

TRAFFIC SPEED REPORT NO.62

DEC., 1957
NO. 33

**Joint
Highway
Research
Project**

PURDUE UNIVERSITY
LAFAYETTE INDIANA

by
C. Pinnell

PROGRESS REPORT

TRAFFIC SPEED REPORT NO. 62

TO: K. B. Woods, Director
Joint Highway Research Project

December 18, 1957

FROM: H. L. Michael, Assistant Director

File: 8-3-3
Project C-36-10C

The attached Traffic Speed Report No. 62 has been prepared by Mr. Charles Pinnell, graduate assistant on our staff. Mr. Swarto Hardjodipuro assisted in the collection of the data.

This progress report is the 1957 summer, semi-annual speed study. The speeds were obtained at the same locations as in previous years and add to the nineteen years of speed data that the Project has collected.

Copies of this report will be distributed as usual to the State Police and to the Office of Traffic Safety. The report is submitted for the record.

Respectfully submitted,

Harold L. Michael

Harold L. Michael, Assistant Director
Joint Highway Research Project

HLM:hgb

Att.

cc: A. K. Branham
J. R. Cooper
W. L. Dolch
W. H. Goets
J. T. Hallett
F. F. Havey
G. A. Hawkins
G. A. Leopards
J. F. McLaughlin

R. D. Miles
R. E. Mills
B. H. Petty
Lloyd Poindexter
M. B. Scott
C. E. Vogelgesang
J. L. Waling
J. E. Wilson
E. J. Yoder

PROGRESS REPORT
TRAFFIC SPEED REPORT NO. 62

by

Charles Pinnell
Graduate Assistant

Joint Highway Research Project
File: 8-3-3
Project C-36-10C

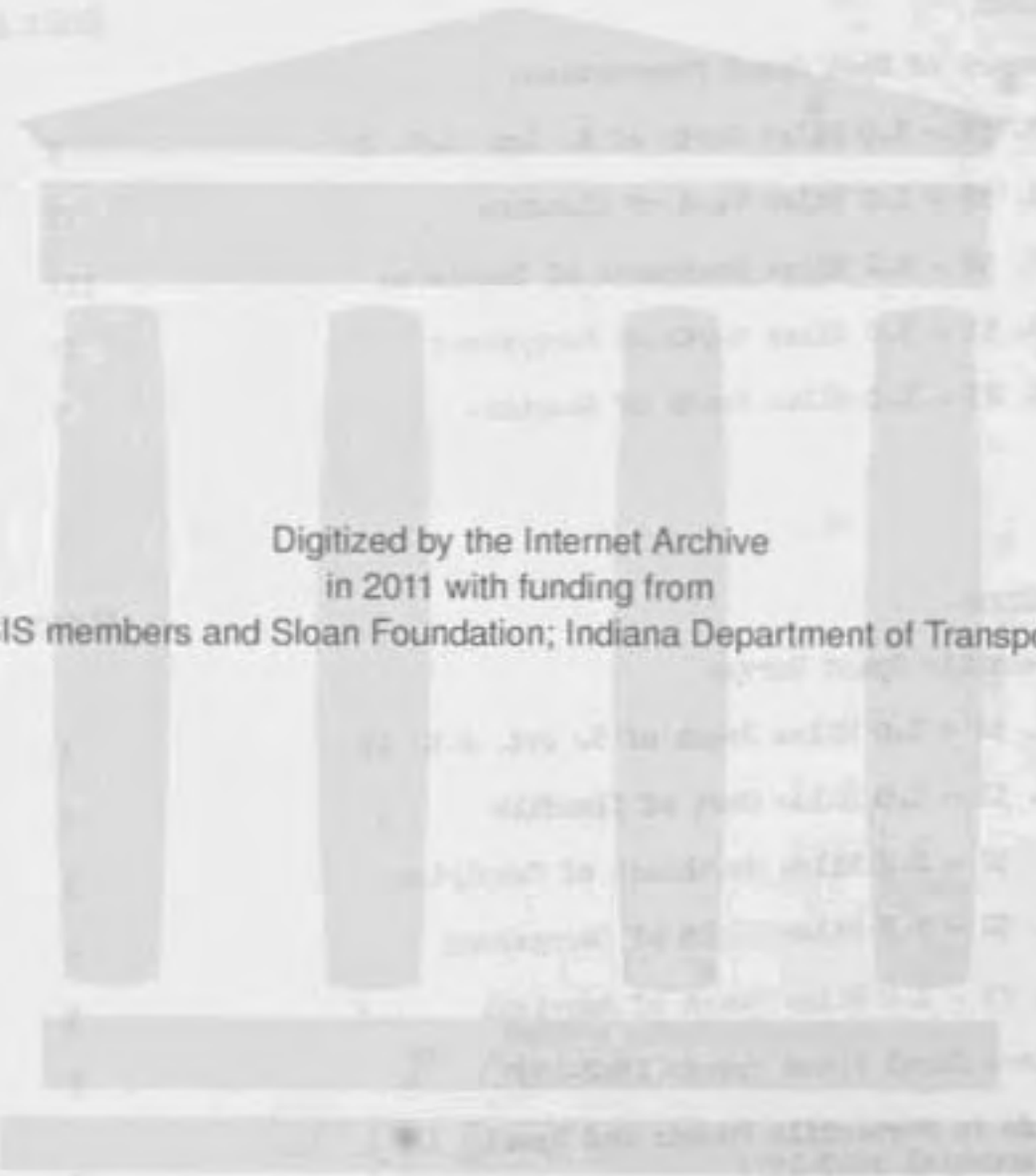
Purdue University
Lafayette, Indiana

December 18, 1957

LIST OF TABLES AND FIGURES

<u>Tables</u>	<u>Table No.</u>
Summary of Spot Speed Observations	
U.S. 52 - 1.0 Miles South of S. Jct. S.R. 28	I
U.S. 52 - 1.0 Miles West of Klondike	II
U.S. 52 - 2.2 Miles Northwest of Templeton	III
U.S. 31 - 7.2 Miles North of Perrysburg	IV
S.R. 25 - 1.0 Miles South of Americus	V

<u>Figures</u>	<u>Figure No.</u>
Percentile Speed Curves	
U.S. 52 - 1.0 Miles South of S. Jct. S.R. 28	1
U.S. 52 - 1.0 Miles West of Klondike	2
U.S. 52 - 2.2 Miles Northwest of Templeton	3
U.S. 52 - 7.2 Miles North of Perrysburg	4
S.R. 25 - 1.0 Miles South of Americus	5
Indiana Rural Speed Trends 1942-1957	6
Trends in Percentile Speeds and Speed Differential 1949-1957	7



Digitized by the Internet Archive
in 2011 with funding from
LYRASIS members and Sloan Foundation; Indiana Department of Transportation

TRAFFIC SPEED REPORT NO. 62

This report covers spot speed observations made during August 1957. These data were collected by Sumarto Hardjodipuro and the writer. All observations are for free-moving vehicles on level tangent sections of rural highways. The location of the observation stations are as follows:

1. U.S. 52 - 1.0 miles South of Jct. with
S.R. 28 (Dual Lanes)
2. U.S. 52 - 1.0 miles West of Klondike
(Dual Lanes)
3. U.S. 52 - 2.2 miles Northwest of
Templeton (2 lane)
4. U.S. 31 - 7.2 miles North of Perrysburg
(2 lane)
5. S.R. 25 - 1.0 miles South of Americus
(2 lane)

Previous reports have included observation taken on U.S. 41, 1.0 miles north of Boswell. At the time the observations were made for this report, a bridge was out on U.S. 41 in the vicinity of Boswell and traffic was being detoured over an alternate route. For this reason, no observations were made at this location.

The speed observations for this study were made with an Electro-Matic Radar Speed Meter. The meter was concealed as part of a rural mailbox and the observers concealed themselves as well as local

conditions permitted. It is believed that the observations were taken without influencing the speeds of the vehicles. Before using the meter it was checked for accuracy and calibrated in the speed range of 20 to 100 miles per hour.

A summary of the results of this study as well as the last seven studies is given in Table I. Indiana State law limits the speed of passenger cars and trucks weighing less than 5,000 pounds to 65 miles per hour, while trucks weighing more than 5,000 pounds are limited to 45 miles per hour. For this reason, the truck speeds are divided into three groups, light trucks, heavy trucks and all trucks. Since it is impractical to accurately determine the exact weight of each truck, panel and pickup types are classed as less than 5,000 pounds while dual-tired and semi-trailer types are classed as weighing over 5,000 pounds.

In order to facilitate a comparison between the present and the last previous observations at a given location, the results of the present and previous study are tabulated in Tables II through V. All speed observations were taken at the same locations for this study as for previous studies with the exception that the observations on U.S. 41 near Boswell were omitted.

The average speed for all passenger cars decreased by 1.4 miles per hour since the last study (May 1957) while the average speed for all trucks increased by 0.8 miles per hour. Indiana passenger cars decreased their average speed on two-lane highways by 0.1 miles per hour while their average speed on four-lane highways decreased by 2.4 miles per hour. A decrease of 2.4 miles per hour on two-lane highways

and 3.7 miles per hour on four-lane highways was noted in the average speed of out-of-state passenger cars.

The average speed for light trucks increased 1.5 miles per hour on two-lane highways and 0.2 miles per hour on four-lane highways. For heavy trucks, and increase in average speed of 1.0 miles per hour on two-lane highways and 0.6 miles per hour on four-lanes highways was observed.

When compared with results of a previous survey made a year earlier in August 1957, a slight increase in average speed was indicated. The average speed for all passenger cars on all highways increased by 0.5 miles per hour while the same average for all trucks increased by 0.8 miles per hour during the one year period.

Trend information on the average speed of passenger cars and trucks is shown in Table I and in Figures 6 and 7.

TABLE I

SUMMARY OF SPOT SPEED OBSERVATIONS
ON INDIANA HIGHWAYS

(Free-Moving Vehicles on Level, Tangent Sections)

	Passenger Cars				Trucks			
	Ind Mean	Non-Ind Mean	All Mean	All 85 per	Light Mean	Heavy Mean	All Mean	
Two-lane Highways	Apr. '54	53.6	56.5	54.8	63.6	44.8	42.9	43.7
	Aug. '54	55.0	56.8	55.7	63.8	49.9	46.0	47.1
	Dec. '54	52.0	54.1	52.8	58.8	48.2	44.4	45.2
	July '55	53.8	55.7	54.5	64.8	46.2	45.5	45.6
	Feb. '56	54.9	58.0	55.9	63.2	47.1	43.2	44.4
	Aug. '56	55.0	56.3	55.5	63.4	50.6	45.5	46.6
	May '57	55.6	59.1	56.9	64.0	50.2	44.8	46.1
	Aug. '57	55.5	56.7	55.9	62.1	51.7	45.8	47.3
Four-lane Highways	Apr. '54	56.4	58.8	57.3	66.0	43.7	41.7	42.2
	Aug. '54	55.5	58.2	56.6	65.0	52.1	45.6	47.1
	Dec. '54	54.2	55.7	54.7	60.4	47.1	43.6	44.3
	July '55	54.5	56.6	55.2	63.7	47.5	43.9	44.8
	Feb. '56	58.1	60.1	58.7	65.7	47.8	45.2	45.8
	Aug. '56	57.4	58.8	58.2	66.8	49.6	46.0	47.4
	May '57	59.9	63.6	61.0	69.0	52.2	46.0	47.9
	Aug. '57	57.5	59.9	58.5	64.8	52.0	46.6	47.6
All Highways	Apr. '54	54.6	57.3	55.6	64.4	44.5	42.5	43.3
	Aug. '54	55.1	57.3	56.0	64.2	50.5	45.9	47.1
	Dec. '54	52.7	54.3	53.4	59.3	47.8	44.0	44.8
	July '55	54.1	56.6	55.2	64.3	46.9	44.7	45.2
	Feb. '56	56.0	58.6	56.8	63.8	47.3	44.0	44.9
	Aug. '56	55.7	57.3	56.4	64.5	50.2	45.6	46.9
	May '57	57.2	60.3	58.3	66.0	50.9	45.2	46.6
	Aug. '57	56.2	58.3	56.9	63.2	51.8	46.1	47.4

TABLE II
SPEED DATA

Station U. S. 52 1.0 Miles South of South Jct. S.R. 28

Surface 24¹ N.B. - P.C.C. S.B. - Bit. Conc. (Divided Lanes) Weather Clear - Warm

This Observation Last Previous Observation (Speed Report No. 61)

Date Aug. 23, 1957

Time 8:50 A.M. - 11:45 A.M.

Time 2:00 - 5:00 P.M.

Time P.M. P.M.

OBSERVATION	PASSENGER CARS										TRUCKS				BUSES	
	all		Indiana		Non-Indians		all		Less than 5000 pounds		5000 pounds or more		all			
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present		
No. of Vehicles Obs.	382	397	311	221	71	176	115	104	37	20	78	84	4	0		
Ave. Speed (m.p.h.)	61.1	59.4	60.7	58.5	63.3	60.4	48.7	46.5	53.8	52.5	46.3	45.0	56.0	-		
45 m.p.h.	-	97.2	-	96.4	-	98.3	68.7	60.6	83.8	80.0	61.5	51.2	100	-		
50 m.p.h.	94.0	93.2	93.6	91.9	95.8	94.9	40.0	27.9	70.3	70.0	25.6	17.9	100	-		
55 m.p.h.	84.3	79.8	83.0	74.2	90.1	86.9	20.9	12.5	48.6	40.0	7.7	6.0	75.0	-		
60 m.p.h.	65.4	54.7	62.4	49.8	78.9	60.8	7.8	2.9	24.3	15.0	0	0	25.0	-		
65 m.p.h.	32.7	19.9	29.6	19.5	46.5	20.5	5.2	1.9	16.2	10.0	0	0	0	-		
70 m.p.h.	10.5	6.0	9.7	4.1	14.1	8.5	3.5	1.0	10.8	5.0	0	0	0	-		
75 m.p.h.	2.6	1.3	2.6	1.4	2.8	1.1	0	0	0	0	0	0	0	-		
No. of Vehicles Obs.	191	195	158	109	33	86	57	55	15	10	42	45	4	-		
Ave. Speed (m.p.h.)	60.8	59.8	60.3	59.4	63.2	60.3	46.8	47.5	48.9	57.8	96.1	45.2	56	-		
Max. Speed (m.p.h.)	-	-	75	81	77	76	-	-	61	73	59	55	69	1		
State or Type	-	-	-	-	Ill	-	-	-	2PCO	2PU	2S2Pl	2S2	-	-		
Min. Speed (m.p.h.)	-	-	40	46	43	39	-	-	26	38	36	32	50	-		
State or Type	-	-	-	-	US Govt	-	-	-	2P St	2PU	2D St	2D	-	-		
No. of Vehicles Obs.	191	202	153	112	38	90	58	49	22	10	36	39	0	0		
Ave. Speed (m.p.h.)	61.5	59.0	61.0	57.7	63.3	60.5	50.5	45.3	57.1	47.2	46.5	44.8	-	-		
Max. Speed (m.p.h.)	-	-	78	75	85	75	-	-	72	57	57	57	-	-		
State or Type	-	-	-	-	Ohio	-	-	-	2 SOP	2PU	2S2St	231	-	-		
Min. Speed (m.p.h.)	-	-	30	27	46	46	-	-	40	30	30	31	-	-		
State or Type	-	-	-	-	Ohio	-	-	-	2P St	2 PU	2SOP	2D	-	-		

TABLE

III

SPEED DATA

Station U.S. 52 1.0 Miles West of KlondikeSurface 24' Portland Cement Concrete (Divided Lanes)Weather Clear & Warm

This Observation

Last Previous Observation (Speed Report No. 61)Date August 22, 1957Date February 15 & 20, 1957Time 2:30 to 4:40 P.M.Time 2:30 to 4:30 P.M.

OBSERVATION	PASSENGER CARS						TRUCKS						BUSES	
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more		Least	Present
No. of Vehicles Obs.	405	380	303	222	102	158	95	122	26	22	69	100	6	0
Avg. Speed (m.p.h.)	60.8	57.7	59.7	56.5	63.9	59.3	46.9	48.6	49.9	51.7	45.8	47.9	38.5	-
Exceeding 45 m.p.h.	—	97.1	—	95.0	—	100	68.4	80.3	76.9	95.5	65.2	77	16.7	0
50 m.p.h.	91.1	90.5	89.1	87.8	97.1	94.3	32.6	43.4	50.0	63.6	26.1	39	16.7	0
55 m.p.h.	79.5	70.8	76.6	64.9	88.2	79.1	9.5	13.3	26.9	27.3	2.9	10	0	0
60 m.p.h.	62.5	42.1	56.8	33.8	79.4	53.8	7.4	3.3	26.9	13.6	0	1	0	0
65 m.p.h.	30.4	12.4	27.1	8.6	40.2	17.7	2.1	1.6	7.7	9.1	0	0	0	0
70 m.p.h.	14.3	4.2	11.6	3.6	22.5	5.1	1.1	0	3.8	0	0	0	0	0
75 m.p.h.	3.2	1.1	1.0	0.9	9.8	1.3	0	0	0	0	0	0	0	0
No. of Vehicles Obs.	230	190	173	110	57	80	23	62	4	9	19	53	3	0
Avg. Speed (m.p.h.)	61.5	57.1	60.7	55.9	63.8	58.7	44.0	47.7	50.75	51.6	42.6	47.0	35.7	-
Max. Speed (m.p.h.)	—	—	86	81	88	70	—	—	60	65	50	56	43	0
State or Type	—	—	—	—	OHIO	—	—	—	2 S	2 P.U.	2 SICO	282	—	0
Min. Speed (m.p.h.)	—	—	30	35	47	46	—	—	45	45	26	36	27	0
State or Type	—	—	—	—	ILL.	—	—	—	28	2 P.U.	28200	2 D	—	—
No. of Vehicles Obs.	175	190	130	112	45	78	72	60	22	13	50	47	3	0
Avg. Speed (m.p.h.)	59.8	58.3	58.4	57.1	63.9	60.0	47.8	49.4	49.7	51.7	47.0	48.8	41.3	-
Max. Speed (m.p.h.)	—	—	74	73	79	77	—	—	70	65	56	61	50	0
State or Type	—	—	—	—	OHIO	—	—	—	2 POP	2 P	2 SIAC	282	—	0
Min. Speed (m.p.h.)	—	—	23	40	46	46	—	—	25	42	29	30	31	0
State or Type	—	—	—	—	OHIO	—	—	—	2 POP	2 P.U.	2 DST	2 D	—	—

North

South

Station U.S. 52 2.0 Miles North of Templeton

Surface 22' Rock Asphalt

This Observation

Date August 29, 1957

Time 9:30 - 11:50 A.M.

Weather Clear, Warm

Last Previous Observation (Speed or Post. No.)

Date March 1 and 26, 1957

Time 2:30 - 4:30 P.M.

OBSERVATION	All			Indiana			Non-Indiana			All			Traffic			Based	
	Last	Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present	Last Present
No. of Vehicles Obs.	385	369	218	176	167	193	115	133	10	16	105	117	0	0			
Ave. Speed (m.p.h.)	60.5	55.6	59.7	55.5	61.6	55.8	46.5	46.9	55.9	50.9	45.6	46.4	-	-			
Max. Speed (m.p.h.)	94.3	97.0	92.2	88.6	97.0	88.6	65.2	70.7	87.5	87.5	61.9	68.4	-	-			
Min. Speed (m.p.h.)	84.2	58.5	80.7	56.3	88.6	60.6	30.4	38.3	100.0	87.5	23.8	31.6	-	-			
State or Type	62.9	26.6	54.6	26.7	73.6	26.4	7.0	5.3	60.0	25.0	1.9	2.6	-	-			
No. of Vehicles Obs.	23.4	6.0	20.2	6.3	27.5	5.7	0	0	0	0	0	0	-	-			
Ave. Speed (m.p.h.)	7.5	2.2	6.9	1.1	8.4	3.1	0	0	0	0	0	0	-	-			
Max. Speed (m.p.h.)	1.8	1.1	0.9	0.6	3.0	1.6	0	0	0	0	0	0	-	-			
Min. Speed (m.p.h.)	212	223	124	117	88	106	48	79	5	13	43	66	-	-			
State or Type	60.3	55.9	59.7	55.6	61.1	56.2	45.7	46.3	57.4	52.7	44.3	45.1	-	-			
No. of Vehicles Obs.	173	146	94	59	79	87	67	54	5	3	62	51	-	-			
Ave. Speed (m.p.h.)	60.7	55.3	59.6	55.3	62.1	55.3	47.1	47.8	54.4	43.0	46.5	48.1	-	-			
Max. Speed (m.p.h.)	80	70	80	70	82	74	—	—	61	51	60	57	-	-			
Min. Speed (m.p.h.)	44	43	44	43	41	42	—	—	2PCO	2P	2DCO	2SI	-	-			
State or Type	—	—	—	—	—	—	—	—	2POPOP	2P	30	36	-	-			
State or Type	—	—	—	—	—	—	—	—	2POPOP	2P	282CO	282	-	-			

West

East

Station U.S. 31 7.2 Miles North of PerrysburgSurface 22.51 Portland Cement Concrete, Resurfaced with Bituminous Material weather Clear and WarmLast Previous Observation (Speed Report No.)Date August 31, 1957Date March 5 & 12, 1957Time 9:40 - 11:50

Time

OBSERVATION	PASSENGER CARS						TRUCKS						BUSES	
	All		Indians		Non-Indiana		all		Less than 5000 pounds		5000 pounds or more		Last Present	All Present
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of Vehicles Obs.	383	437	309	342	74	95	110	63	37	26	73	37	6	0
Avg. Speed (m.p.h.)	53.0	56.8	52.6	56.6	54.8	57.8	43.9	47.1	47.7	51.4	42.0	44.1	33.2	-
45 m.p.h.	86.7	94.7	84.5	94.5	96.0	95.8	39.1	57.1	62.2	76.9	27.4	43.2	16.7	-
50 m.p.h.	70.8	87.0	68.9	86.5	78.4	88.4	23.6	30.2	43.8	46.2	11.0	18.9	16.7	-
55 m.p.h.	41.5	65.5	40.1	62.9	47.3	74.7	11.8	14.3	27.0	30.8	4.1	2.7	16.7	-
60 m.p.h.	19.8	37.5	18.5	35.7	25.7	44.2	6.4	11.1	18.9	23.1	0	2.7	0	-
65 m.p.h.	7.6	14.4	7.1	14.3	9.5	14.7	1.8	6.3	5.4	15.4	0	0	0	-
70 m.p.h.	2.6	4.4	2.6	4.4	2.7	4.2	0	1.6	0	3.8	0	0	0	-
75 m.p.h.	1.0	0.5	0.6	0.3	2.7	1.1	0	0	0	0	0	0	0	-
No. of Vehicles Obs.	200	196	160	163	40	33	60	36	21	14	39	22	-	-
Avg. Speed (m.p.h.)	53.7	55.8	53.7	55.6	53.8	56.5	43.9	45.6	48.1	48.5	41.6	43.8	-	-
Max. Speed (m.p.h.)	-	-	75	71	67	72	-	-	68	66	56	54	-	-
State or Type	-	-	-	-	Mich.	-	-	-	2POP	2PO	2DDP	2SD	-	-
Min. Speed (m.p.h.)	-	-	31	36	40	40	-	-	24	37	28	33	-	-
State or Type	-	-	-	-	N.Y.	-	-	-	2POP	2PU	2DST	2D	-	-
No. of Vehicles Obs.	183	241	149	179	34	62	50	27	16	12	34	15	-	-
Avg. Speed (m.p.h.)	52.3	57.7	51.4	57.4	56.0	58.5	44.0	49.1	47.2	54.7	42.4	44.5	-	-
Max. Speed (m.p.h.)	-	-	74	75	78	78	-	-	69	72	56	62	-	-
State or Type	-	-	-	-	Mich&Oh	-	-	-	2PCO	2PU	2DDP	2D	-	-
Min. Speed (m.p.h.)	-	-	31	33	43	44	-	-	21	42	34	34	-	-
State or Type	-	-	-	-	Ohio	-	-	-	2PST	2PU	2S2CO	2D	-	-

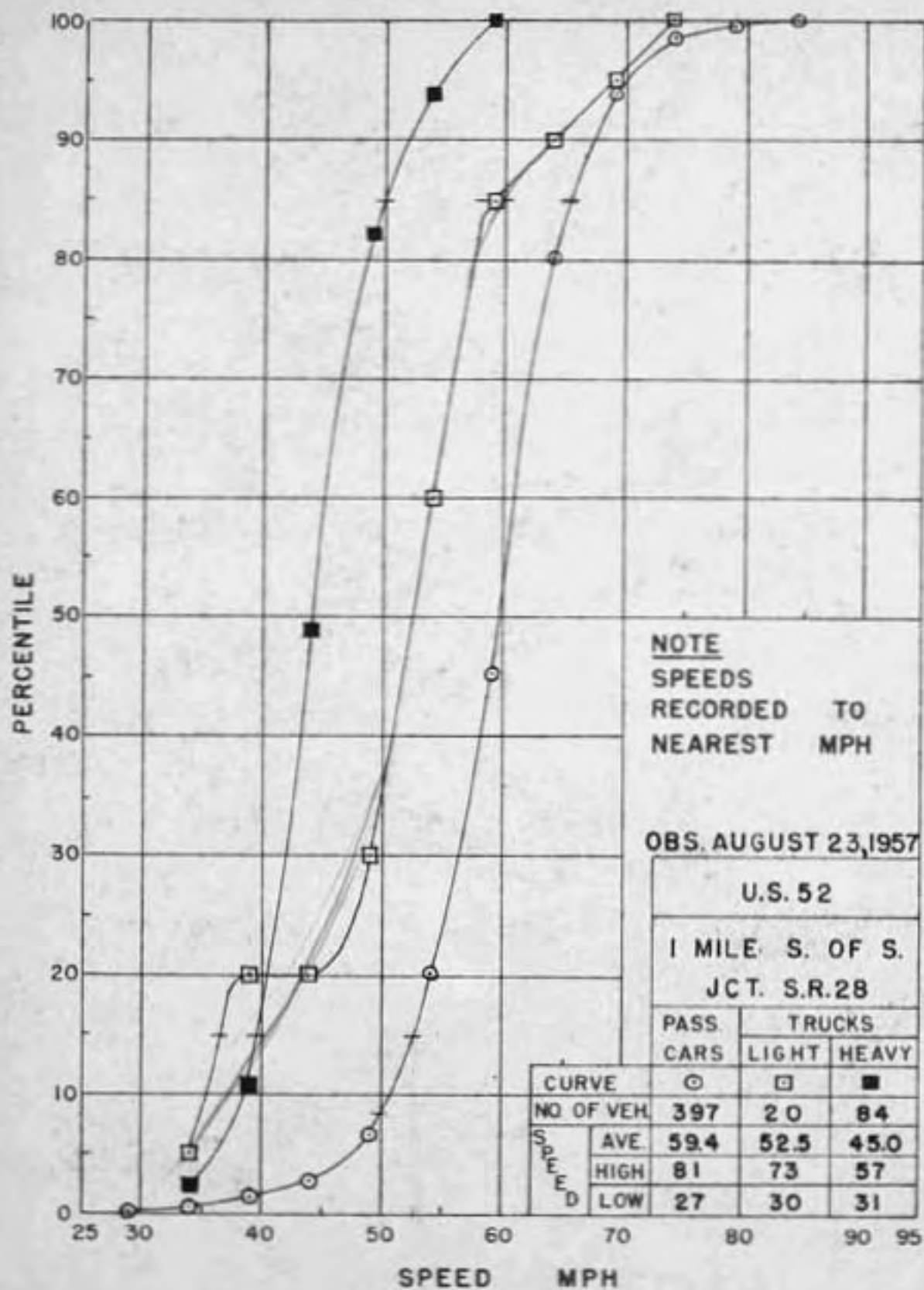


FIGURE 1

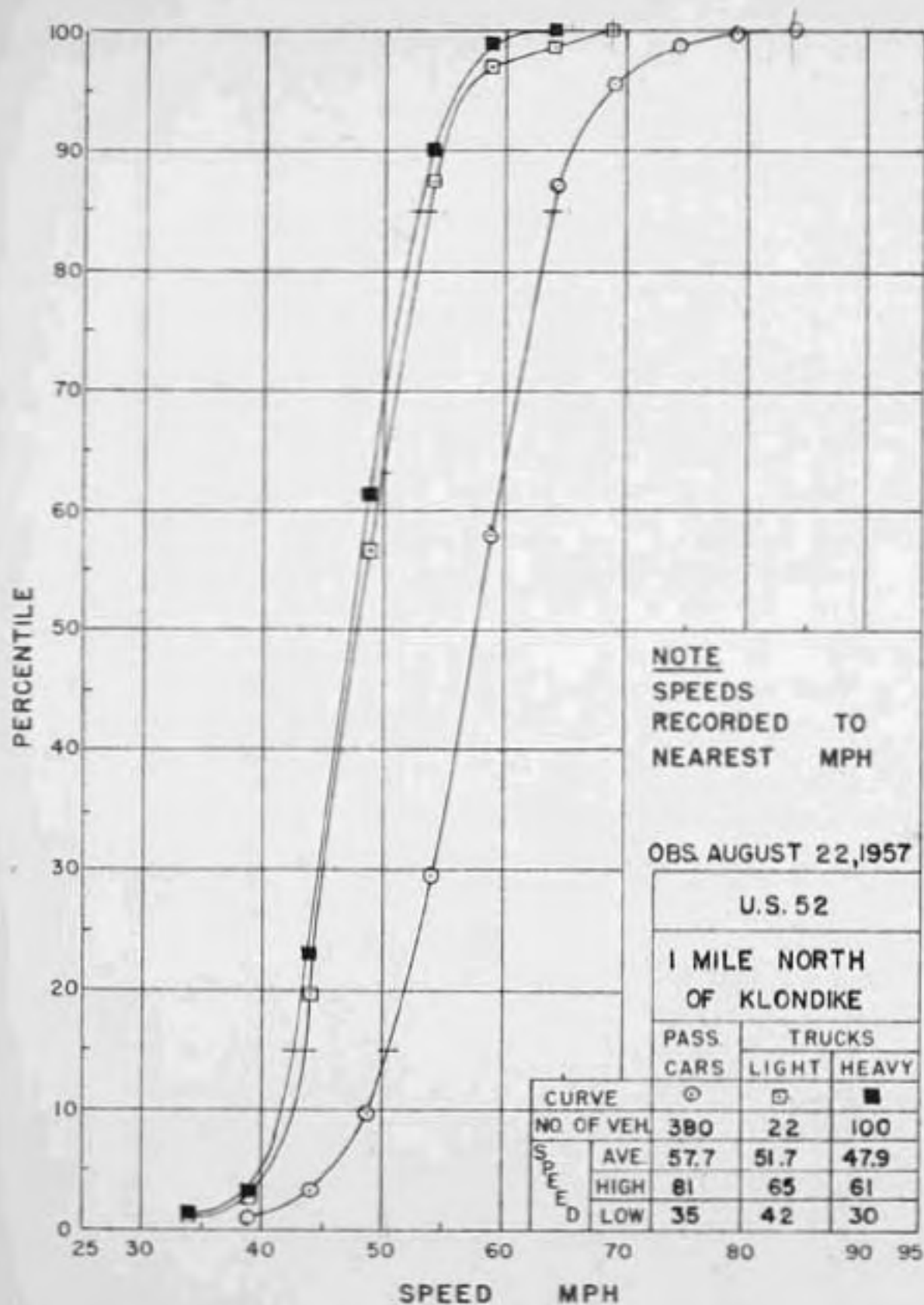


FIGURE 2

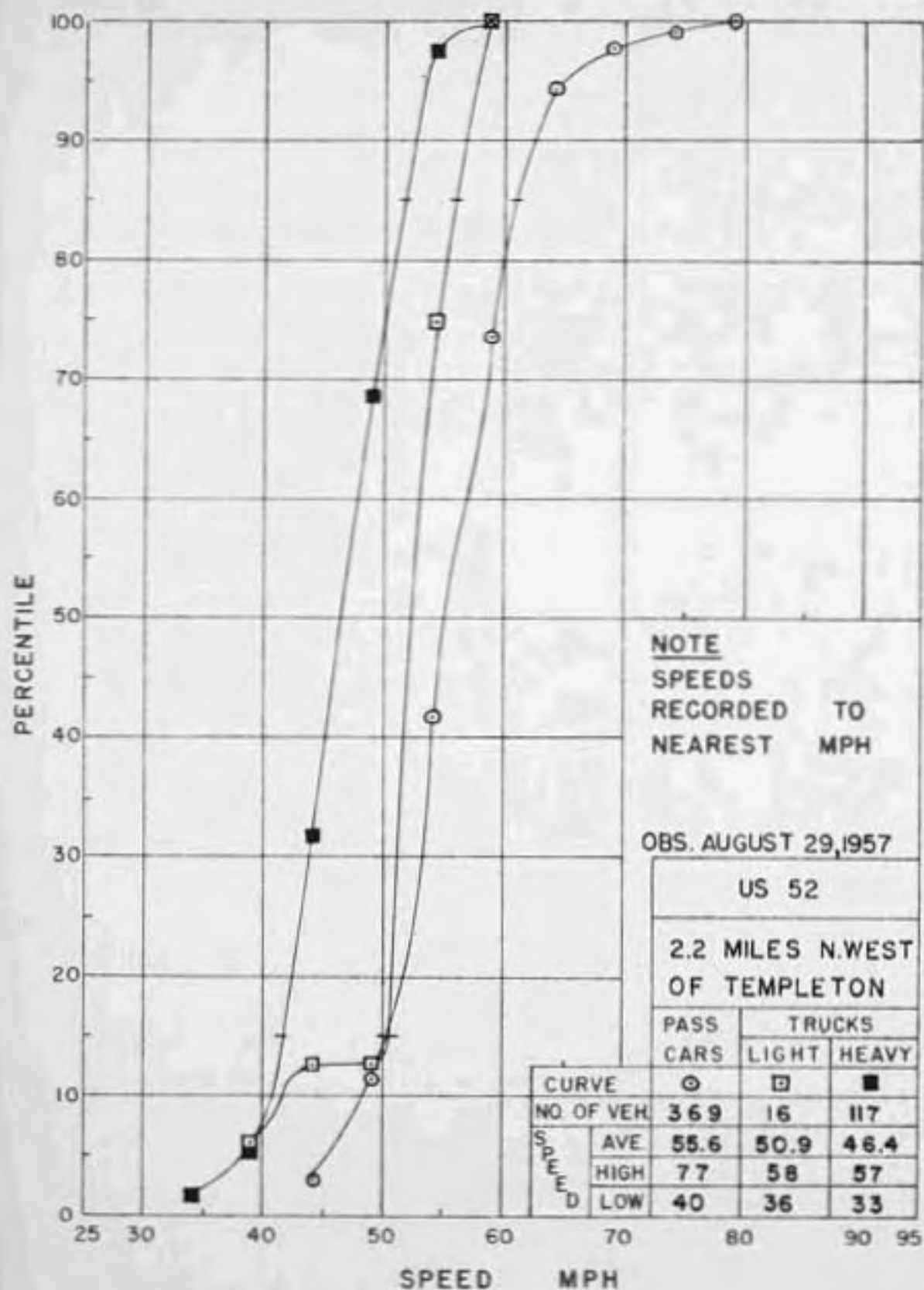


FIGURE 3

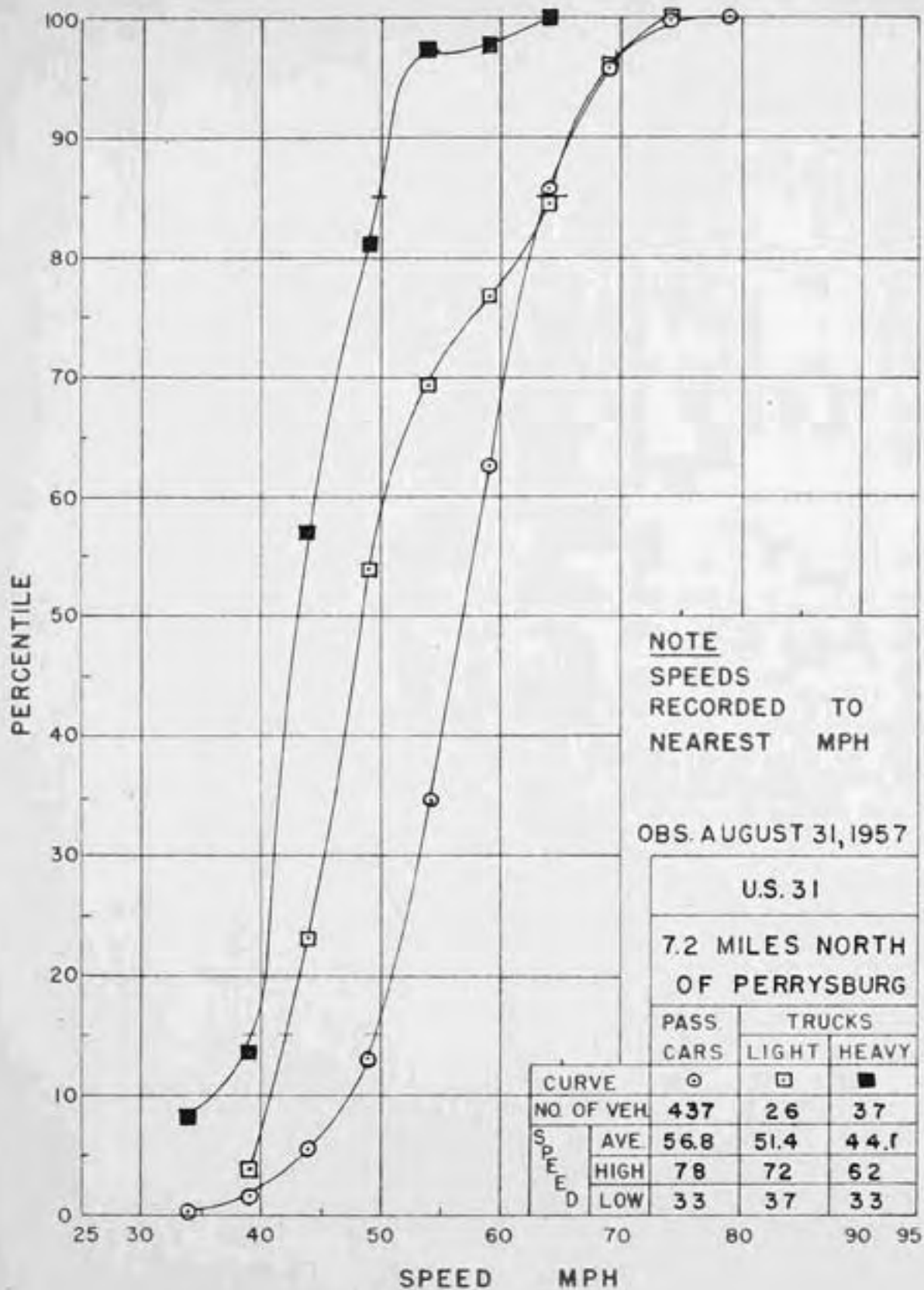


FIGURE 4

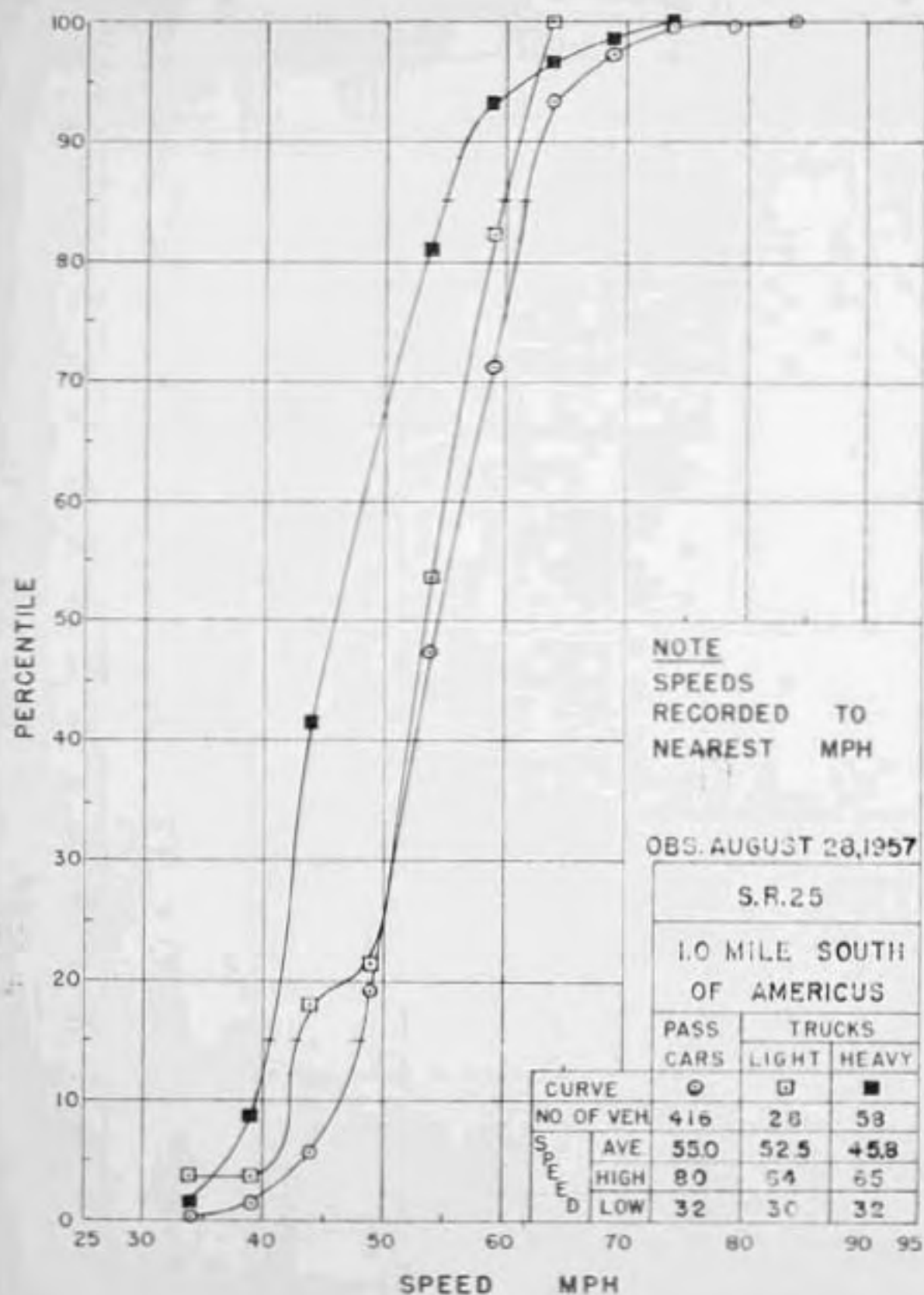


FIGURE 5

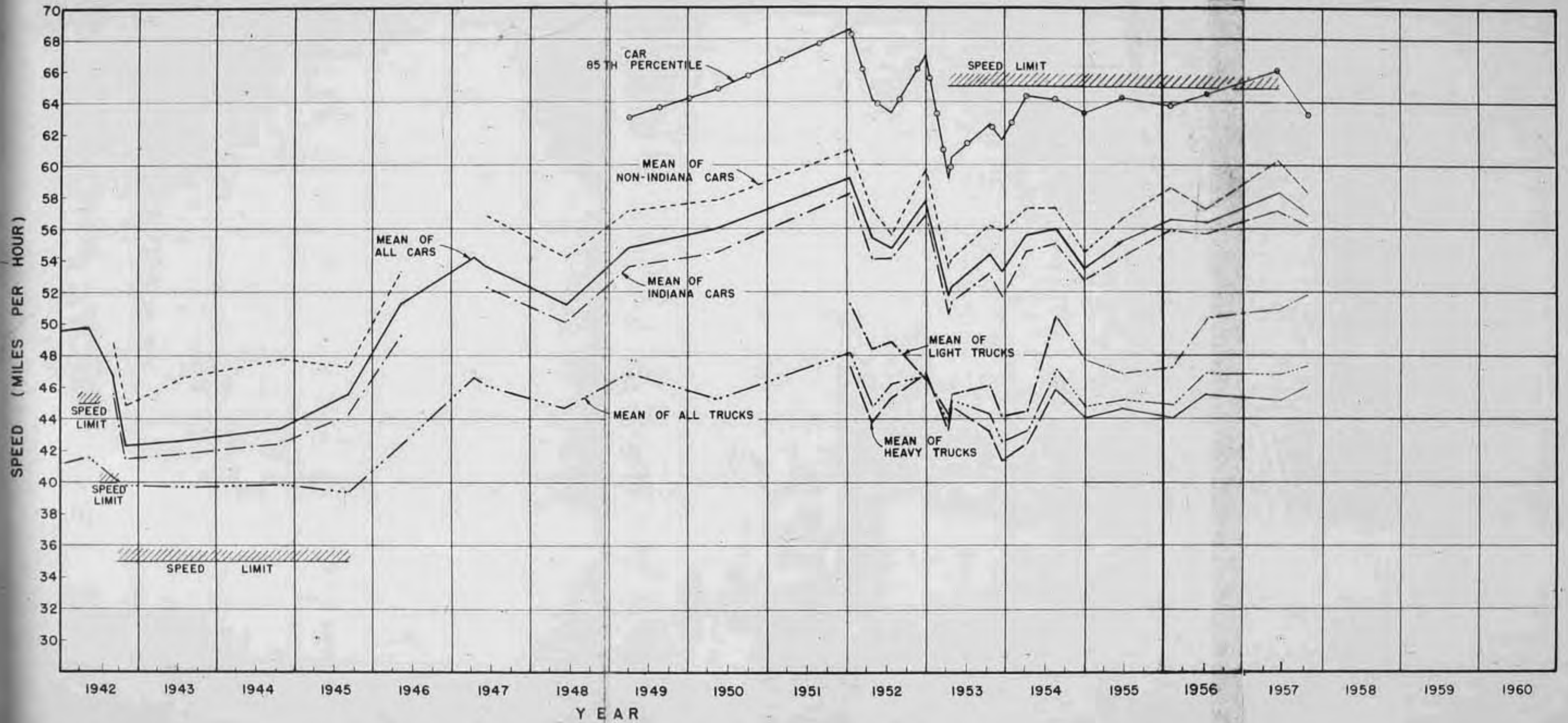


FIG. 6

INDIANA RURAL SPEED TRENDS 1942 - 1960

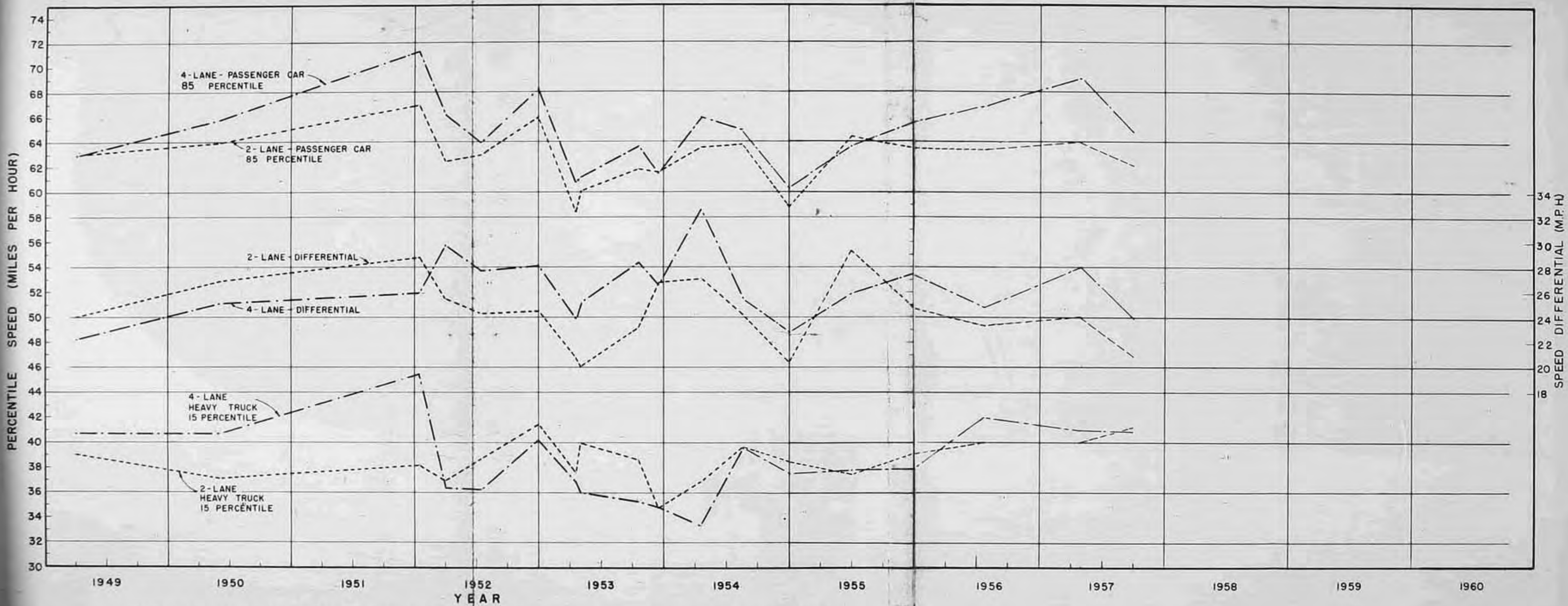


FIG. 7 TRENDS IN PERCENTILE SPEEDS AND SPEED DIFFERENTIAL 1949-1960