

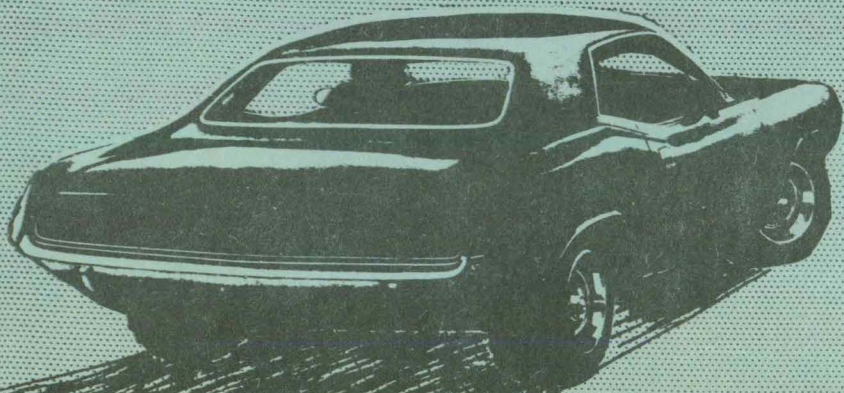
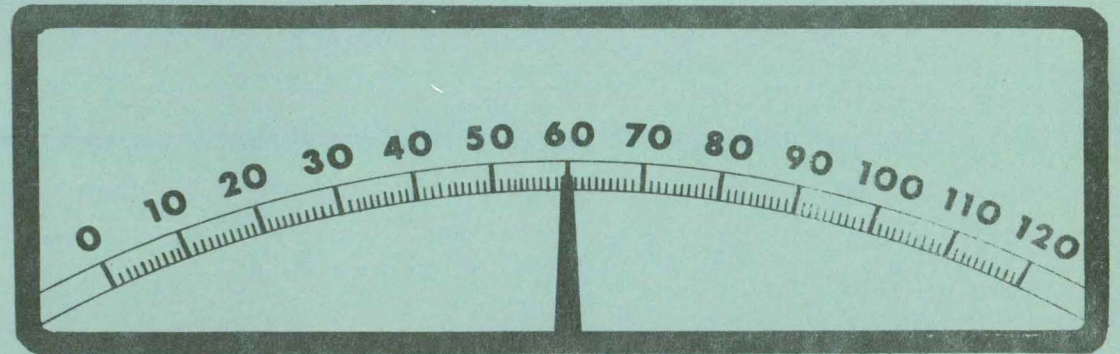
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Annual

Speed Check

at Selected Primary Road Locations



IOWA
July 1969

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IOWA
SPEED STUDY

1969

prepared by

IOWA STATE HIGHWAY COMMISSION
TRAFFIC AND SAFETY DEPARTMENT

in cooperation with
U.S. Department of Transportation
Federal Highway Administration
Bureau of Public Roads

INTRODUCTION

The Iowa State Highway Commission conducted speed studies during the month of July, 1969 at 25 locations. At four locations data was also obtained during the nighttime. 1967 was the last year that data was obtained semi-annually. In 1968 studies were made at each station during May, July and October. A comparison of the 85 percentile speed for these months is shown on page 14.

The general location of the stations for 1969 is illustrated on the map on page 4.

Vehicular speeds were measured by the use of electronic radar speed meter. Vehicles were classified as passenger cars or commercial. Passenger cars were classified as local, other Iowa or foreign. The commercial vehicles were classified as local and other. A two hour study is made at each station. The stations are on level, tangent sections of paved rural highways and only the speeds of "free-flowing" vehicles were recorded.

1969 SPEED STUDY

DESCRIPTION OF STATIONS BY SYSTEMS

Interstate

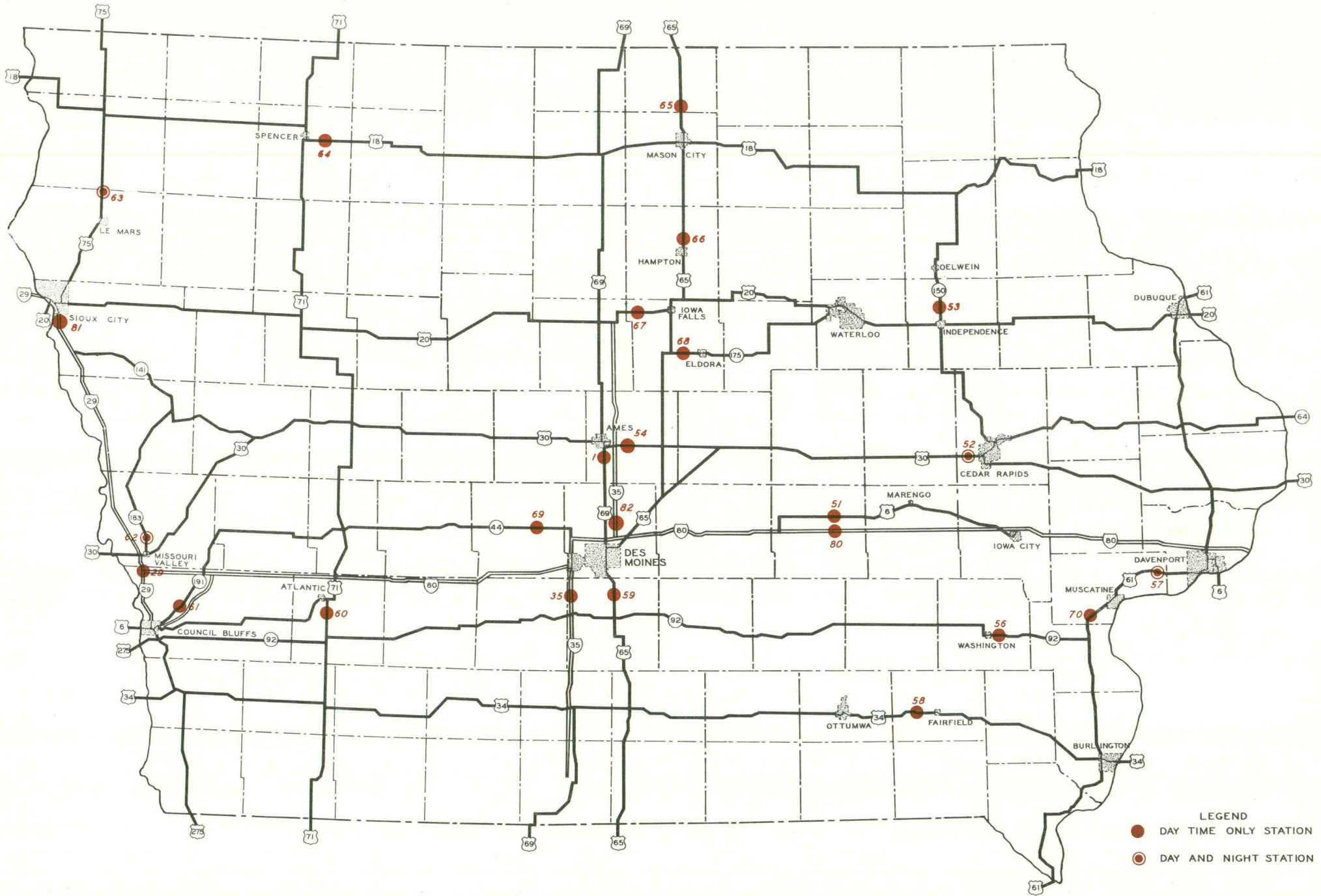
Sta. 29	I-29	- 1 mile south of Loveland Exit
Sta. 35	I-35	- North of North River Bridge
Sta. 80	I-80	- East of Brooklyn Exit
Sta. 81	I-29	- Sioux City Industrial Interchange
Sta. 82	I-35	- South of Bondurant Interchange

Primary

Sta. 1	US 69	- 4 miles south of Ames
Sta. 51	US 6	- 1.8 miles east of Iowa 398
Sta. 52	Iowa 150	- 1 mile west of Cedar Rapids
Sta. 53	Iowa 150	- 1 mile north of Independence
Sta. 54	US 30	- 4 miles east of Ames
Sta. 56	Iowa 92	- 2 miles east of Washington
Sta. 57	US 61	- 2.5 miles west of Blue Grass
Sta. 58	US 34	- 5 miles west of Fairfield
Sta. 59	US 69	- 6 miles north of Indianola
Sta. 60	US 71	- 4 miles south of Atlantic
Sta. 61	Iowa 191	- 2.5 miles south of Underwood
Sta. 62	Iowa 183	- 2.5 miles north of Missouri Valley
Sta. 63	US 75	- 7 miles north of Le Mars
Sta. 64	US 18	- 5 miles east of Spencer
Sta. 65	US 65	- 7.7 miles north of Mason City
Sta. 66	US 65	- 2 miles north of Hampton
Sta. 67	US 20	- 3 miles west of Alden

Sta. 68	Iowa 175	- 2.8 miles east of US 65
Sta. 69	Iowa 44	- 0.5 mile east of Dallas Center
Sta. 70	US 61	- 9 miles south of Muscatine

ANNUAL SPEED CHECK
STATION LOCATIONS



IOWA STATE HIGHWAY COMMISSION
 AVERAGE AND 85th PERCENTILE DAYTIME
 SPEEDS OF MOTOR VEHICLES
 CHECKED IN JULY, 1969 SURVEY

* Interstate Stations

Speed Check Location No.	Rt. No.	Passenger Cars			Commercial Vehicles			All Vehicles		
		No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed
51	6	91	67.8	56.5	19	57.4	49.3	110	67.0	55.1
52	30	516	67.8	59.1	64	60.3	54.3	580	67.5	58.7
53	150	214	67.9	58.1	43	59.9	53.2	257	67.1	57.6
54	30	411	70.2	62.9	74	59.0	51.9	485	69.7	60.8
1	69	208	67.8	58.4	17	58.8	51.8	225	67.3	58.1
56	92	213	65.3	57.1	48	57.7	50.0	261	63.7	56.3
57	61	296	70.1	60.8	63	59.2	52.4	359	69.5	59.5
58	34	311	69.7	60.2	78	58.5	50.9	389	69.1	58.8
59	69	544	67.2	58.7	66	59.5	53.4	610	66.6	58.2
60	71	165	66.5	57.0	11	61.9	52.2	176	66.1	56.8
61	191	310	65.8	57.0	181	58.2	52.0	491	62.9	54.7
62	183	70	67.1	58.0	6	58.7	50.9	76	66.7	57.6
63	75	138	69.7	60.9	38	60.6	55.3	176	68.8	59.5
64	18	168	68.9	58.5	28	57.8	48.6	196	68.2	57.4
65	65	322	67.9	58.5	70	58.0	50.9	392	66.9	57.4
66	65	307	68.8	60.2	73	60.1	56.2	380	68.1	59.3
67	20	272	69.4	60.8	55	59.1	54.0	327	68.7	59.4
68	175	215	69.0	59.9	25	59.2	51.4	240	68.7	59.3
69	44	168	66.7	57.0	54	54.8	48.6	222	63.9	54.2
70	61	208	68.8	59.2	52	58.0	49.7	260	68.1	57.7
29*	29	675	73.9	64.5	143	66.1	59.3	818	72.7	63.4
35*	35	725	77.1	68.4	133	67.9	60.6	858	76.0	67.4
80*	80	1131	77.6	69.2	139	67.7	59.8	1270	77.2	68.6
81*	29	786	70.2	62.1	91	60.8	56.9	877	69.9	61.1
82*	35	898	74.8	67.1	109	60.9	58.1	1007	73.9	66.4
All Stations	-	9362	70.0	62.5	1680	60.0	54.7	11042	69.5	60.9

IOWA STATE HIGHWAY COMMISSION
 AVERAGE AND 85th PERCENTILE DAYTIME
 SPEEDS OF MOTOR VEHICLES ON PRIMARY HIGHWAYS
 CHECKED IN JULY, 1969 SURVEY

Speed Check Location No.	Rt. No.	Passenger Cars			Commercial Vehicles			All Vehicles		
		No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed
51	6	91	67.8	56.5	19	57.4	49.3	110	67.0	55.1
52	30	516	67.8	59.1	64	60.3	54.3	580	67.5	58.7
53	150	214	67.9	58.1	43	59.9	53.2	257	67.1	57.6
54	30	411	70.2	62.9	74	59.0	51.9	485	69.7	60.8
1	69	208	67.8	58.4	17	58.8	51.8	225	67.3	58.1
56	92	213	65.3	57.1	48	57.7	50.0	261	63.7	56.3
57	61	296	70.1	60.8	63	59.2	52.4	359	69.5	59.5
58	34	311	69.7	60.2	78	58.5	50.9	389	69.1	58.8
59	69	544	67.2	58.7	66	59.5	53.4	610	66.6	58.2
60	71	165	66.5	57.0	11	61.9	52.2	176	66.1	56.8
61	191	310	65.8	57.0	181	58.2	52.0	491	62.9	54.7
62	183	70	67.1	58.0	6	58.7	50.9	76	66.7	57.6
63	75	138	69.7	60.9	38	60.6	55.3	176	68.8	59.5
64	18	168	68.9	58.5	28	57.8	48.6	196	68.2	57.4
65	65	322	67.9	58.5	70	58.0	50.9	392	66.9	57.4
66	65	307	68.8	60.2	73	60.1	56.2	380	68.1	59.3
67	20	272	69.4	60.8	55	59.1	54.0	327	68.7	59.4
68	175	215	69.0	59.9	25	59.2	51.4	240	68.7	59.3
69	44	168	66.7	57.0	54	54.8	48.6	222	63.9	54.2
70	61	208	68.8	59.2	52	58.0	49.7	260	68.1	57.7
All Stations	-	5147	67.7	59.2	1065	58.1	52.1	6212	67.0	58.0

IOWA STATE HIGHWAY COMMISSION
 AVERAGE AND 85th PERCENTILE DAYTIME
 SPEEDS OF MOTOR VEHICLES ON INTERSTATE HIGHWAYS
 CHECKED IN JULY, 1969 SURVEY

Speed Check Location No.	Rt. No.	Passenger Cars			Commercial Vehicles			All Vehicles		
		No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed
29	29	675	73.9	64.5	143	66.1	59.3	818	72.7	63.4
35	35	725	77.1	68.4	133	67.9	60.6	858	76.0	67.4
80	80	1131	77.6	69.2	139	67.7	59.8	1270	77.2	68.6
81	29	786	70.2	62.1	91	60.8	56.9	877	69.9	61.1
82	35	898	74.8	67.1	109	60.9	58.1	1007	73.9	66.4
All Stations	-	4215	74.6	66.5	615	65.3	59.1	4830	73.7	65.7

IOWA STATE HIGHWAY COMMISSION
 AVERAGE AND 85th PERCENTILE NIGHTTIME
 SPEEDS OF MOTOR VEHICLES ON PRIMARY HIGHWAYS
 CHECKED IN JULY, 1969 SURVEYS

Speed Check Location No.	Rt. No.	Passenger Cars			Commercial Vehicles			All Vehicles		
		No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed	No. Obs.	85th % Speed	Avg. Speed
52	30	232	62.0	57.3	44	60.0	57.1	276	60.8	57.3
57	61	66	66.6	58.2	6	59.4	55.9	72	66.1	58.0
62	183	46	62.1	54.5	5	57.2	48.4	51	61.3	53.4
63	75	64	68.2	59.3	10	60.4	57.0	74	67.6	58.9
All Stations	-	408	63.9	57.4	65	59.0	56.3	473	62.4	57.2

1969 Speed Study
 All Rural Highways
 Daytime Traffic

STATIONS All Rural Stations

	Vehicle Type					All
	Passenger Cars			Commercial		
	Local	Other	Foreign	Local	Other	
No. Checked	3387	2872	3103	497	1183	11,042
Avg. Speed	59.2	62.4	64.9	51.9	55.5	60.9
85% Speed	68.2	69.9	74.1	58.3	61.7	69.5

Vehicles Traveling at or Below
 Indicated Speed-Percent

Speed-Miles Per Hour													
	85	80	75	70	65	60	55	50	45	40	35	30	25
	99.9	99.7	99.5	100.0	100.0	99.7							
	99.5	98.8	98.4	100.0	100.0	99.1							
	96.7	92.9	86.9	99.8	99.4	93.4							
	92.1	85.5	76.7	99.8	99.0	87.2							
	73.0	58.8	46.9	97.4	91.2	65.1							
	59.7	45.3	33.7	94.0	81.9	52.6							
	29.4	18.0	12.6	67.0	45.2	25.1							
	17.9	10.3	6.8	48.3	26.8	15.2							
	5.0	2.0	1.0	10.9	4.2	3.3							
	2.2	0.5	0.3	3.6	1.9	1.3							
	0.4	0.1	0.0	0.8	0.2	0.2							
	0.0	0.0	0.0	0.0	0.0	0.0							
	0.0	0.0	0.0	0.0	0.0	0.0							

Daytime Violations
(All Stations)

Violations	Passenger Cars		Commercial Vehicles		All Vehicles	
	Primary Routes	Interstate Routes	Primary Routes	Interstate Routes	Primary Routes	Interstate Routes
Below Minimum Exceed Limits		8		8		16
5 mph or less	164	503	320	183	484	686
6 to 10 mph	120	63	24	19	144	82
11 to 15 mph	10	18	17	15	27	33
16 to 20 mph	6	4	-	1	6	5
21 to 25 mph	-	-	-	1	-	1
Over 25 mph	-	-	-	-	-	-
Violation Sub-Total	300	596	361	227	661	807
Vehicle Sub-Total	5147	4215	1065	615	6212	4830
Percent Sub-Total	5.8%	14.1%	33.9%	36.9%	10.6%	16.7%
Total Vehicles	9362		1680		11042	
Percent	9.6%		35%		13.3%	

Speed Limits - Primary Routes - Day 70; Night, 60.
 Trucks - Day - Night, 55. Buses - Day - Night, 60.
 Interstate - Day, 75; Night, 65; Minimum 40,
 Trucks - Day - Night, 65.

Exceeding Limits by	Nighttime Violations (4 Stations - None Interstate)		
	Passenger Cars (60 MPH)	Commercial Vehicles	All Vehicles
5 mph or less	27	35	62
6 to 10 mph	46	3	49
11 to 15 mph	5	-	5
16 to 20 mph	4	-	4
21 to 25 mph	-	-	-
Over 25 mph	-	-	-
Violation Total	82	38	120
Total No. of Vehicles Checked	408	65	473
Percent Exceeding Speed Limit	20.1%	58.5%	25.4%

CUMULATIVE FREQUENCY CHART

ALL DAY STATIONS
 STATION NO. All Stations

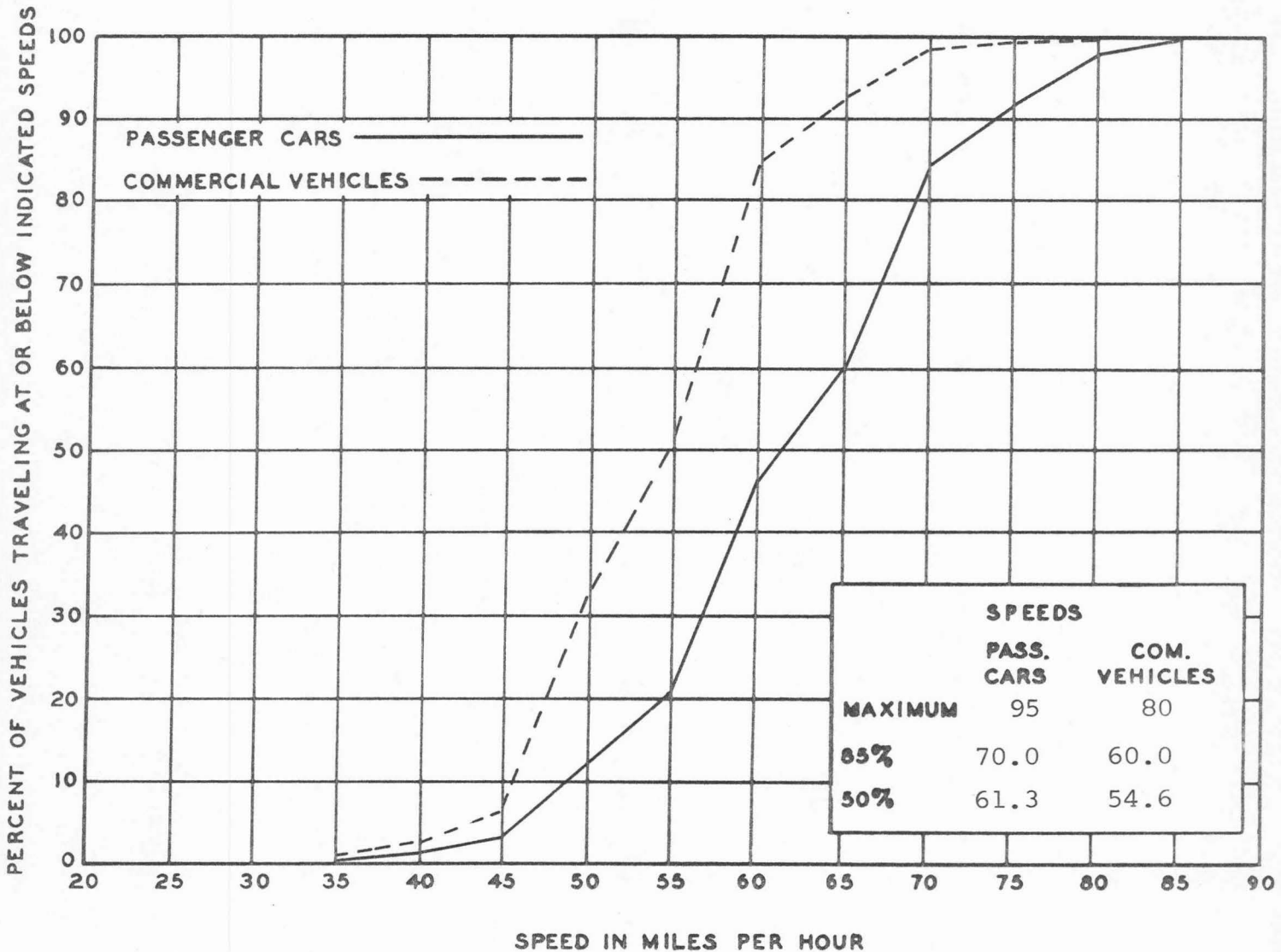
PASSENGER CARS

COMMERCIAL VEHICLES

Local and Other 6259
 OUT OF STATE 3103
 TOTAL 9362

Local 497
 Other 1183
 TOTAL 1680

TOTAL VEHICLES 11,042



CUMULATIVE FREQUENCY CHART

CORRESPONDING DAY AND NIGHT STATIONS

STATIONS 52, 57, 62, 63

DAY

NIGHT

PASSENGER CARS 1020

PASSENGER CARS 408

COMMERCIAL VEHICLES 171

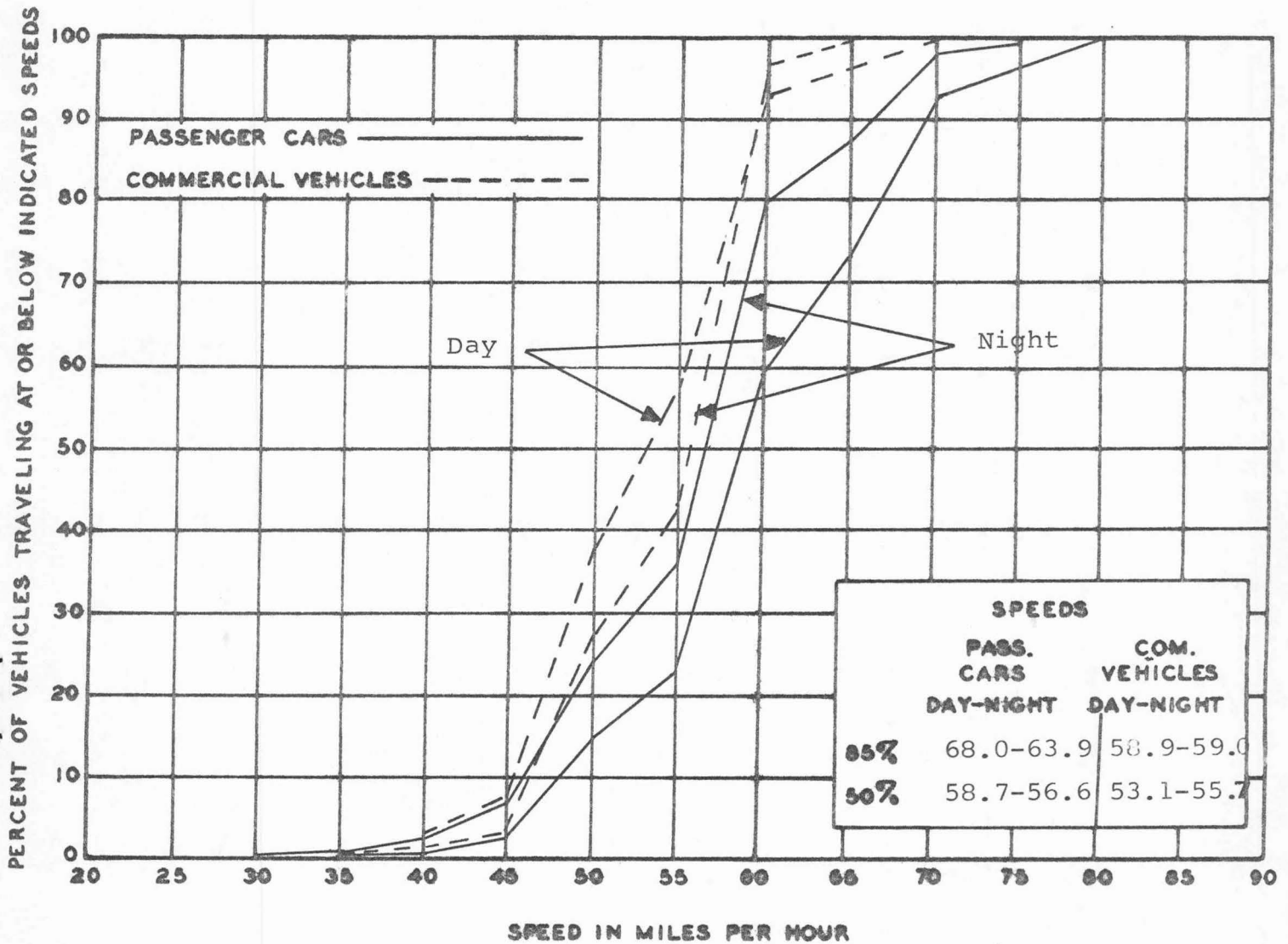
COMMERCIAL VEHICLES 65

TOTAL 1191

TOTAL 473

SPEED LIMIT Cars-70, Trucks-55

SPEED LIMIT Cars-60, Trucks-55



85th PERCENTILE SPEEDS IN JULY COMPARED BY
YEAR FOR PASSENGER CARS AND COMMERCIAL VEHICLES

Year	Passenger Cars			Commercial		
	Primary		Interstate	Primary		Interstate
	Day	Night	Day	Day	Night	Day
1967*	62.4	62.5	72.5	54.2	56.6	61.7
1968**	66.9	63.8	72.0	58.0	58.4	62.3
1969	67.7	63.9	74.6	58.1	59.0	65.3

*This represents data obtained in October 1967.
**This represents data obtained in July 1968.

85th PERCENTILE SPEEDS IN MAY, JULY
AND OCTOBER OF 1968 FOR PASSENGER CARS
AND COMMERCIAL VEHICLES

Month (1968)	Passenger Cars			Commercial		
	Primary		Interstate	Primary		Interstate
	Day	Night	Day	Day	Night	Day
May	64.7	61.5	72.0	55.4	52.7	62.4
July	66.9	63.8	72.0	58.0	58.4	62.3
October	68.1	68.2	72.2	57.4	59.2	62.4

SUMMARY

The 1969 Annual Speed Study data was obtained during the day at 25 rural stations, (20 on primary roads and 5 on Interstate highways) using electronic radar speed meters. In addition, data was gathered at four locations on the Primary System during the night.

A total of 11,515 vehicles were surveyed during the day and night hours at the 25 stations in July, 1969. The daylight survey totaled 11,042, of which 9,362 were passenger cars and 1,680 were commercial vehicles. The four night stations checked a total of 473 vehicles. Passenger cars accounted for 408 and commercial vehicles for 65 of the total.

Of the 11,042 vehicles observed during the daytime, 30.7% were local passenger cars, 26.0% were other Iowa passenger cars, 28.1% were out-of-state passenger cars, 4.5% were local commercial vehicles and 10.7% were other Iowa and out-of-state commercial vehicles.

The 85 - percentile daytime speeds of 67.7 MPH for passenger cars and 58.1 MPH for commercial vehicles indicates the 70 MPH car and 55 MPH truck daytime speed limits are reasonable and proper. The 85 - percentile nighttime speeds were 63.9 MPH for passenger cars and 59.0 MPH for commercial vehicles on the primary roads. Iowa has a posted nighttime speed limit for cars and trucks of 60 MPH and 55 MPH respectively.

The 85 - percentile daytime speeds of 74.6 MPH for passenger cars and 65.3 MPH for commercial vehicles is also in agreement with the 75 MPH car and 65 MPH truck daytime speed limits posted on the Interstate system.

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