15 minute period. Such periods rarely occurred. There was rarely indication, in fact, that motorists were ever aware of the presence of a speed measuring station while it was in operation.

The speed was measured at a distance from the van so that the angle of measurement with the highway center line was always less than 10°. No corrections of speeds were necessary at these small angles. 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 14 in the Appendix. Tables 15, 16, 17 and 18 summarize the data for rural interstate, four-lane, two-lane and urban interstate highways, respectively. Table 19 is the summary for all highways. Tables 20 through 34 are summaries in an FHWA format which is desired.

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

	<u>Interstate</u>		<u>Other</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Four-Lane</u>	<u>Two-Lane</u>
			<u>Rural</u>	<u>Rural</u>
<u>Passenger Cars:</u>				
Indiana	58.7	60.4	57.1	56.3
Non-Indiana	59.1	60.5	57.8	57.3
All Passenger Cars	58.8	60.5	57.2	56.4
85 Percentile (all)	62.9	64.8	61.9	61.4
<u>Trucks:</u>				
Less than 5000 lbs.	57.7	59.3	56.7	55.6
5000 lbs. or more	58.9	60.9	58.0	55.1
<u>All Vehicles:</u>				
Average	58.7	60.5	57.4	56.0
85 Percentile	63.1	64.8	62.1	61.0

The percent of vehicles exceeding the speed limit (55 mph) for each classification of vehicle and each type of highway was as follows:

	<u>Interstate</u>		<u>Other</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Four-Lane</u>	<u>Two-Lane</u>
<u>Passenger Cars:</u>				
Indiana	75.5	86.3	63.3	55.5
Non-Indiana	81.0	86.9	67.7	61.0
All Passenger Cars	77.1	86.6	64.0	56.2
<u>Trucks:</u>				
Less than 5000 lbs.	66.1	77.9	58.1	51.1
5000 lbs. or more	82.0	88.1	71.8	49.6
<u>All Vehicles:</u>				
	76.9	86.1	65.4	53.9

The percent of vehicles traveling more than 5 mph above the speed limit (exceeding 60 mph) for each case was as follows:

	<u>Interstate</u>		<u>Other</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Four-Lane</u>	<u>Two-Lane</u>
			<u>Rural</u>	<u>Rural</u>
<u>Passenger Cars:</u>				
Indiana	32.0	45.8	23.3	20.2
Non-Indiana	38.0	45.3	24.5	27.9
All Passenger Cars	33.7	45.5	23.5	21.2
<u>Trucks:</u>				
Less than 5000 lbs.	28.4	40.7	23.8	18.5
5000 lbs. or more	35.3	54.5	33.1	14.4
<u>All Vehicles:</u>	33.4	48.0	26.4	19.3

The percent of vehicles traveling more than 10 miles per hour above the speed limit (exceeding 65 mph) for each case was as follows:

	<u>Interstate</u>		<u>Other</u>	
	<u>Urban</u>	<u>Rural</u>	<u>Four-Lane</u>	<u>Two-Lane</u>
			<u>Rural</u>	<u>Rural</u>
<u>Passenger Cars:</u>				
Indiana	8.4	15.2	5.8	5.1
Non-Indiana	6.3	13.5	5.2	9.6
All Passenger Cars	7.8	14.3	5.7	5.7
<u>Trucks:</u>				
Less than 5000 lbs.	9.5	10.6	3.6	5.9
5000 lbs. or more	9.4	14.8	5.7	2.0
<u>All Vehicles:</u>	8.5	14.1	5.4	5.0

Summary and Conclusions

The overall average speeds for all vehicles and for all passenger cars in this study were found to be the same, 58.1 mph. The overall average speeds for heavy trucks and for all trucks were found to be 58.6 mph and 58.0 mph, respectively. These overall average speeds show an increase over the results of January-March 1977 of 1.1 mph for all vehicles and 0.3 mph for all passenger cars. The overall average speeds for heavy trucks and for all trucks were 2.6 mph and 2.0 mph, respectively, more than the results for the January-March 1977 study.

Table A presents a comparison of the overall speed results with that of the previous two studies. The 85th percentile speed and the average speed of passenger cars was essentially the same as the pre-winter quarter (Oct.-Dec. 1976). However the 85th percentile and the average speeds of trucks show a significant increase from the pre-winter results.

A comparison of April-June 1977 speed data with that for other recent periods for several types of highway for passenger cars and trucks is shown in Tables B, C, D and E. In general, speeds increased on all highway types except two-lane highways where both passenger car and truck speeds show little quarterly variation.

The increase in average speed of passenger cars occurred mainly on urban interstate highways. Passenger vehicle speeds remained approximately the same as the January-March results on rural interstate and four-lane highways and showed a slight decline on two-lane highways. These April-June 1977 passenger car speeds closely resemble the passenger car speeds on all highway types for July-September 1976 suggesting no significant change under comparable seasonal conditions. The upward trend in passenger car speeds on rural interstate highways observed in the last report has continued, but only marginally.

Except for two-lane highways, truck speeds increased to record levels on all highway types. In particular, heavy trucks reached the highest observed average speeds over the past twelve months on urban interstate, rural interstate and four-lane highways.

TABLE A. COMPARISON OF THE OVERALL SPEED RESULTS

	April-June 1977	Jan.-Mar. 1977	Oct.-Dec. 1976
<u>Average:</u>			
All Passenger Cars	58.1	57.8	58.0
Heavy Trucks	58.6	56.0	56.0
All Trucks	58.0	56.0	56.1
<u>85 Percentile:</u>			
All Passenger Cars	63.0	62.7	63.0
Heavy Trucks	63.3	61.5	60.9
All Trucks	63.0	61.4	61.0
<u>15 Percentile:</u>			
Heavy Trucks	52.9	49.7	50.3

TABLE B. AVERAGE SPEEDS ON INTERSTATE HIGHWAYS (URBAN)

	April-June 1977	Jan.-Mar. 1977	Oct.-Dec. 1976	July-Sept. 1976
<u>Passenger Cars:</u>				
Indiana	58.7	57.0	57.3	58.4
Non-Indiana	59.1	57.1	57.8	58.6
All Passenger Cars	58.8	57.0	57.3	58.4
85 Percentile (all)	62.9	61.5	61.2	63.3
<u>Trucks:</u>				
Less than 5000 lbs.	57.7	55.9	55.7	57.7
5000 lbs. or more	58.9	56.2	55.4	57.3

TABLE C. AVERAGE SPEEDS ON INTERSTATE HIGHWAYS (RURAL)

	April-June 1977	Jan.-Mar. 1977	Oct.-Dec. 1976	July-Sept. 1976
<u>Passenger Cars:</u>				
Indiana	60.4	60.1	59.7	59.5
Non-Indiana	60.5	61.0	60.1	60.2
All Passenger Cars	60.5	60.5	59.9	59.8
85 Percentile (all)	64.8	64.7	64.5	64.3
<u>Trucks:</u>				
Less than 5000 lbs.	59.3	58.0	58.0	58.5
5000 lbs. or more	60.9	59.3	57.4	58.4

TABLE D. AVERAGE SPEEDS ON OTHER FOUR-LANE HIGHWAYS

	April-June 1977	Jan.-Mar. 1977	Oct.-Dec. 1976	July-Sept. 1976
<u>Passenger Cars:</u>				
Indiana	57.1	56.7	58.1	57.2
Non-Indiana	57.8	58.7	59.8	57.8
All Passenger Cars	57.2	57.0	58.3	57.3
85 Percentile (all)	61.9	61.7	63.7	61.8
<u>Trucks:</u>				
Less than 5000 lbs.	56.7	54.8	56.8	56.9
5000 lbs. or more	58.0	54.8	55.9	56.6

TABLE E. AVERAGE SPEEDS ON TWO-LANE HIGHWAYS

	April-June 1977	Jan.-Mar. 1977	Oct.-Dec. 1976	July-Sept. 1976
<u>Passenger Cars:</u>				
Indiana	56.3	56.5	56.4	56.4
Non-Indiana	57.3	58.3	56.3	57.8
All Passenger Cars	56.4	56.7	56.4	56.6
85 Percentile (all)	61.4	61.8	61.4	61.5
<u>Trucks:</u>				
Less than 5000 lbs.	55.6	55.8	54.9	55.6
5000 lbs. or more	55.1	53.5	54.4	55.4

TABLE 1 SPEED DATA

Station	RI-6	Highway	1-65	Location	7.5 miles north of junction of S.R. 160
No. of Lanes	4	Type of Surface	Concrete	Weather	Clear
This Observation				Last	Previous Observation (Speed Report No. 100)
Date	5-26-77	Date	3-14-77	Time	12:30-1:13 PM - SB 1:20-2:20 PM - NB
Time	12:00-2:32 PM - SB	Time	12:12-1:05 PM - SB 1:20-2:20 PM - NB		

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			All			All		
	Last	Pres-ent	Last	Last	Pres-ent	Last	Last	Pres-ent	Last	Last	Pres-ent	Last
No. of vehicles obs.	275	246	120	134	155	112	202	184	61	57	141	127
Ave. speed (m.p.h.)	60.43	60.74	60.01	60.65	60.75	59.69	60.06	59.49	59.75	59.77	60.20	
Standard deviation	5.55	5.40	5.59	5.21	5.51	5.64	4.89	4.68	5.02	5.46	4.85	4.30
24 m.p.h.	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	
34 m.p.h.	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	
44 m.p.h.	.36	0	.83	0	0	0	.50	0	1.64	0	0	
49 m.p.h.	4.00	1.22	4.17	1.49	3.87	.89	2.48	1.09	1.64	1.75	2.84	.79
54 m.p.h.	13.09	9.35	15.83	9.70	10.97	8.93	13.37	10.33	11.48	14.04	14.18	8.66
59 m.p.h.	41.09	45.12	43.33	42.54	39.35	48.21	49.01	44.57	55.74	56.14	46.10	39.37
64 m.p.h.	83.27	80.08	84.17	79.85	82.58	80.36	85.64	85.33	86.89	82.46	85.71	86.61
69 m.p.h.	94.18	94.31	94.17	95.52	94.19	92.86	98.02	97.28	98.36	94.74	97.87	98.43
74 m.p.h.	98.91	98.37	100.0	97.76	98.06	99.71	99.50	100.0	100.0	99.29	100.0	
79 m.p.h.	100.0	99.59	100.0	100.0	100.0	99.11	100.0	100.0	100.0	100.0	100.0	
84 m.p.h.	100.0	99.59	100.0	100.0	100.0	99.11	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	
All Vehicles	147	131	61	71	86	60	115	84	42	25	73	59
Average speed	61.43	59.37	60.62	59.30	62.00	59.47	60.42	58.58	60.10	57.44	60.60	59.07
No. of vehicles obs.	128	115	59	63	69	52	87	100	19	32	68	68
Average speed	59.28	62.30	59.37	62.17	59.20	62.46	58.72	61.30	58.16	61.56	58.88	61.18

TABLE 2 SPEED DATA

Station RI-21	Highway 1-69	Type of Surface	Location 1.6 miles south of junction of S.R. 18
No. of Lanes 4	Concrete	Weather Clear	No. 100
This Observation			
Date 5.11.77			Last Previous Observation (Speed Report No. 100)
Time 10:40-11:31 AM - NB		Date 3.17.77	
11:53 AM - 12:56 PM - SB		Time 10:35-11:31 AM - NB	
		12:03-1:12 PM - SB	

OBSERVATION	PASSENGER CARS				TRUCKS			
	All		Indiana		Non-Indiana		All	
	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	242	263	137	178	105	85	186	174
Ave. speed (m.p.h.)	60.24	60.16	59.30	59.96	61.48	60.58	59.91	59.67
Standard deviation	5.14	4.76	4.92	4.56	5.18	5.17	5.11	5.35
24 m.p.h.	0	0	0	0	0	0	0	5.68
29 m.p.h.	0	0	0	0	0	0	0	6.09
34 m.p.h.	0	0	0	0	0	0	0	0
39 m.p.h.	0	0	0	0	0	0	0	0
44 m.p.h.	0	0	0	0	0	0	0	0
49 m.p.h.	2.48	.38	3.65	.56	.95	0	4.84	2.87
54 m.p.h.	10.33	7.98	13.87	8.99	5.71	5.88	25.27	15.52
59 m.p.h.	46.69	49.81	54.01	51.69	37.14	45.88	63.98	50.57
64 m.p.h.	84.30	85.93	87.59	85.96	80.00	85.88	88.71	83.91
69 m.p.h.	94.21	95.44	97.08	96.63	90.48	92.94	98.39	95.40
74 m.p.h.	98.76	98.48	99.27	99.44	98.10	96.47	100.0	99.43
79 m.p.h.	100.0	99.62	100.0	100.0	100.0	98.82	100.0	100.0
84 m.p.h.	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
All Vehicles	118	128	72	86	46	42	96	91
No. of vehicles obs.	118	128	72	86	46	42	96	91
Average speed	61.08	60.26	60.25	60.33	62.37	60.12	59.25	60.75
No. of vehicles obs.	124	135	65	92	59	43	90	83
Average speed	59.45	60.06	58.25	59.61	60.78	61.02	56.49	58.49

TABLE 3 SPEED DATA

NB 4.6 miles north of junction of S.R. 28
SB 6.1 miles south of S.R. 38

Station RI-33 No of lanes 4 Highway 1-65 Type of surface

Type of Surfaces

This Observation

Date 5-13-77
Time 10:00-10:46 AM - SB
11:28-12:05 PM - NB

Concrete

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PREFACE NO. 15

		PASSENGER CARS				TRUCKS					
		All	Indiana	Non-Indiana		All	<5000	1 lbs.	>5000	0 lbs.	1 lbs.
OBSERVATION	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last
No. of vehicles obs.											
Ave. speed (m.p.h.)	238	130	108	192	52						
Standard deviation	60.86	60.88	60.83	60.50	60.06						
24 m.p.h.	5.34	5.45	5.24	4.98	5.26						
29 m.p.h.	0	0	0	0	0						
34 m.p.h.	0	0	0	0	0						
39 m.p.h.	0	0	0	0	0						
44 m.p.h.	0	0	0	0	0						
49 m.p.h.	.42	.77	0	2.08	3.85						
54 m.p.h.	9.66	10.00	9.26	11.46	15.38						
59 m.p.h.	42.02	43.08	40.74	43.23	44.23						
64 m.p.h.	78.15	77.69	78.70	81.25	82.60						
69 m.p.h.	93.28	93.08	93.52	95.31	96.15						
74 m.p.h.	98.32	98.46	98.15	98.96	98.08						
79 m.p.h.	100.0	100.0	100.0	100.0	100.0						
84 m.p.h.	100.0	100.0	100.0	100.0	100.0						
89 m.p.h.	100.0	100.0	100.0	100.0	100.0						
No. of vehicles obs.	119	57		96							
Average Speed	60.68	60.72	60.65	61.85	61.23						
No. of vehicles obs.	119	73		96							
Average speed	61.04	61.01	61.09	59.15	59.20						

TABLE 4 SPEED DATA

Station 81-25	Highway 1-80	Type of Surface	Location 12.2 miles east of junction of SR 9
No. of Lanes 4		Concrete	
This Observation Date 5-24-77	Time 9:58-10:55 AM - EB		Last Previous Observation (Speed Report No.)
	Time 11:11 AM - 12:04 PM - WB	Date None Taken	Clear
		Time	

		PASSENGER CARS				TRUCKS				<5000 lbs.			
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.													
Ave. speed (m.p.h.)	202	19	183	19	60.09	61.57	229	42	42	42	42	42	187
Standard deviation	60.02	59.32	60.09	60.09	4.91	4.73	5.10	5.24	58.52	58.52	62.26	62.26	4.82
24 m.p.h.	4.74	4.91	4.73	4.73	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
34 m.p.h.	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
44 m.p.h.	0	0	0	0	0	0	0	0	0	0	0	0	0
49 m.p.h.	0	0	0	0	0	0	0	0	0	0	0	0	0
54 m.p.h.	0	0	0	0	1.09	1.09	1.75	7.14	7.14	7.14	7.14	7.14	.53
59 m.p.h.	0	0	0	0	10.53	9.84	6.99	19.05	19.05	19.05	19.05	19.05	4.28
64 m.p.h.	0	0	0	0	63.16	46.99	31.00	52.38	52.38	52.38	52.38	52.38	26.20
69 m.p.h.	0	0	0	0	89.47	85.25	76.42	90.48	90.48	90.48	90.48	90.48	73.26
74 m.p.h.	0	0	0	0	94.74	96.17	94.32	97.62	97.62	97.62	97.62	97.62	93.58
79 m.p.h.	0	0	0	0	99.50	100.0	99.45	98.25	98.25	98.25	98.25	98.25	97.86
84 m.p.h.	0	0	0	0	100.0	100.0	100.0	99.56	99.56	99.56	99.56	99.56	99.47
89 m.p.h.	0	0	0	0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
All Vehicles	89	14	75	75	14	14	14	21	21	21	21	21	105
Average speed	60.72	60.36	60.79	60.79	5	5	5	60.19	60.19	60.19	60.19	60.19	62.83
No. of vehicles obs.	113	5	108	108	103	103	103	21	21	21	21	21	82
Average speed	59.47	56.40	59.61	59.61	56.57	56.57	56.57	56.86	56.86	56.86	56.86	56.86	61.52

TABLE 5 SPEED DATA

Station	4L-17	Highway	U.S. 52	Type of Surface	Location Just east of Co. Rd. 475W, near Klondike
No. of Lanes	4			Asphalt	Weather Clear
This Observation Date	5/9/77				Last Previous Observation (Speed Report No. 100)
Time	9:36-11:15 A.M. - WB				Date 3/11/77
	11:20 A.M.-1:04 P.M. - EB				Time 9:40-11:35 A.M. - WB
					12:40-2:15 P.M. - EB

PASSENGER CARS										TRUCKS								
OBSERVATION	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	Last	Pres-ent	Last	Pres-ent	Last	
No. of vehicles obs.	288	278	265	246	23	32	170	151	110	89	60	60	60	60	60	60	62	
Ave. speed (m.p.h.)	56.80	56.75	56.68	56.59	58.17	57.97	55.12	56.12	55.14	56.30	55.08	55.08	55.08	55.08	55.08	55.08	55.85	
Standard deviation	5.84	5.90	5.81	6.00	6.15	5.00	5.62	7.25	5.44	7.04	5.98	5.98	5.98	5.98	5.98	5.98	7.58	
24 m.p.h.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
29 m.p.h.	0	.36	0	.41	0	0	0	0	0	0	0	0	0	0	0	0	0	
34 m.p.h.	0	.36	0	.41	0	0	0	0	0	0	0	0	0	0	0	0	0	
39 m.p.h.	1.04	.72	1.13	.81	0	0	0	0	1.32	0	0	0	0	0	0	0	0	
44 m.p.h.	2.08	3.96	2.26	4.47	0	0	0	0	1.32	0	0	0	0	0	0	0	0	
49 m.p.h.	9.72	8.27	9.81	8.54	8.70	6.25	15.29	13.91	15.45	10.11	15.00	15.00	15.00	15.00	15.00	15.00	9.60	
54 m.p.h.	33.33	28.78	33.96	30.89	26.09	12.50	45.29	35.10	42.73	40.45	50.00	50.00	50.00	50.00	50.00	50.00	27.42	
59 m.p.h.	69.79	71.94	70.24	72.36	56.52	68.75	75.29	74.17	78.18	78.65	70.00	70.00	70.00	70.00	70.00	70.00	67.74	
64 m.p.h.	92.36	91.01	93.21	91.87	82.61	84.38	97.06	92.72	98.18	94.38	95.00	95.00	95.00	95.00	95.00	95.00	90.32	
69 m.p.h.	98.26	98.20	98.11	97.97	100.00	100.00	100.00	100.00	98.68	100.00	97.75	100.00	100.00	100.00	100.00	100.00	100.00	
74 m.p.h.	100.00	99.64	100.00	99.59	100.00	100.00	100.00	100.00	99.34	100.00	98.88	100.00	98.88	100.00	98.88	100.00	100.00	
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.34	100.00	98.88	100.00	98.88	100.00	98.88	100.00	100.00	
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.34	100.00	98.88	100.00	98.88	100.00	98.88	100.00	100.00	
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.34	100.00	98.88	100.00	98.88	100.00	98.88	100.00	100.00	
All Vehicles																		
No. of vehicles obs.	164	146	149	131	15	15	82	69	59	43	23	23	23	23	23	23	26	
Average speed	56.90	56.16	56.70	55.93	58.87	58.13	54.85	54.46	54.90	54.56	54.74	54.74	54.74	54.74	54.74	54.74	54.31	
No. of vehicles obs.	124	132	116	115	8	17	88	82	51	46	37	36	36	36	36	36	36	
Average speed	56.67	57.40	56.66	57.34	56.88	57.82	55.36	57.51	55.41	57.93	55.30	56.97	56.97	56.97	56.97	56.97	56.97	

TABLE 6 SPEED DATA

Station	4L-32	Highway	U.S. 30	Type of Surface	Asphalt	Location	2.9 miles west of Wanatah City limit sign
This Observation	Date	5/19/77	Time	11:06 A.M.-12:00 noon - WB 12:19-1:20 P.M. - EB		Weather	Clear
						Last Previous Observation (Speed Report No. 100)	
						Date 3/23/77	
						Time 10:50-11:54 A.M. - WB	
						12:22-1:28 P.M. - EB	

PASSENGER CARS								TRUCKS			
All				Indiana		Non-Indiana		All		<5000 lbs.	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	211	180	168	131	43	49	216	248	66	47	150
Ave. speed (m.p.h.)	57.62	57.47	57.49	57.44	58.14	57.53	55.25	58.53	54.76	57.30	55.47
Standard deviation	4.93	4.79	5.12	4.51	4.12	5.54	5.75	4.53	6.48	4.13	5.40
24 m.p.h.	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
34 m.p.h.	0	0	0	0	0	0	0	0	0	0	0
39 m.p.h.	.47	0	.60	0	0	0	.46	0	.40	1.52	0
44 m.p.h.	.95	.56	1.19	.76	0	0	.93	.93	1.21	7.58	0
49 m.p.h.	3.79	2.78	4.17	.76	2.33	8.16	13.89	2.82	21.21	4.26	10.67
54 m.p.h.	20.85	27.78	22.62	27.48	13.95	28.57	42.13	16.94	42.42	23.40	42.00
59 m.p.h.	70.14	69.44	69.05	71.76	74.42	63.27	79.63	55.24	81.82	68.09	78.67
64 m.p.h.	92.89	92.22	94.05	92.37	88.37	91.84	96.30	91.94	95.45	97.87	96.67
69 m.p.h.	98.58	97.78	98.21	98.47	100.00	95.92	99.54	100.00	98.48	100.00	100.00
74 m.p.h.	99.05	100.00	98.81	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
All Vehicles	104	94	79	68	25	26	108	121	27	24	81
and											97
Average speed	58.16	57.64	58.11	57.68	58.32	57.54	56.26	59.26	53.48	56.79	57.19
No. of vehicles obs.	107	86	89	63	18	23	108	127	39	23	69
Average speed	57.09	57.28	56.93	57.19	57.89	57.52	54.25	57.84	55.64	57.83	53.46

TABLE 7 SPEED DATA

Station	4L-27	Highway	U.S. 24	Type of Surface	Location	3.5 miles east of junction of S.R. 9
No. of Lanes	4	Date	5/23/77		Weather	Clear
This Observation					Last Previous Observation (Speed Report No. __)	
Date	12:12-1:16 P.M. - NB				Date	None taken
Time	1:38-2:41 P.M. - SB				Time	

OBSERVATION	PASSENGER CARS						TRUCKS					
	All			Indiana			Non-Indiana			All		
	Last	Pres-ent	Last	Last	Pres-ent	Last	Last	Pres-ent	Last	Last	Pres-ent	Last
No. of vehicles obs.												
Ave. speed (m.p.h.)	26.7	232	35	162	76	86						
Standard deviation	56.97	56.94	57.11	56.52	56.03	56.97						
24 m.p.h.	5.19	5.24	4.92	5.09	5.21	4.97						
29 m.p.h.	0	0	0	0	0	0						
34 m.p.h.	0	0	0	0	0	0						
39 m.p.h.	.37	.43	0	0	0	0						
44 m.p.h.	1.87	2.16	0	0	0	0						
49 m.p.h.	6.74	7.33	2.86	.62	1.32	0						
54 m.p.h.	27.72	27.16	6.17	7.89	4.65							
59 m.p.h.	69.66	69.83	68.57	35.80	38.16	33.72						
64 m.p.h.	94.01	93.53	97.14	72.84	76.32	69.77						
69 m.p.h.	99.25	99.14	100.00	99.38	97.37	91.86						
74 m.p.h.	100.00	100.00	100.00	100.00	98.68	100.00						
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00						
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00						
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00						
No. of vehicles obs.	135	121	14	78	30	48						
Avg Average speed	57.19	57.26	56.64	57.68	57.93	57.52						
No. of vehicles obs.	132	111	21	84	46	38						
Avg Average speed	56.73	56.60	57.43	55.45	54.78	56.26						

TABLE 8 SPEED DATA

Station	4L-29	Highway	U.S. 30	Type of Surface	Asphalt	Location	1.3 miles east of junction of SR 13	Weather	Clear
No. of Lanes	4	Date	5/25/77	Date	None taken	Last Previous Observation	(Speed Report No. ____)	Date	None taken
This Observation		Date	9:04-9:52 A.M. - EB	Date	Time	Time		Date	Time
Time	10:11-10:56 A.M. - WB								

OBSERVATION	PASSENGER CARS						TRUCKS		
	All		Indiana		Non-Indiana		All		>5000 lbs.
	Last	Present	Last	Present	Last	Present	Last	Present	Last
No. of vehicles obs.	206	167	39	58.41	58.11	227	65	66	162
Ave. speed (m.p.h.)	58.04	57.95	58.41	57.46	57.46	58.38			
Standard deviation	5.25	5.40	4.63	5.14	5.71	4.89			
24 m.p.h.	0	0	0	0	0	0	0	0	0
29 m.p.h.	0	0	0	0	0	0	0	0	0
34 m.p.h.	0	0	0	0	0	0	0	0	0
39 m.p.h.	0	0	0	0	0	0	0	0	0
44 m.p.h.	.49	.60	0	.88	1.54	.64			
49 m.p.h.	3.88	4.79	0	5.73	9.23	4.32			
54 m.p.h.	23.79	25.15	17.95	23.79	30.99				
59 m.p.h.	68.93	68.26	71.79	59.91	61.54	59.26			
64 m.p.h.	87.38	87.43	81.18	88.99	87.69	89.51			
69 m.p.h.	98.06	98.20	97.44	99.56	98.46	100.00			
74 m.p.h.	99.03	99.40	97.44	100.00	100.00	100.00			
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
All Vehicles	117	95	22	99	26	73			
End									
Average speed	56.71	56.56	57.36	56.62	56.54	57.00			
No. of vehicles obs.	89	72	17	128	39	89			
Average speed	59.79	59.79	59.76	59.27	59.51	59.74			

of vehicles less than

traveling at or

TABLE 9 SPEED DATA

Station	2L-18	Highway	U.S. 35	Type of Surface	Asphalt	Location	2.5 miles east of junction of I-69
No. of Lanes	2						
This Observation						Weather	Clear
Date	5/11/77					Last Previous Observation (Speed Report No. 100)	
Time	2:08-3:56 P.M.					Date	3/17/77
						Time	2:20-4:23 P.M.

PASSENGER CARS								TRUCKS						
OBSERVATION	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	Last	Pres-ent
No. of vehicles obs.	303	283	271	257	32	26	147	146	75	79	72	72	67	
Ave. speed (m.p.h.)	56.76	57.56	56.78	57.50	56.56	58.12	53.35	55.28	54.80	56.14	51.85	54.27		
Standard deviation	4.69	6.08	4.71	6.11	4.64	5.81	5.42	6.36	5.45	6.41	5.01	6.20		
24 m.p.h.	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		
34 m.p.h.	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		
44 m.p.h.	.99	2.12	.74	2.33	3.13	0	4.76	6.16	4.00	5.06	2.78	1.49		
49 m.p.h.	5.28	7.07	5.54	7.39	3.13	3.85	21.09	15.75	12.00	12.66	5.56	7.40		
54 m.p.h.	30.03	27.92	29.89	27.63	31.25	30.77	56.46	43.15	42.67	37.97	70.83	49.25		
59 m.p.h.	73.27	67.14	73.43	67.70	71.88	61.54	89.12	73.29	85.33	70.89	93.06	76.12		
64 m.p.h.	96.04	87.99	95.94	88.33	96.88	84.62	97.96	93.15	96.00	89.87	100.00	97.01		
69 m.p.h.	98.68	96.47	98.52	96.11	100.00	100.00	99.32	99.32	98.67	98.73	100.00	100.00		
74 m.p.h.	100.00	99.29	100.00	99.22	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
No. of vehicles obs.	131	129	119	120	12	9	84	84	42	44	42	40		
Average speed	56.62	58.37	56.66	58.33	56.17	58.89	52.87	56.23	54.71	57.66	51.02	54.65		
No. of vehicles obs.	172	154	152	137	20	17	63	62	33	35	30	27		
Average speed	56.87	56.88	56.88	56.77	56.80	57.71	54.00	54.00	54.91	54.23	53.00	53.70		

All Vehicles

Buses

TABLE 10 SPEED DATA

Station	2L-54	Highway	U.S. 231	Location	1.1 miles south of junction of SR 234
No. of Lanes	2	Type of Surface	Asphalt	Weather	Clear
This Observation				Last Previous Observation (Speed Report No. 100)	
Date	5/10/77	Date	3/16/77		
Time	10:18-1:01 P.M.	Time	10:14-2:23 P.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
No. of vehicles obs.	226	241	194	216	32	25	202	196	83	86
Ave. speed (m.p.h.)	57.08	55.68	56.69	55.60	59.44	56.32	54.71	55.77	55.58	56.16
Standard deviation	6.37	5.82	6.21	5.81	6.92	6.04	5.74	6.48	5.99	7.20
24 m.p.h.	0	0	0	0	0	0	0	0	0	0
29 m.p.h.	0	0	0	0	0	0	0	0	0	0
34 m.p.h.	.44	0	.52	0	0	0	.50	0	0	.84
39 m.p.h.	.44	.83	.52	.93	0	0	1.49	0	1.20	0
44 m.p.h.	1.77	4.98	2.06	5.09	0	0	4.00	2.48	4.59	1.20
49 m.p.h.	11.50	10.79	12.37	11.57	6.25	4.00	17.33	14.80	14.46	16.28
54 m.p.h.	31.42	38.59	34.54	37.96	12.50	4.00	48.02	41.33	44.58	40.70
59 m.p.h.	69.91	78.84	71.65	79.17	59.38	76.00	82.67	74.49	79.52	70.93
64 m.p.h.	89.38	94.61	90.72	95.37	81.25	88.00	96.53	92.35	95.18	87.21
69 m.p.h.	96.46	98.76	97.42	98.61	90.63	100.00	98.51	97.96	96.39	96.51
74 m.p.h.	98.67	100.00	98.97	100.00	96.88	100.00	99.50	98.47	98.80	97.67
79 m.p.h.	99.56	100.00	99.48	100.00	100.00	100.00	100.00	100.00	100.00	100.00
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of vehicles obs.	110	110	94	102	16	8	104	102	38	43
Average speed	57.63	55.99	57.11	55.88	60.69	57.37	53.89	55.69	55.18	56.98
No. of vehicles obs.	116	131	100	114	16	17	98	94	45	43
Average speed	56.55	55.41	56.29	55.35	58.19	55.82	55.57	55.85	55.91	55.35

All Vehicles
of vehicles
traveling at
the same
time

All
Average
speed

TABLE 11 SPEED DATA

Station 2L-75 Highway U.S. 35 Location 2.7 miles north of Knox city limit sign
 No. of Lanes 2 Type of Surface Asphalt Weather Clear
 This Observation Date 5/20/77 Previous Observation (Speed Report No.)
 Time 10:58 A.M.-1:07 P.M. Date None taken
 Time

TABLE 12 SPEED DATA

Station	2L-81	Highway	U.S. 27	Location	0.6 miles south of Union-Wayne county line
No. of Lanes	2	Type of Surface	Concrete	Weather	Clear
This Observation				Last Previous Observation (Speed Report No.)	
Date	5/17/77	Date	None taken		
Time	8:37-10:53 A.M.	Time			

		PASSENGER CARS						TRUCKS			
		All			Indiana			Non-Indiana		All	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.		283	228		55		150		74		76
Ave. Speed (m.p.h.)	57.22	57.12	57.65	55.57	56.00	55.74					
Standard deviation	5.84	5.35	7.59	5.25	4.60	5.82					
24 m.p.h.	0	0	0	0	0	0					
29 m.p.h.	0	0	0	0	0	0					
34 m.p.h.	0	0	0	0	0	0					
39 m.p.h.	.35	0	1.82	0	0	0					
44 m.p.h.	.35	0	1.82	4.00	2.70	5.25					
49 m.p.h.	8.48	7.46	12.73	9.33	6.76	11.84					
54 m.p.h.	31.45	32.46	21.27	40.00	35.14	44.74					
59 m.p.h.	68.90	70.18	63.64	80.67	79.73	81.58					
64 m.p.h.	91.87	92.11	90.91	97.33	98.65	96.05					
69 m.p.h.	97.17	97.81	94.55	98.67	100.00	97.37					
74 m.p.h.	98.94	99.56	96.36	100.00	100.00	100.00					
79 m.p.h.	99.65	100.00	98.18	100.00	100.00	100.00					
84 m.p.h.	99.65	100.00	98.18	100.00	100.00	100.00					
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00					
No. of vehicles obs.	156	124	32	65	34	31					
Average speed	57.04	56.92	57.53	56.85	56.85	56.48					
No. of vehicles obs.	127	104	23	85	40	45					
Average speed	57.44	57.36	57.83	54.72	55.27	54.22					

TABLE 13 SPEED DATA

Station	UI-6	Highway	I-65	Type of Surface	Concrete	Location	East of White River Bridge
No. of Lanes	6					Weather	Clear
This Observation Date	5/16/77					Last Previous Observation (Speed Report No. 100)	
Time	10:20-10:56 A.M. - EB					Date 3/31/77	
	11:13-11:41 A.M. - WB					Time 10:08-10:40 A.M. - EB	
							11:04-11:34 A.M. - WB

PASSENGER CARS								TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.		271	275	243	229	28	46	166	161	69	80	97	81
Ave. speed (m.p.h.)	57.02	58.11	57.00	58.03	57.18	58.50	56.43	56.91	55.67	56.99	56.98	56.83	
Standard deviation	4.90	5.00	4.95	5.07	4.52	4.67	4.94	5.06	5.22	4.96	4.68	5.19	
24 m.p.h.	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	
34 m.p.h.	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	
44 m.p.h.	1.48	1.36	1.65	.44	0	0	1.81	2.48	2.90	0	0	1.23	
49 m.p.h.	6.27	3.64	6.58	4.37	3.57	0	7.83	6.21	8.70	3.75	7.22	4.91	
54 m.p.h.	29.52	22.13	29.63	22.27	28.57	21.74	31.33	24.84	34.78	31.25	28.87	18.52	
59 m.p.h.	70.85	61.45	70.78	62.88	71.43	54.35	76.51	70.81	85.51	68.75	70.10	72.84	
64 m.p.h.	94.10	90.55	94.24	90.39	92.86	91.30	96.99	95.03	98.55	92.50	95.88	97.53	
69 m.p.h.	98.15	97.82	97.94	97.82	100.00	97.83	99.40	99.38	100.00	98.75	98.97	100.00	
74 m.p.h.	100.00	99.64	100.00	99.56	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	
No. of vehicles obs.	135	143	119	114	16	29	83	76	35	38	48	38	
Average speed	57.83	57.83	57.77	57.68	58.25	58.41	56.22	55.97	56.14	56.29	56.27	55.66	
No. of vehicles obs.	136	132	124	115	12	17	83	85	34	42	49	43	
Average speed	56.21	58.42	56.26	58.39	55.75	58.65	56.65	57.74	55.18	57.62	57.67	57.86	

TABLE 14 SPEED DATA

Station	UI-2	Highway	I-65	Type of Surface	Concrete	Location	NB: .9 miles north of junction of SR 8 SB: 1.6 miles south of U.S. 30
No. of Lanes	4					Weather	Clear
This Observation						Last Previous Observation (Speed Report No.)	
Date	5/18/77	Date	None taken			Date	
Time	11:25-12:02 P.M. - SB	Time				Time	
	12:34-1:06 P.M. - NB						

		PASSENGER CARS				TRUCKS			
		All	Indiana	Non-Indiana	All	<5000 lbs.	>5000 lbs.	Present	Present
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Last	Last	Pres-ent
No. of vehicles obs.		214	118	96	221	47			174
Ave. speed (m.p.h.)	59.68	59.91	59.40	59.73	59.02	59.92			
Standard deviation	4.68	5.12	4.09	4.91	6.00	4.57			
24 m.p.h.	0	0	0	0	0	0			0
29 m.p.h.	0	0	0	0	0	0			0
34 m.p.h.	0	0	0	0	0	0			0
39 m.p.h.	0	0	0	0	0	0			0
44 m.p.h.	0	0	0	0	0	0			0
49 m.p.h.	3.27	3.39	3.13	1.36	2.13	1.15			
54 m.p.h.	10.28	11.02	9.38	14.93	23.40	12.64			
59 m.p.h.	50.00	49.15	51.04	50.23	55.32	48.85			
64 m.p.h.	85.98	83.05	89.58	82.35	80.85	82.76			
69 m.p.h.	97.20	95.76	98.96	98.64	97.87	98.85			
74 m.p.h.	99.53	99.15	100.00	99.55	100.00	99.43			
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00			
No. of vehicles obs.	109	64	45	111	22	89			
Average speed	60.11	60.11	60.11	59.71	59.41	59.79			
No. of vehicles obs.	105	54	51	110	25	85			
Average speed	59.23	59.67	58.76	59.75	58.68	60.06			

TABLE 15 SPEED DATA

Station	Highway Interstate	Rural Location	See Individual Stations
No. of Lanes	Type of Surface		Weather
This Observation		Last Previous Observation (Speed Report No. ____)	
Date	April-June 1977	Date	
Time		Time	

		PASSENGER CARS						TRUCKS						<5000 lbs.			>5000 lbs.		
		All			Indiana			Non-Indiana			All			<5000 lbs.			>5000 lbs.		
OBSERVATION	No. of vehicles obs.	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
Ave. speed (m.p.h.)	94.9	94.6	46.1	60.39	60.52	77.9	77.9	199	199	199	199	199	199	59.31	59.31	60.94	60.94	60.94	60.94
Standard deviation	5.08	5.03	5.14	5.14	5.08	5.08	5.08	5.08	5.08	5.08	5.08	5.08	5.08	5.52	5.52	4.85	4.85	4.85	4.85
24 m.p.h.	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
34 m.p.h.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39 m.p.h.	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
44 m.p.h.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49 m.p.h.	.74	.87	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	.61	1.93	1.93	1.93	1.93	1.93	1.93
54 m.p.h.	9.17	9.54	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	10.78	10.78	10.78	10.78	10.78	10.78
59 m.p.h.	46.36	47.07	45.70	45.70	45.70	45.70	45.70	45.70	45.70	45.70	45.70	45.70	45.70	53.77	53.77	53.77	53.77	53.77	53.77
64 m.p.h.	82.40	82.00	82.79	82.79	82.79	82.79	82.79	82.79	82.79	82.79	82.79	82.79	82.79	85.93	85.93	85.93	85.93	85.93	85.93
69 m.p.h.	94.73	95.23	94.26	94.26	94.26	94.26	94.26	94.26	94.26	94.26	94.26	94.26	94.26	95.48	95.48	95.48	95.48	95.48	95.48
74 m.p.h.	98.63	98.70	98.57	98.57	98.57	98.57	98.57	98.57	98.57	98.57	98.57	98.57	98.57	99.10	99.10	99.10	99.10	99.10	99.10
79 m.p.h.	99.79	100.00	99.59	99.59	99.59	99.59	99.59	99.59	99.59	99.59	99.59	99.59	99.59	99.87	99.87	99.87	99.87	99.87	99.87
84 m.p.h.	99.89	100.00	99.80	99.80	99.80	99.80	99.80	99.80	99.80	99.80	99.80	99.80	99.80	100.00	100.00	100.00	100.00	100.00	100.00
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

All Vehicles
of vehicles
traveling at or less
than

TABLE 16 SPEED DATA

Station	Highway	4-Lane, Rural	Location	See Individual Stations
No. of Lanes	Type of Surface			Weather
This Observation			Last Previous Observation (Speed Report No. ____)	
Date	April-June 1977		Date	
Time			Time	

OBSERVATION	PASSENGER CARS						TRUCKS				
	All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.
	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	931		776		155		788		277		511
Ave. speed (m.p.h.)	57.24		57.13		57.75		57.54		56.67		58.01
Standard deviation	5.37		5.43		5.05		5.51		5.83		5.27
24 m.p.h.	0		0		0		0		0		0
29 m.p.h.	.11		.13		0		0		0		0
34 m.p.h.	.11		.13		0		.25		0		.39
39 m.p.h.	.32		.39		0		.38		0		.59
44 m.p.h.	1.93		2.32		0		1.90		1.81		1.96
49 m.p.h.	5.80		6.06		4.52		6.47		8.30		5.48
54 m.p.h.	27.18		27.96		23.23		26.27		34.66		21.72
59 m.p.h.	70.14		70.62		67.74		63.83		72.20		59.30
64 m.p.h.	91.30		91.49		90.32		91.75		94.22		90.41
69 m.p.h.	98.39		98.45		98.06		99.49		98.56		100.00
74 m.p.h.	99.68		99.74		99.35		99.87		99.66		100.00
79 m.p.h.	100.00		100.00		100.00		99.87		99.66		100.00
84 m.p.h.	100.00		100.00		100.00		99.87		99.66		100.00
89 m.p.h.	100.00		100.00		100.00		99.87		99.66		100.00

ALL VEHICLES

% OF VEHICLES
travelling at or less
than

TABLE 18 SPEED DATA

Station _____	Highway _____	Interstate _____	Urban _____	Location _____	See Individual Stations _____
No. of Lanes _____	Type of Surface _____				Weather _____
This Observation Date April-June 1977	Last Previous Observation (Speed Report No. ____)				Date _____
Time _____	Time _____				Time _____

		PASSENGER CARS						TRUCKS			
		All		Indiana		Non-Indiana		All		<5000 lbs.	
OBSERVATION		Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.	Ave. speed (m.p.h.)	489	58.80	347	58.67	142	59.11	382	58.54	127	57.74
Standard deviation	4.92	0	5.15	0	4.29	0	5.16	0	5.44	0	5.44
24 m.p.h.	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
34 m.p.h.	0	0	0	0	0	0	0	0	0	0	0
39 m.p.h.	0	0	0	0	0	0	0	.26	0	0	.39
44 m.p.h.	.20	.29	.29	0	0	0	1.05	0	0	0	1.57
49 m.p.h.	3.48	4.03	2.11	3.40	3.40	3.40	3.15	3.15	3.15	3.15	3.53
54 m.p.h.	16.97	18.44	13.38	19.11	19.11	19.11	28.35	28.35	28.35	28.35	14.51
59 m.p.h.	56.44	58.21	52.11	58.90	58.90	58.90	63.78	63.78	63.78	63.78	56.47
64 m.p.h.	88.55	87.90	90.14	87.70	87.70	87.70	88.19	88.19	88.19	88.19	87.45
69 m.p.h.	97.55	97.12	98.59	98.95	98.95	98.95	98.43	98.43	98.43	98.43	99.22
74 m.p.h.	99.59	99.42	100.00	99.74	99.74	99.74	100.00	100.00	100.00	100.00	99.61
79 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
84 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
89 m.p.h.	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

All Vehicles
traveling at or
less than

TABLE 19 SPEED DATA

Station	Highway Indiana System	Location	See Individual Stations		Weather	
No. of Lanes	Type of Surface		Last	Previous	Observation	(Speed Report No.)
This Observation	Date	April-June 1977				
		Time				

OBSERVATION	PASSENGER CARS				TRUCKS		
	All	Indiana	Non-Indiana	All	<5000	1bs.	>5000
	Last	Pres-ent	Last	Last	Pres-ent	Last	Pres-ent
No. of vehicles obs.							
Ave. speed (m.p.h.)	342.3	2502	921	2621	928		1693
Standard deviation	58.09	57.63	59.36	58.00	56.99		58.55
24 m.p.h.	5.67	5.70	5.39	5.78	5.98		5.59
29 m.p.h.	0	0	0	0	0		0
34 m.p.h.	.03	.04	0	0	0		0
39 m.p.h.	.23	.28	.11	.19	0		.30
44 m.p.h.	1.43	1.84	.33	1.98	2.26		1.83
49 m.p.h.	5.38	6.39	2.61	6.60	8.73		5.43
54 m.p.h.	23.25	26.18	15.31	24.84	32.65		20.56
59 m.p.h.	62.69	66.07	53.53	60.21	68.75		55.52
64 m.p.h.	88.69	89.61	86.21	89.01	91.27		87.77
69 m.p.h.	97.08	97.44	96.09	98.05	97.84		98.17
74 m.p.h.	99.33	99.48	98.91	99.54	99.46		99.94
79 m.p.h.	99.91	100.00	99.67	99.92	99.89		100.00
84 m.p.h.	99.94	100.00	99.78	99.96	99.89		100.00
89 m.p.h.	100.00	100.00	100.00	100.00	99.89		100.00

of vehicles traveling at or less than

All Vehicles

TABLE 20

Monitoring of Speed
(Statistical Summary)

Quarterly Report--Calendar Quarter Ending June 30, 1977

Annual Report--Year Ending _____

STATE Indiana

Miles	Number of Monitor Locations	Number of Vehicles Measured	Duration of Measurement Session (Hours)	Average Speed (MPH)	Median Speed (MPH)	85th Percentile Speed (MPH)	Percent of Motorists Exceeding 55 MPH	Percent of Motorists Exceeding 60 MPH	Percent of Motorists Exceeding 65 MPH
Interstate Urban	218	2	871	2.2	58.7	58.1	63.1	77	33
Interstate Rural	849	4	1728	6.4	60.5	59.7	64.8	86	48
Multi-lane, Divided	657	4	1719	9.0	57.4	57.0	62.1	65	26
Multi-lane, Undivided	--	--	(Included in multi-lane, divided classification)	--	--	--	--	--	--
2-Lane, Rural	8030	4	1726	8.9	56.0	55.5	61.0	54	19
State Total	9754	14	6044	26.5	58.1	57.6	63.0	70	32

TABLE 21
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGCRY	Rural Interstate	STATION NUMBER	RI-6	LOCATION	1-65, 7.5 miles north of junction of SR 160
NUMBER OF SESSIONS	1	DATES	5-26-77	VEHICLES MEASURED	430
AVERAGE SPEED (MPH)	60.5	STANDARD DEVIATION (MPH)	5.1		
MEDIAN SPEED (MPH)	59.8	85TH PERCENTILE SPEED (MPH)	64.8		
PERCENTAGE OF VEHICLES EXCEEDING:					
55 MPH:	86	60 MPH:	49	65 MPH:	14

TABLE 22
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Rural	Interstate
STATION NUMBER	RI-21	LOCATION
		1-69, 1.6 miles south of junction of SR 18
NUMBER OF SESSIONS	1	DATES
		5-11-77
		VEHICLES MEASURED
AVERAGE SPEED (MPH)	60.0	STANDARD DEVIATION (MPH)
		5.0
MEDIAN SPEED (MPH)	59.0	85TH PERCENTILE SPEED (MPH)
		64.0
PERCENTAGE OF VEHICLES EXCEEDING:		
55 MPH:	84	60 MPH:
		43
		65 MPH:
		11

TABLE 23
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Rural Interstate	
STATION NUMBER	<u>RI-33</u>	LOCATION <u>I-65, SB - 6.1 miles south of junction of SR 28</u>
NUMBER OF SESSIONS	<u>1</u>	<u>DATES 5-13-77</u> VEHICLES MEASURED <u>430</u>
AVERAGE SPEED (MPH)	<u>60.7</u>	STANDARD DEVIATION (MPH) <u>5.2</u>
MEDIAN SPEED (MPH)	<u>60.0</u>	85TH PERCENTILE SPEED (MPH) <u>65.3</u>
PERCENTAGE OF VEHICLES EXCEEDING:		
55 MPH:	<u>86</u>	60 MPH: <u>49</u> 65 MPH: <u>16</u>

TABLE 24

SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGCRY	Rural	Interstate
STATION NUMBER	RI-25	LOCATION
		Toll Road I-80 and I-90 - 12.2 miles east of junction of SR 9
NUMBER OF SESSIONS	1	DATES
		5-24-77
		VEHICLES MEASURED
AVERAGE SPEED (MPH)	60.8	STANDARD DEVIATION (MPH)
MEDIAN SPEED (MPH)	60.1	85TH PERCENTILE SPEED (MPH)
PERCENTAGE OF VEHICLES EXCEEDING:		
55 MPH:	89	60 MPH:
		51
		65 MPH:
		15

TABLE 25

SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Multi-Lane Divided	
STATION NUMBER 4L-17	LOCATION US 52,	EB = 156 ft. east of Co. Rd. 475W WB = 0.25 miles east of Co. Rd. 475W
NUMBER OF SESSIONS 1	DATES 5-9-77	VEHICLES MEASURED 429
AVERAGE SPEED (MPH) 56.5	STANDARD DEVIATION (MPH)	6.4
MEDIAN SPEED (MPH) 55.9	85TH PERCENTILE SPEED (MPH)	61.9
PERCENTAGE OF VEHICLES EXCEEDING:		
55 MPH: 58	60 MPH: 21	65 MPH: 6

TABLE 26
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Multi-Lane, Divided
STATION NUMBER	4L-32
LOCATION	US 30, 2.9 miles west of Wanatah city limit sign
NUMBER OF SESSIONS	1
DATES	5-19-77
VEHICLES MEASURED	428
AVERAGE SPEED (MPH)	58.1
STANDARD DEVIATION (MPH)	4.7
MEDIAN SPEED (MPH)	57.7
85TH PERCENTILE SPEED (MPH)	62.2
PERCENTAGE OF VEHICLES EXCEEDING:	
55 MPH:	72
60 MPH:	31
65 MPH:	4

TABLE 27
SPEED MONITORING STATION SUMMARY

HIGHWAY CATE GCRY	Multi-Lane, Divided		
STATION NUMBER	4L-27	LOCATION	US 24, NB - 3.5 miles east of junction of SR 9 SB - 3.8 miles east of junction of SR 9
NUMBER OF SESSIONS	1	DATES	5-23-77
		VEHICLES MEASURED	429
AVERAGE SPEED (MPH)	56.8	STANDARD DEVIATION (MPH)	5.2
MEDIAN SPEED (MPH)	56.4	85TH PERCENTILE SPEED (MPH)	61.6
PERCENTAGE OF VEHICLES EXCEEDING:			
55 MPH:	61	60 MPH:	22
		65 MPH:	4

TABLE 28

SPEED MONITORING STATION SUMMARY

HIGHWAY CATEG ^R	<u>Multi-Lane, Divided</u>		
STATION NUMBER	<u>4L-29</u>	LOCATION	<u>US 30, 1.3 miles east of junction of SR 13</u>
NUMBER OF SESSIONS	<u>1</u>	DATES	<u>5-25-77</u>
		VEHICLES MEASURED	<u>433</u>
AVERAGE SPEED (MPH)	<u>58.1</u>	STANDARD DEVIATION (MPH)	<u>5.2</u>
MEDIAN SPEED (MPH)	<u>57.6</u>	85TH PERCENTILE SPEED (MPH)	<u>62.8</u>
PERCENTAGE OF VEHICLES EXCEEDING:			
55 MPH:	<u>70</u>	60 MPH:	<u>31</u>
		65 MPH:	<u>7</u>

TABLE 29

SPEED MONITORING STATION SUMMARY

HIGHWAY CATE GCRY	Two Lane Rural	STATION NUMBER	<u>2L-18</u>	LOCATION	<u>US 35, 2.5 miles east of junction of I-69</u>
NUMBER OF SESSIONS	<u>1</u>	DATES	<u>5-11-77</u>	VEHICLES MEASURED	<u>429</u>
AVERAGE SPEED (MPH)	<u>56.8</u>	STANDARD DEVIATION (MPH)	<u>6.3</u>		
MEDIAN SPEED (MPH)	<u>56.4</u>	85TH PERCENTILE SPEED (MPH)	<u>62.2</u>		
PERCENTAGE OF VEHICLES EXCEEDING:					
55 MPH:	<u>58</u>	60 MPH:	<u>24</u>	65 MPH:	<u>7</u>

TABLE 30
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGCRY	Two Lane Rural
STATION NUMBER	<u>2L-54</u>
LOCATION	<u>US 231, 1.1 miles south of junction of SR 234</u>
NUMBER OF SESSIONS	<u>1</u>
DATES	<u>5-10-77</u>
VEHICLES MEASURED	<u>437</u>
AVERAGE SPEED (MPH)	<u>55.7</u>
STANDARD DEVIATION (MPH)	<u>6.1</u>
MEDIAN SPEED (MPH)	<u>55.4</u>
85TH PERCENTILE SPEED (MPH)	<u>61.2</u>
PERCENTAGE OF VEHICLES EXCEEDING:	
55 MPH:	<u>54</u>
60 MPH:	<u>19</u>
65 MPH:	<u>5</u>

TABLE 31

SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Two Lane Rural	STATION NUMBER	2L-75	LOCATION	U.S. 35, 2.7 miles north of Knox city limit sign
NUMBER OF SESSIONS	1	DATES	5.-20-77	VEHICLES MEASURED	427
AVERAGE SPEED (MPH)	54.7	STANDARD DEVIATION (MPH)	5.5		
MEDIAN SPEED (MPH)	54.5	85TH PERCENTILE SPEED (MPH)	59.5		
PERCENTAGE OF VEHICLES EXCEEDING:					
55 MPH:	46	60 MPH:	12	65 MPH:	2

TABLE 32
SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY	Two Lane Rural
STATION NUMBER	2L-81
LOCATION	US 27, 0.6 miles south of Union-Wayne county line
NUMBER OF SESSIONS	1
DATES	5-17-77
VEHICLES MEASURED	433
AVERAGE SPEED (MPH)	56.7
STANDARD DEVIATION (MPH)	5.7
MEDIAN SPEED (MPH)	55.8
85TH PERCENTILE SPEED (MPH)	61.2
PERCENTAGE OF VEHICLES EXCEEDING:	
55 MPH:	59
60 MPH:	21
65 MPH:	5

TABLE 33

SPEED MONITORING STATION SUMMARY

<u>HIGHWAY CATE GCRY Urban Interstate</u>			
<u>STATION NUMBER</u>	<u>UI-6</u>	<u>LOCATION</u>	<u>I-65, just east of White River Bridge</u>
<u>NUMBER OF SESSIONS</u>	<u>1</u>	<u>DATES</u>	<u>5-16-77</u>
AVERAGE SPEED (MPH)	<u>57.7</u>	STANDARD DEVIATION (MPH)	<u>5.1</u>
MEDIAN SPEED (MPH)	<u>57.3</u>	85TH PERCENTILE SPEED (MPH)	<u>61.7</u>
PERCENTAGE OF VEHICLES EXCEEDING:			
55 MPH:	<u>70</u>	60 MPH:	<u>26</u>
		65 MPH:	<u>6</u>

TABLE 34

SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORY Urban Interstate
 STATION NUMBER UI-2 LOCATION 1-65, NB - .9 miles north of junction of SR 8
SB - 1.6 miles south of junction of US 30

NUMBER OF SESSIONS	1	DATES	<u>5-18-77</u>	VEHICLES MEASURED	<u>435</u>
AVERAGE SPEED (MPH)	<u>59.7</u>		STANDARD DEVIATION (MPH)	<u>4.8</u>	
MEDIAN SPEED (MPH)	<u>59.0</u>		85TH PERCENTILE SPEED (MPH)	<u>64.2</u>	
PERCENTAGE OF VEHICLES EXCEEDING:					
55 MPH:	<u>84</u>	60 MPH:	<u>41</u>	65 MPH:	<u>11</u>

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