

Thomas P. Woll



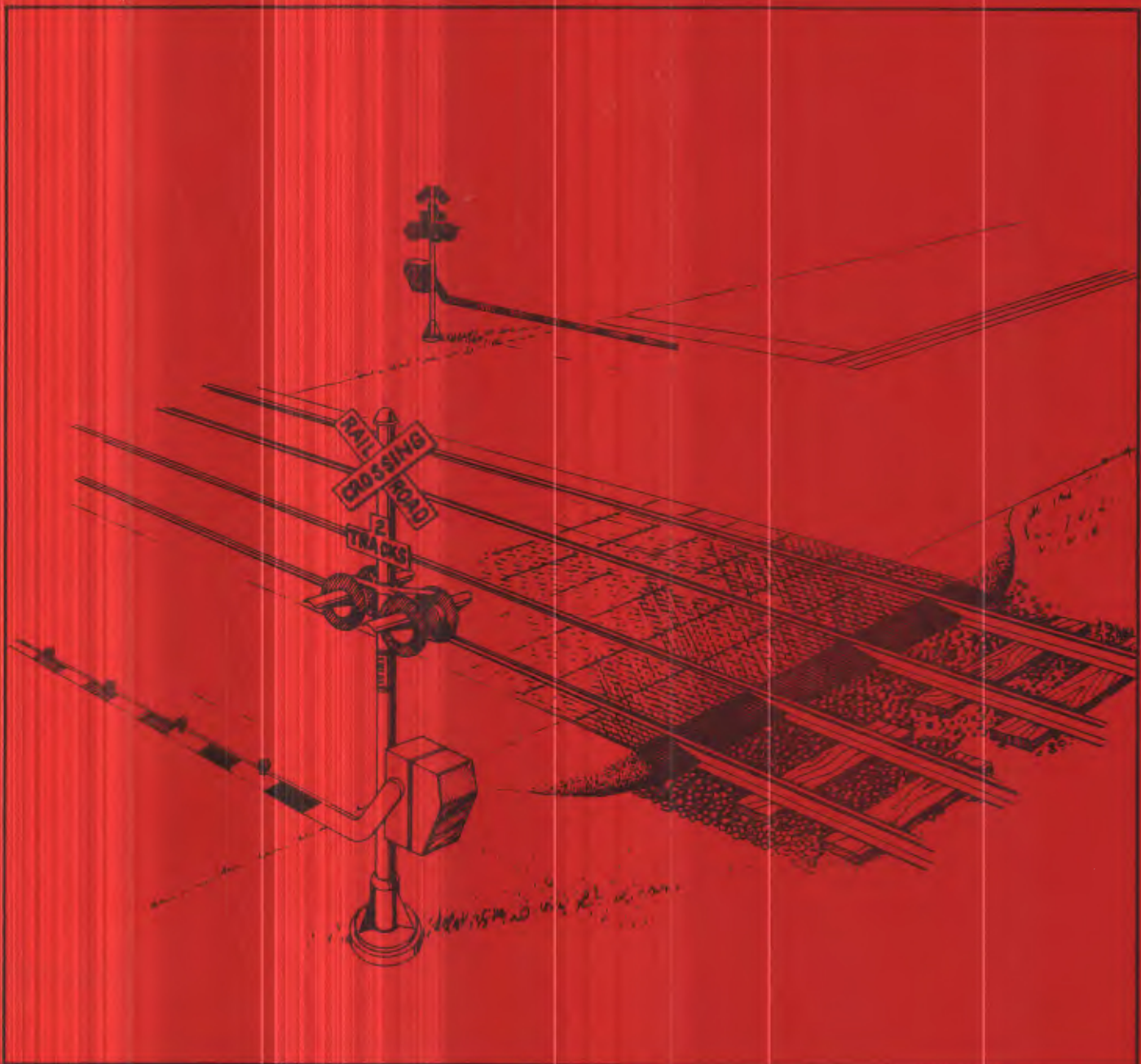
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TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
INTRODUCTION.	1
1. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS: HISTORICAL DATA 1977-1982	3
2. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS (1982).	5
State and Railroad Data.	5
Highway User and Vehicle Data.	12
Train and Track Data	20
Warning Device Data.	26
Time, Day, and Weather Data.	30
Motorist Action Data	33
3. RAIL-HIGHWAY CROSSING ACCIDENT RATES.	34
4. RAIL-HIGHWAY CROSSING INVENTORY	45
Physical Characteristics	45
Track Data	50
Highway System Data.	53
Warning Device Data.	59
Operational Characteristics.	66
Train Traffic Data	66
Train Speed Data	71
Highway Traffic Data	72
APPENDIX A: REPORTING REQUIREMENTS AND DEFINITIONS.	A-1
APPENDIX B: REPORTING FORMS	B-1
APPENDIX C: MISCELLANEOUS DATA.	C-1
APPENDIX D: ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS.	D-1
KEYWORD INDEX	

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1977-1982.	3
2 SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1977-1982	4
3 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE	5
4 ACCIDENTS/INCIDENTS AND CASUALTY RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE	6
5 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF MOTOR VEHICLE	7
6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN	8
7 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY.	9
7a ACCIDENTS/INCIDENTS AND CASUALTIES BY RAILROAD.	10
8 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY	11
9 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER	14
10 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE	14
11 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, NUMBER OF OCCUPANTS, CASUALTY RATES, DAMAGE RATES, AND ACCIDENT RATES	15
12 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY	16
13 CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF PERSON INVOLVED, TYPE OF HIGHWAY USER, AND CIRCUMSTANCE	17
14 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY	18

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
15 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY POSITION AND TYPE OF VEHICLE . . .	19
16 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY	20
17 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD EQUIPMENT INVOLVED, PART OF TRAIN STRUCK, CIRCUMSTANCE, AND VISIBILITY	22
18 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRAIN SPEED AND TYPE OF TRAIN. . .	22
19 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY NUMBER OF CARS IN TRAIN AND TYPE OF TRAIN	23
20 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION.	24
21 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRACK TYPE AND TRACK CLASS	25
22 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION.	26
23 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE AND OPERATIONAL STATUS OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY	28
24 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES DURING DUSK AND DARK HOURS BY ILLUMINATION OF CROSSING AND CIRCUMSTANCE.	28
25 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY LOCATION AND TYPE OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY	29
26 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY VISIBILITY AND CIRCUMSTANCE. . . .	30
27 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TEMPERATURE, CIRCUMSTANCE, AND VISIBILITY.	30
28 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TIME OF DAY AND CIRCUMSTANCE . . .	31

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
29 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MONTH AND CIRCUMSTANCE.	31
30 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WEATHER CONDITIONS, CIRCUMSTANCE, AND VISIBILITY.	32
31 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY OBSTRUCTION OF MOTORISTS' VIEW, CIRCUMSTANCE, AND VISIBILITY.	33
32 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MOTORISTS ACTION AND TYPE OF VEHICLE	33
33 TOTAL PUBLIC AND PRIVATE CROSSINGS BY STATE AND TYPE.	45
34 TOTAL PUBLIC AND PRIVATE CROSSINGS BY CLASS I RAILROAD AND TYPE.	46
35 TOTAL CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL.	47
36 TOTAL CROSSINGS BY NUMBER OF MAIN AND OTHER TRACKS.	50
37 TOTAL CROSSINGS BY NUMBER OF TRACK AND WARNING DEVICE CATEGORY.	51
38 TOTAL CROSSINGS BY NUMBER OF TRACKS AND TRAFFIC LANES	51
39 TOTAL CROSSINGS BY NUMBER OF TRACKS AND STATE	52
40 TOTAL CROSSINGS BY TYPE OF HIGHWAY SYSTEM AND STATE	53
41 TOTAL CROSSINGS BY HIGHWAY SYSTEM GROUP AND STATE	54
42 TOTAL CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD AT RAIL-HIGHWAY CROSSING.	55
43 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND STATE.	56
44 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND WARNING DEVICE CATEGORY.	57
45 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND STATE.	59
46 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND RAILROAD	60

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
47 TOTAL CROSSINGS BY PAVEMENT MARKINGS AND STATE	62
48 TOTAL CROSSINGS BY RAILROAD ADVANCE WARNING AND STATE.	63
49 TOTAL CROSSINGS MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' STANDARD FOR CROSSBUCKS BY STATE.	64
50 TOTAL CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY.	66
51 TOTAL CROSSINGS BY NUMBER OF THRU TRAINS AND SWITCHING TRAINS PER DAY.	68
52 TOTAL CROSSINGS BY NUMBER OF DAY AND NIGHT TRAINS PER DAY	68
53 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY	69
54 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC.	70
55 TOTAL CROSSINGS BY MAXIMUM TIMETABLE SPEED	71
56 TOTAL CROSSINGS BY TYPICAL TRAIN SPEED VARIATION	71
57 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC.	72
58 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY	73
59 TOTAL CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC.	74
C-1 MISCELLANEOUS DATA RECEIVED FROM THE RAIL-HIGHWAY CROSSING ACCIDENT/INCIDENT REPORTS.	C-2
C-2 MISCELLANEOUS DATA RECEIVED FROM DOT-AAR INVENTORY FORMS	C-3
D-1 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN.	D-2
D-2 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY.	D-3
D-3 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS BY TYPE OF ROADWAY USER	D-4
D-4 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION	D-4

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
D-5 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY.	D-5
D-6 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY	D-6
D-7 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS BY RAILROAD.	D-7

LIST OF TABLES (continued)

<u>Table</u>	<u>Page</u>
47 TOTAL CROSSINGS BY PAVEMENT MARKINGS AND STATE	62
48 TOTAL CROSSINGS BY RAILROAD ADVANCE WARNING AND STATE.	63
49 TOTAL CROSSINGS MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' STANDARD FOR CROSSBUCKS BY STATE.	64
50 TOTAL CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY.	66
51 TOTAL CROSSINGS BY NUMBER OF THRU TRAINS AND SWITCHING TRAINS PER DAY.	68
52 TOTAL CROSSINGS BY NUMBER OF DAY AND NIGHT TRAINS PER DAY	68
53 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY	69
54 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC.	70
55 TOTAL CROSSINGS BY MAXIMUM TIMETABLE SPEED	71
56 TOTAL CROSSINGS BY TYPICAL TRAIN SPEED VARIATION	71
57 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC.	72
58 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY	73
59 TOTAL CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC.	74
C-1 MISCELLANEOUS DATA RECEIVED FROM THE RAIL-HIGHWAY CROSSING ACCIDENT/INCIDENT REPORTS.	C-2
C-2 MISCELLANEOUS DATA RECEIVED FROM DOT-AAR INVENTORY FORMS	C-3
D-1 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN.	D-2
D-2 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY.	D-3
D-3 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS BY TYPE OF ROADWAY USER	D-4
D-4 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION	D-4

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1	SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1977-1982. 3
2	SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1977-1982 4
3	ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER. 12
4	ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE. 13
5	ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN. 21
6	ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY 27
7	ACCIDENTS/INCIDENTS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC (AADT). 32
8	CROSSING ACCIDENT RATE BY LOCATION: URBAN OR RURAL 34
9	CROSSING ACCIDENT RATE BY TYPE OF DEVELOPMENT 34
10	CROSSING ACCIDENT RATE BY NUMBER OF TRACKS. 35
11	CROSSING ACCIDENT RATE BY NUMBER OF MAINLINE TRACKS 35
12	CROSSING ACCIDENT RATE BY HIGHWAY SYSTEM. 36
13	CROSSING ACCIDENT RATE BY TYPE OF URBAN ROAD. 37
14	CROSSING ACCIDENT RATE BY TYPE OF RURAL ROAD. 37
15	CROSSING ACCIDENT RATE BY PAVED OR NON-PAVED ROAD SURFACE 38
16	CROSSING ACCIDENT RATE BY NUMBER OF TRAFFIC LANES 38
17	CROSSING ACCIDENT RATE BY SMALLEST CROSSING ANGLE 39
18	CROSSING ACCIDENT RATE BY CROSSING SURFACE. 39

LIST OF FIGURES (continued)

<u>Figure</u>		<u>Page</u>
19	CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY	40
20	CROSSING ACCIDENT RATE BY NUMBER OF THRU-TRAINS DURING DAYLIGHT HOURS (6 AM to 6 PM)	40
21	CROSSING ACCIDENT RATE BY MAXIMUM TIMETABLE SPEED.	41
22	CROSSING ACCIDENT RATE BY ANNUAL AVERAGE DAILY TRAFFIC	42
23	CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC.	43
24	CROSSING ACCIDENT RATE BY WARNING DEVICE CATEGORY.	44
25	CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL	48
26	CROSSINGS BY TYPE OF DEVELOPMENT	49
27	CROSSINGS BY NUMBER OF TRACKS.	50
28	CROSSINGS BY NUMBER OF TRAFFIC LANES	58
29	CROSSINGS BY WARNING DEVICE CATEGORY	61
30	CROSSINGS BY SMALLEST CROSSING ANGLE	65
31	CROSSINGS BY CROSSING SURFACE.	65
32	CROSSINGS BY TORAL NUMBER OF TRAINS PER DAY.	66
33	CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY	67
34	CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC (AADT)	70
35	CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC.	72
36	CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY	73

LIST OF ABBREVIATIONS

ACC/INC	-	accident/incident
A/I	-	accident/incident
CONT	-	contractor employee
ENOD	-	employee not on duty
EOD	-	employee on duty
FA	-	Federal aid
HWY	-	highway
INJ	-	injury or casualty
K	-	thousands
KLD	-	killed
MUTCD	-	Manual on Uniform Traffic Control Devices
LOCO(S)	-	locomotive
NONT	-	non-trespasser
PSGR	-	passenger
SIG	-	signal
TRES	-	trespasser
VEH REG	-	vehicles registered

INTRODUCTION

The fifth annual report, issued by the Federal Railroad Administration's (FRA) Office of Safety, combines rail-highway crossing accident/incident statistics with the National Rail-Highway Crossing Inventory. Accident/Incident data have been obtained from the FRA's Railroad Accident/Incident Reporting System (RAIRS). The RAIRS consists of the accident/incident reports filed by all railroads with the Office of Safety (49 CFR 225). The National Rail-Highway Crossing Inventory contains information about all rail-highway crossings in the United States.

The Federal Railroad Safety Act of 1970 (P. L. 91-458) and the Accident Reports Act (45 U.S.C. 38-34) require railroads to file reports to assist the FRA in its mandate to record railroad accidents and casualties. The National Rail-Highway Crossing Inventory was developed in response to the Federal Railroad Safety Act of 1970 and the Federal Highway Safety Acts of 1970 and 1973. These laws require the Secretary of Transportation to improve safety at rail-highway crossings.

Because of major revisions in reporting requirements, it is not possible to make direct comparisons of data collected after January 1, 1975 with information from prior years. These changes increased the number of reported rail-highway accidents/incidents; casualty reports have been increased to a lesser extent. Appendix A discusses current reporting requirements.

Section 1 presents historical data on rail-highway crossing accidents/incidents for 1977 through 1982.

Section 2 contains accident/incident statistics for 1982. These data were obtained from the rail-highway crossing accident/incident file and the railroad casualty file.

Section 3 combines information from the rail-highway crossing accident/incident file with data in the National Rail-Highway Crossing Inventory and shows relationships between certain crossing characteristics and accident frequencies.

Section 4 presents physical and operational statistics for all U.S. public, at-grade rail-highway crossings, as described by the National Inventory of June 10, 1982.

The tables and figures in Sections 1, 2, 3, 4, and Appendix C present data on public rail-highway crossings. Appendix D and Tables 33 and 34 present data on private crossings. Tables 1, 3, 7a, 9, 13, D-3, and Figures 1 and 3 pertain to crossing accidents/incidents involving all highway users. All other tables show only those accidents/incidents in which motor vehicles are involved. Summary data for accidents and incidents at all public and private crossings are shown in the following table.

SUMMARY OF RAIL—HIGHWAY CROSSING ACCIDENT/INCIDENTS, 1982

Type of Crossing	..... Accidents	Total.....		.....Motor Vehicles.....			.....Non-Motor Vehicles.....		
		Killed	Injured	Accidents	Killed	Injured	Accidents	Killed	Injured
Public	7,158	580	2,508	6,882	526	2,417	276	54	91
Private	<u>590</u>	<u>27</u>	<u>129</u>	<u>545</u>	<u>20</u>	<u>117</u>	<u>45</u>	<u>7</u>	<u>12</u>
Total	7,748	607	2,637	7,427	546	2,534	321	61	103

In preparing this Bulletin, a logic oversight in the criteria for Table 49 was noted and corrected. In previous publications, a crossing equipped with passive warning devices, including one or more reflectorized crossbucks, was counted as meeting the MUTCD standard. This year's Table 49 requires that two or more reflectorized crossbucks (unless the highway is single lane) be at a crossing without automatic warning devices in order to meet the Standard.

1. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS: HISTORICAL DATA 1977-1982

TABLE 1. SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1977-1982

YEAR	NUMBER OF ACCIDENTS	KILLED	TOTAL INJURED	CASUALTIES	CASUALTIES PER ACCIDENT
1977	12,299	944	4,649	5,593	0.45
1978	12,435	1,021	4,256	5,277	0.42
1979	11,552	834	4,172	5,006	0.43
1980	9,763	788	3,662	4,450	0.46
1981	8,546	697	3,121	3,818	0.45
1982	7,158	580	2,508	3,088	0.43

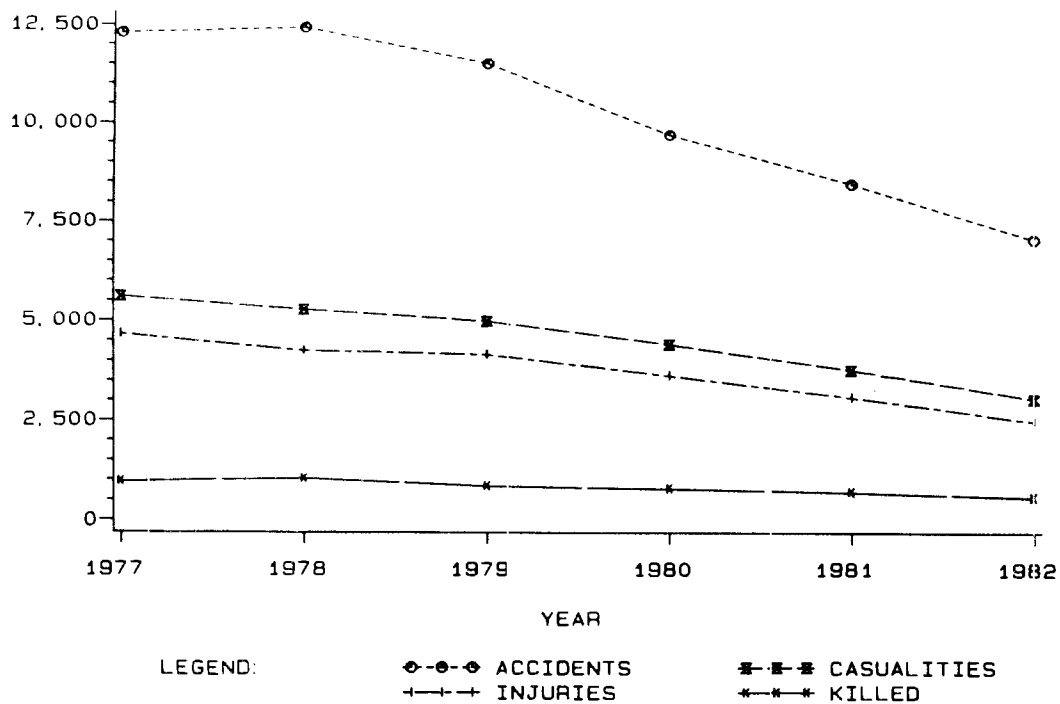


FIGURE 1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1977-1982

TABLE 2. SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1977-1982

YEAR	ACCIDENTS	MOTOR VEHICLES REGISTERED (000) ¹	ACCIDENTS PER MILLION VEHICLES
1977	11,849	147,718	80.21
1978	11,999	153,636	78.10
1979	11,108	157,291	70.62
1980	9,422	161,614	58.30
1981	8,232	165,732	49.67
1982	6,882	163,700	42.04

¹ Figures for 1977-1981 supplied by the Federal Highway Administration. The 1982 figure is an estimate, and is not used in other tables.

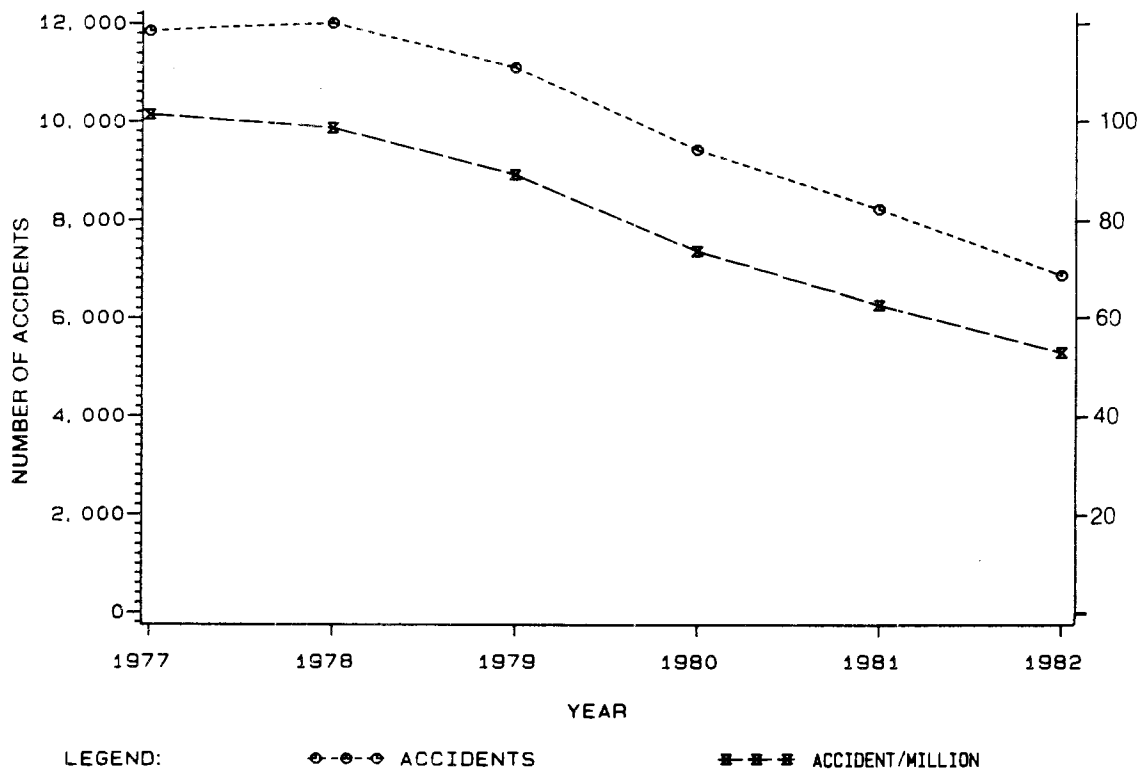


FIGURE 2. SUMMARY OF ACCIDENTS / INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSING INVOLVING MOTOR VEHICLES, 1977-1982

2. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS, 1982

TABLE 3. SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY STATE

State	No. Of Acc/Inc	---Killed---		---Injured---		Total -Casualties--	
		No.	%	No.	%	No.	%
Alabama.....	188	8	1.38	90	3.59	98	3.17
Alaska.....	28	1	.17	2	.08	3	.10
Arizona.....	22	5	.86	10	.40	15	.49
Arkansas.....	145	26	4.48	67	2.67	93	3.01
California.....	325	39	6.72	117	4.67	156	5.05
Colorado.....	104	3	.52	32	1.28	35	1.13
Connecticut.....	25	1	.17	10	.40	11	.36
Delaware.....	12	---	---	3	.12	3	.10
Dist. of Columbia	---	---	---	---	---	---	---
Florida.....	179	9	1.55	53	2.11	62	2.01
Georgia.....	208	7	1.21	64	2.55	71	2.30
Idaho.....	55	7	1.21	16	.64	23	.74
Illinois.....	449	48	8.28	174	6.94	222	7.19
Indiana.....	383	30	5.17	106	4.23	136	4.40
Iowa.....	173	8	1.38	51	2.03	59	1.91
Kansas.....	174	15	2.59	80	3.19	95	3.08
Kentucky.....	112	3	.52	47	1.87	50	1.62
Louisiana.....	349	14	2.41	153	6.10	167	5.41
Maine.....	29	2	.34	2	.08	4	.13
Maryland.....	44	3	.52	15	.60	18	.58
Massachusetts....	31	2	.34	6	.24	8	.26
Michigan.....	285	28	4.83	106	4.23	134	4.34
Minnesota.....	198	9	1.55	37	1.48	46	1.49
Mississippi.....	161	13	2.24	93	3.71	106	3.43
Missouri.....	175	11	1.90	59	2.35	70	2.27
Montana.....	24	1	.17	8	.32	9	.29
Nebraska.....	123	11	1.90	25	1.00	36	1.17
Nevada.....	4	4	.69	---	---	4	.13
New Hampshire.....	13	---	---	2	.08	2	.06
New Jersey.....	53	5	.86	6	.24	11	.36
New Mexico.....	19	2	.34	7	.28	9	.29
New York.....	97	14	2.41	22	.88	36	1.17
North Carolina...	190	13	2.24	62	2.47	75	2.43
North Dakota.....	46	5	.86	9	.36	14	.45
Ohio.....	488	46	7.93	178	7.10	224	7.25
Oklahoma.....	221	20	3.45	84	3.35	104	3.37
Oregon.....	57	1	.17	24	.96	25	.81
Pennsylvania.....	138	17	2.93	33	1.32	50	1.62
Rhode Island.....	---	---	---	---	---	---	---
South Carolina...	134	6	1.03	34	1.36	40	1.30
South Dakota.....	42	---	---	10	.40	10	.32
Tennessee.....	146	10	1.72	46	1.83	56	1.81
Texas.....	877	91	15.69	346	13.80	437	14.15
Utah.....	56	8	1.38	21	.84	29	.94
Vermont.....	13	1	.17	4	.16	5	.16
Virginia.....	99	8	1.38	33	1.32	41	1.33
Washington.....	117	7	1.21	26	1.04	33	1.07
West Virginia....	78	4	.69	32	1.28	36	1.17
Wisconsin.....	256	12	2.07	101	4.03	113	3.66
Wyoming.....	13	2	.34	2	.08	4	.13
Total.....	7,158	580	100.00	2,508	100.00	3,088	100.00

TABLE 4 ACCIDENTS/INCIDENTS AND CASUALTY RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE

State	No. Of Acc/Inc	-----Casualties-----			Vehicles Registered	--Per 10,000 Registration--		
		Kld	Inj	Total		Acc/Inc	Kld	Inj
Alabama.....	184	8	89	97	3,084,613	.60	.03	.29
Alaska.....	26	1	2	3	297,572	.87	.03	.07
Arizona.....	22	5	10	15	2,199,834	.10	.02	.05
Arkansas.....	140	25	66	91	1,691,226	.83	.15	.39
California.....	304	30	111	141	17,530,169	.17	.02	.06
Colorado.....	102	3	32	35	2,601,448	.39	.01	.12
Connecticut.....	25	1	10	11	2,180,330	.11	---	.05
Delaware.....	12	---	3	3	416,314	.29	---	.07
Dist. of Columbia	---	---	---	---	278,695	---	---	---
Florida.....	170	7	51	58	8,194,081	.21	.01	.06
Georgia.....	203	6	64	70	3,965,497	.51	.02	.16
Idaho.....	54	7	16	23	912,839	.59	.08	.18
Illinois.....	423	40	165	205	7,902,639	.54	.05	.21
Indiana.....	378	29	104	133	4,063,904	.93	.07	.26
Iowa.....	165	7	50	57	2,590,203	.64	.03	.19
Kansas.....	167	15	78	93	2,139,599	.78	.07	.36
Kentucky.....	108	3	45	48	2,658,164	.41	.01	.17
Louisiana.....	335	14	146	160	2,902,905	1.15	.05	.50
Maine.....	27	2	2	4	778,773	.35	.03	.03
Maryland.....	42	1	15	16	2,932,983	.14	---	.05
Massachusetts....	29	1	6	7	3,875,665	.07	---	.02
Michigan.....	267	25	101	126	6,410,298	.42	.04	.16
Minnesota.....	188	7	35	42	3,335,736	.56	.02	.10
Mississippi.....	155	12	86	98	1,605,286	.97	.07	.54
Missouri.....	172	11	58	69	3,438,728	.50	.03	.17
Montana.....	23	1	7	8	774,237	.30	.01	.09
Nebraska.....	117	10	25	35	1,261,338	.93	.08	.20
Nevada.....	4	4	---	4	718,019	.06	.06	---
New Hampshire.....	13	---	2	2	815,978	.16	---	.02
New Jersey.....	49	3	4	7	4,802,621	.10	.01	.01
New Mexico.....	18	2	6	8	1,099,848	.16	.02	.05
New York.....	90	12	20	32	8,310,324	.11	.01	.02
North Carolina...	186	13	61	74	4,660,904	.40	.03	.13
North Dakota.....	43	5	8	13	672,539	.64	.07	.12
Ohio.....	470	42	170	212	8,008,527	.59	.05	.21
Oklahoma.....	217	20	84	104	2,745,820	.79	.07	.31
Oregon.....	52	1	22	23	2,171,780	.24	---	.10
Pennsylvania.....	134	13	33	46	7,235,249	.19	.02	.05
Rhode Island.....	---	---	---	---	619,893	---	---	---
South Carolina...	131	6	32	38	2,012,753	.65	.03	.16
South Dakota.....	39	---	10	10	650,751	.60	---	.15
Tennessee.....	141	10	43	53	3,616,612	.39	.03	.12
Texas.....	857	89	338	427	11,461,291	.75	.08	.29
Utah.....	54	8	21	29	1,099,672	.49	.07	.19
Vermont.....	11	1	1	2	366,316	.30	.03	.03
Virginia.....	91	5	31	36	3,928,718	.23	.01	.08
Washington.....	112	5	26	31	3,477,089	.32	.01	.07
West Virginia....	75	3	31	34	1,389,808	.54	.02	.22
Wisconsin.....	245	12	95	107	3,302,367	.74	.04	.29
Wyoming.....	12	1	2	3	509,736	.24	.02	.04
Total.....	6,882	526	2,417	2,943	163,699,691	.42	.03	.15

Note: Vehicle registration figures are for 1981 and were supplied by the Federal Highway Administration. Registration figures for Hawaii are omitted because it does not have any reporting railroads.

TABLE 5 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF MOTOR VEHICLE

State	TYPE OF MOTOR VEHICLE																	
	---Automobile---			----Truck----			-Truck Trailer-			-----Bus-----			---School Bus---			---Motorcycle---		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Alabama.....	129	6	61	32	2	8	21	---	19	---	---	---	---	---	---	2	---	1
Alaska.....	16	---	2	7	1	---	3	---	---	---	---	---	---	---	---	---	---	---
Arizona.....	13	---	2	7	5	7	1	---	---	---	---	---	---	---	---	1	---	1
Arkansas.....	93	20	48	33	4	13	13	1	3	---	---	---	---	---	---	1	---	2
California.....	227	26	97	53	2	10	20	---	3	---	---	---	---	---	---	4	2	1
Colorado.....	65	3	21	29	---	9	7	---	2	---	---	---	---	---	---	1	---	---
Connecticut.....	24	1	10	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---
Delaware.....	9	---	2	2	---	---	1	---	1	---	---	---	---	---	---	---	---	---
Dist. of Columbia	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Florida.....	119	4	36	27	1	6	19	---	4	1	---	5	---	---	---	4	2	---
Georgia.....	142	6	39	36	---	13	23	---	12	---	---	---	---	---	---	2	---	---
Idaho.....	30	5	10	19	2	6	5	---	---	---	---	---	---	---	---	---	---	---
Illinois.....	311	24	126	81	15	31	26	---	4	---	---	---	1	---	1	4	1	3
Indiana.....	272	18	70	81	8	24	20	---	6	---	---	---	---	---	---	5	3	4
Iowa.....	100	5	32	44	1	17	18	1	---	---	---	---	1	---	---	2	---	1
Kansas.....	91	9	43	58	4	24	15	1	8	1	---	2	---	---	---	2	1	1
Kentucky.....	65	2	23	35	1	19	8	---	3	---	---	---	---	---	---	---	---	---
Louisiana.....	228	11	109	78	2	27	21	---	8	2	---	---	2	---	---	4	1	2
Maine.....	20	1	2	4	---	---	3	1	---	---	---	---	---	---	---	---	---	---
Maryland.....	28	1	10	10	---	4	3	---	---	---	---	---	---	---	---	1	---	1
Massachusetts....	28	1	6	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---
Michigan.....	199	23	77	53	2	22	11	---	1	---	---	---	1	---	---	3	---	1
Minnesota.....	136	5	27	35	2	6	15	---	2	1	---	---	---	---	---	1	---	---
Mississippi.....	107	8	69	34	4	9	13	---	7	---	---	---	1	---	1	---	---	---
Missouri.....	114	4	40	43	4	16	14	2	2	---	---	---	---	---	---	1	1	---
Montana.....	14	---	4	8	1	1	1	---	2	---	---	---	---	---	---	---	---	---
Nebraska.....	74	6	17	32	3	7	11	1	1	---	---	---	---	---	---	---	---	---
Nevada.....	2	---	---	2	4	---	---	---	---	---	---	---	---	---	---	---	---	---
New Hampshire.....	9	---	2	1	---	---	2	---	---	---	---	---	---	---	---	1	---	---
New Jersey.....	43	3	3	3	---	---	1	---	---	1	---	---	---	---	---	1	---	1
New Mexico.....	12	1	4	6	1	2	---	---	---	---	---	---	---	---	---	---	---	---
New York.....	70	2	15	10	---	---	8	1	4	1	9	1	---	---	---	1	---	---
North Carolina...	121	8	36	43	3	21	20	1	4	---	---	---	---	---	---	2	1	---
North Dakota.....	26	2	5	13	2	1	4	1	2	---	---	---	---	---	---	---	---	---
Ohio.....	358	32	130	72	10	25	37	---	13	---	---	---	---	---	---	3	---	2
Oklahoma.....	134	12	56	60	7	16	20	---	12	1	---	---	---	---	---	2	1	---
Oregon.....	32	---	16	14	1	4	6	---	2	---	---	---	---	---	---	---	---	---
Pennsylvania.....	92	9	25	24	3	4	18	1	4	---	---	---	---	---	---	---	---	---
Rhode Island.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
South Carolina...	94	3	24	23	2	8	13	1	---	---	---	---	1	---	---	---	---	---
South Dakota.....	27	---	9	10	---	---	1	2	---	---	---	---	---	---	---	---	---	---
Tennessee.....	92	8	30	38	2	8	10	---	4	---	---	---	---	---	---	1	---	1
Texas.....	562	57	212	214	27	78	70	3	24	1	---	14	1	---	4	9	2	6
Utah.....	40	3	15	11	3	6	3	2	---	---	---	---	---	---	---	---	---	---
Vermont.....	6	---	1	3	---	---	1	---	---	---	---	---	---	---	---	1	1	---
Virginia.....	71	4	24	14	1	5	5	---	1	---	---	---	1	---	1	---	---	---
Washington.....	79	4	19	25	1	7	7	---	---	---	---	---	---	---	---	1	---	---
West Virginia....	52	3	19	18	---	6	3	---	5	---	---	---	---	---	---	2	---	1
Wisconsin.....	172	8	63	55	4	28	14	---	1	1	---	1	---	---	---	3	---	2
Wyoming.....	6	---	---	4	1	1	2	---	1	---	---	---	---	---	---	---	---	---
Total.....	4,754	348	1,691	1,504	136	500	539	17	165	10	9	23	9	---	7	66	16	31

TABLE 6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN

State	TYPE OF TRAIN											
	---Freight---			---Passenger---			-Yard Switching			-----Other-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Alabama.....	135	5	64	7	2	12	27	1	9	15	---	4
Alaska.....	6	1	1	2	---	---	13	---	1	5	---	---
Arizona.....	15	5	8	---	---	---	4	---	1	3	---	1
Arkansas.....	104	25	50	---	---	---	17	---	12	19	---	4
California.....	212	19	86	22	9	5	42	---	3	28	2	17
Colorado.....	77	3	24	3	---	---	11	---	2	11	---	6
Connecticut.....	14	1	7	10	---	3	---	---	---	1	---	---
Delaware.....	9	---	3	---	---	---	1	---	---	2	---	---
Dist. of Columbia	---	---	---	---	---	---	---	---	---	---	---	---
Florida.....	125	3	41	8	3	---	24	1	4	13	---	6
Georgia.....	141	5	54	5	---	2	36	1	6	21	---	2
Idaho.....	45	6	12	---	---	---	3	---	1	6	1	3
Illinois.....	281	30	120	42	8	18	46	---	6	54	2	21
Indiana.....	294	26	91	22	1	4	35	1	7	27	1	2
Iowa.....	103	7	42	---	---	---	31	---	4	31	---	4
Kansas.....	133	14	69	3	---	---	14	1	4	17	---	5
Kentucky.....	76	3	35	---	---	---	15	---	2	17	---	8
Louisiana.....	207	9	92	8	2	1	80	3	31	40	---	22
Maine.....	21	2	2	---	---	---	3	---	---	3	---	---
Maryland.....	27	---	14	6	1	---	6	---	1	3	---	---
Massachusetts....	14	1	4	10	---	2	2	---	---	3	---	---
Michigan.....	180	22	80	12	2	3	35	1	3	40	---	15
Minnesota.....	135	7	30	3	---	---	21	---	2	29	---	3
Mississippi.....	106	6	63	8	5	6	23	---	7	18	1	10
Missouri.....	131	11	47	2	---	---	23	---	7	16	---	4
Montana.....	18	1	7	1	---	---	2	---	---	2	---	---
Nebraska.....	91	9	22	2	1	---	6	---	---	18	---	3
Nevada.....	1	---	---	1	4	---	1	---	---	1	---	---
New Hampshire.....	6	---	1	1	---	---	4	---	---	2	---	1
New Jersey.....	22	1	3	17	2	---	3	---	---	7	---	1
New Mexico.....	17	2	5	---	---	---	---	---	---	1	---	1
New York.....	51	2	12	21	9	4	5	---	1	13	1	3
North Carolina...	149	12	49	7	1	3	17	---	6	13	---	3
North Dakota.....	33	5	4	1	---	---	8	---	3	1	---	1
Ohio.....	379	35	151	7	3	2	30	2	8	54	2	9
Oklahoma.....	171	18	72	---	---	---	26	2	7	20	---	5
Oregon.....	33	1	18	3	---	---	9	---	3	7	---	1
Pennsylvania.....	91	6	23	16	1	5	10	---	2	17	6	3
Rhode Island.....	---	---	---	---	---	---	---	---	---	---	---	---
South Carolina...	101	4	25	4	---	1	14	---	3	12	2	3
South Dakota.....	23	---	5	---	---	---	11	---	3	5	---	2
Tennessee.....	95	10	33	---	---	---	32	---	7	14	---	3
Texas.....	576	79	244	13	2	10	150	6	44	118	2	40
Utah.....	42	8	17	2	---	---	6	---	3	4	---	1
Vermont.....	8	1	---	---	---	---	2	---	1	1	---	---
Virginia.....	56	5	18	2	---	---	12	---	7	21	---	6
Washington.....	63	5	22	3	---	---	28	---	1	18	---	3
West Virginia....	55	3	23	3	---	---	6	---	4	11	---	4
Wisconsin.....	166	11	70	2	1	1	53	---	15	24	---	9
Wyoming.....	8	1	1	---	---	---	1	---	---	3	---	1
Total.....	4,846	430	1,864	279	57	82	948	19	231	809	20	240

Note: "Other" includes mixed trains, work trains, light locomotives, single car or cut of cars

TABLE 7 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY

Railroad	WARNING DEVICE CATEGORY								Total
	Gates	Flashing Lights	Hwy Sig. Wigwags Bells	Special	Cross-Bucks	Stop Signs	Other Signs	No Signs Or Signals	
Alabama Great Southern Railroad.....	3	8	4	---	9	---	---	1	25
Amtrak (National Railroad Passenger Corp.)	55	32	1	---	72	1	---	2	163
Atchison, Topeka and Santa Fe Railway Co..	83	103	6	3	158	1	1	2	357
Baltimore and Ohio Railroad Company.....	13	71	2	7	110	1	---	2	206
Bessemer & Lake Erie Railroad Company.....	1	---	---	---	1	---	---	---	2
Boston and Maine Corporation.....	7	15	---	5	6	---	---	---	33
Burlington Northern.....	60	190	45	5	390	---	2	8	700
Central of Georgia Railroad Company.....	3	8	5	7	18	---	---	---	41
Chesapeake and Ohio Railway Company.....	24	61	---	---	104	4	---	1	194
Chicago and Northwestern Transportation Co	48	99	31	8	116	3	1	4	310
Chicago, Milwaukee, St. Paul & Pacific RR.	19	53	16	8	62	2	---	---	160
Cincinnati, New Orleans & Texas Pacific RR	1	4	1	---	2	---	---	---	8
Clinchfield Railroad.....	---	---	---	---	7	---	1	1	9
Consolidated Rail Corporation.....	156	270	13	13	226	9	4	6	697
Delaware and Hudson Railroac Company.....	1	2	---	---	2	---	---	---	5
Denver and Rio Grande Western Railroad Co.	3	13	1	---	27	---	---	---	44
Detroit, Toledo and Ironton Railroad Co...	---	5	---	---	11	---	---	2	18
Duluth, Missabe and Iron Range Railway Co.	---	1	---	---	1	---	---	---	2
Elgin, Joliet and Eastern Railway Company.	2	5	---	---	3	---	---	---	10
Florida East Coast Railway Company.....	21	---	---	4	---	---	---	---	25
Grand Trunk Western Railroad Company.....	21	18	---	---	31	---	---	1	71
Illinois Central Gulf Railroad.....	27	114	11	6	160	1	3	3	325
Kansas City Southern Railway Company.....	3	32	1	3	30	---	---	1	70
Long Island Railroad.....	7	---	---	1	---	---	---	---	8
Louisiana & Arkansas Railway Company.....	1	47	1	2	31	---	---	---	82
Louisville and Nashville Railroad Company.	36	93	27	9	96	6	---	7	274
Missouri Pacific Railroad Company.....	57	220	23	10	322	2	---	6	640
Missouri-Kansas-Texas Railrcad Company....	6	45	5	1	50	---	---	---	107
Norfolk and Western Railway Company.....	47	124	10	7	167	---	2	3	360
Pittsburgh & Lake Erie Railroad.....	---	---	---	---	---	---	---	---	---
Seaboard Coast Line Railroad.....	53	96	1	14	251	2	---	---	417
Soo Line Railroad.....	3	51	2	1	43	---	---	1	101
Southern Pacific Transportation Company...	119	116	39	20	161	15	---	3	473
Southern Railway Company.....	26	84	21	17	130	---	1	9	288
St. Louis Southwestern Railway Company....	13	20	3	1	56	2	---	---	95
Union Pacific Railroad.....	39	51	16	3	97	1	---	3	210
Western Maryland Railway.....	---	2	---	1	4	---	---	---	7
Western Pacific Railroad Company.....	11	3	---	---	16	---	---	---	30
All Other Railroads.....	53	142	26	31	206	3	5	6	472
Total.....	1,022	2,198	311	187	3,176	53	20	72	7,039

Note: "Special" are crossings protected by watchmen or members of train crew.

The totals on this table are slightly higher than those shown on other tables. The reporting rules require that when an Amtrak train is being operated by a crew of another railroad, both Amtrak and the operating carrier must make a report of an accident/incident. In all other tables these accidents/incidents are only counted once.

TABLE 7A. ACCIDENTS/INCIDENTS AND CASUALTIES BY RAILROAD

Railroad	-----Motor Vehicle-----			----Other Highway Users----			-----Total-----		
	Acc/Inc	Killed	Injured	Acc/Inc	Killed	Injured	Acc/Inc	Killed	Injured
Alabama Great Southern Railroad.....	25	5	12	---	---	---	25	5	12
Amtrak (National Railroad Passenger Corp.)	163	---	10	9	---	---	172	---	10
Atchison, Topeka and Santa Fe Railway Co..	357	38	138	12	3	4	369	41	142
Baltimore and Ohio Railroad Company.....	206	17	94	6	4	1	212	21	95
Bessemer & Lake Erie Railroad Company.....	2	---	1	---	---	---	2	---	1
Boston and Maine Corporation.....	33	1	7	2	---	2	35	1	9
Burlington Northern.....	700	48	149	29	7	5	729	55	154
Central of Georgia Railroad Company.....	41	---	22	---	---	---	41	---	22
Chesapeake and Ohio Railway Company.....	194	18	98	7	1	2	201	19	100
Chicago and Northwestern Transportation Co	310	10	118	27	2	11	337	12	129
Chicago, Milwaukee, St. Paul & Pacific RR.	160	3	23	6	3	---	166	6	23
Cincinnati, New Orleans & Texas Pacific RR	8	2	4	---	---	---	8	2	4
Clinchfield Railroad.....	9	1	2	---	---	---	9	1	2
Consolidated Rail Corporation.....	697	56	133	22	12	2	719	68	135
Delaware and Hudson Railroad Company.....	5	---	1	---	---	---	5	---	1
Denver and Rio Grande Western Railroad Co.	44	2	18	1	---	---	45	2	18
Detroit, Toledo and Ironton Railroad Co...	18	1	7	3	---	1	21	1	8
Duluth, Missabe and Iron Range Railway Co.	2	---	---	---	---	---	2	---	---
Elgin, Joliet and Eastern Railway Company.	10	---	7	---	---	---	10	---	7
Florida East Coast Railway Company.....	25	1	8	1	1	---	26	2	8
Grand Trunk Western Railroad Company.....	71	7	43	5	---	1	76	7	44
Illinois Central Gulf Railroad.....	325	23	170	18	1	10	343	24	180
Kansas City Southern Railway Company.....	70	1	34	---	---	---	70	1	34
Long Island Railroad.....	8	9	1	5	1	2	13	10	3
Louisiana & Arkansas Railway Company.....	82	---	37	1	---	3	83	---	40
Louisville and Nashville Railroad Company.	274	12	65	8	1	7	282	13	72
Missouri Pacific Railroad Company.....	640	96	339	10	2	4	650	98	343
Missouri-Kansas-Texas Railroad Company....	107	4	49	3	---	1	110	4	50
Norfolk and Western Railway Company.....	360	34	158	19	3	13	379	37	171
Pittsburgh & Lake Erie Railroad.....	---	---	---	---	---	---	---	---	---
Seaboard Coast Line Railroad.....	417	24	125	16	2	3	433	26	128
Soo Line Railroad.....	101	5	36	3	---	1	104	5	37
Southern Pacific Transportation Company...	473	37	171	20	3	8	493	40	179
Southern Railway Company.....	288	9	96	9	---	3	297	9	99
St. Louis Southwestern Railway Company....	95	7	30	8	1	---	103	8	30
Union Pacific Railroad.....	210	27	77	13	2	1	223	29	78
Western Maryland Railway.....	7	---	1	---	---	---	7	---	1
Western Pacific Railroad Company.....	30	2	12	2	1	1	32	3	13
All Other Railroads.....	472	26	121	20	4	5	492	30	126
Total.....	7,039	526	2,417	285	54	91	7,324	580	2,508

Note: A/I totals on this table are slightly higher than those shown on other tables. The reporting rules require that when an Amtrak train is being operated by a crew of another railroad, both Amtrak and the operating carrier must make a report of an accident/incident. In all other tables these accidents/incidents are only counted once.

TABLE 8 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY

State	WARNING DEVICE CATEGORY								Total
	Gates	Flashing Lights	Hwy Sig. Wigwags Bells	Special	Cross-Bucks	Stop Signs	Other Signs	No Signs Or Signals	
Alabama.....	10	46	24	9	86	5	1	3	184
Alaska.....	---	6	4	1	13	---	2	---	26
Arizona.....	7	12	1	---	1	1	---	---	22
Arkansas.....	9	31	9	2	86	3	---	---	140
California.....	134	59	29	5	69	6	1	1	304
Colorado.....	8	39	6	2	45	---	2	---	102
Connecticut.....	3	16	---	1	5	---	---	---	25
Delaware.....	---	3	---	1	8	---	---	---	12
Dist. of Columbia	---	---	---	---	---	---	---	---	---
Florida.....	45	50	7	6	62	---	---	---	170
Georgia.....	24	39	14	11	110	3	---	2	203
Idaho.....	1	9	8	---	36	---	---	---	54
Illinois.....	122	156	8	9	122	1	---	5	423
Indiana.....	74	151	5	11	129	2	2	4	378
Iowa.....	18	44	14	4	80	1	2	2	165
Kansas.....	20	30	6	2	105	---	1	3	167
Kentucky.....	14	48	3	2	38	---	---	3	108
Louisiana.....	16	124	7	8	176	---	---	4	335
Maine.....	1	13	---	4	8	---	---	1	27
Maryland.....	9	8	2	4	18	---	1	---	42
Massachusetts....	6	13	---	4	6	---	---	---	29
Michigan.....	44	99	1	1	118	3	---	1	267
Minnesota.....	14	51	12	3	106	2	---	---	188
Mississippi.....	10	45	7	4	85	2	1	1	155
Missouri.....	13	57	6	3	91	---	1	1	172
Montana.....	2	7	1	---	13	---	---	---	23
Nebraska.....	21	32	7	---	56	---	1	---	117
Nevada.....	2	---	---	---	2	---	---	---	4
New Hampshire....	1	7	---	1	4	---	---	---	13
New Jersey.....	17	22	1	3	6	---	---	---	49
New Mexico.....	5	3	---	---	9	---	---	1	18
New York.....	26	33	3	3	22	1	---	2	90
North Carolina...	19	44	---	6	115	---	---	2	186
North Dakota.....	5	8	1	---	29	---	---	---	43
Ohio.....	60	141	13	5	239	6	1	5	470
Oklahoma.....	14	71	8	3	121	---	---	---	217
Oregon.....	7	10	5	1	24	5	---	---	52
Pennsylvania.....	17	58	1	5	47	2	2	2	134
Rhode Island....	---	---	---	---	---	---	---	---	---
South Carolina...	8	26	2	16	77	1	---	1	131
South Dakota.....	---	10	1	---	28	---	---	---	39
Tennessee.....	18	37	13	4	59	---	2	8	141
Texas.....	93	326	29	24	376	5	---	4	857
Utah.....	5	10	3	2	31	1	---	2	54
Vermont.....	---	3	1	2	5	---	---	---	11
Virginia.....	23	28	3	3	34	---	---	---	91
Washington.....	6	28	13	4	54	---	---	7	112
West Virginia....	9	14	1	2	46	1	---	2	75
Wisconsin.....	10	99	30	6	96	1	---	3	245
Wyoming.....	1	1	1	---	9	---	---	---	12
Total.....	971	2,167	310	187	3,105	52	20	70	6,882

Note: "Special" are crossings protected by watchmen or members of train crew

HIGHWAY USER AND VEHICLE DATA (1982)

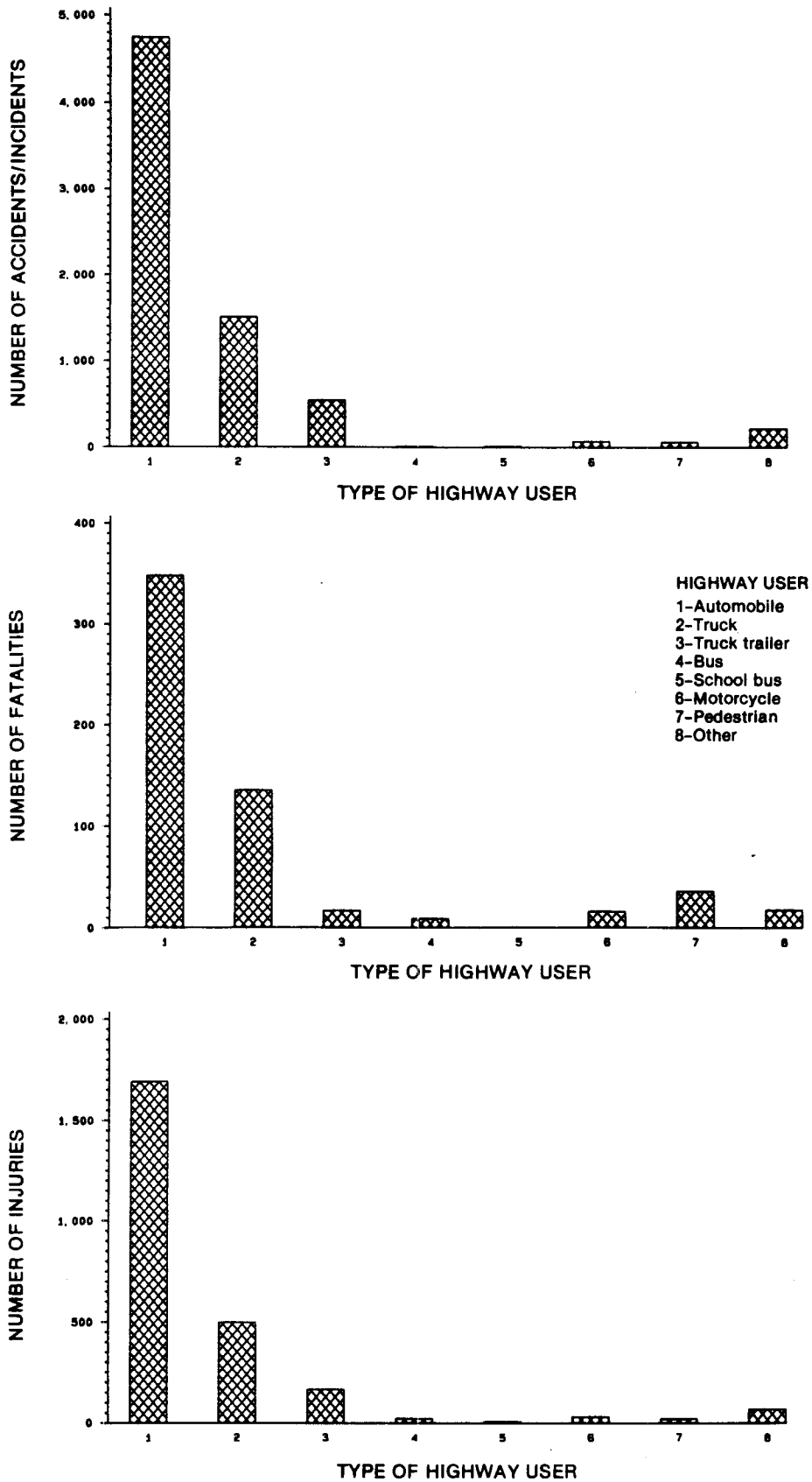


FIGURE 3 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER

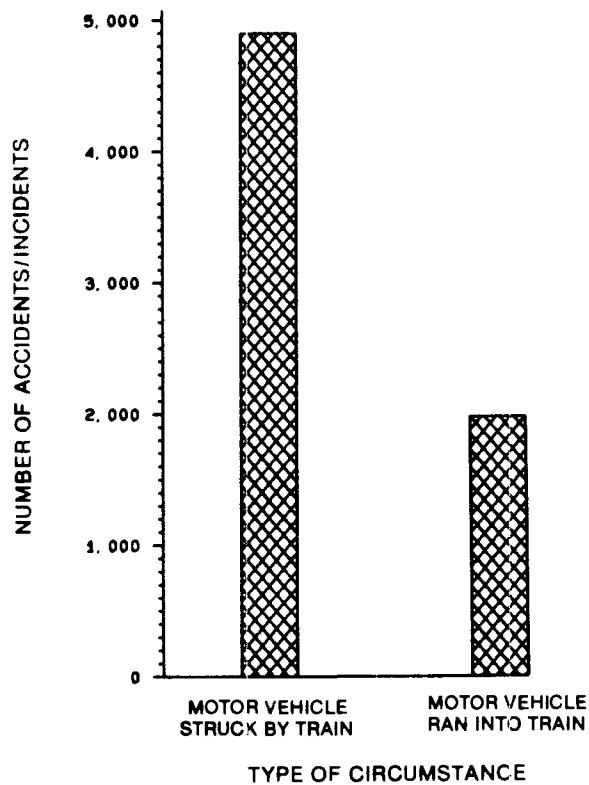
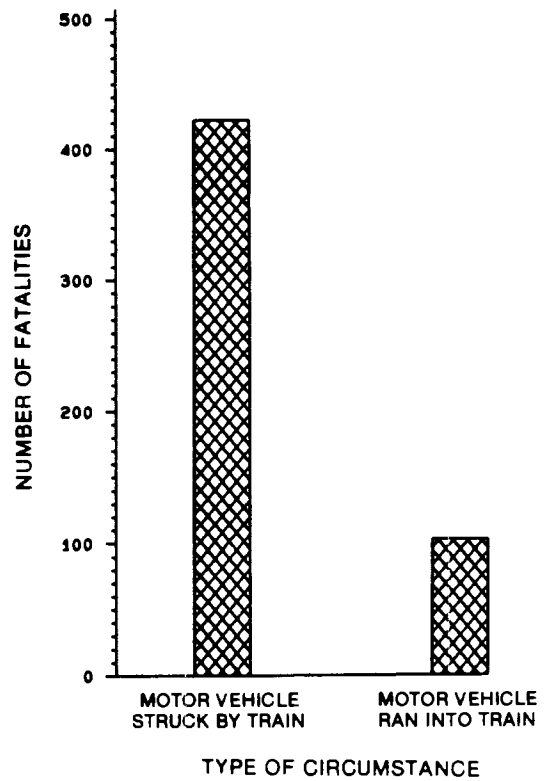
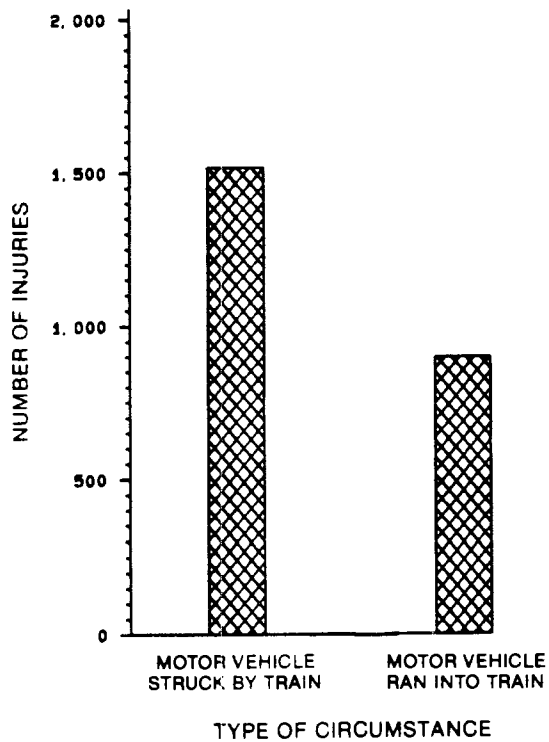


FIGURE 4 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE

**TABLE 9 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS
BY TYPE OF HIGHWAY USER**

Type Of Vehicle	----Acc/Inc----		-----Killed-----		----Injured----		Fatal Acc/Inc	Injury Acc/Inc
	No.	%	No.	%	No.	%		
Automobile.....	4,754	66.42	348	60.00	1,691	67.42	273	1,193
Truck.....	1,504	21.01	136	23.45	500	19.94	105	380
Truck-trailer....	539	7.53	17	2.93	165	6.58	16	115
Bus.....	10	.14	9	1.55	23	.92	1	4
School bus.....	9	.13	---	---	7	.28	---	4
Motorcycle.....	66	.92	16	2.76	31	1.24	15	26
Pedestrian.....	61	.85	36	6.21	22	.88	36	21
Other.....	215	3.00	18	3.10	69	2.75	18	51
Total.....	7,158	100.00	580	100.00	2,508	100.00	464	1,794

**TABLE 10 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS
INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE**

Circumstance	----Acc/Inc----		-----Killed-----		----Injured----		Fatal Acc/Inc	Injury Acc/Inc
	No.	%	No.	%	No.	%		
Struck by consist	4,901	71.21	423	80.42	1,519	62.85	322	1,081
Ran into consist.	1,981	28.79	103	19.58	898	37.15	88	641
Total.....	6,882	100.00	526	100.00	2,417	100.00	410	1,722

TABLE 11 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, NUMBER OF OCCUPANTS, CASUALTY RATES, DAMAGE RATES, AND ACCIDENT RATES

Type Of Vehicle	# of A/I	Occupants Per A/I	....Occupants...		Vehicle Damage Per A/I(\$)	Vehicles Registered	Accidents Per Million Vehicles
			Killed Per A/I	Injured Per A/I			
Automobiles..	4,754	1.44	.07	.35	1,697	122,937,472	37.21
Trucks.....	2,043	1.26	.07	.28	4,837	34,397,627	59.39
Buses.....	19	9.00	.47	1.47	4,197	540,635	35.14
Motorcycles..	66	1.17	.24	.47	1,066	5,823,957	11.33
Total.....	6,882	1.40	.08	.34	2,644	163,699,691	42.04

NOTE: Vehicle registration figures were supplied by the Federal Highway Administration. They do not include counts for the state of Hawaii.

TABLE 12 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY

VISIBILITY

Type Of Vehicle	-----Dawn-----			-----Day-----			-----Dusk-----			-----Dark-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER												
Automobile.....	73	6	17	1,816	149	608	143	10	39	1,371	126	408
Truck.....	27	---	9	633	77	181	38	2	14	306	24	97
Truck-trailer....	9	---	3	372	10	106	5	2	1	69	1	18
Bus.....	---	---	---	4	---	7	---	---	---	1	9	1
School bus.....	1	---	---	6	---	6	---	---	---	1	---	1
Motorcycle.....	---	---	---	14	3	3	---	---	---	12	4	---
Total.....	110	6	29	2,845	239	911	186	14	54	1,760	164	525
HIGHWAY USER STRUCK RAIL CONSIST												
Automobile.....	38	---	10	510	17	205	31	---	17	772	40	387
Truck.....	9	1	2	258	11	106	22	---	4	211	21	87
Truck-trailer....	1	---	---	62	3	29	---	---	---	21	1	8
Bus.....	---	---	---	4	---	15	---	---	---	1	---	---
School bus.....	1	---	---	---	---	---	---	---	---	---	---	---
Motorcycle.....	1	---	1	19	5	12	---	---	---	20	4	15
Total.....	50	1	13	853	36	367	53	---	21	1,025	66	497
GRAND TOTAL												
Automobile.....	111	6	27	2,326	166	813	174	10	56	2,143	166	795
Truck.....	36	1	11	891	88	287	60	2	18	517	45	184
Truck-trailer....	10	---	3	434	13	135	5	2	1	90	2	26
Bus.....	---	---	---	8	---	22	---	---	---	2	9	1
School bus.....	2	---	---	6	---	6	---	---	---	1	---	1
Motorcycle.....	1	---	1	33	8	15	---	---	---	32	8	15
Total.....	160	7	42	3,698	275	1,278	239	14	75	2,785	230	1,022

TABLE 13 CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF PERSON INVOLVED, TYPE OF HIGHWAY USER, AND CIRCUMSTANCE

Type Of Vehicle	TYPE OF PERSON														
	---EOD---		---ENOD---		---PSGR---		---NONT---		---TRES---		---CONT---		-----Total-----		
	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	Kld	Inj	A/I
RAIL CONSIST STRUCK HIGHWAY USER															
Automobile.....	1	17	---	1	---	---	248	981	42	73	---	---	291	1,072	3,403
Truck.....	1	8	---	---	---	---	96	278	6	15	---	---	103	301	1,004
Truck-trailer....	---	60	---	---	---	1	13	66	---	1	---	---	13	128	455
Bus.....	---	---	---	---	---	---	---	7	9	1	---	---	9	8	5
School bus.....	---	1	---	---	---	---	---	6	---	---	---	---	---	7	8
Motorcycle.....	---	---	---	---	---	---	3	3	4	---	---	---	7	3	26
Pedestrian.....	---	1	---	---	---	---	22	6	14	12	---	---	36	19	57
Other.....	1	5	---	---	---	---	5	39	5	3	---	---	11	47	170
Total.....	3	92	---	1	---	1	387	1,386	80	105	---	---	470	1,585	5,128
HIGHWAY USER STRUCK RAIL CONSIST															
Automobile.....	---	11	---	---	---	---	56	580	1	28	---	---	57	619	1,351
Truck.....	---	5	---	---	---	---	30	185	3	9	---	---	33	199	500
Truck-trailer....	---	6	---	---	---	---	4	30	---	1	---	---	4	37	84
Bus.....	---	1	---	---	---	---	---	14	---	---	---	---	---	15	5
School bus.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1
Motorcycle.....	---	---	---	1	---	---	9	26	---	1	---	---	9	28	40
Pedestrian.....	---	---	---	---	---	---	---	---	---	3	---	---	---	3	4
Other.....	---	1	---	---	---	---	6	18	1	3	---	---	7	22	45
Total.....	---	24	---	1	---	---	105	853	5	45	---	---	110	923	2,030
GRAND TOTAL															
Automobile.....	1	28	---	1	---	---	304	1,561	43	101	---	---	348	1,691	4,754
Truck.....	1	13	---	---	---	---	126	463	9	24	---	---	136	500	1,504
Truck-trailer....	---	66	---	---	---	1	17	96	---	2	---	---	17	165	539
Bus.....	---	1	---	---	---	---	---	21	9	1	---	---	9	23	10
School bus.....	---	1	---	---	---	---	---	6	---	---	---	---	---	7	9
Motorcycle.....	---	---	---	1	---	---	12	29	4	1	---	---	16	31	66
Pedestrian.....	---	1	---	---	---	---	22	6	14	15	---	---	36	22	61
Other.....	1	6	---	---	---	---	11	57	6	6	---	---	18	69	215
Total.....	3	116	---	2	---	1	492	2,239	85	150	---	---	580	2,508	7,158

Note: EOD = Employee on duty ENOD = Employee not on duty
 PSGR = Passenger on train NONT = Nontrespasser
 TRES = Trespasser CONT = Contractor employee

TABLE 14 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF VEHICLE, CIRCUMSTANCE, AND VISIBILITY

VISIBILITY

Speed Of Vehicle	-----Dawn-----			-----Day-----			-----Dusk-----			-----Dark-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER															
Standing.....	50	1	2	965	27	167	66	5	15	725	22	80	1,806	55	264
1-9.....	17	---	6	621	45	184	33	1	6	265	14	81	936	60	277
10-19.....	21	1	14	514	53	197	48	4	23	287	33	138	870	91	372
20-29.....	10	2	4	294	32	164	12	1	2	183	19	78	499	54	248
30-39.....	5	1	2	165	31	76	8	1	2	115	31	55	293	64	135
40-49.....	2	---	---	60	11	34	4	---	3	32	13	16	98	24	53
50-59.....	2	1	---	16	9	7	3	1	---	13	6	19	34	17	26
60 and over.....	---	---	---	8	3	4	---	---	---	3	3	2	11	6	6
Unknown.....	3	---	1	202	28	78	12	1	3	137	23	56	354	52	138
Total.....	110	6	29	2,845	239	911	186	14	54	1,760	164	525	4,901	423	1,519
HIGHWAY USER STRUCK RAIL CONSIST															
Standing.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-9.....	5	---	---	189	4	46	16	---	5	191	---	54	401	4	105
10-19.....	13	---	2	218	4	89	13	---	3	238	5	103	482	9	197
20-29.....	10	---	3	154	5	78	10	---	5	178	11	85	352	16	171
30-39.....	9	---	4	113	5	61	6	---	2	146	9	90	274	14	157
40-49.....	4	---	2	51	4	26	4	---	2	56	8	43	115	12	73
50-59.....	1	---	---	30	7	30	---	---	---	40	14	32	71	21	62
60 and over.....	---	---	---	4	3	2	---	---	---	13	8	7	17	11	9
Unknown.....	8	1	2	94	4	35	4	---	4	163	11	83	269	16	124
Total.....	50	1	13	853	36	367	53	---	21	1,025	66	497	1,981	103	898
GRAND TOTAL															
Standing.....	50	1	2	965	27	167	66	5	15	725	22	80	1,806	55	264
1-9.....	22	---	6	810	49	230	49	1	11	456	14	135	1,337	64	382
10-19.....	34	1	16	732	57	286	61	4	26	525	38	241	1,352	100	569
20-29.....	20	2	7	448	37	242	22	1	7	361	30	163	851	70	419
30-39.....	14	1	6	278	36	137	14	1	4	261	40	145	567	78	292
40-49.....	6	---	2	111	15	60	8	---	5	88	21	59	213	36	126
50-59.....	3	1	---	46	16	37	3	1	---	53	20	51	105	38	88
60 and over.....	---	---	---	12	6	6	---	---	---	16	11	9	28	17	15
Unknown.....	11	1	3	296	32	113	16	1	7	300	34	139	623	68	262
Total.....	160	7	42	3,698	275	1,278	239	14	75	2,785	230	1,022	6,882	526	2,417

TABLE 15 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY POSITION AND TYPE OF VEHICLE

Vehicle	-----Position On Crossing-----								
	--Stalled On--			--Stopped On--			--Moving Over--		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Automobile.....	654	12	54	687	28	131	3,413	308	1,506
Truck.....	171	4	15	167	9	41	1,166	123	444
Truck-trailer....	40	---	4	66	1	12	433	16	149
Bus.....	---	---	---	4	---	7	6	9	16
School bus.....	1	---	---	2	---	---	6	---	7
Motorcycle.....	4	---	---	10	1	---	52	15	31
Total.....	870	16	73	936	39	191	5,076	471	2,153

TRAIN AND TRACK DATA (1982)

TABLE 16 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY

Speed Of Consist	VISIBILITY												Total		
	Dawn			Day			Dusk			Dark					
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER															
Standing.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-9.....	16	---	---	707	---	92	50	---	4	486	1	97	1,259	1	193
10-19.....	22	---	4	579	3	139	41	---	4	339	10	119	981	13	266
20-29.....	21	---	6	547	17	218	39	3	16	310	20	128	917	40	368
30-39.....	17	3	7	428	73	196	29	4	19	256	36	83	730	116	305
40-49.....	21	1	8	348	81	171	14	4	4	222	50	75	605	136	258
50-59.....	11	1	4	153	41	61	9	1	5	90	18	16	263	61	86
60-69.....	2	1	---	46	13	16	---	---	---	42	27	5	90	41	21
70-79.....	---	---	---	31	10	16	4	2	2	14	2	2	49	14	20
80-89.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
90 and over.....	---	---	---	1	---	---	---	---	---	1	---	---	2	---	---
Unknown.....	---	---	---	4	1	2	---	---	---	---	---	---	4	1	2
Total.....	110	6	29	2,845	239	911	186	14	54	1,760	164	525	4,901	423	1,519
HIGHWAY USER STRUCK RAIL CONSIST															
Standing.....	4	---	1	25	---	5	2	---	---	138	11	82	169	11	88
1-9.....	16	---	3	266	2	75	22	---	6	393	16	152	697	18	236
10-19.....	11	1	2	171	5	75	7	---	1	194	3	105	383	9	183
20-29.....	6	---	2	186	5	93	7	---	5	141	13	79	340	18	179
30-39.....	4	---	2	102	12	60	7	---	6	92	10	40	205	22	108
40-49.....	6	---	3	71	2	43	7	---	3	53	8	32	137	10	81
50-59.....	2	---	---	21	7	12	1	---	---	7	1	6	31	8	18
60-69.....	---	---	---	3	---	2	---	---	---	4	---	1	7	---	3
70-79.....	---	---	---	5	3	1	---	---	---	2	4	---	7	7	1
80-89.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
90 and over.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Unknown.....	1	---	---	3	---	1	---	---	---	1	---	---	5	---	1
Total.....	50	1	13	853	36	367	53	---	21	1,025	66	497	1,981	103	898
GRAND TOTAL															
Standing.....	4	---	1	25	---	5	2	---	---	138	11	82	169	11	88
1-9.....	32	---	3	973	2	167	72	---	10	879	17	249	1,956	19	429
10-19.....	33	1	6	750	8	214	48	---	5	533	13	224	1,364	22	449
20-29.....	27	---	8	733	22	311	46	3	21	451	33	207	1,257	58	547
30-39.....	21	3	9	530	85	256	36	4	25	348	46	123	935	138	413
40-49.....	27	1	11	419	83	214	21	4	7	275	58	107	742	146	339
50-59.....	13	1	4	174	48	73	10	1	5	97	19	22	294	69	104
60-69.....	2	1	---	49	13	18	---	---	---	46	27	6	97	41	24
70-79.....	---	---	---	36	13	17	4	2	2	16	6	2	56	21	21
80-89.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
90 and over.....	---	---	---	1	---	---	---	---	---	1	---	---	2	---	---
Unknown.....	1	---	---	7	1	3	---	---	---	1	---	---	9	1	3
Total.....	160	7	42	3,698	275	1,278	239	14	75	2,785	230	1,022	6,882	526	2,417

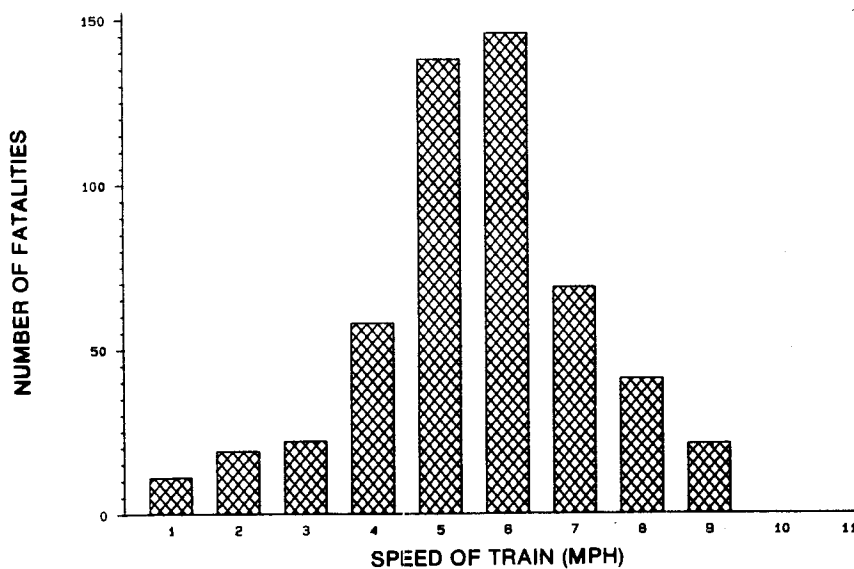
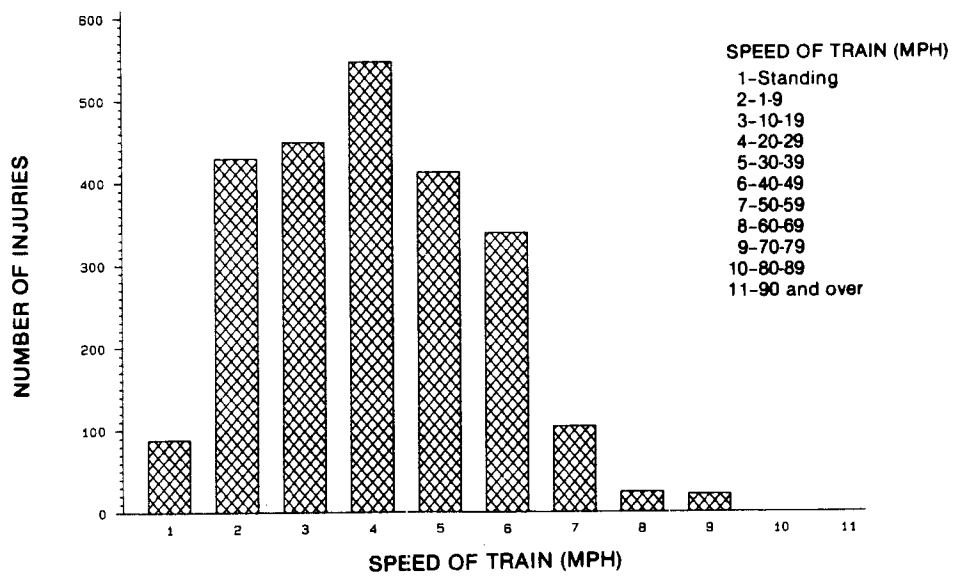
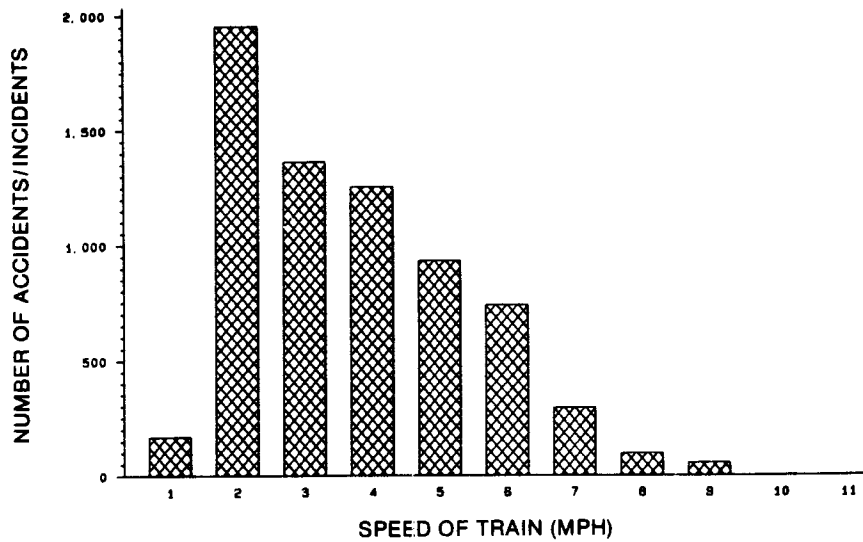


FIGURE 5. ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN

TABLE 17 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD EQUIPMENT INVOLVED, PART OF TRAIN STRUCK, CIRCUMSTANCE, AND VISIBILITY

Type Consist	CIRCUMSTANCE											
	Consist Struck Vehicle	Vehicle Struck Consist	Lead Unit	-----Part Of Consist Struck-----				Unknown	-----Visibility-----			
				-----Quarter-----					Dawn	Day	Dusk	Dark
				1	2	3	4					
Train (Units Pulling).	4,110	1,448	835	220	138	89	133	33	128	3,043	206	2,181
Train (Units Pushing).	314	170	67	12	21	18	51	1	13	218	17	236
Train (Standing).....	---	139	29	18	29	35	25	3	3	11	2	123
Cars (Moving).....	94	49	45	---	1	1	1	1	---	128	2	13
Cars (Standing).....	---	14	11	---	1	1	1	---	1	8	---	5
Light Locos (Moving)..	367	135	124	---	---	1	9	1	15	258	12	217
Light Locos (Standing)	---	15	14	---	---	---	1	---	---	5	---	10
Other.....	16	11	11	---	---	---	---	---	---	27	---	---
Total.....	4,901	1,981	1,136	250	190	145	221	39	160	3,698	239	2,785

Note: The "Lead" unit is the first unit to occupy the crossing.

TABLE 18 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRAIN SPEED AND TYPE OF TRAIN

Speed Of Consist	----Freight----			---Passenger---			-Yard Switching			-----Other-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Standing.....	102	7	59	2	---	---	37	4	21	28	---	8	169	11	88
1-9.....	846	9	205	19	---	1	658	10	130	433	---	93	1,956	19	429
10-19.....	945	15	314	30	2	13	203	3	60	186	2	62	1,364	22	449
20-29.....	1,094	55	480	35	1	9	35	1	13	93	1	45	1,257	58	547
30-39.....	859	124	384	31	4	8	10	---	4	35	10	17	935	138	413
40-49.....	680	139	312	33	1	15	2	1	2	27	5	10	742	146	339
50-59.....	250	63	96	40	5	5	2	---	1	2	1	2	294	69	104
60-69.....	61	14	14	34	26	10	1	---	---	1	1	---	97	41	24
70-79.....	5	3	---	51	18	21	---	---	---	---	---	---	56	21	21
80-89.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
90 and over.....	---	---	---	2	---	---	---	---	---	---	---	---	2	---	---
Unknown.....	4	1	---	1	---	---	---	---	---	4	---	3	9	1	3
Total.....	4,846	430	1,864	279	57	82	948	19	231	809	20	240	6,882	526	2,417

Note: "Other" includes mixed trains, work trains, light locomotives, single car or cut of cars

TABLE 19 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY NUMBER OF CARS IN TRAIN AND TYPE OF TRAIN

Number Of Cars	----Freight----			---Passenger---			-Yard Switching			-----Other-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
1-9.....	930	54	321	182	45	44	585	14	141	250	4	76	1,947	117	582
10-19.....	508	41	195	58	10	20	172	1	39	22	---	2	760	52	256
20-29.....	307	34	126	3	---	2	80	1	20	4	---	1	394	35	149
30-39.....	288	27	125	1	---	---	54	2	9	11	---	5	354	29	139
40-49.....	308	35	129	---	---	---	16	---	7	4	---	---	328	35	136
50-59.....	325	37	140	---	---	---	12	1	4	3	---	3	340	38	147
60-69.....	311	40	139	1	---	---	5	---	6	4	---	1	321	40	146
70-79.....	360	37	125	---	---	---	6	---	---	---	---	---	366	37	125
80-89.....	306	28	121	2	---	4	2	---	---	1	---	---	311	28	125
90-99.....	283	15	118	---	---	---	---	---	---	---	---	---	283	15	118
100-109.....	319	30	115	---	---	---	---	---	---	1	---	---	320	30	115
110-119.....	253	23	72	1	---	1	1	---	1	---	---	---	255	23	74
120-129.....	135	11	63	---	---	---	1	---	---	---	---	---	136	11	63
130-139.....	83	8	28	---	---	---	---	---	---	---	---	---	83	8	28
140-149.....	42	5	12	1	---	1	---	---	---	---	---	---	43	5	13
150 And over.....	72	5	29	---	---	---	---	---	---	1	---	---	73	5	29
Locomotives only.	16	---	6	30	2	10	14	---	4	508	16	152	568	18	172
Total.....	4,846	430	1,864	279	57	82	948	19	231	809	20	240	6,882	526	2,417

Note: "Other" includes mixed trains, work trains, light locomotives, single car or cut of cars

TABLE 20. ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION

Number Of Cars	VISIBILITY												Total		
	Dawn			Day			Dusk			Dark					
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER															
1-9.....	24	2	2	897	56	242	64	3	8	368	34	115	1,353	95	367
10-19.....	9	1	6	334	21	98	21	2	5	177	14	58	541	38	167
20-29.....	4	---	---	163	21	51	15	---	3	98	5	41	280	26	95
30-39.....	7	---	2	137	13	60	9	---	5	103	13	28	256	26	95
40-49.....	5	2	1	135	14	57	6	---	---	93	17	36	239	33	94
50-59.....	6	---	1	139	13	65	8	1	5	95	14	30	248	28	101
60-69.....	3	---	2	123	20	47	10	3	3	100	12	29	236	35	81
70-79.....	11	1	3	157	17	46	4	2	1	97	10	16	269	30	66
80-89.....	8	---	1	97	12	37	8	---	6	101	8	27	214	20	71
90-99.....	11	---	2	115	6	53	9	---	7	85	6	25	220	12	87
100-109.....	4	---	1	113	12	34	8	1	1	95	11	29	220	24	65
110-119.....	7	---	2	100	12	27	6	1	1	80	7	10	193	20	40
120-129.....	2	---	1	43	5	14	3	---	6	42	2	15	90	7	36
130-139.....	1	---	---	34	5	6	3	---	1	21	2	9	59	7	16
140-149.....	---	---	---	17	1	4	1	---	---	14	1	5	32	2	9
150 And over.....	1	---	1	25	1	9	1	---	---	25	3	6	52	4	16
Locomotives only.	7	---	4	216	10	61	10	1	2	166	5	46	399	16	113
Total.....	110	6	29	2,845	239	911	186	14	54	1,760	164	525	4,901	423	1,519
HIGHWAY USER STRUCK RAIL CONSIST															
1-9.....	6	---	2	352	6	119	18	---	5	218	16	89	594	22	215
10-19.....	5	---	1	103	5	37	9	---	8	102	9	43	219	14	89
20-29.....	6	---	1	35	5	21	6	---	4	67	4	28	114	9	54
30-39.....	1	---	1	39	---	14	---	---	---	58	3	29	98	3	44
40-49.....	3	---	---	32	---	21	2	---	---	52	2	21	89	2	42
50-59.....	4	1	1	30	4	19	3	---	1	55	5	25	92	10	46
60-69.....	3	---	---	26	2	21	1	---	1	55	3	43	85	5	65
70-79.....	3	---	2	24	4	10	1	---	1	69	3	46	97	7	59
80-89.....	2	---	---	36	3	24	1	---	---	58	5	30	97	8	54
90-99.....	1	---	---	18	---	11	1	---	---	43	3	20	63	3	31
100-109.....	4	---	2	25	---	8	3	---	---	68	6	40	100	6	50
110-119.....	2	---	---	22	2	15	1	---	---	37	1	19	62	3	34
120-129.....	---	---	---	13	4	11	4	---	---	29	---	16	46	4	27
130-139.....	---	---	---	9	1	2	---	---	---	15	---	10	24	1	12
140-149.....	1	---	---	1	---	1	---	---	---	9	3	3	11	3	4
150 And over.....	---	---	---	7	---	3	---	---	---	14	1	10	21	1	13
Locomotives only.	9	---	3	81	---	30	3	---	1	76	2	25	169	2	59
Total.....	50	1	13	853	36	367	53	---	21	1,025	66	497	1,981	103	898
GRAND TOTAL															
1-9.....	30	2	4	1,249	62	361	82	3	13	586	50	204	1,947	117	582
10-19.....	14	1	7	437	26	135	30	2	13	279	23	101	760	52	256
20-29.....	10	---	1	198	26	72	21	---	7	165	9	69	394	35	149
30-39.....	8	---	3	176	13	74	9	---	5	161	16	57	354	29	139
40-49.....	8	2	1	167	14	78	8	---	---	145	19	57	328	35	136
50-59.....	10	1	2	169	17	84	11	1	6	150	19	55	340	38	147
60-69.....	6	---	2	149	22	68	11	3	4	155	15	72	321	40	146
70-79.....	14	1	5	181	21	56	5	2	2	166	13	62	366	37	125
80-89.....	10	---	1	133	15	61	9	---	6	159	13	57	311	28	125
90-99.....	12	---	2	133	6	64	10	---	7	128	9	45	283	15	118
100-109.....	8	---	3	138	12	42	11	1	1	163	17	69	320	30	115
110-119.....	9	---	2	122	14	42	7	1	1	117	8	29	255	23	74
120-129.....	2	---	1	56	9	25	7	---	6	71	2	31	136	11	63
130-139.....	1	---	---	43	6	8	3	---	1	36	2	19	83	8	28
140-149.....	1	---	---	18	1	5	1	---	---	23	4	8	43	5	13
150 And over.....	1	---	1	32	1	12	1	---	---	39	4	16	73	5	29
Locomotives only.	16	---	7	297	10	91	13	1	3	242	7	71	568	18	172
Total.....	160	7	42	3,698	275	1,278	239	14	75	2,785	230	1,022	6,882	526	2,417

TABLE 21 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TRACK TYPE AND TRACK CLASS

Track Class	TRACK TYPE																	
	Main			Yard			Siding			Industry			Unknown			Total		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
1.....	811	10	189	354	2	87	86	2	8	202	2	52	3	---	2	1,456	16	338
2.....	1,339	46	515	60	---	15	19	---	2	48	3	15	---	---	---	1,466	49	547
3.....	1,995	183	791	29	1	9	14	---	5	19	---	10	3	---	2	2,060	184	817
4.....	1,577	236	598	9	---	2	5	---	7	12	---	6	1	---	---	1,604	236	613
5.....	135	26	47	---	---	---	---	---	---	---	---	---	---	---	---	135	26	47
6.....	4	---	---	---	---	---	---	---	---	---	---	---	---	---	---	4	---	---
Unknown.....	76	6	27	48	3	19	6	---	---	27	6	9	---	---	---	157	15	55
Total....	5,937	507	2,167	500	6	132	130	2	22	308	11	92	7	---	4	6,882	526	2,417

WARNING DEVICE DATA (1982)

TABLE 22 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION

Warning Device	--Drove Around-- -Or Thru Gate--			--Stopped And-- -Then Proceeded			-Did Not Stop--			-----Other-----			-----Unknown-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Gates.....	453	78	160	16	2	6	117	5	59	366	4	31	19	---	4	971	89	260
Cantilever flashrs	---	---	---	26	---	7	310	35	151	99	2	14	4	---	3	439	37	175
Standard flashers	---	---	---	111	4	26	1,182	91	529	417	13	56	18	1	2	1,728	109	613
Hwy Sig, W W, Bells	---	---	---	25	---	3	214	16	102	60	---	7	11	---	---	310	16	112
Special Devices..	---	---	---	22	---	2	124	3	51	32	---	5	9	---	1	187	3	59
Crossbucks.....	---	---	---	140	16	50	2,012	204	914	876	37	177	77	5	26	3,105	262	1,167
Stopsigns.....	---	---	---	2	---	1	31	3	9	16	1	5	3	---	---	52	4	15
Other Signs.....	---	---	---	---	---	---	12	1	9	7	2	---	1	---	---	20	3	9
No Signs Or Signl	---	---	---	3	---	1	25	1	4	37	1	1	5	1	1	70	3	7
Total.....	453	78	160	345	22	96	4,027	359	1,828	1,910	60	296	147	7	37	6,882	526	2,417

Note: "Special" are crossings protected by watchmen or members of train crew.
 "Hwy Sig" = Highway signals, W W = Wigwags.

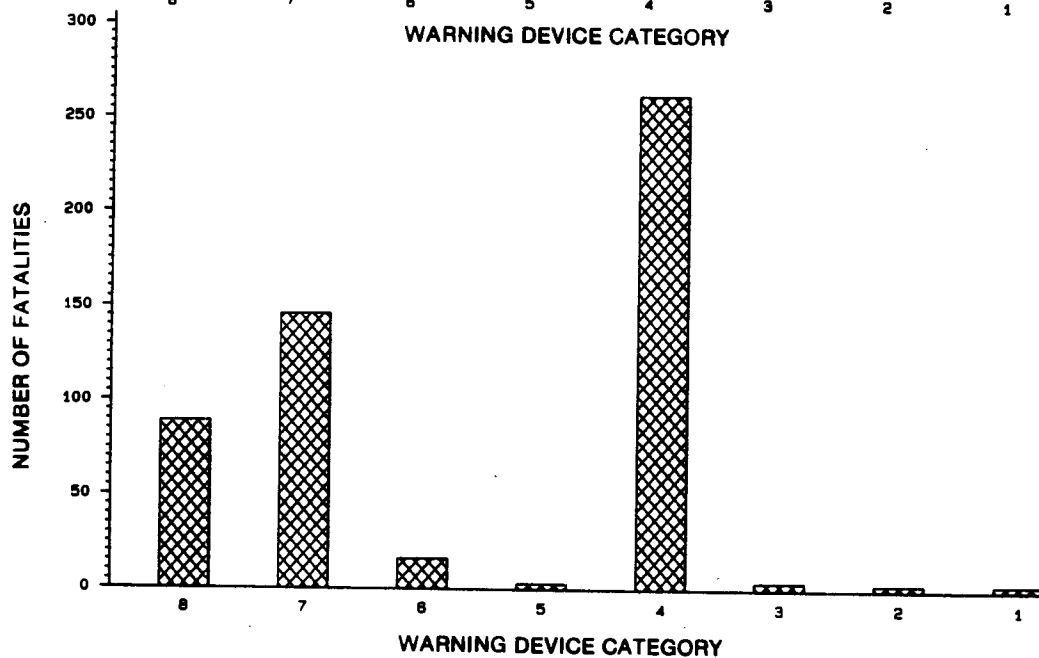
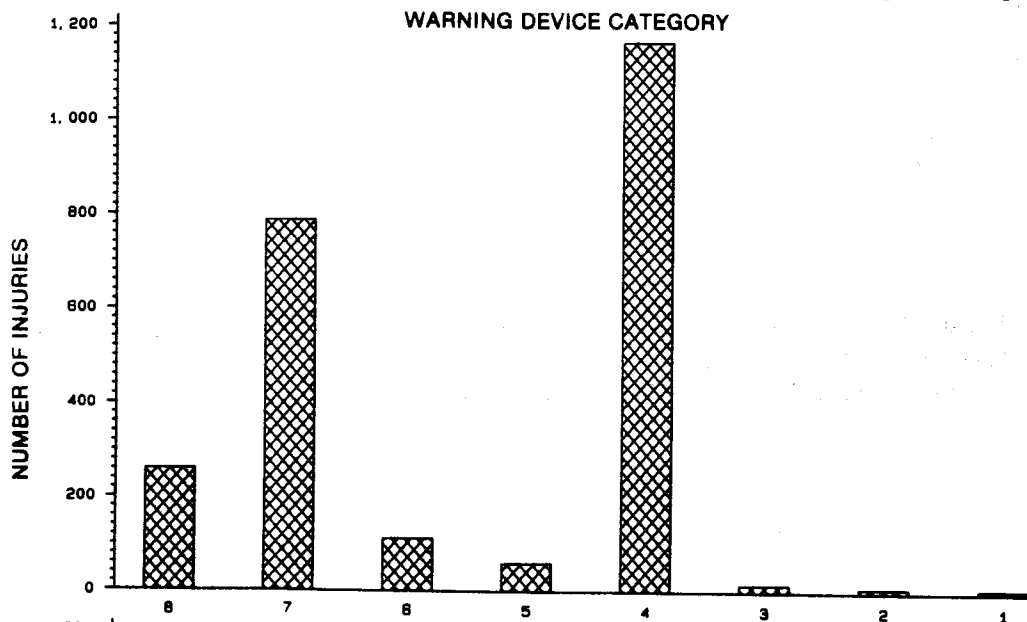
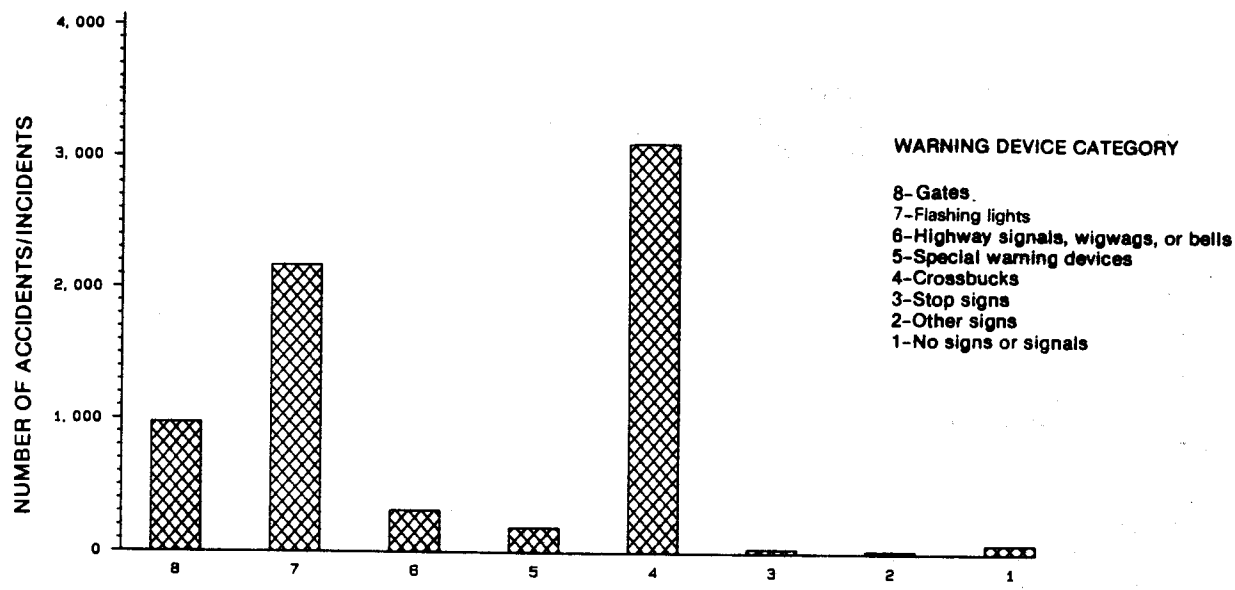


FIGURE 6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY

TABLE 23 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TYPE AND OPERATIONAL STATUS OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY

Warning Device	-Device Working--			-----Highway User-----							
	Yes	No	N/A	----Struck By Consist----				----Ran Into Consist----			
				Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark
Gates.....	938	17	16	18	301	26	409	13	56	7	141
Cantilever flshrs	434	1	4	4	180	8	95	1	81	1	69
Standard flashers	1,681	27	20	24	717	39	389	10	246	16	287
Hwy Sig,W W,Bells	237	7	66	7	119	8	80	---	51	3	42
Special Devices..	---	---	187	1	48	6	45	3	22	5	57
Crossbucks.....	---	---	3,105	53	1,414	89	705	23	384	19	418
Stopsigns.....	---	---	52	1	26	4	9	---	6	2	4
Other Signs.....	---	---	20	---	8	1	6	---	2	---	3
No Signs Or Signl	---	---	70	2	32	5	22	---	5	---	4
Total.....	3,290	52	3,540	110	2,845	186	1,760	50	853	53	1,025

Note: If a rail consist is intentionally grounded to prevent activation of the warning device, these are reported as "N/A."

TABLE 24 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES DURING DUSK AND DARK HOURS BY ILLUMINATION OF CROSSING AND CIRCUMSTANCE

	CIRCUMSTANCE								
	Struck By Consist			Ran Into Consist			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Lighted.....	1,104	95	336	472	24	176	1,576	119	512
Not Lighted.....	2,621	225	793	1,035	53	499	3,656	278	1,292
Not Reported.....	972	85	327	405	24	192	1,377	109	519
Total.....	4,901	423	1,519	1,981	103	898	6,882	526	2,417

TIME, DAY AND WEATHER DATA (1982)

TABLE 26 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY VISIBILITY AND CIRCUMSTANCE

CIRCUMSTANCE

Visibility	Struck By Consist			Ran Into Consist			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Dawn.....	110	6	29	50	1	13	160	7	42
Day.....	2,845	239	911	853	36	367	3,698	275	1,278
Dusk.....	186	14	54	53	---	21	239	14	75
Dark.....	1,760	164	525	1,025	66	497	2,785	230	1,022
Total.....	4,901	423	1,519	1,981	103	898	6,882	526	2,417

TABLE 27 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TEMPERATURE, CIRCUMSTANCE, AND VISIBILITY

CIRCUMSTANCE

Temperature	----Struck By Consist----				----Ran Into Consist-----				-----Total-----			
	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark
Over 100.....	---	2	---	---	---	2	---	---	---	4	---	---
80 To 100.....	---	682	18	74	2	185	4	58	2	867	22	132
60 To 79.....	43	941	60	569	10	269	17	298	53	1,210	77	867
40 To 59.....	33	596	63	583	17	152	8	334	50	748	71	917
20 To 39.....	16	448	32	385	14	162	14	219	30	610	46	604
0 To 19.....	14	145	11	115	4	65	7	90	18	210	18	205
-20 To -1.....	3	29	2	26	2	15	3	26	5	44	5	52
Under -20.....	1	2	---	8	1	3	---	---	2	5	---	8
Not Reported.....	---	---	---	---	---	---	---	---	---	---	---	---
Total.....	110	2,845	186	1,760	50	853	53	1,025	160	3,698	239	2,785

TABLE 25 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY LOCATION AND TYPE OF WARNING DEVICE, CIRCUMSTANCE, AND VISIBILITY

LOCATION AND TYPE OF WARNING DEVICE AND CIRCUMSTANCE	VISIBILITY														
	-----Dawn-----			-----Day-----			-----Dusk-----			-----Dark-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER															
Automatic, Both Sides.....	49	4	15	1,274	83	362	80	3	16	943	94	284	2,346	184	677
Automatic, Side Of Approach.	4	---	---	34	2	4	1	---	1	27	2	8	66	4	13
Automatic, Opposite Side....	---	---	---	9	---	4	---	---	---	2	---	2	11	---	6
Automatic, Side Not Reported	---	---	---	---	---	---	---	---	---	1	---	---	1	---	---
Manual, Both Sides.....	1	---	1	33	---	5	3	---	---	36	---	3	73	---	9
Manual, Side Of Approach....	---	---	---	7	---	---	2	---	---	5	---	4	14	---	4
Manual, Opposite Side.....	---	---	---	1	---	1	1	---	---	1	---	---	3	---	1
Manual, Side Not Reported...	---	---	---	7	---	1	---	---	---	3	---	---	10	---	1
Other, Both Sides.....	50	2	12	1,343	148	510	85	9	37	671	64	217	2,149	223	776
Other, Side Of Approach....	4	---	1	73	5	12	7	1	---	36	3	2	120	9	15
Other, Opposite Side.....	---	---	---	28	---	8	2	---	---	11	---	3	41	---	11
Other, Side Not Reported....	---	---	---	4	---	1	---	---	---	2	---	---	6	---	1
No Signs Or Signals.....	2	---	---	32	1	3	5	1	---	22	1	2	61	3	5
Total.....	110	6	29	2,845	239	911	186	14	54	1,760	164	525	4,901	423	1,519
HIGHWAY USER STRUCK RAIL CONSIST															
Automatic, Both Sides.....	22	---	5	417	17	206	25	---	8	517	43	232	981	60	451
Automatic, Side Of Approach.	2	---	1	16	1	2	2	---	---	21	2	9	41	3	12
Automatic, Opposite Side....	---	---	---	1	---	1	---	---	---	1	---	---	2	---	1
Automatic, Side Not Reported	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manual, Both Sides.....	1	---	---	17	---	6	4	---	3	48	3	29	70	3	38
Manual, Side Of Approach....	---	---	---	2	---	2	---	---	---	3	---	1	5	---	3
Manual, Opposite Side.....	1	---	---	---	---	---	---	---	---	4	---	2	5	---	2
Manual, Side Not Reported...	1	---	---	3	---	---	1	---	---	2	---	1	7	---	1
Other, Both Sides.....	23	1	7	369	17	138	18	---	10	405	17	211	815	35	366
Other, Side Of Approach....	---	---	---	18	1	9	2	---	---	15	---	9	35	1	18
Other, Opposite Side.....	---	---	---	5	---	2	---	---	---	5	1	2	10	1	4
Other, Side Not Reported....	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---
No Signs Or Signals.....	---	---	---	5	---	1	---	---	---	4	---	1	9	---	2
Total.....	50	1	13	853	36	367	53	---	21	1,025	66	497	1,981	103	898
GRAND TOTAL															
Automatic, Both Sides.....	71	4	20	1,691	100	568	105	3	24	1,460	137	516	3,327	244	1,128
Automatic, Side Of Approach.	6	---	1	50	3	6	3	---	1	48	4	17	107	7	25
Automatic, Opposite Side....	---	---	---	10	---	5	---	---	---	3	---	2	13	---	7
Automatic, Side Not Reported	---	---	---	---	---	---	---	---	---	1	---	---	1	---	---
Manual, Both Sides.....	2	---	1	50	---	11	7	---	3	84	3	32	143	3	47
Manual, Side Of Approach....	---	---	---	9	---	2	2	---	---	8	---	5	19	---	7
Manual, Opposite Side.....	1	---	---	1	---	1	1	---	---	5	---	2	8	---	3
Manual, Side Not Reported...	1	---	---	10	---	1	1	---	---	5	---	1	17	---	2
Other, Both Sides.....	73	3	19	1,712	165	648	103	9	47	1,076	81	428	2,964	258	1,142
Other, Side Of Approach....	4	---	1	91	6	21	9	1	---	51	3	11	155	10	33
Other, Opposite Side.....	---	---	---	33	---	10	2	---	---	16	1	5	51	1	15
Other, Side Not Reported....	---	---	---	4	---	1	1	---	---	2	---	---	7	---	1
No Signs Or Signals.....	2	---	---	37	1	4	5	1	---	26	1	3	70	3	7
Total.....	160	7	42	3,698	275	1,278	239	14	75	2,785	230	1,022	6,882	526	2,417

Note: Automatic devices include gates, flashing lights, and other devices which are activated by the approach of a rail consist. Manual devices include "Watchmen" and "Flagged by crew". "Other" devices include crossbucks, stop signs, etc.

TABLE 28 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY TIME OF DAY AND CIRCUMSTANCE

TIME	CIRCUMSTANCE								
	Struck By Consist			Ran Into Consist			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
MID TO 12:59 AM..	164	26	53	115	7	52	279	33	105
1 TO 1:59 AM...	130	15	32	121	12	73	251	27	105
2 TO 2:59 AM...	146	19	27	90	7	65	236	26	92
3 TO 3:59 AM...	86	4	31	60	3	36	146	7	67
4 TO 4:59 AM...	50	3	7	31	2	16	81	5	23
5 TO 5:59 AM...	75	7	21	57	2	20	132	9	41
6 TO 6:59 AM...	145	12	42	47	1	15	192	13	57
7 TO 7:59 AM...	177	12	42	64	---	28	241	12	70
8 TO 8:59 AM...	214	10	54	63	---	21	277	10	75
9 TO 9:59 AM...	219	22	74	69	---	22	288	22	96
10 TO 10:59 AM.	279	19	105	82	4	26	361	23	131
11 TO 11:59 AM.	265	22	78	102	4	51	367	26	129
NOON TO 12:59 PM.	270	17	102	87	2	37	357	19	139
1 TO 1:59 PM...	279	23	82	74	3	28	353	26	110
2 TO 2:59 PM...	264	22	73	76	5	49	340	27	122
3 TO 3:59 PM...	280	31	94	72	5	26	352	36	120
4 TO 4:59 PM...	294	27	110	97	6	36	391	33	146
5 TO 5:59 PM...	289	28	100	78	3	29	367	31	129
6 TO 6:59 PM...	238	17	65	106	3	52	344	20	117
7 TO 7:59 PM...	243	25	79	99	5	49	342	30	128
8 TO 8:59 PM...	215	16	62	77	11	30	292	27	92
9 TO 9:59 PM...	219	7	63	92	5	45	311	12	108
10 TO 10:59 PM.	187	19	62	112	6	36	299	25	98
11 TO 11:59 PM.	173	20	61	110	7	56	283	27	117
Total.....	4,901	423	1,519	1,981	103	898	6,882	526	2,417

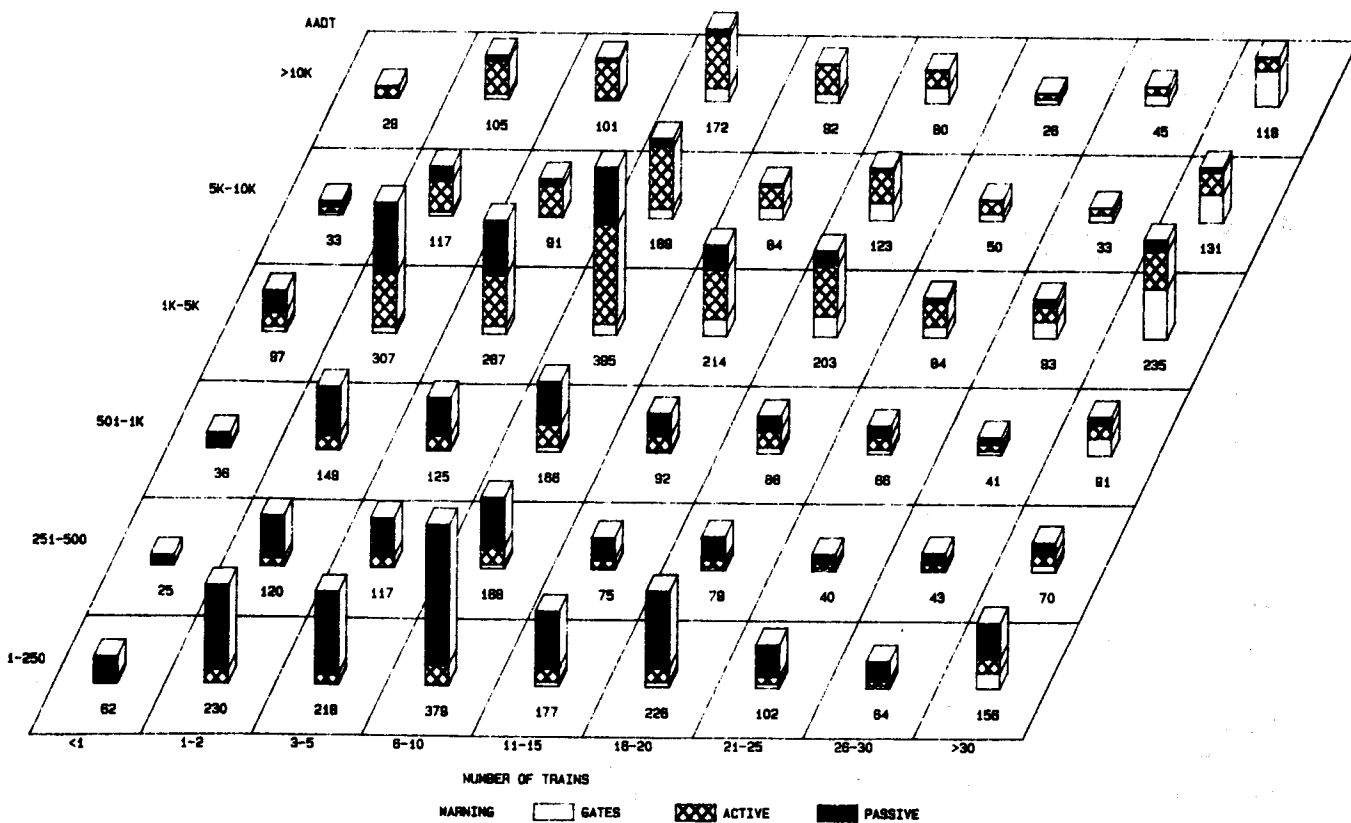
TABLE 29. ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MONTH AND CIRCUMSTANCE

Month	CIRCUMSTANCE								
	Struck By Consist			Ran Into Consist			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
January.....	604	40	204	282	12	127	886	52	331
February.....	535	41	165	219	8	100	754	49	265
March.....	438	47	166	191	11	92	629	58	258
April.....	404	37	112	145	8	73	549	45	185
May.....	322	20	103	113	7	59	435	27	162
June.....	354	22	103	125	8	52	479	30	155
July.....	354	34	122	138	10	82	492	44	204
August.....	363	29	108	137	9	63	500	38	171
September.....	308	40	96	117	7	45	425	47	141
October.....	400	25	115	160	7	60	560	32	175
November.....	409	46	123	159	5	63	568	51	186
December.....	410	42	102	195	11	82	605	53	184
Total.....	4,901	423	1,519	1,981	103	898	6,882	526	2,417

TABLE 30. ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WEATHER CONDITIONS, CIRCUMSTANCE, AND VISIBILITY

Weather	CIRCUMSTANCE								Total			
	---Struck By Consist---				---Ran Into Consist---				Dawn	Day	Dusk	Dark
	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark
Clear.....	60	1,912	99	1,012	31	526	26	590	91	2,438	125	1,602
Cloudy.....	26	632	46	460	8	187	13	233	34	819	59	693
Rain.....	7	193	30	170	3	88	7	106	10	281	37	276
Fog.....	11	23	3	39	4	14	---	54	15	37	3	93
Sleet.....	---	6	2	2	---	6	1	2	---	12	3	4
Snow.....	6	77	6	75	4	31	6	39	10	108	12	114
Not Reported.....	---	2	---	2	---	1	---	1	---	3	---	3
Total.....	110	2,845	186	1,760	50	853	53	1,025	160	3,698	239	2,785

FIGURE 7. ACCIDENTS/INCIDENTS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC (AADT)



MOTORIST ACTION DATA (1982)

TABLE 31. ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY OBSTRUCTION OF MOTORISTS' VIEW, CIRCUMSTANCE, AND VISIBILITY

Type Obstruction	CIRCUMSTANCE											
	----Struck By Consist----				----Ran Into Consist----				-----Total-----			
	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark	Dawn	Day	Dusk	Dark
Permanent structure...	2	113	6	49	3	27	3	16	5	140	9	65
Standing RR Equipment.	---	27	1	6	1	2	3	7	1	29	4	13
Passing Train.....	---	9	2	6	---	1	---	3	---	10	2	9
Topography.....	---	25	1	8	---	10	1	5	---	35	2	13
Vegetation.....	1	82	3	23	1	29	1	6	2	111	4	29
Highway Vehicle.....	---	8	1	3	---	---	1	4	---	8	2	7
Other.....	4	26	2	6	---	16	1	12	4	42	3	18
Not Obstructed.....	103	2,554	170	1,658	45	768	42	972	148	3,322	212	2,630
Unknown.....	---	1	---	1	---	---	1	---	---	1	1	1
Total.....	110	2,845	186	1,760	50	853	53	1,025	160	3,698	239	2,785

TABLE 32. ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MOTORIST ACTION AND TYPE OF VEHICLE

Type Of Vehicle	MOTORIST ACTION					
	Struck By Second Train			Passed Standing Vehicle		
	Yes	No	Unknown	Yes	No	Unknown
Automobile.....	76	4,609	69	181	4,146	427
Truck.....	25	1,456	23	47	1,343	114
Truck-trailer....	7	528	4	17	487	35
Bus.....	---	9	1	---	9	1
School bus.....	---	9	---	---	9	---
Motorcycle.....	---	63	3	2	50	14
Total.....	108	6,674	100	247	6,044	591

3. RAIL-HIGHWAY CROSSING ACCIDENT RATES (1982)

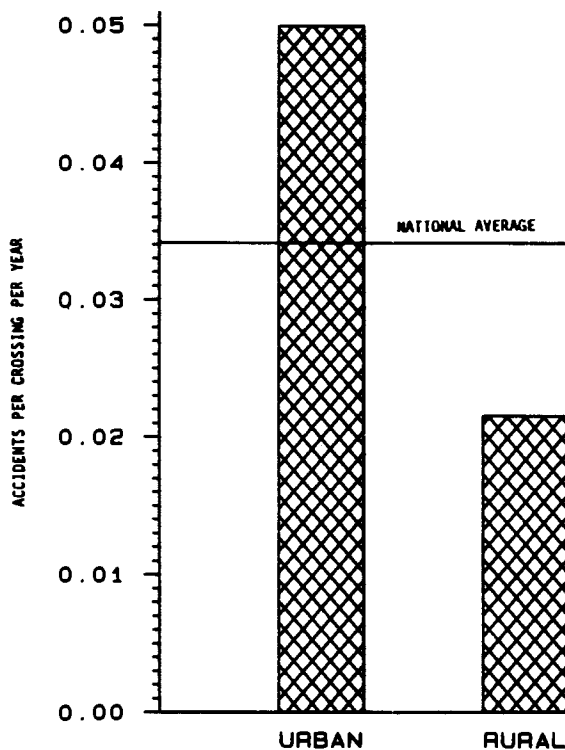


FIGURE 8 CROSSING ACCIDENT RATE BY LOCATION: URBAN OR RURAL

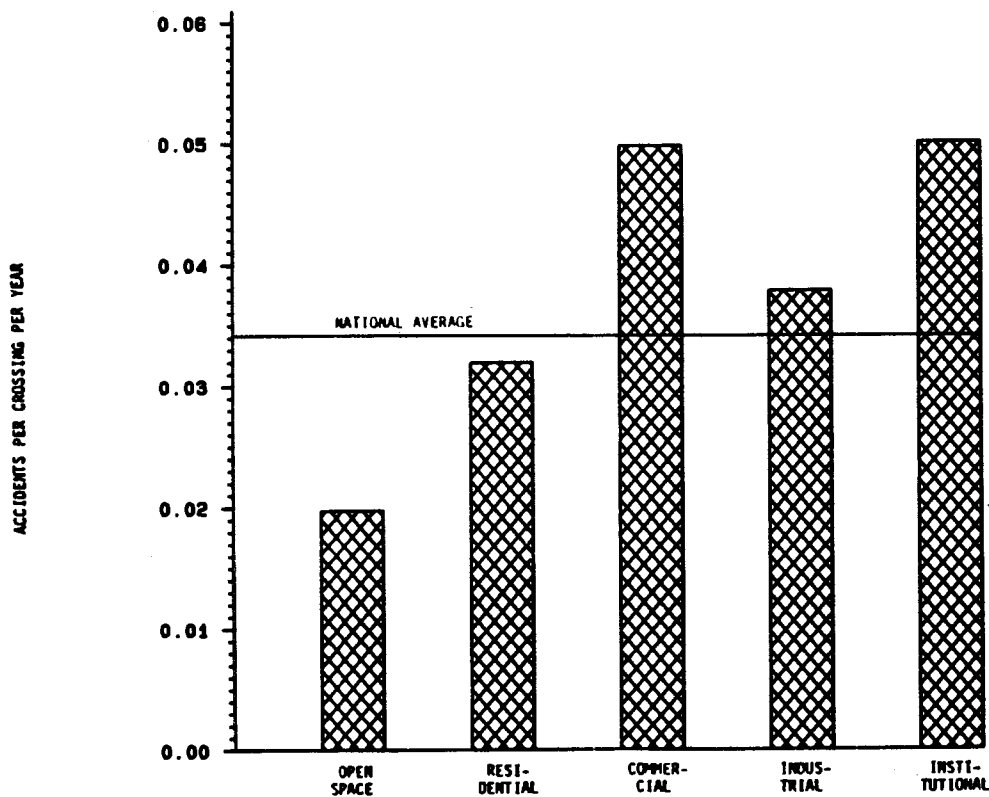


FIGURE 9 CROSSING ACCIDENT RATE BY TYPE OF DEVELOPMENT

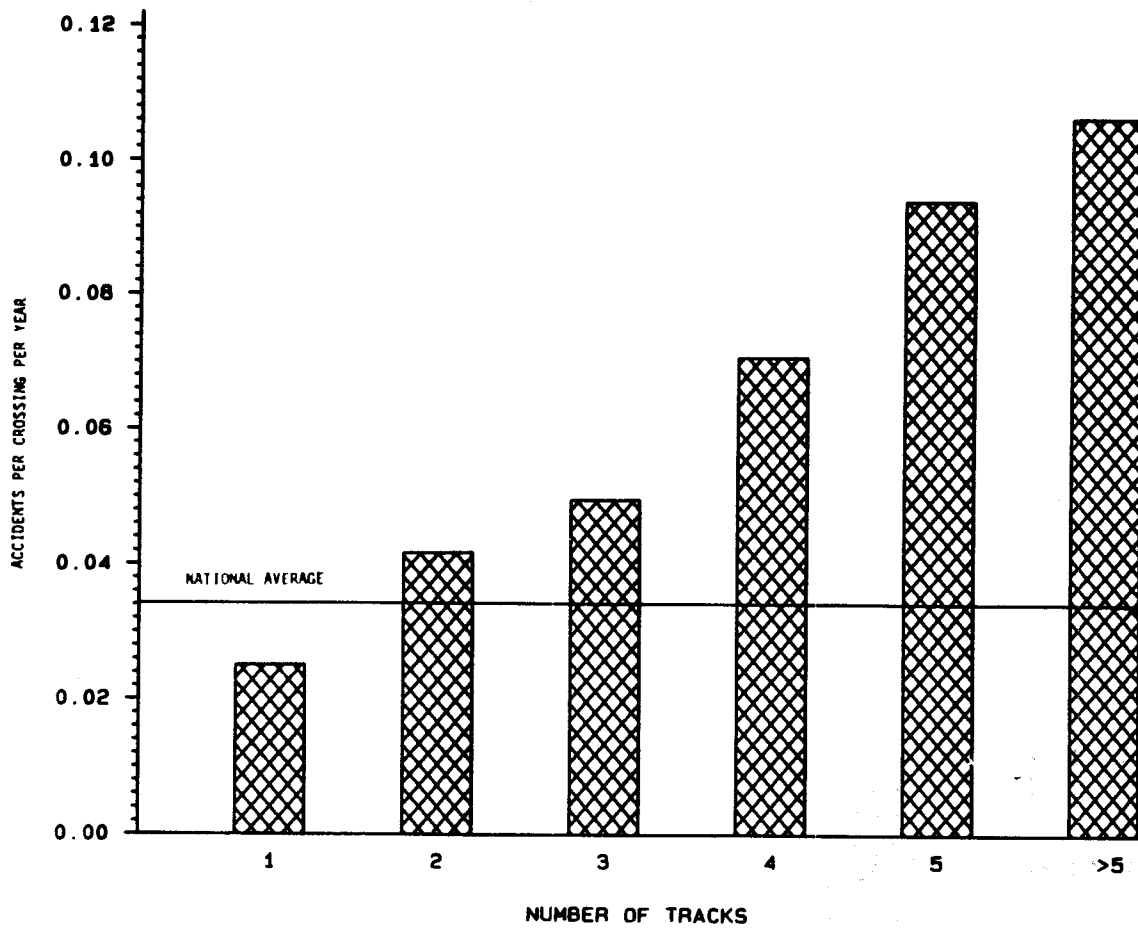


FIGURE 10 CROSSING ACCIDENT RATE BY NUMBER OF TRACKS

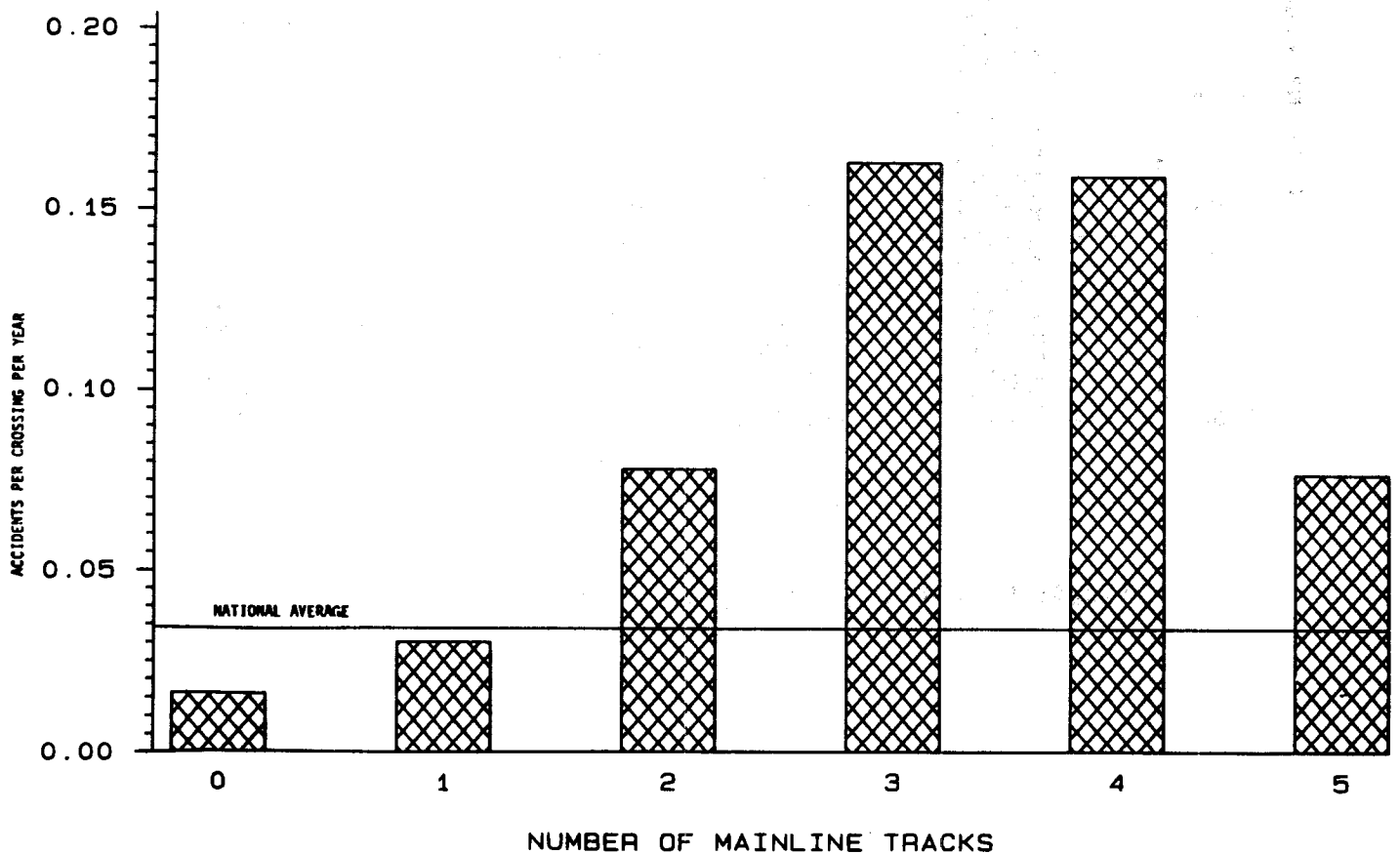


FIGURE 11. CROSSING ACCIDENT RATE BY NUMBER OF MAINLINE TRACKS

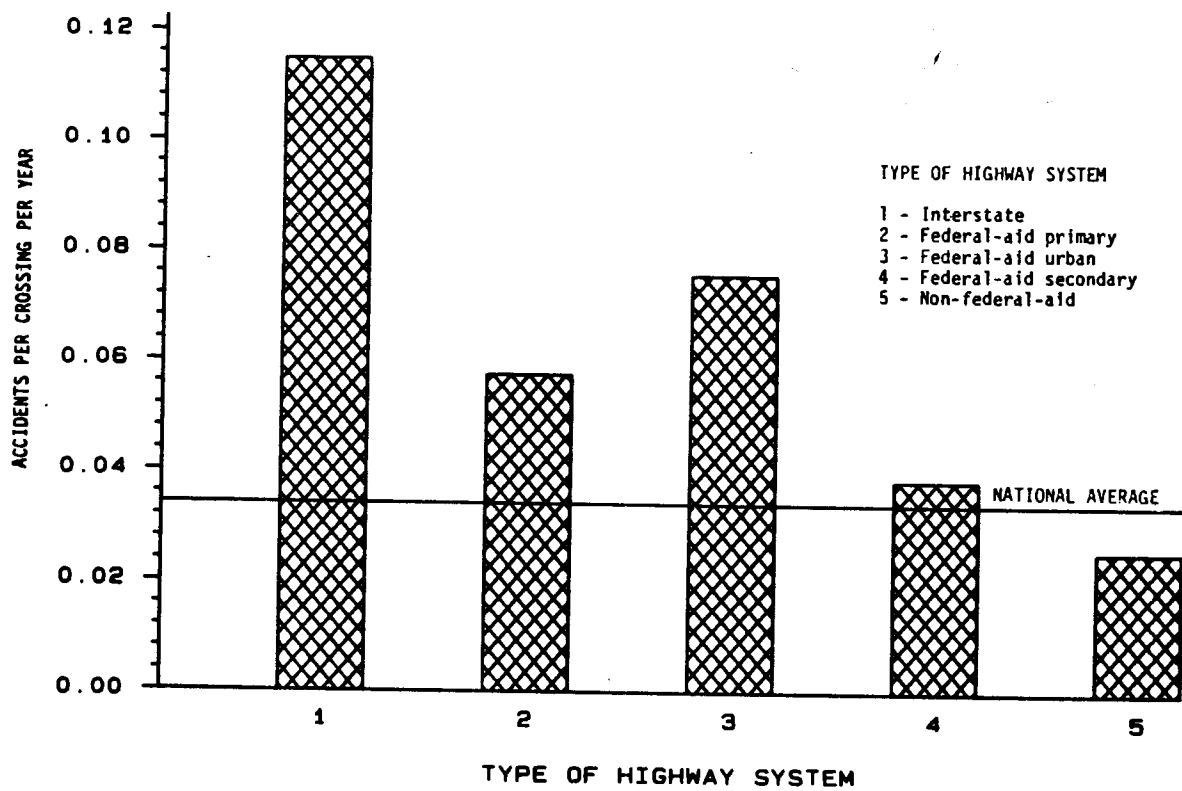


FIGURE 12 CROSSING ACCIDENT RATE BY HIGHWAY SYSTEM

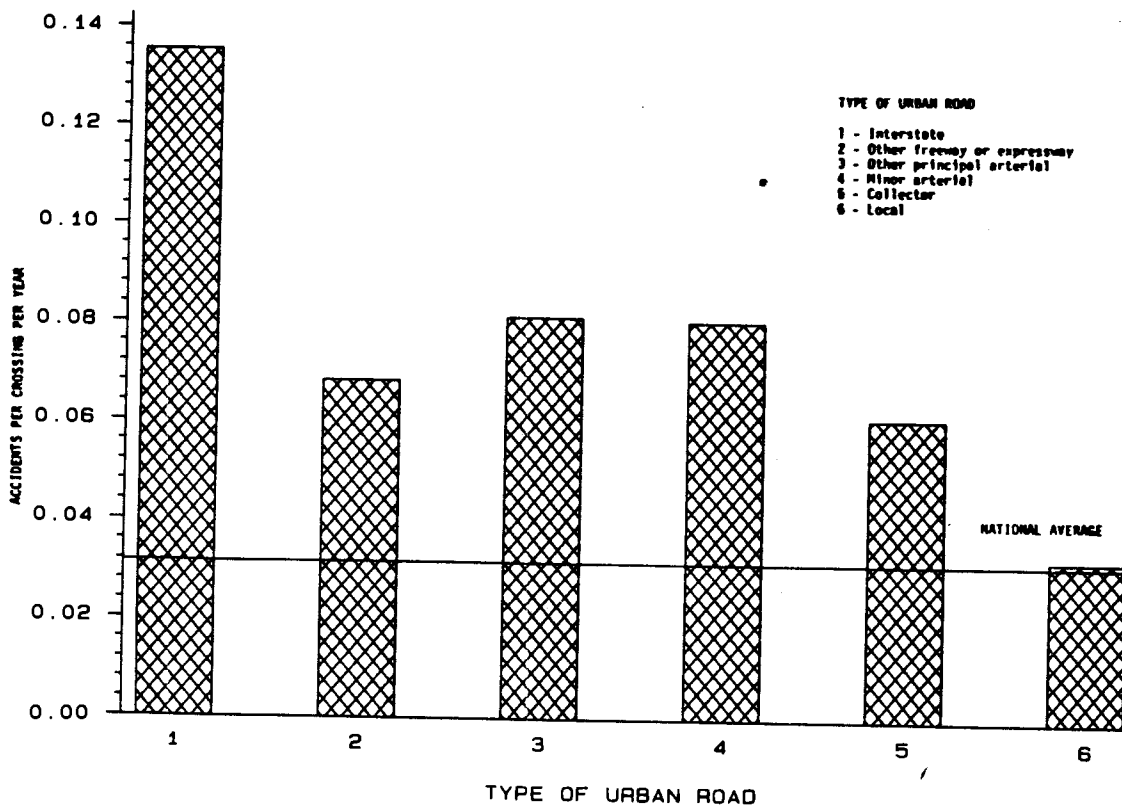


FIGURE 13 CROSSING ACCIDENT RATE BY TYPE OF URBAN ROAD

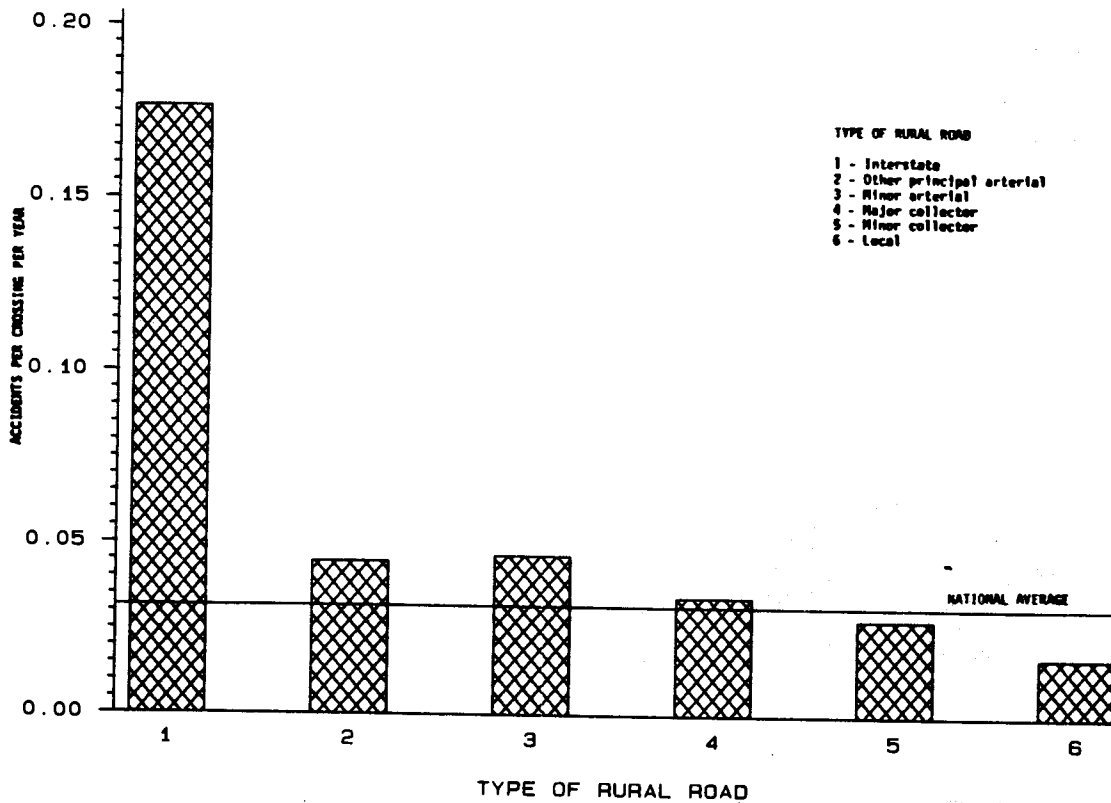


FIGURE 14 CROSSING ACCIDENT RATE BY TYPE OF RURAL ROAD

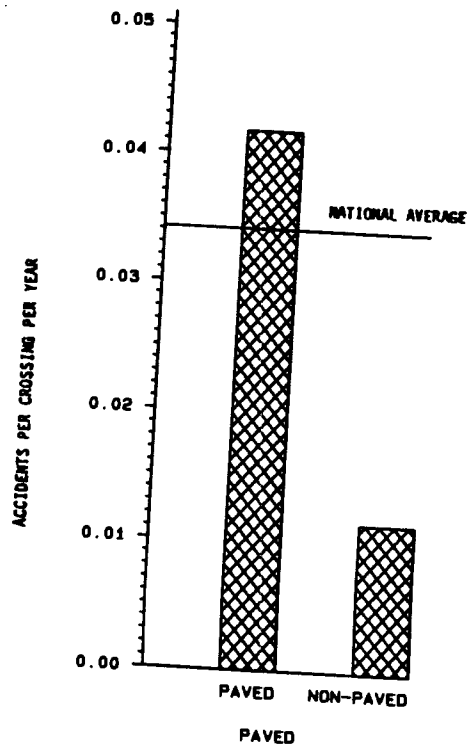


FIGURE 15 CROSSING ACCIDENT RATE BY PAVED OR NON-PAVED ROAD SURFACE

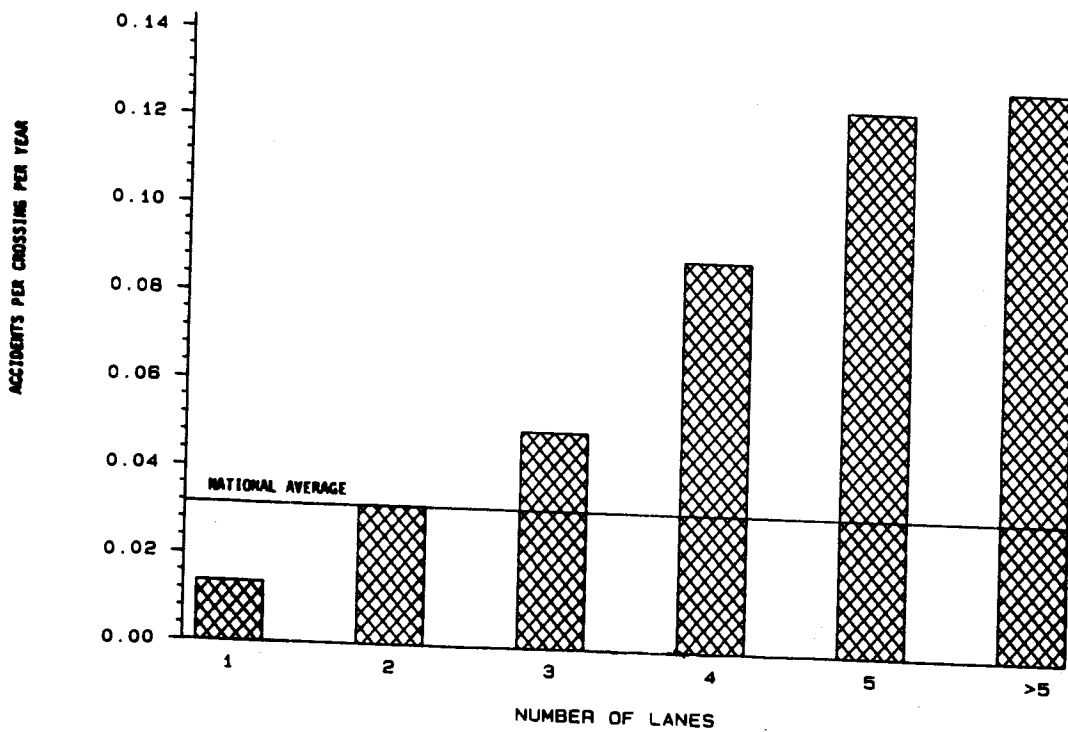


FIGURE 16 CROSSING ACCIDENT RATE BY NUMBER OF TRAFFIC LANES

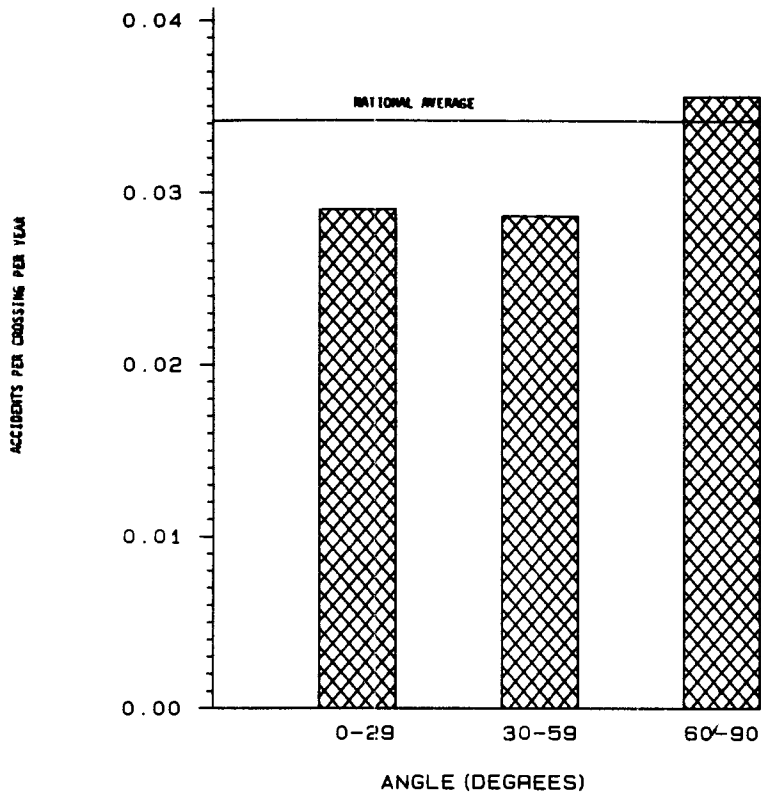


FIGURE 17. CROSSING ACCIDENT RATE BY SMALLEST CROSSING ANGLE

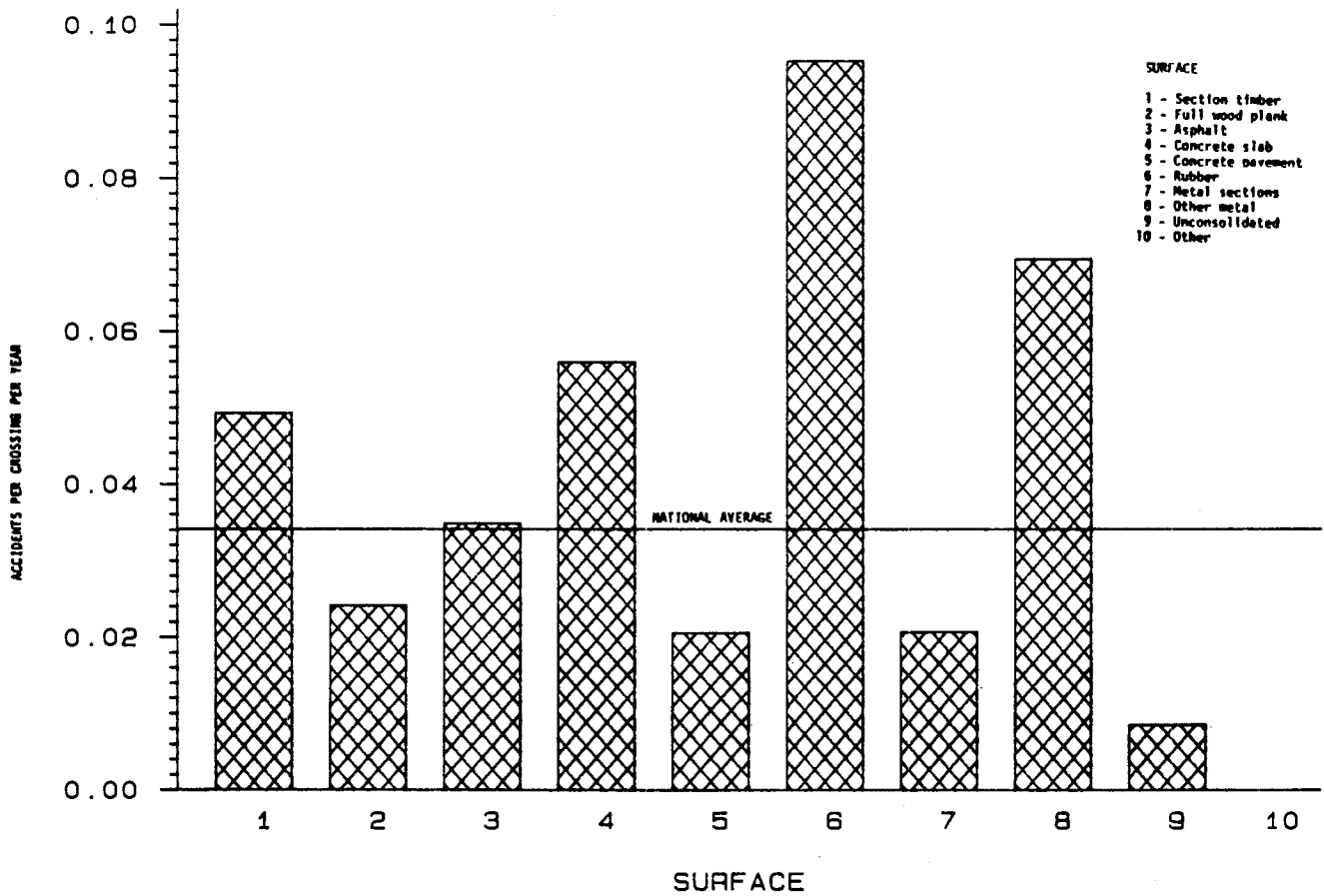


FIGURE 18. CROSSING ACCIDENT RATE BY CROSSING SURFACE

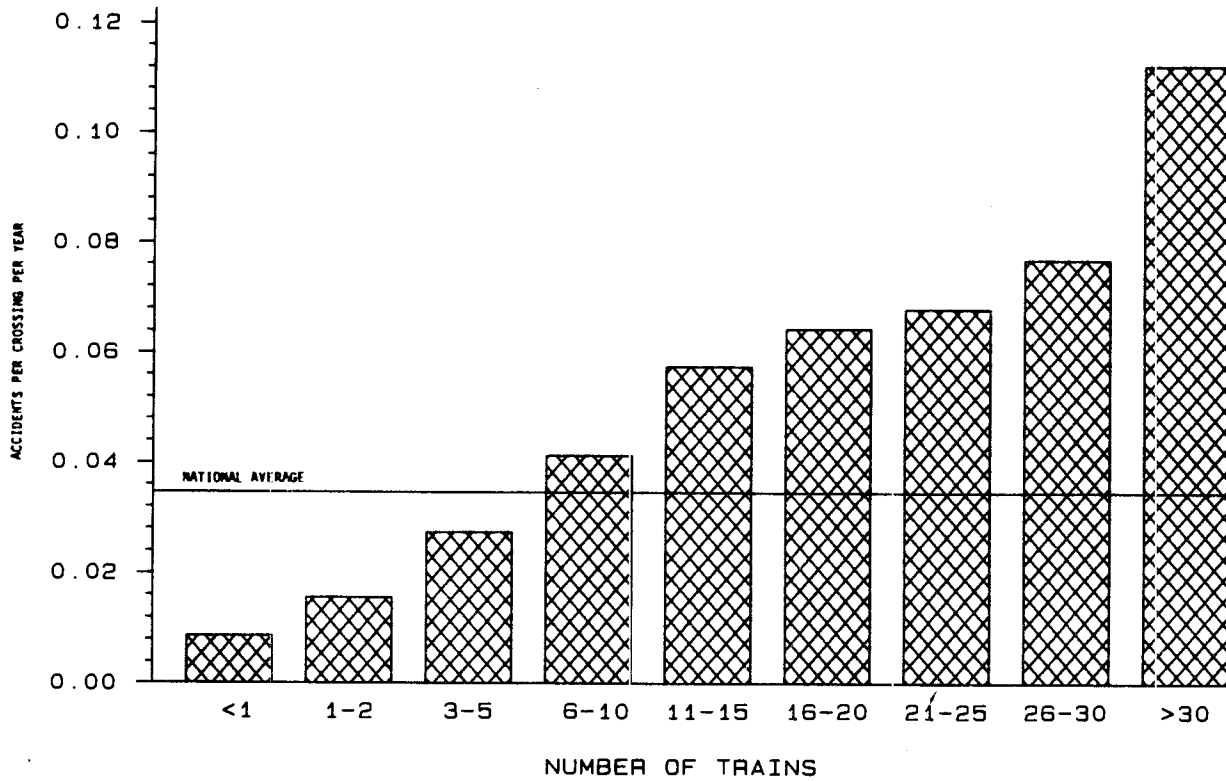


FIGURE 19. CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY

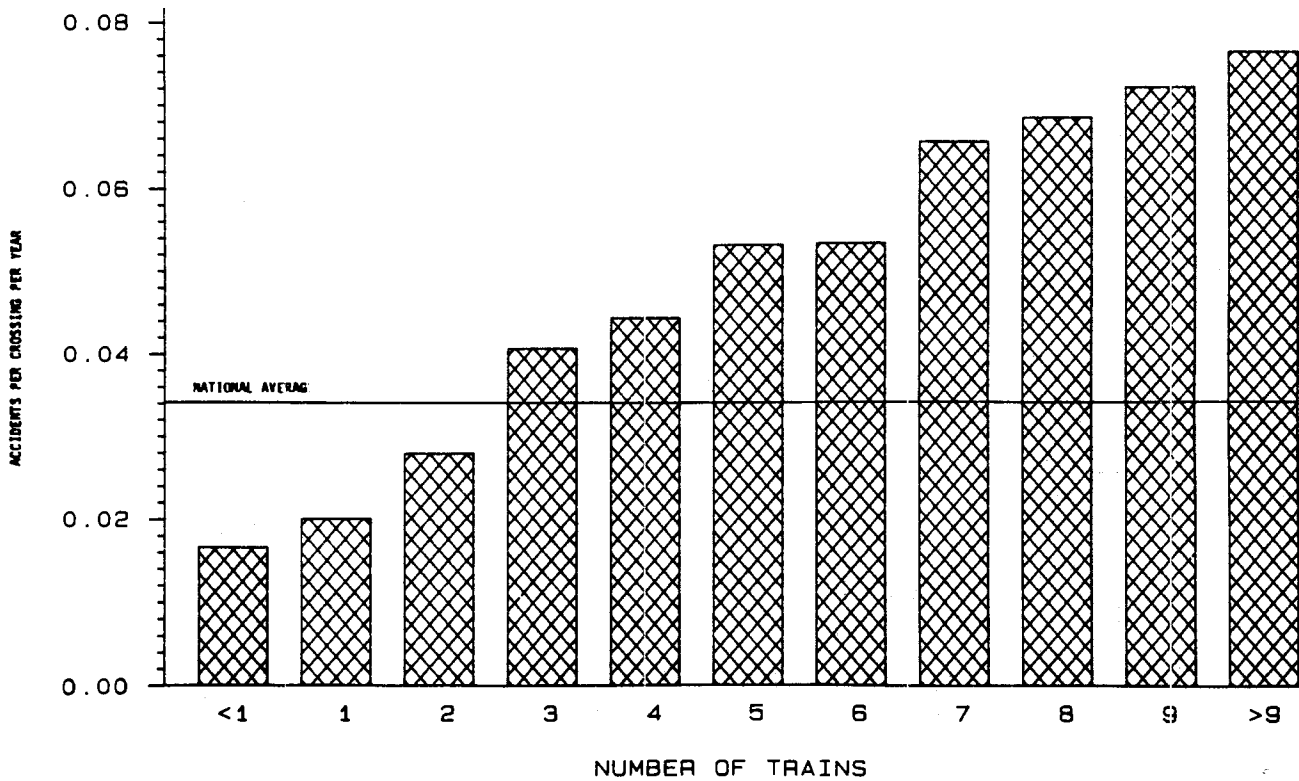


FIGURE 20. CROSSING ACCIDENT RATE BY NUMBER OF THRU-TRAINS DURING DAYLIGHT HOURS (6AM to 6PM)

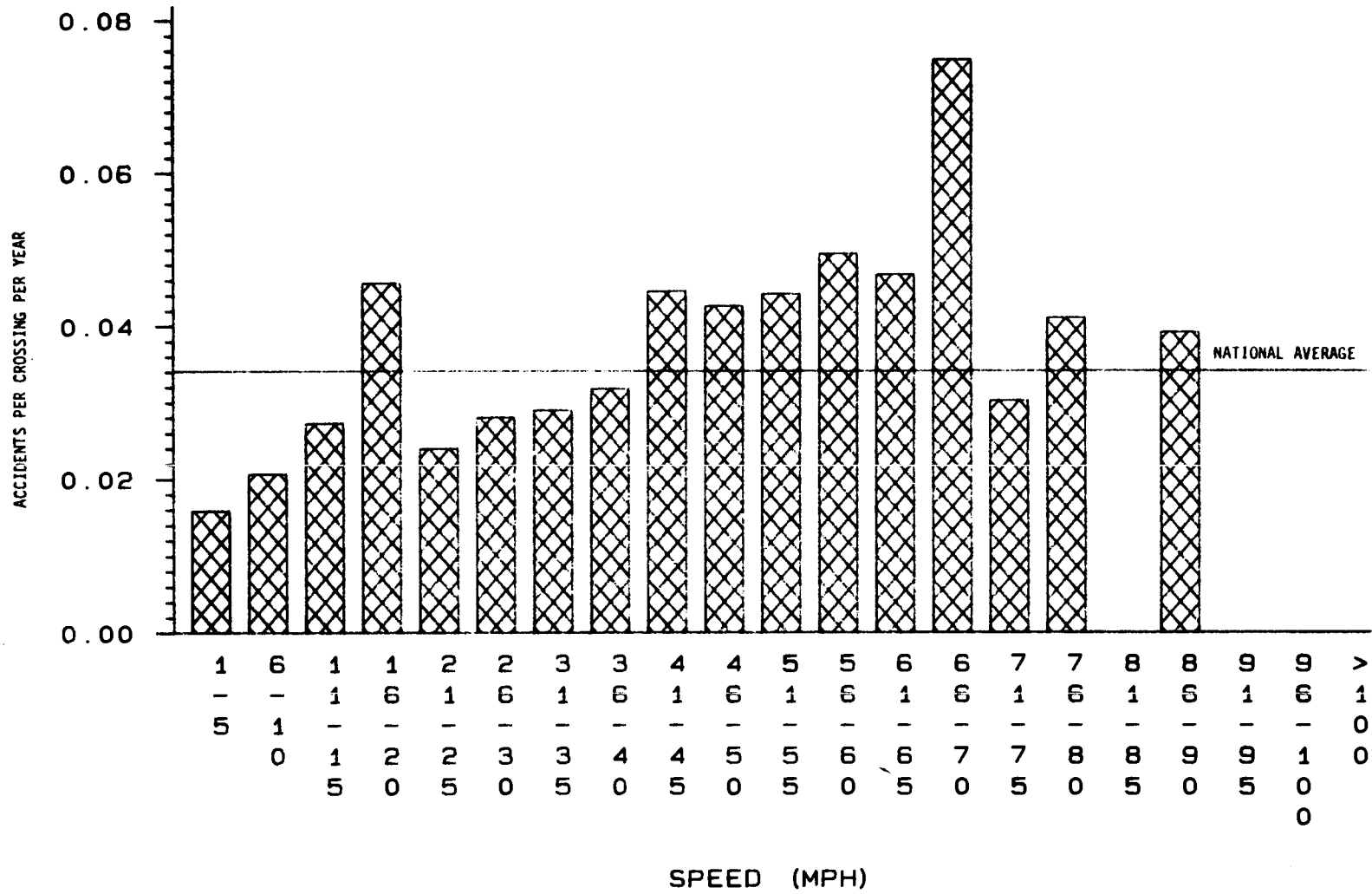


FIGURE 21. CROSSING ACCIDENT RATE BY MAXIMUM TIMETABLE SPEED

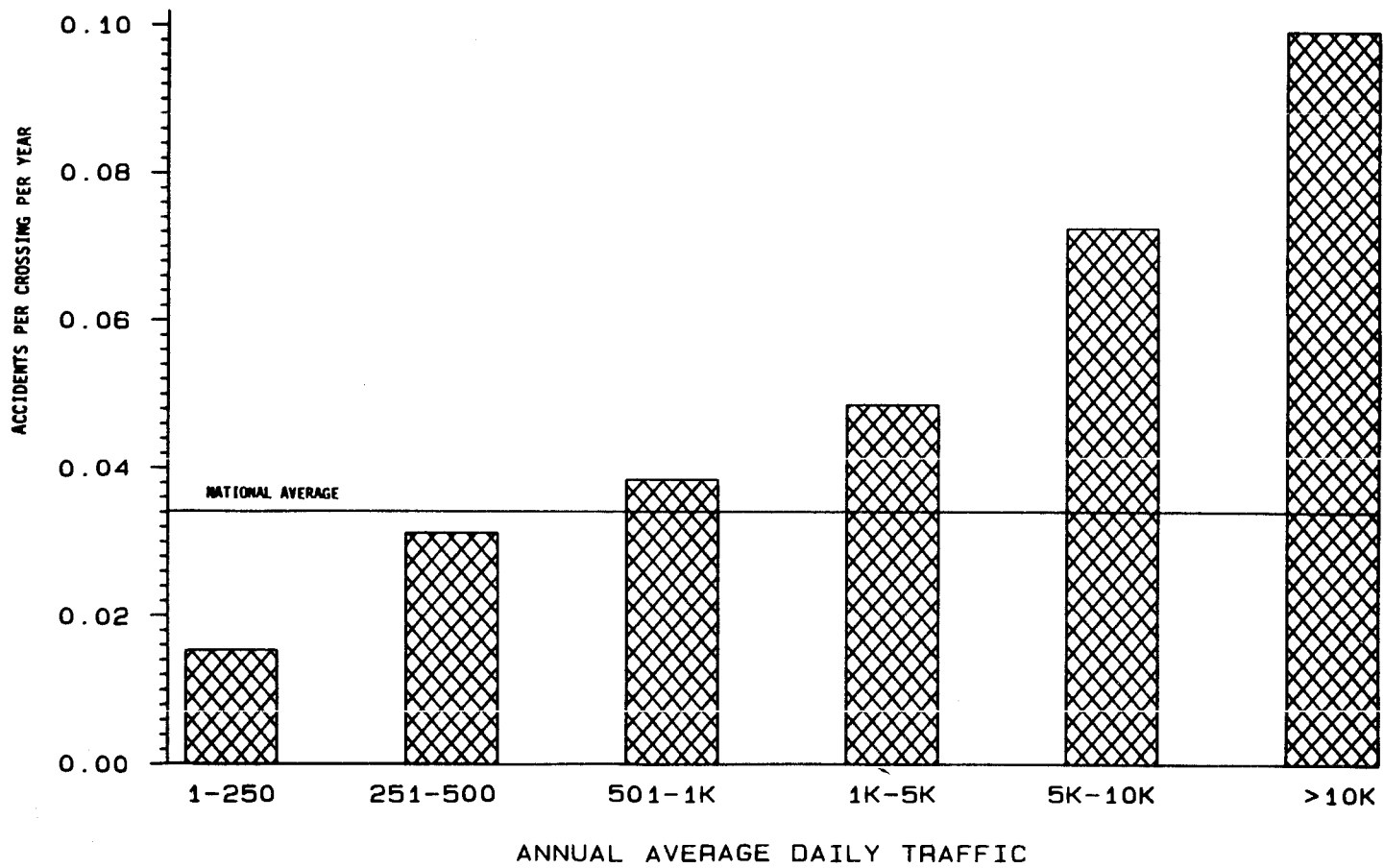


FIGURE 22. CROSSING ACCIDENT RATE BY ANNUAL AVERAGE DAILY TRAFFIC

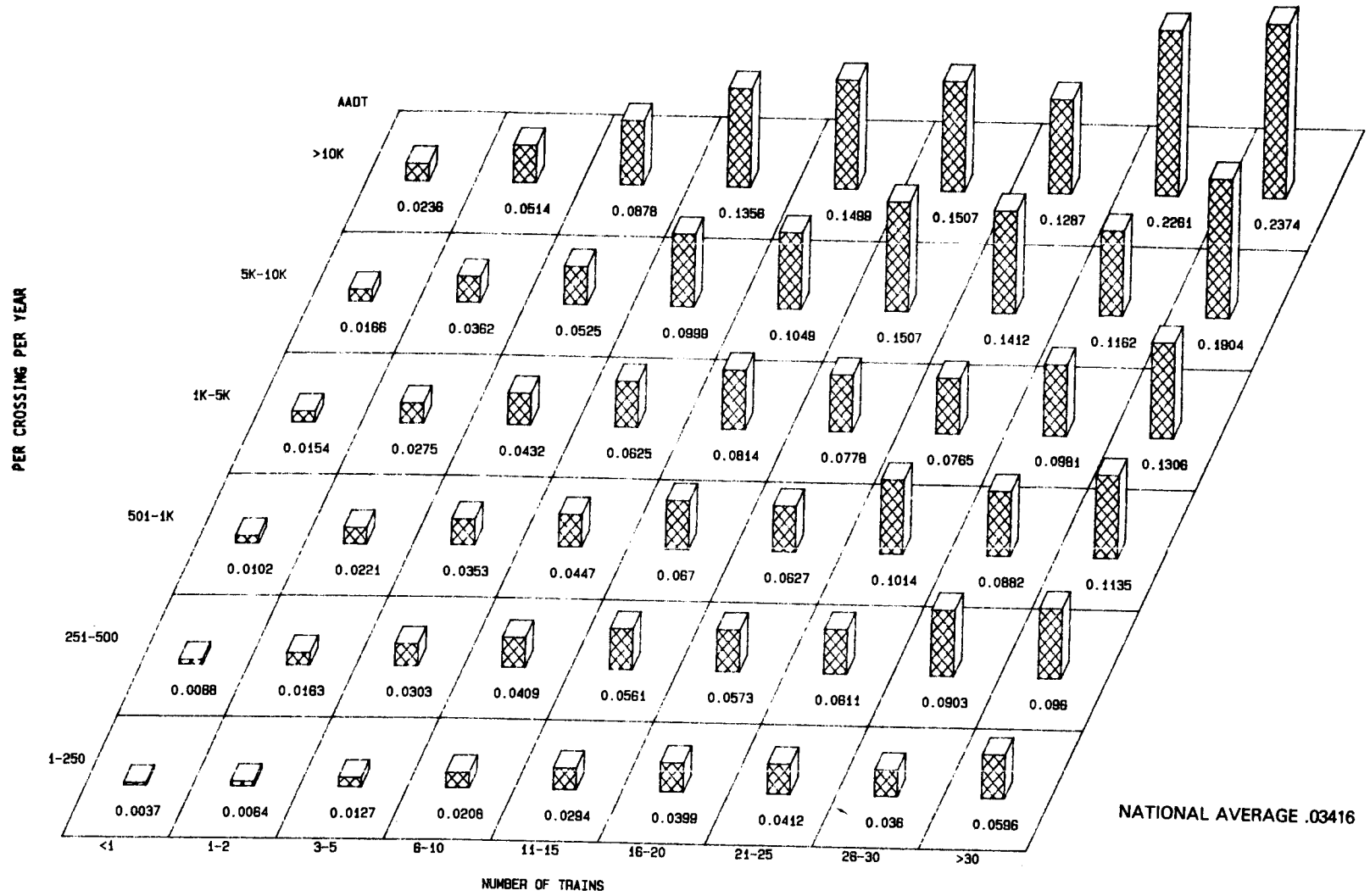


FIGURE 23. CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC

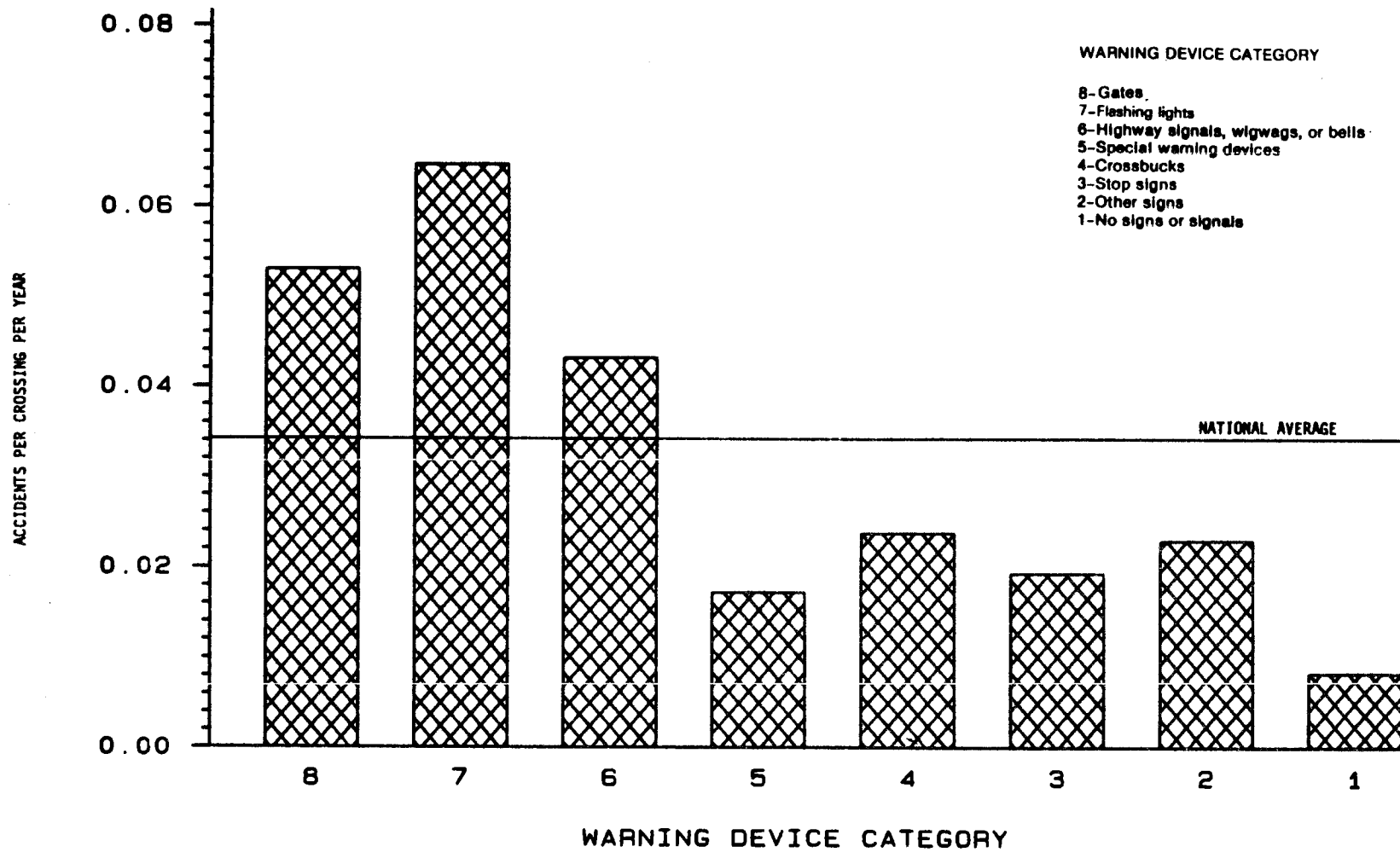


FIGURE 24. CROSSING ACCIDENT RATE BY WARNING DEVICE CATEGORY

4. RAIL-HIGHWAY CROSSING INVENTORY (1982)

PHYSICAL CHARACTERISTICS

TABLE 33. TOTAL PUBLIC AND PRIVATE CROSSINGS BY STATE AND TYPE

State	Public At Grade	Public Grade Separation		Private	Pedestrian	Total
		RR Under	RR Over			
Alabama	4,754	502	191	2,495	34	7,976
Alaska	224	9	1	74	---	308
Arizona	1,001	81	79	857	7	2,025
Arkansas	3,883	181	136	1,852	17	6,069
California	8,973	934	561	5,634	253	16,355
Colorado	2,389	195	110	1,599	12	4,305
Connecticut	509	334	261	466	53	1,623
Delaware	256	43	56	170	4	529
District of Columbia	56	30	38	15	13	152
Florida	5,578	232	58	2,284	75	8,227
Georgia	6,902	577	257	3,128	39	10,903
Hawaii	6	---	---	---	---	6
Idaho	2,097	94	65	1,835	7	4,098
Illinois	12,741	1,010	1,991	7,515	427	23,684
Indiana	9,947	545	652	4,100	122	15,366
Iowa	8,027	593	435	5,527	62	14,644
Kansas	9,421	357	231	4,865	35	14,909
Kentucky	3,665	471	482	3,822	114	8,554
Louisiana	4,803	217	129	4,064	46	9,259
Maine	1,039	125	80	1,102	14	2,360
Maryland	990	330	217	872	28	2,437
Massachusetts	1,210	809	448	597	103	3,167
Michigan	8,194	358	427	3,689	112	12,780
Minnesota	6,724	518	416	4,244	82	11,984
Mississippi	3,589	236	116	2,770	21	6,732
Missouri	6,246	717	450	4,686	99	12,198
Montana	2,077	149	104	3,138	23	5,491
Nebraska	5,346	244	165	3,972	26	9,753
Nevada	357	51	37	302	2	749
New Hampshire	660	159	66	522	23	1,430
New Jersey	2,211	555	747	780	130	4,423
New Mexico	827	67	80	606	4	1,584
New York	4,374	1,438	1,186	4,013	305	11,316
North Carolina	5,488	524	301	4,316	76	10,705
North Dakota	5,585	83	92	2,741	37	8,538
Ohio	9,885	1,252	1,211	5,941	111	18,400
Oklahoma	5,411	268	220	2,205	20	8,124
Oregon	2,875	286	177	3,358	101	6,797
Pennsylvania	6,599	1,684	2,015	4,218	344	14,860
Rhode Island	141	101	43	81	4	370
South Carolina	4,385	406	131	1,853	17	6,792
South Dakota	2,645	103	58	1,675	7	4,488
Tennessee	4,173	517	503	2,418	37	7,648
Texas	14,631	801	801	7,452	51	23,736
Utah	1,370	123	53	905	6	2,457
Vermont	595	76	86	791	51	1,599
Virginia	2,798	645	482	3,780	69	7,774
Washington	4,168	410	373	4,338	116	9,405
West Virginia	2,429	291	379	2,943	111	6,153
Wisconsin	6,611	469	377	4,155	176	11,788
Wyoming	621	93	54	1,029	9	1,806
Puerto Rico	55	---	---	2	---	57
Total.....	209,541	20,293	17,628	135,796	3,635	386,893

TABLE 34. TOTAL PUBLIC AND PRIVATE CROSSINGS BY CLASS I RAILROAD AND TYPE

Railroad	Public	Public Grade		Private	Pedestrian	Total
	At Grade	RR Under	RR Over			
CLASS I RAILROAD						
Amtrak	214	521	489	126	73	1,423
Atchison, Topeka and Santa Fe	11,492	662	644	6,939	85	19,822
Baltimore and Ohio Railroad	5,148	818	699	3,544	126	10,335
Bessemer and Lake Erie Railroad	145	32	49	96	2	324
Boston and Maine Corporation	1,136	483	237	589	56	2,501
Burlington Northern	24,774	1,504	1,265	18,053	343	45,939
Chesapeake and Ohio Railway	4,521	378	456	4,188	148	9,691
Chicago and Northwestern	9,564	641	806	6,051	206	17,268
Chi., Milw., St. Paul & Pacific	6,608	574	502	4,593	116	12,393
Chicago, Rock Island & Pacific	4,375	343	280	2,731	24	7,753
Clinchfield Railroad	145	54	67	232	4	502
Colorado and Southern Railway	443	42	21	308	3	817
Consolidated Rail Corporation	17,415	3,437	3,590	8,916	444	33,802
*The Estates	5,063	386	304	3,060	58	8,871
Delaware and Hudson Railroad	504	102	110	745	28	1,489
Denver and Rio Grande Western	1,120	128	69	609	4	1,930
Detroit, Toledo And Ironton	470	22	43	453	5	993
Duluth, Missabe And Iron Range	222	27	34	159	8	450
Elgin, Joliet and Eastern	250	32	28	102	---	412
Florida East Coast Railway	792	33	2	113	10	950
Fort Worth and Denver Railway	925	38	17	426	---	1,406
Grand Trunk Western	1,662	109	154	722	27	2,674
Illinois Central Gulf Railroad	9,754	828	759	5,638	195	18,174
Kansas City Southern Railway	1,016	92	75	476	6	1,665
Long Island Railroad	310	294	105	82	88	879
Louisiana & Arkansas Railway	725	60	33	561	5	1,384
Louisville And Nashville	7,803	772	571	4,856	197	14,199
Missouri-Kansas-Texas Railroad	2,110	157	136	1,139	7	3,549
Missouri Pacific Railroad	12,383	679	514	7,974	114	21,664
Norfolk and Western Railway	8,124	794	1,069	5,252	117	16,356
Pittsburg and Lake Erie Railroad	112	46	27	107	18	310
St. Louis Southwestern Railway	2,321	122	93	993	2	3,531
Seaboard Coast Line Railroad	11,593	857	292	5,442	129	18,313
Soo Line	4,364	146	159	2,743	45	7,457
Southern Pacific Trans. Company	11,463	998	652	7,963	257	21,333
Southern Railway	13,050	1,346	769	3,082	73	23,320
Union Pacific Railroad	7,670	577	271	5,153	57	14,728
Western Maryland Railway	489	76	66	497	11	1,139
Western Pacific	621	81	57	374	11	1,144
RECAPITULATION						
TOTAL CLASS I	190,896	18,291	15,514	123,087	3,102	350,890
TOTAL CLASS II & III	18,645	2,002	2,114	12,709	533	36,003
TOTAL	209,541	20,293	17,628	135,796	3,635	386,893

*NOTE: "The Estates" are crossings on predecessor lines that were not merged into Conrail.

TABLE 35. TOTAL CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL

State	LOCATION		Total
	Urban	Rural	
Alabama.....	2,069	2,685	4,754
Alaska.....	41	183	224
Arizona.....	519	482	1,001
Arkansas.....	1,510	2,373	3,883
California.....	6,502	2,471	8,973
Colorado.....	844	1,545	2,389
Connecticut.....	398	111	509
Delaware.....	80	176	256
Dist of Columbia.	56	---	56
Florida.....	2,542	3,036	5,578
Georgia.....	2,473	4,429	6,902
Hawaii.....	---	6	6
Idaho.....	367	1,730	2,097
Illinois.....	4,269	8,472	12,741
Indiana.....	4,055	5,892	9,947
Iowa.....	2,073	5,954	8,027
Kansas.....	1,734	7,687	9,421
Kentucky.....	1,037	2,628	3,665
Louisiana.....	2,076	2,727	4,803
Maine.....	273	766	1,039
Maryland.....	442	548	990
Massachusetts....	857	353	1,210
Michigan.....	3,180	5,014	8,194
Minnesota.....	1,746	4,978	6,724
Mississippi.....	1,144	2,445	3,589
Missouri.....	1,921	4,325	6,246
Montana.....	366	1,711	2,077
Nebraska.....	781	4,565	5,346
Nevada.....	92	265	357
New Hampshire....	290	370	660
New Jersey.....	1,519	692	2,211
New Mexico.....	246	581	827
New York.....	1,948	2,426	4,374
North Carolina...	2,124	3,364	5,488
North Dakota.....	333	5,252	5,585
Ohio.....	3,771	6,114	9,885
Oklahoma.....	288	5,123	5,411
Oregon.....	1,264	1,611	2,875
Pennsylvania.....	3,309	3,290	6,599
Rhode Island.....	131	10	141
South Carolina...	1,692	2,693	4,385
South Dakota.....	343	2,302	2,645
Tennessee.....	1,717	2,456	4,173
Texas.....	7,708	6,923	14,631
Utah.....	705	665	1,370
Vermont.....	201	394	595
Virginia.....	1,349	1,449	2,798
Washington.....	1,982	2,186	4,168
West Virginia....	510	1,919	2,429
Wisconsin.....	2,544	4,067	6,611
Wyoming.....	57	564	621
Puerto Rico.....	8	47	55
Unknown.....	---	---	---
TOTAL.....	77,486	132,055	209,541

NOTE: The classification of a crossing as urban or rural is now based on the functional classification code. In previous publications it was based on the highway system code.

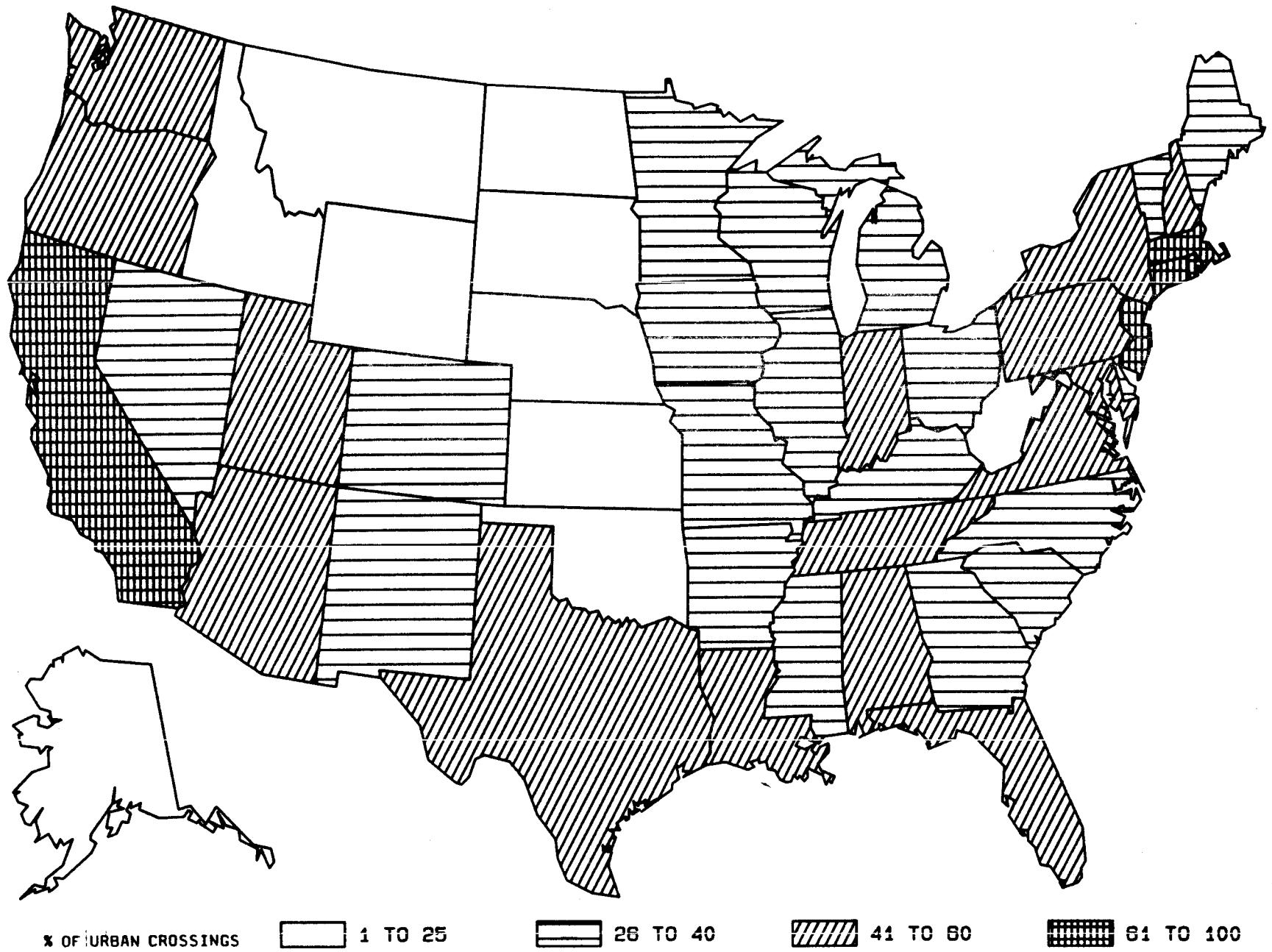


FIGURE 25. CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL

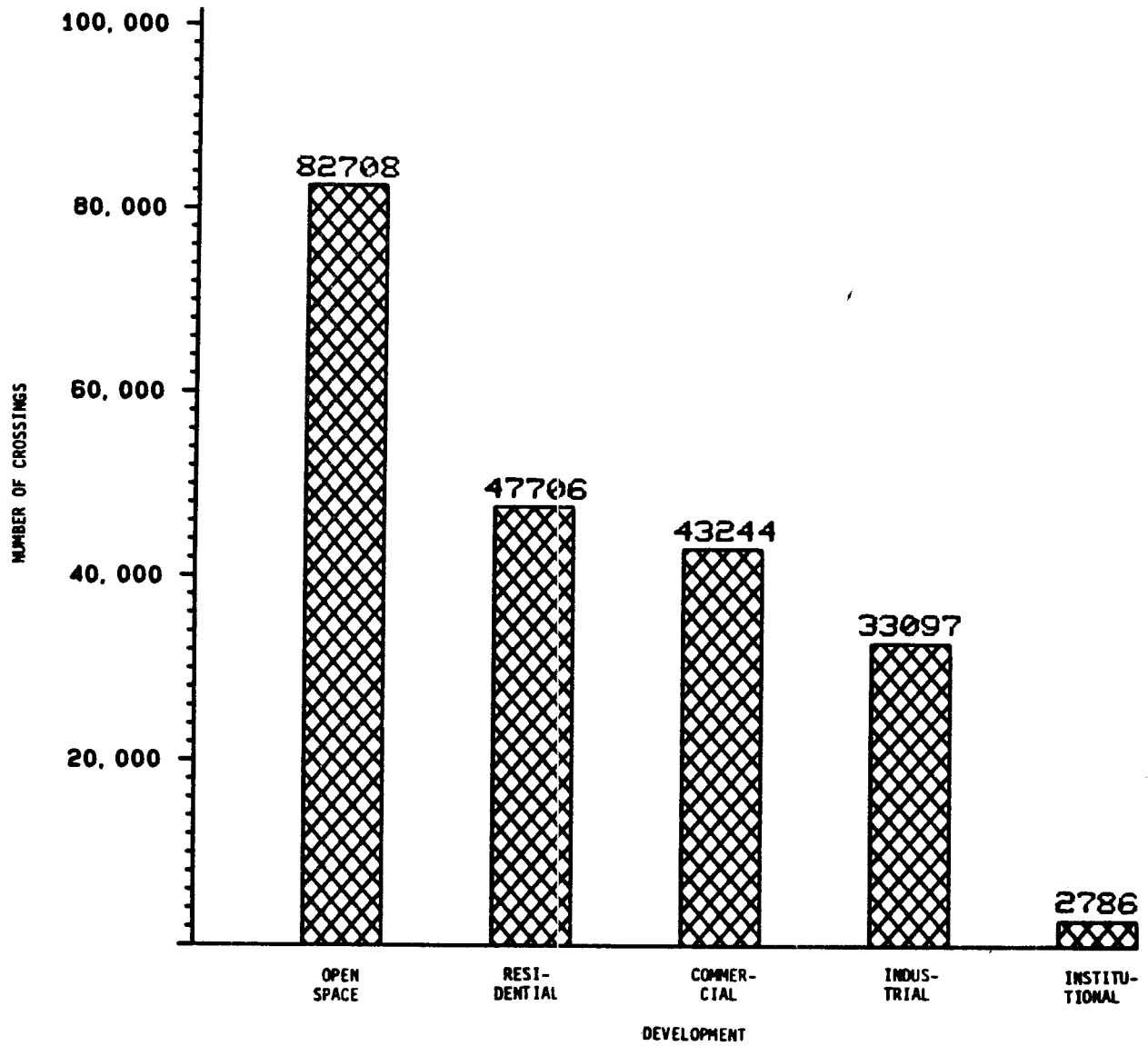


FIGURE 26. CROSSINGS BY TYPE OF DEVELOPMENT

TRACK DATA (1982)

TABLE 36. TOTAL CROSSINGS BY NUMBER OF MAIN AND OTHER TRACKS

Other Tracks	Number of main tracks							Total
	0	1	2	3	4	5	>5	
0	78*	122,997	10,142	323	87	8	3	133,638
1	23,579	25,927	2,876	95	22	1	---	52,500
2	5,428	8,919	1,289	43	12	2	---	15,693
3	1,650	2,680	431	25	7	---	---	4,793
4	467	916	205	12	8	---	---	1,608
5	175	359	112	8	3	---	1	658
>5	179	358	105	2	5	2	---	651
Total	31,556	162,156	15,160	508	144	13	4	209,541

* Crossings for which data was not reported in the inventory.

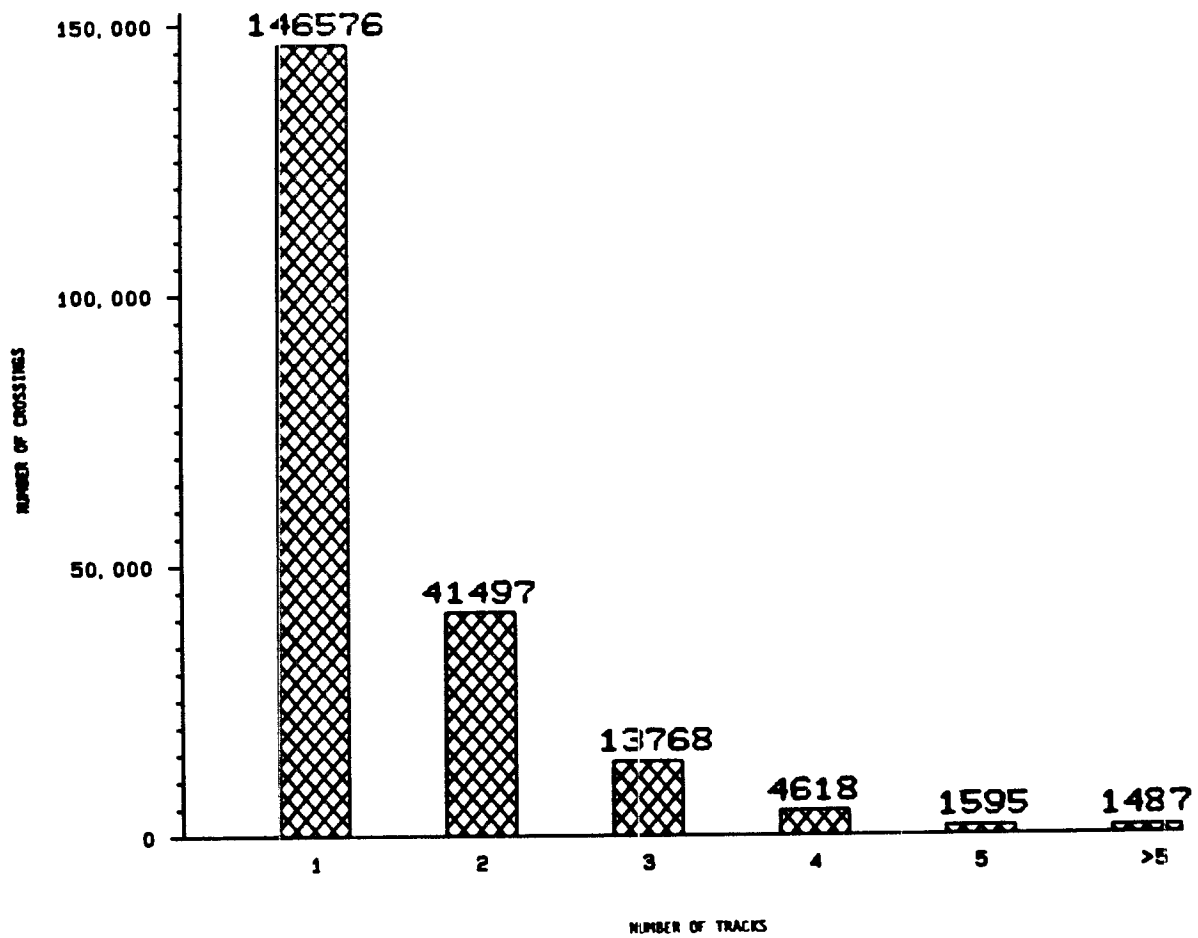


FIGURE 27. CROSSINGS BY NUMBER OF TRACKS

TABLE 37. TOTAL CROSSINGS BY NUMBER OF TRACKS AND WARNING DEVICE CATEGORY

Warning device	NUMBER OF TRACKS						Total
	1	2	3	4	5	>5	
Gates.....	6,624	6,945	2,885	1,154	408	413	18,429
Flashing lights.....	22,241	7,462	2,907	1,045	389	352	34,396
Hwy. signals, wigwags, bells	1,637	648	277	101	46	22	2,731
Special warning devices.....	5,212	1,324	464	176	66	77	7,319
Crossbucks.....	99,274	22,526	6,502	1,905	607	524	131,338
Stop signs.....	1,014	253	85	27	9	10	1,398
Other signs.....	677	166	35	21	10	7	916
No signs or signals.....	9,897	2,173	613	189	60	82	13,014
Total.....	146,576	41,497	13,768	4,618	1,595	1,487	209,541

TABLE 38. TOTAL CROSSINGS BY NUMBER OF TRACKS AND TRAFFIC LANES

Traffic Lanes	Number of tracks						Total
	1	2	3	4	5	>5	
1	28,452	5,627	1,140	302	87	97	35,705
2	110,180	33,005	11,522	3,896	1,354	1,241	161,198
3	722	304	113	43	12	13	1,207
4	6,372	2,324	911	345	135	126	10,213
5	324	93	32	17	4	1	471
>5	526	144	50	15	3	9	747
Total	146,576	41,497	13,768	4,618	1,595	1,487	209,541

TABLE 39. TOTAL CROSSINGS BY NUMBER OF TRACKS AND STATE

State	NUMBER OF TRACKS						Total
	1	2	3	4	5	>5	
Alabama.....	3,466	819	312	86	36	35	4,754
Alaska.....	181	34	6	1	1	1	224
Arizona.....	715	184	67	23	7	5	1,001
Arkansas.....	2,698	803	255	75	32	20	3,883
California.....	6,244	1,690	625	213	104	97	8,973
Colorado.....	1,643	473	158	51	31	33	2,389
Connecticut.....	382	91	24	8	4	---	509
Delaware.....	210	31	10	3	2	---	256
Dist of Columbia.	36	14	6	---	---	---	56
Florida.....	3,735	1,219	388	120	44	72	5,578
Georgia.....	5,103	1,211	366	142	39	41	6,902
Hawaii.....	6	---	---	---	---	---	6
Idaho.....	1,475	376	138	60	22	26	2,097
Illinois.....	7,746	3,369	1,042	361	115	108	12,741
Indiana.....	6,571	2,395	619	234	80	48	9,947
Iowa.....	5,533	1,503	621	218	80	72	8,027
Kansas.....	6,902	1,508	649	222	74	66	9,421
Kentucky.....	2,476	853	226	72	17	21	3,665
Louisiana.....	3,469	897	278	91	32	36	4,803
Maine.....	800	175	45	14	3	2	1,039
Maryland.....	690	203	60	25	3	9	990
Massachusetts....	949	195	42	15	5	4	1,210
Michigan.....	5,837	1,614	462	166	59	56	8,194
Minnesota.....	4,764	1,246	472	140	47	55	6,724
Mississippi.....	2,418	756	248	103	33	31	3,589
Missouri.....	4,192	1,259	535	154	50	56	6,246
Montana.....	1,495	366	149	33	14	20	2,077
Nebraska.....	3,771	995	386	108	36	50	5,346
Nevada.....	233	86	23	7	3	5	357
New Hampshire....	557	86	11	3	2	1	660
New Jersey.....	1,580	461	128	22	12	8	2,211
New Mexico.....	581	164	52	19	4	7	827
New York.....	3,150	893	226	68	17	20	4,374
North Carolina...	3,997	993	315	117	35	31	5,488
North Dakota.....	4,553	719	242	49	18	4	5,585
Ohio.....	5,765	2,749	852	338	109	72	9,885
Oklahoma.....	4,048	775	364	132	45	47	5,411
Oregon.....	2,098	500	200	54	14	9	2,875
Pennsylvania.....	4,414	1,516	422	159	44	44	6,599
Rhode Island....	88	43	8	2	---	---	141
South Carolina...	3,311	759	223	52	26	14	4,385
South Dakota.....	2,112	344	122	42	15	10	2,645
Tennessee.....	2,860	890	273	86	30	34	4,173
Texas.....	10,477	2,696	910	326	112	110	14,631
Utah.....	573	261	85	21	20	10	1,370
Vermont.....	478	84	23	4	1	5	595
Virginia.....	1,861	633	199	70	22	13	2,798
Washington.....	2,911	771	306	119	31	30	4,168
West Virginia....	1,735	494	155	29	6	10	2,429
Wisconsin.....	4,812	1,183	390	139	51	36	6,611
Wyoming.....	422	116	50	22	8	3	621
Puerto Rico.....	53	2	---	---	---	---	55
Unknown.....	---	---	---	---	---	---	---
TOTAL.....	146,576	41,497	13,768	4,618	1,595	1,487	209,541

HIGHWAY SYSTEM DATA (1982)

TABLE 40. TOTAL CROSSINGS BY TYPE OF HIGHWAY SYSTEM AND STATE

State	01	02	03	04	08	Total
Alabama.....	---	457	13	441	3,843	4,754
Alaska.....	---	25	7	45	147	224
Arizona.....	12	36	190	71	692	1,001
Arkansas.....	1	159	253	190	3,280	3,883
California.....	---	1,138	826	722	6,287	8,973
Colorado.....	---	108	439	108	1,734	2,389
Connecticut.....	---	31	177	21	280	509
Delaware.....	---	35	11	115	95	256
Dist of Columbia.	---	4	1	3	48	56
Florida.....	---	166	76	799	4,498	5,539
Georgia.....	3	415	154	826	5,504	6,902
Hawaii.....	---	---	---	---	6	6
Idaho.....	1	64	65	160	1,807	2,097
Illinois.....	---	752	1,412	993	9,584	12,741
Indiana.....	---	395	420	1,849	7,283	9,947
Iowa.....	5	465	792	777	5,988	8,027
Kansas.....	---	382	490	1,222	7,327	9,421
Kentucky.....	1	118	317	329	2,900	3,665
Louisiana.....	---	175	36	466	4,126	4,803
Maine.....	---	102	23	98	816	1,039
Maryland.....	---	61	207	90	632	990
Massachusetts....	---	119	319	121	651	1,210
Michigan.....	2	386	876	1,283	5,647	8,194
Minnesota.....	1	252	117	1,083	5,271	6,724
Mississippi.....	1	167	208	565	2,648	3,589
Missouri.....	---	140	293	760	5,053	6,246
Montana.....	5	93	60	178	1,741	2,077
Nebraska.....	---	276	295	596	4,179	5,346
Nevada.....	---	19	11	31	296	357
New Hampshire....	---	73	126	39	420	658
New Jersey.....	---	72	214	197	1,728	2,211
New Mexico.....	---	24	60	57	686	827
New York.....	---	271	1	801	3,301	4,374
North Carolina...	---	125	215	421	4,727	5,488
North Dakota.....	1	194	99	700	4,591	5,585
Ohio.....	---	439	130	1,975	7,339	9,883
Oklahoma.....	---	174	320	447	4,470	5,411
Oregon.....	---	161	321	296	2,097	2,875
Pennsylvania.....	---	456	447	548	5,148	6,599
Rhode Island.....	---	7	29	24	81	141
South Carolina...	1	272	97	1,418	2,597	4,385
South Dakota.....	---	125	119	309	2,092	2,645
Tennessee.....	---	179	11	377	3,606	4,173
Texas.....	87	394	1,315	991	11,844	14,631
Utah.....	1	26	1	164	1,178	1,370
Vermont.....	---	59	5	70	461	595
Virginia.....	---	112	365	449	1,872	2,798
Washington.....	---	87	234	623	3,224	4,168
West Virginia....	---	144	46	428	1,811	2,429
Wisconsin.....	---	431	918	495	4,767	6,611
Wyoming.....	---	33	17	59	512	621
Puerto Rico.....	---	14	---	3	38	55
Unknown.....	---	---	---	---	---	---
TOTAL.....	122	10,412	13,178	24,833	160,953	209,498

HIGHWAY SYSTEM CODES

CODE	SYSTEM	CODE	SYSTEM
01	INTERSTATE	02	FEDERAL-AID PRIMARY
03	FEDERAL-AID URBAN	04	FEDERAL-AID SECONDARY
08	NON-FEDERAL-AID		

SEE APENDIX A FOR EXPLANATION OF REVISION IN CODES.

TABLE 41. TOTAL CROSSINGS BY HIGHWAY SYSTEM GROUP AND STATE

HIGHWAY SYSTEM GROUP

State	On-State	Off-State	Total
Alabama.....	326	4,428	4,754
Alaska.....	99	125	224
Arizona.....	64	937	1,001
Arkansas.....	606	3,277	3,883
California.....	388	8,585	8,973
Colorado.....	278	2,111	2,389
Connecticut.....	89	420	509
Delaware.....	248	8	256
Dist of Columbia.....	55	1	56
Florida.....	1,057	4,521	5,578
Georgia.....	794	6,108	6,902
Hawaii.....	---	6	6
Idaho.....	149	1,948	2,097
Illinois.....	1,550	11,191	12,741
Indiana.....	939	9,008	9,947
Iowa.....	454	7,573	8,027
Kansas.....	525	8,896	9,421
Kentucky.....	1,030	2,635	3,665
Louisiana.....	1,027	3,776	4,803
Maine.....	210	829	1,039
Maryland.....	162	828	990
Massachusetts....	45	1,165	1,210
Michigan.....	502	7,692	8,194
Minnesota.....	383	6,341	6,724
Mississippi.....	343	3,246	3,589
Missouri.....	896	5,350	6,246
Montana.....	327	1,750	2,077
Nebraska.....	420	4,926	5,346
Nevada.....	66	291	357
New Hampshire....	192	468	660
New Jersey.....	207	2,004	2,211
New Mexico.....	179	648	827
New York.....	457	3,917	4,374
North Carolina...	3,556	1,932	5,488
North Dakota.....	276	5,309	5,585
Ohio.....	1,324	8,561	9,885
Oklahoma.....	408	5,003	5,411
Oregon.....	185	2,690	2,875
Pennsylvania.....	2,282	4,317	6,599
Rhode Island.....	31	110	141
South Carolina...	2,903	1,482	4,385
South Dakota.....	190	2,455	2,645
Tennessee.....	276	3,897	4,173
Texas.....	2,631	12,000	14,631
Utah.....	146	1,224	1,370
Vermont.....	143	452	595
Virginia.....	1,718	1,080	2,798
Washington.....	239	3,929	4,168
West Virginia....	1,474	955	2,429
Wisconsin.....	572	6,039	6,611
Wyoming.....	99	522	621
Puerto Rico.....	38	17	55
Unknown.....	---	---	---
TOTAL.....	32,558	176,983	209,541

TABLE 42. TOTAL CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD AT RAIL-HIGHWAY CROSSING

Rural	Crossings	Urban	Crossings
Interstate.....	17	Interstate.....	96
Other principal arterial	1,597	Other freeway/expressway	542
Minor arterial.....	4,782	Other principal arterial	7,600
Major collector.....	13,918	Minor arterial.....	12,939
Minor collector.....	13,765	Collector.....	11,395
Local.....	97,925	Local.....	44,914
Total.....	132,004	Total.....	77,486

TABLE 43. TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND STATE

State	NUMBER OF LANES (BOTH DIRECTIONS)						Total
	1	2	3	4	5	>5	
Alabama.....	977	3,508	25	224	9	11	4,754
Alaska.....	29	186	1	7	1	---	224
Arizona.....	20	848	12	89	19	13	1,001
Arkansas.....	1,006	2,806	13	57	---	1	3,883
California.....	479	6,309	176	1,621	164	224	8,973
Colorado.....	176	2,042	18	144	5	4	2,389
Connecticut.....	31	447	7	22	2	---	509
Delaware.....	2	231	4	18	---	1	256
Dist of Columbia.	2	48	1	3	---	2	56
Florida.....	319	4,578	69	455	39	118	5,578
Georgia.....	1,399	5,255	29	211	1	7	6,902
Hawaii.....	---	6	---	---	---	---	6
Idaho.....	593	1,415	10	74	2	3	2,097
Illinois.....	2,741	9,216	53	700	11	20	12,741
Indiana.....	2,019	7,448	49	414	6	11	9,947
Iowa.....	2,017	5,774	22	203	3	8	8,027
Kansas.....	2,331	6,781	8	298	---	3	9,421
Kentucky.....	1,149	2,442	7	66	1	---	3,665
Louisiana.....	684	3,871	14	210	8	16	4,803
Maine.....	63	958	4	14	---	---	1,039
Maryland.....	139	774	8	62	3	4	990
Massachusetts....	45	1,099	8	57	1	---	1,210
Michigan.....	631	6,802	60	624	31	46	8,194
Minnesota.....	1,182	5,248	17	273	3	1	6,724
Mississippi.....	489	2,977	8	108	2	5	3,589
Missouri.....	1,673	4,414	11	139	4	5	6,246
Montana.....	292	1,755	4	25	1	---	2,077
Nebraska.....	1,273	3,968	4	96	2	3	5,346
Nevada.....	132	198	1	25	---	1	357
New Hampshire....	40	588	4	25	2	1	660
New Jersey.....	132	1,913	11	147	2	6	2,211
New Mexico.....	273	511	1	36	3	3	827
New York.....	425	3,780	23	136	4	6	4,374
North Carolina...	348	4,882	37	201	11	9	5,488
North Dakota.....	1,298	4,250	1	36	---	---	5,585
Ohio.....	1,456	8,000	72	330	14	13	9,885
Oklahoma.....	940	4,181	7	275	6	2	5,411
Oregon.....	342	2,385	46	95	4	3	2,875
Pennsylvania.....	1,034	5,216	120	199	2	28	6,599
Rhode Island.....	6	114	---	21	---	---	141
South Carolina...	737	3,429	15	185	7	12	4,385
South Dakota.....	836	1,746	3	56	1	3	2,645
Tennessee.....	770	3,158	21	204	14	6	4,173
Texas.....	2,598	10,645	72	1,181	41	94	14,631
Utah.....	256	1,018	---	85	1	10	1,370
Vermont.....	135	448	4	8	---	---	595
Virginia.....	42	2,600	25	111	10	10	2,798
Washington.....	400	3,305	75	346	28	14	4,168
West Virginia....	1,229	1,179	9	11	---	1	2,429
Wisconsin.....	364	5,953	16	258	1	19	6,611
Wyoming.....	149	440	2	28	2	---	621
Puerto Rico.....	2	53	---	---	---	---	55
Unknown.....	---	---	---	---	---	---	---
TOTAL.....	35,705	161,198	1,207	10,213	471	747	209,541

TABLE 44. TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND WARNING DEVICE CATEGORY

Warning device	NUMBER OF LANES (BOTH DIRECTIONS)						Total
	1	2	3	4	5	>5	
Gates.....	343	14,678	276	2,677	191	264	18,429
Flashing lights.....	810	28,900	373	3,869	179	265	34,396
Hwy. signals, wigwags, bells	289	2,098	34	239	27	44	2,731
Special warning devices.....	504	5,985	124	646	16	44	7,319
Crossbucks.....	30,035	98,688	298	2,173	44	100	131,338
Stop signs.....	233	1,108	10	45	---	2	1,398
Other signs.....	202	685	5	21	---	3	916
No signs or signals.....	3,289	9,056	87	543	14	25	13,014
Total.....	35,705	161,198	1,207	10,213	471	747	209,541

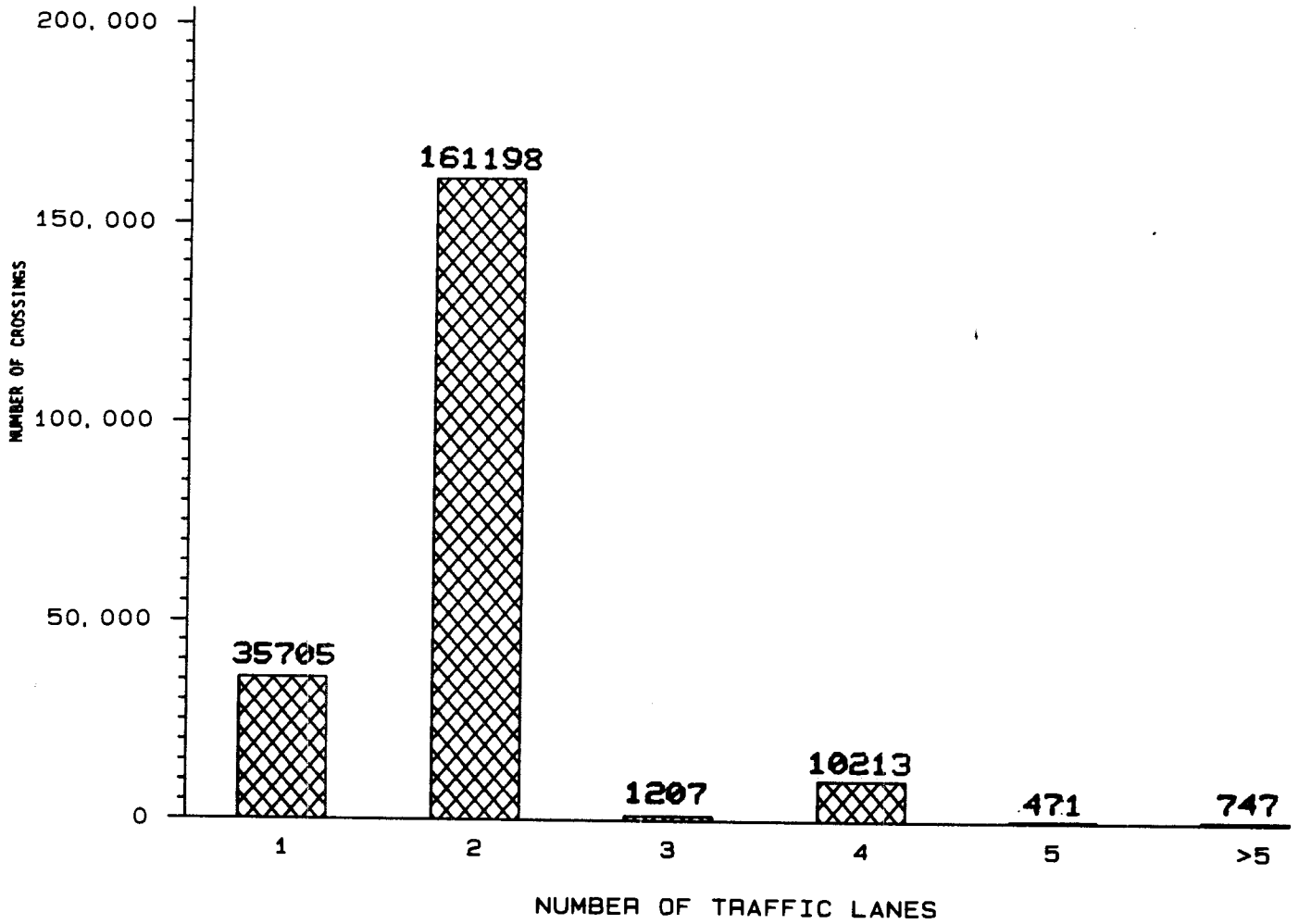


FIGURE 28. CROSSINGS BY NUMBER OF TRAFFIC LANES

WARNING DEVICE DATA

TABLE 45. TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND STATE

State	Gates	Warning Device Category						No Signs or Signals	Total
		Flashing Lights	Hwy. Sig. Wigwags Bells	Special	Cross- Bucks	Stop Signs	Other Signs		
Alabama.....	176	611	22	57	3,354	73	10	451	4,754
Alaska.....	1	44	---	18	145	2	1	13	224
Arizona.....	232	100	14	89	536	6	---	24	1,001
Arkansas.....	182	448	27	103	2,940	10	---	173	3,883
California.....	2,924	1,180	415	208	3,939	88	20	199	8,973
Colorado.....	149	361	42	82	1,587	26	2	140	2,389
Connecticut.....	50	170	7	94	69	9	2	108	509
Delaware.....	30	97	2	41	79	1	---	6	256
Dist of Columbia.	---	3	---	7	15	11	---	20	56
Florida.....	1,278	978	10	146	2,781	31	75	279	5,578
Georgia.....	762	537	22	173	4,928	10	11	459	6,902
Hawaii.....	---	---	---	---	6	---	---	---	6
Idaho.....	57	219	14	22	1,463	86	8	228	2,097
Illinois.....	1,788	2,911	210	301	6,988	6	5	532	12,741
Indiana.....	785	2,326	160	277	5,668	83	11	637	9,947
Iowa.....	414	1,079	134	87	6,021	6	2	284	8,027
Kansas.....	387	781	93	255	7,666	2	2	235	9,421
Kentucky.....	229	721	38	111	2,132	5	---	429	3,665
Louisiana.....	252	789	12	76	3,189	34	22	429	4,803
Maine.....	64	379	3	145	431	---	4	13	1,039
Maryland.....	71	180	36	65	427	29	19	163	990
Massachusetts....	189	436	38	243	247	2	3	52	1,210
Michigan.....	646	1,903	71	251	5,068	18	22	215	8,194
Minnesota.....	320	876	19	52	5,196	48	3	210	6,724
Mississippi.....	31	359	19	60	2,240	448	11	421	3,589
Missouri.....	330	1,141	131	144	4,065	10	2	423	6,246
Montana.....	99	213	10	23	1,544	3	4	181	2,077
Nebraska.....	349	521	46	30	4,182	9	5	204	5,346
Nevada.....	73	49	1	6	192	---	7	29	357
New Hampshire....	26	154	16	166	260	9	4	25	660
New Jersey.....	384	680	30	396	592	6	3	120	2,211
New Mexico.....	144	105	8	11	537	---	5	17	827
New York.....	724	1,237	103	516	1,512	1	53	228	4,374
North Carolina...	545	784	38	243	3,351	19	20	488	5,488
North Dakota.....	197	213	1	3	4,801	2	---	368	5,585
Ohio.....	771	2,266	95	108	6,182	14	16	433	9,885
Oklahoma.....	198	741	44	149	4,103	3	9	164	5,411
Oregon.....	334	166	69	113	1,740	100	11	342	2,875
Pennsylvania.....	607	1,357	107	784	2,660	74	426	584	6,599
Rhode Island.....	9	25	19	33	28	5	3	19	141
South Carolina...	163	417	5	358	3,153	1	16	272	4,385
South Dakota.....	1	178	2	1	2,362	---	---	101	2,645
Tennessee.....	171	647	18	282	2,243	35	2	775	4,173
Texas.....	1,031	2,689	125	164	9,546	34	17	1,025	14,631
Utah.....	79	219	11	113	796	5	49	98	1,370
Vermont.....	19	192	4	58	302	1	6	13	595
Virginia.....	508	518	29	242	1,260	1	6	234	2,798
Washington.....	125	538	55	75	2,827	20	7	521	4,168
West Virginia....	114	373	12	50	1,534	8	6	332	2,429
Wisconsin.....	350	1,356	340	238	4,077	1	3	246	6,611
Wyoming.....	57	128	2	2	374	3	3	52	621
Puerto Rico.....	4	1	2	48	---	---	---	---	55
Unknown.....	---	---	---	---	---	---	---	---	---
TOTAL.....	18,429	34,396	2,731	7,319	131,338	1,398	916	13,014	209,541

NOTE: "Special" are warning systems that are not train activated, such as, a crossing being flagged by a member of the train crew.

TABLE 46. TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND RAILROAD

Railroad	Warning Device Category							No Signs or Signals	Total
	Gates	Flashing Lights	Hwy.Sig. Wigwags Bells	Special	Cross- Bucks	Stop Signs	Other Signs		
Amtrak (National RR Passenger Corp)	105	32	---	23	36	2	2	14	214
Atchison, Topeka And Santa Fe Rwy Co.	1,540	1,513	221	567	7,601	6	11	33	11,492
Baltimore And Ohio Railroad Co.	316	1,134	41	104	3,264	19	6	264	5,148
Bessemer And Lake Erie Railroad Co.	34	25	---	3	81	---	---	2	145
Boston And Maine Corporation	194	253	27	247	353	4	4	54	1,136
Burlington Northern Incorporated	1,369	2,801	179	329	18,412	153	13	1,518	24,774
Chesapeake And Ohio Railway Company	352	917	13	81	2,884	6	2	266	4,521
Chicago And Northwestern	525	1,523	337	143	6,566	5	6	399	9,564
Chicago, Milw, St. Paul And Pacific	313	1,044	105	212	4,529	7	7	391	6,608
Chicago, Rock Island And Pacific	289	582	46	11	3,273	9	1	164	4,375
Clinchfield Railroad Company	8	20	3	10	95	---	---	9	145
Colorado And Southern Railway	29	85	9	1	276	4	1	38	443
Consolidated Rail Corporation	1,928	4,682	319	1,449	7,178	119	341	1,399	17,415
Delaware And Hudson Railway	161	151	5	19	130	---	20	18	504
Denver And Rio Grande Western RR Co.	63	203	3	11	737	4	3	96	1,120
Detroit, Toledo And Ironton RR Co.	29	93	---	4	332	1	---	11	470
Duluth, Missabe And Iron Range Rwy Co.	9	39	---	3	169	1	1	---	222
Elgin, Joliet And Eastern Railway Co.	77	75	2	12	83	---	---	1	250
Florida East Coast Railway Co.	459	122	---	5	196	---	---	10	792
Fort Worth And Denver Railway	18	107	1	3	681	---	2	113	925
Grand Trunk Western Railroad Co.	306	454	12	99	775	2	---	14	1,662
Illinois Central Gulf Railroad Co.	437	1,463	174	171	6,532	317	10	650	9,754
Kansas City Southern Railway Co.	33	171	7	1	731	---	1	72	1,016
Long Island Railroad Company	269	29	---	---	11	---	---	1	310
Louisiana And Arkansas Rwy Company	22	165	---	---	513	---	---	25	725
Louisville And Nashville Railroad Co.	411	1,508	49	189	4,698	59	10	879	7,803
Missouri Pacific Railroad Co.	611	2,019	57	139	8,821	15	1	720	12,383
Missouri-Kansas-Texas Railroad Co.	110	379	34	15	1,411	2	1	158	2,110
Norfolk And Western Railway Co.	741	1,876	132	192	4,940	14	8	221	8,124
Pittsburg And Lake Erie Railroad Co.	18	10	2	3	64	---	---	15	112
Seaboard Coast Line Railroad Co.	1,443	1,477	23	499	7,590	34	9	518	11,593
Soo Line Railroad Company	144	560	24	6	3,518	4	1	107	4,364
Southern Pacific Transportation Co.	2,749	1,376	405	40	6,125	77	21	670	11,463
Southern Railway Company	1,094	1,698	30	543	7,949	30	32	1,674	13,050
St. Louis Southwestern Railway Co.	153	330	5	22	1,699	4	---	108	2,321
Union Pacific Railroad Co.	543	851	74	176	5,263	86	58	619	7,670
Western Maryland Railway Company	27	140	11	27	243	1	11	29	489
Western Pacific Railroad Company	213	77	11	3	282	10	1	24	621
* The Estates	108	844	68	208	3,242	38	122	433	5,063
TOTAL CLASS I RAILROADS.....	17,250	30,828	2,489	5,570	121,283	1,033	706	11,737	190,896
RECAPITULATION									
Class I railroads	17,250	30,828	2,489	5,570	121,283	1,033	706	11,737	190,896
Class II and III railroads	1,179	3,568	242	1,749	10,055	365	210	1,277	18,645
Grand total	18,429	34,396	2,731	7,319	131,338	1,398	916	13,014	209,541

NOTE: "The Estates" are crossings on predecessor lines that were not merged into Conrail.

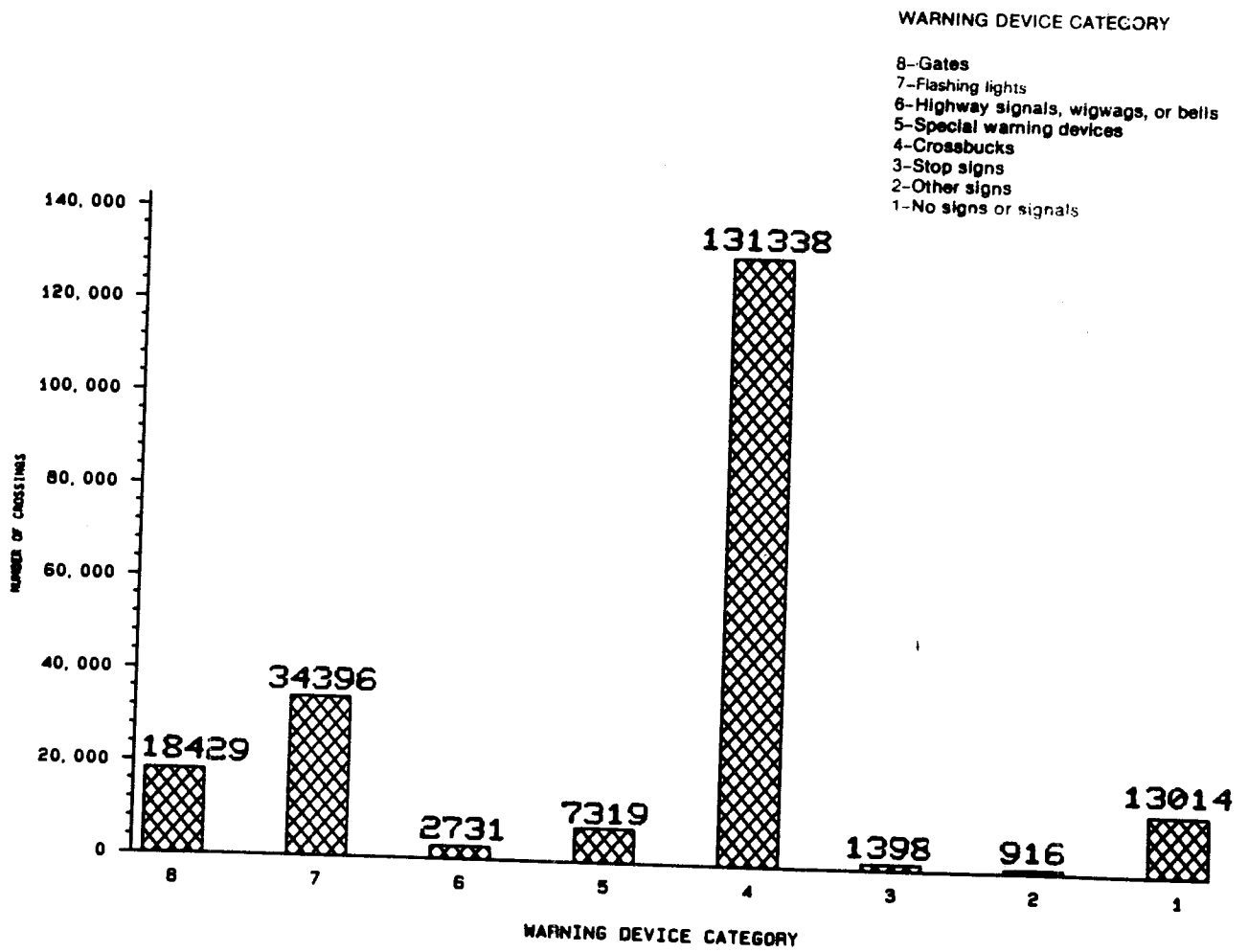


FIGURE 29. CROSSINGS BY WARNING DEVICE CATEGORY

TABLE 47. TOTAL CROSSINGS BY PAVEMENT MARKINGS AND STATE

State	PAVEMENT MARKING					Total
	Stop Lines	RR X-ing Symbol	Both	.....None..... Paved	Unpaved	
Alabama.....	45	134	128	3,300	1,147	4,754
Alaska.....	3	1	13	93	114	224
Arizona.....	38	17	359	327	260	1,001
Arkansas.....	48	98	106	2,010	1,621	3,883
California.....	1,094	231	5,121	2,185	342	8,973
Colorado.....	17	22	96	1,299	955	2,389
Connecticut.....	17	2	96	388	6	509
Delaware.....	3	22	117	104	10	256
Dist of Columbia.	---	---	32	24	---	56
Florida.....	319	124	1,446	2,646	1,043	5,578
Georgia.....	113	151	570	3,917	2,151	6,902
Hawaii.....	2	---	---	4	---	6
Idaho.....	1	3	333	889	871	2,097
Illinois.....	69	147	1,388	5,485	5,652	12,741
Indiana.....	96	273	2,095	5,597	1,886	9,947
Iowa.....	78	101	522	2,932	4,394	8,027
Kansas.....	2	16	517	2,986	5,900	9,421
Kentucky.....	56	515	583	1,573	938	3,665
Louisiana.....	22	549	268	2,810	1,154	4,803
Maine.....	---	---	617	319	103	1,039
Maryland.....	29	29	145	716	71	990
Massachusetts....	53	45	121	955	36	1,210
Michigan.....	93	123	731	4,870	2,377	8,194
Minnesota.....	133	173	536	2,507	3,375	6,724
Mississippi.....	12	9	454	1,983	1,131	3,589
Missouri.....	84	159	600	2,594	2,809	6,246
Montana.....	4	20	263	440	1,350	2,077
Nebraska.....	41	156	216	1,435	3,498	5,346
Nevada.....	7	1	79	122	148	357
New Hampshire....	19	11	38	522	70	660
New Jersey.....	50	87	89	1,850	135	2,211
New Mexico.....	4	20	40	353	410	827
New York.....	130	249	283	3,319	393	4,374
North Carolina...	36	21	4,096	586	749	5,488
North Dakota.....	14	16	177	731	4,647	5,585
Ohio.....	743	808	4,703	2,784	847	9,885
Oklahoma.....	24	26	47	2,782	2,532	5,411
Oregon.....	152	319	471	1,312	621	2,875
Pennsylvania.....	66	360	163	5,242	768	6,599
Rhode Island.....	13	---	14	114	---	141
South Carolina...	98	100	1,247	2,149	791	4,385
South Dakota.....	14	5	78	739	1,809	2,645
Tennessee.....	16	29	183	2,976	969	4,173
Texas.....	23	42	4,073	6,224	4,269	14,631
Utah.....	14	22	167	805	362	1,370
Vermont.....	25	16	56	312	186	595
Virginia.....	116	93	1,192	1,105	292	2,798
Washington.....	162	32	543	2,520	911	4,168
West Virginia....	26	15	106	1,474	808	2,429
Wisconsin.....	89	38	357	5,148	979	6,611
Wyoming.....	10	14	78	139	380	621
Puerto Rico.....	---	14	---	36	5	55
Unknown.....	---	---	---	---	---	---
TOTAL.....	4,323	5,458	35,753	97,732	66,275	209,541

NOTE: The Manual On Uniform Traffic Control Devices does not require pavement markings at all crossings.

TABLE 48. TOTAL CROSSINGS BY RAILROAD ADVANCE WARNING AND STATE

State	RAILROAD ADVANCE WARNING		
	Yes	No	Total
Alabama.....	908	3,846	4,754
Alaska.....	67	157	224
Arizona.....	540	461	1,001
Arkansas.....	589	3,294	3,883
California.....	7,075	1,898	8,973
Colorado.....	841	1,548	2,389
Connecticut.....	229	280	509
Delaware.....	221	35	256
Dist of Columbia.	31	25	56
Florida.....	2,358	3,220	5,578
Georgia.....	1,320	5,582	6,902
Hawaii.....	1	5	6
Idaho.....	1,694	403	2,097
Illinois.....	6,342	6,399	12,741
Indiana.....	6,313	3,634	9,947
Iowa.....	4,165	3,862	8,027
Kansas.....	3,854	5,567	9,421
Kentucky.....	787	2,878	3,665
Louisiana.....	2,416	2,387	4,803
Maine.....	1,010	29	1,039
Maryland.....	415	575	990
Massachusetts....	892	318	1,210
Michigan.....	5,435	2,759	8,194
Minnesota.....	3,469	3,255	6,724
Mississippi.....	662	2,927	3,589
Missouri.....	1,214	5,032	6,246
Montana.....	605	1,472	2,077
Nebraska.....	2,443	2,903	5,346
Nevada.....	149	208	357
New Hampshire....	466	194	660
New Jersey.....	785	1,426	2,211
New Mexico.....	162	665	827
New York.....	3,231	1,143	4,374
North Carolina...	4,270	1,218	5,488
North Dakota.....	929	4,656	5,585
Ohio.....	6,178	3,707	9,885
Oklahoma.....	1,027	4,384	5,411
Oregon.....	1,795	1,080	2,875
Pennsylvania.....	2,400	4,199	6,599
Rhode Island.....	28	113	141
South Carolina...	2,473	1,912	4,385
South Dakota.....	712	1,933	2,645
Tennessee.....	646	3,527	4,173
Texas.....	6,509	8,122	14,631
Utah.....	479	891	1,370
Vermont.....	349	246	595
Virginia.....	1,913	885	2,798
Washington.....	2,723	1,445	4,168
West Virginia....	504	1,925	2,429
Wisconsin.....	3,850	2,761	6,611
Wyoming.....	155	466	621
Puerto Rico.....	32	23	55
Unknown.....	---	---	---
TOTAL.....	97,661	111,880	209,541

NOTE: The Manual On Uniform Traffic Control Devices does not require pavement markings at all crossings.

TABLE 49. TOTAL CROSSINGS MEETING THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' STANDARD FOR CROSSBUCKS BY STATE

State	Active Warning	X-buck meet standards		Total
		Yes	No	
Alabama.....	809	1,618	2,327	4,754
Alaska.....	45	95	84	224
Arizona.....	346	500	155	1,001
Arkansas.....	657	2,191	1,035	3,883
California.....	4,519	1,986	2,468	8,973
Colorado.....	552	938	899	2,389
Connecticut.....	227	116	166	509
Delaware.....	129	90	37	256
Dist of Columbia.	3	14	39	56
Florida.....	2,266	2,218	1,094	5,578
Georgia.....	1,321	4,365	1,216	6,902
Hawaii.....	---	4	2	6
Idaho.....	290	995	812	2,097
Illinois.....	4,909	6,043	1,789	12,741
Indiana.....	3,271	3,515	3,161	9,947
Iowa.....	1,627	5,281	1,119	8,027
Kansas.....	1,261	3,088	5,072	9,421
Kentucky.....	988	1,604	1,073	3,665
Louisiana.....	1,053	2,967	783	4,803
Maine.....	446	539	54	1,039
Maryland.....	287	194	509	990
Massachusetts....	663	315	232	1,210
Michigan.....	2,620	3,835	1,739	8,194
Minnesota.....	1,215	4,913	596	6,724
Mississippi.....	409	1,666	1,514	3,589
Missouri.....	1,602	1,757	2,887	6,246
Montana.....	322	1,180	575	2,077
Nebraska.....	916	2,846	1,584	5,346
Nevada.....	123	118	116	357
New Hampshire....	196	39	425	660
New Jersey.....	1,094	415	702	2,211
New Mexico.....	257	308	262	827
New York.....	2,064	968	1,342	4,374
North Carolina...	1,367	2,220	1,901	5,488
North Dakota.....	411	2,942	2,232	5,585
Ohio.....	3,132	3,621	3,132	9,885
Oklahoma.....	983	1,371	3,057	5,411
Oregon.....	569	971	1,335	2,875
Pennsylvania.....	2,071	1,544	2,984	6,599
Rhode Island.....	53	6	82	141
South Carolina...	585	2,896	904	4,385
South Dakota.....	181	2,101	363	2,645
Tennessee.....	836	1,241	2,096	4,173
Texas.....	3,845	3,322	7,464	14,631
Utah.....	309	496	565	1,370
Vermont.....	215	196	184	595
Virginia.....	1,055	1,081	662	2,798
Washington.....	718	1,839	1,611	4,168
West Virginia....	499	982	948	2,429
Wisconsin.....	2,046	3,196	1,369	6,611
Wyoming.....	187	215	219	621
Puerto Rico.....	7	16	32	55
Unknown.....	---	---	---	---
TOTAL.....	55,556	86,977	67,008	209,541

NOTE: The manual requires two reflectorized crossbucks to be placed at all crossings. For crossings with active warning devices, a determination has not been made as to whether crossbucks which are part of the device meet the MUTCD standard.

FIGURE 30. CROSSINGS BY SMALLEST CROSSING ANGLE

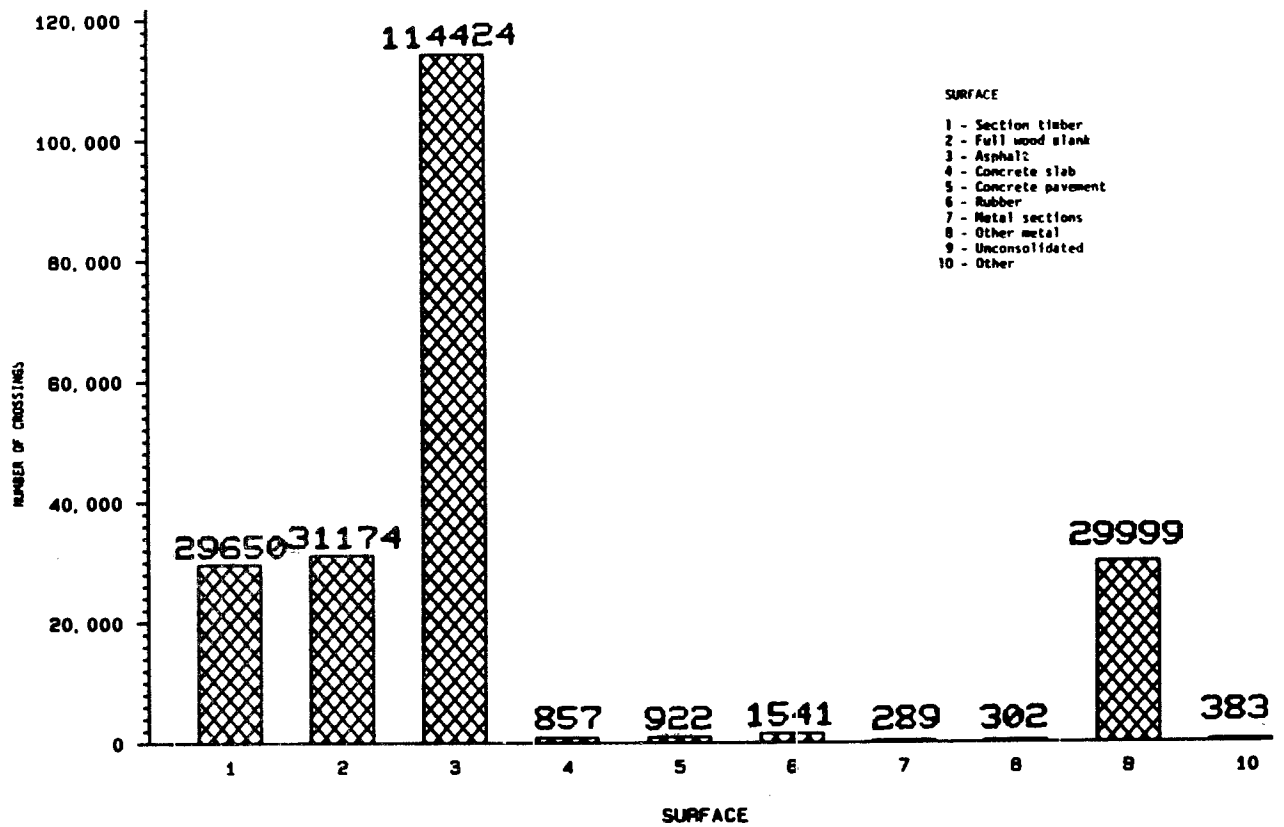
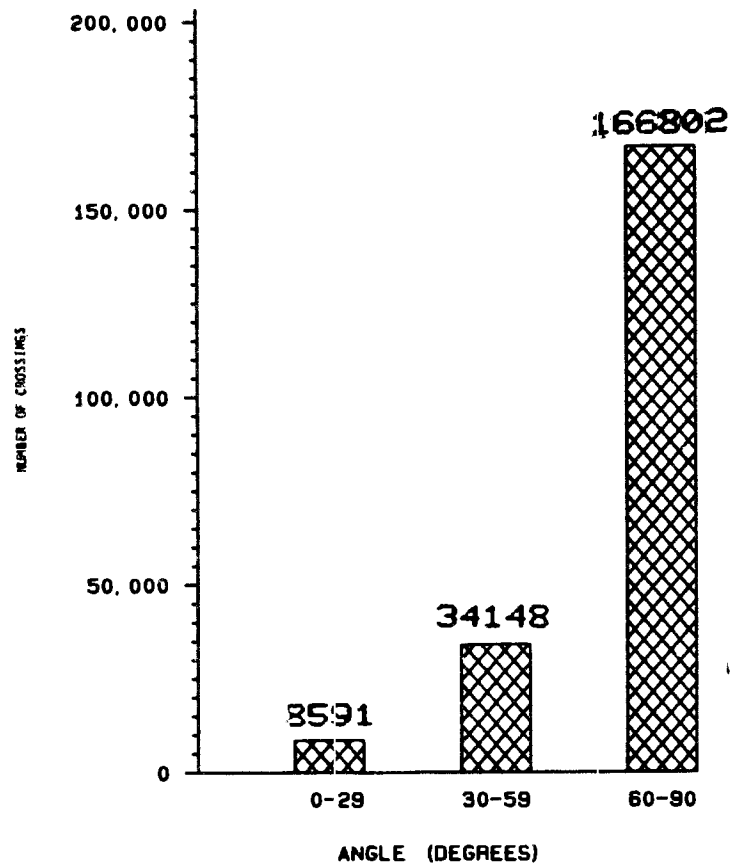


FIGURE 31. CROSSINGS BY CROSSING SURFACE

**OPERATIONAL CHARACTERISTICS
TRAIN TRAFFIC DATA (1982)**

TABLE 50. TOTAL CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY

Trains	Crossings
<1	31,805
1-5	100,142
6-10	35,558
11-15	12,769
16-20	12,418
21-25	5,566
26-30	4,150
31-35	2,324
36-40	1,548
41-45	662
46-50	1,025
51-55	335
56-60	275
61-65	264
66-70	92
71-75	81
76-80	241
81-85	33
86-90	16
91-95	15
96-100	65
>100	157
Total	209,541

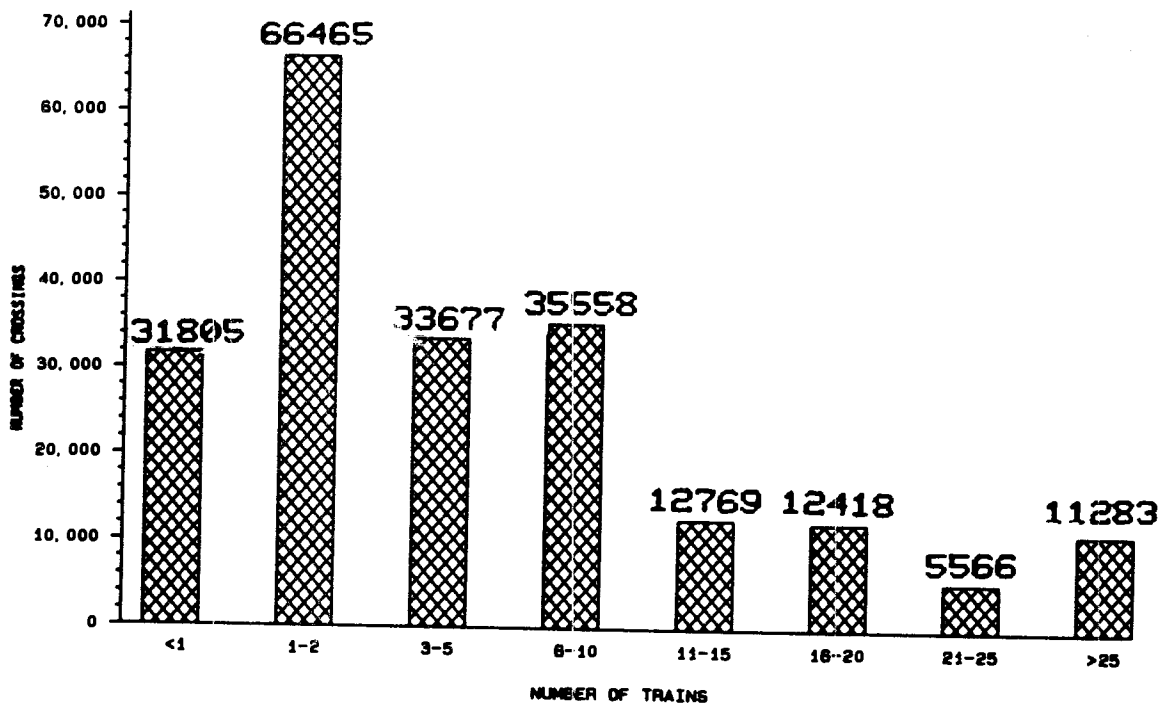


FIGURE 32. CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY

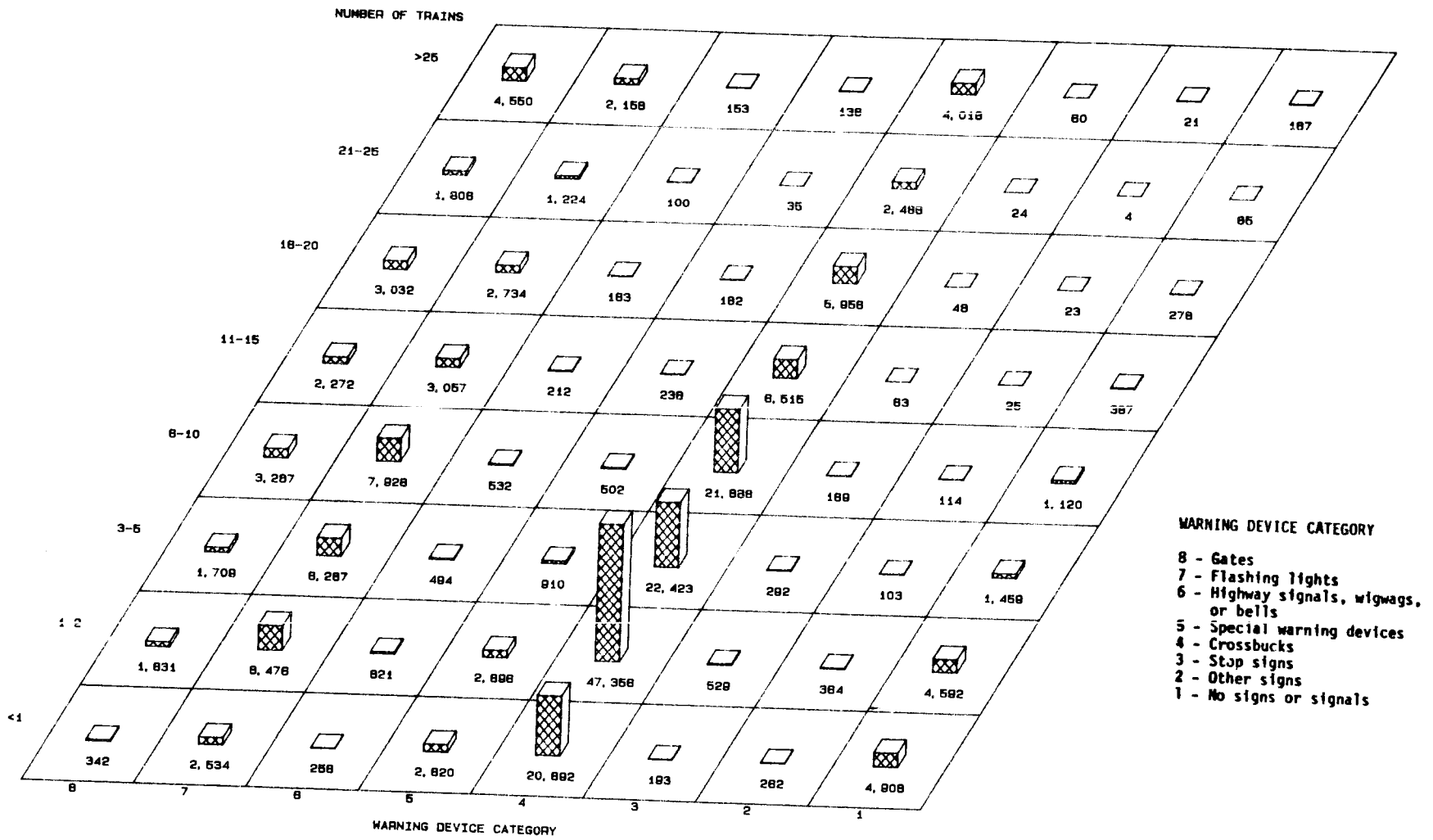


FIGURE 33. CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY

TABLE 51. TOTAL CROSSINGS BY NUMBER OF THRU TRAINS AND SWITCHING TRAINS PER DAY

Switching Trains	Through trains								
	<1	1-2	3-5	6-10	11-15	16-20	21-25	>25	Total
<1	31,805	36,501	15,845	16,603	5,108	5,905	2,251	4,366	118,384
1-2	28,583	9,343	6,755	6,839	2,854	2,240	976	1,697	59,287
2-3	6,893	1,886	2,063	2,669	1,287	693	522	928	16,941
6-10	3,794	989	950	1,638	819	980	298	622	10,090
11-15	758	183	194	306	92	107	83	131	1,854
16-20	643	137	118	227	86	93	115	122	1,541
21-25	145	36	20	80	17	15	36	50	399
>25	350	83	80	151	107	107	27	140	1,045
Total	72,971	49,158	26,025	28,513	10,370	10,140	4,308	8,056	209,541

TABLE 52. TOTAL CROSSINGS BY NUMBER OF DAY AND NIGHT TRAINS PER DAY

Day Trains	Night: trains								
	<1	1-2	3-5	6-10	11-15	16-20	21-25	>25	Total
<1	31,805	9,184	1,318	252	16	7	3	1	42,586
1-2	41,250	33,411	3,310	575	24	44	1	---	78,615
2-3	6,491	12,636	18,254	1,816	253	175	3	3	39,631
6-10	2,815	2,848	6,901	15,250	1,600	201	226	16	29,857
11-15	356	263	736	3,340	4,803	621	10	36	10,165
16-20	340	38	89	642	1,143	1,871	124	242	4,489
21-25	51	13	35	126	338	196	637	100	1,496
>25	495	42	43	99	287	310	359	1,067	2,702
Total	83,603	58,435	30,686	22,100	8,464	3,425	1,363	1,465	209,541

TABLE 53. TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY

Warning device	NUMBER OF TRAINS								Total
	<1	1-2	3-5	6-10	11-15	16-20	21-25	>25	
Gates.....	342	1,631	1,709	3,287	2,272	3,032	1,606	4,550	18,429
Flashing lights.....	2,534	8,476	6,287	7,926	3,057	2,734	1,224	2,158	34,396
Hwy. signals, wigwags, bells	256	821	494	532	212	163	100	153	2,731
Special warning devices.....	2,620	2,696	910	502	236	182	35	136	7,319
Crossbucks.....	20,692	47,356	22,423	21,888	6,515	5,958	2,488	4,018	131,338
Stop signs.....	193	529	292	189	63	48	24	60	1,398
Other signs.....	262	364	103	114	25	23	4	21	916
No signs or signals.....	4,906	4,592	1,459	1,120	387	278	85	187	13,014
Total.....	31,805	66,465	33,677	35,558	12,769	12,418	5,566	11,283	209,541

TABLE 54. TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC

Trains	Average annual daily traffic						Total
	1-250	251-500	501-1,000	1,001-5,000	5,001-10,000	> 10,000	
<1	15,221	3,677	3,441	6,313	1,926	1,227	31,805
1-2	35,904	7,368	6,757	11,164	3,231	2,041	66,465
2-3	17,210	3,863	3,539	6,182	1,733	1,150	33,677
6-10	18,265	4,107	3,713	6,321	1,891	1,261	35,558
11-15	6,021	1,338	1,374	2,628	801	607	12,769
16-20	5,671	1,379	1,404	2,617	816	531	12,418
21-25	2,475	655	651	1,229	354	202	5,566
>25	4,396	1,205	1,267	2,747	972	696	11,283
Total	105,163	23,592	22,146	39,201	11,724	7,715	209,541

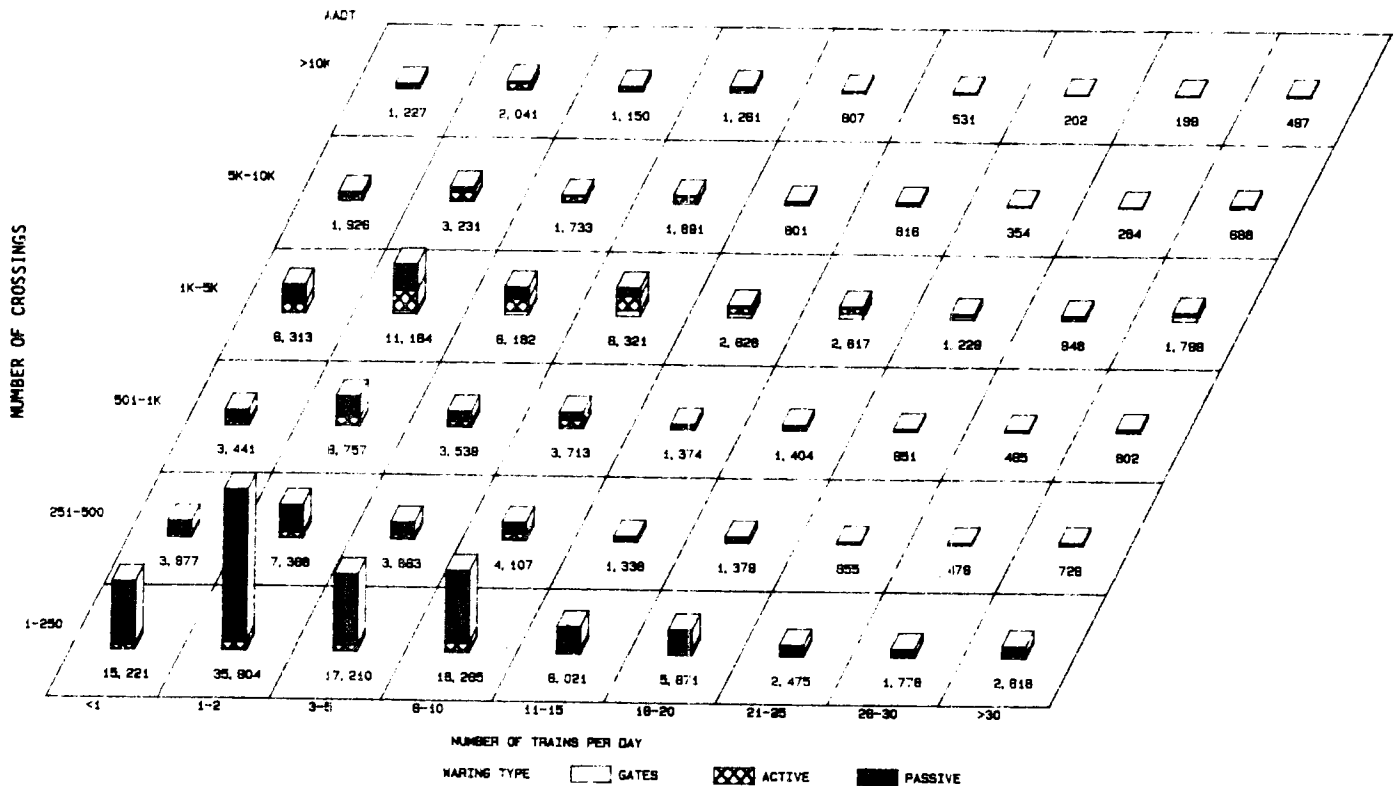


FIGURE 34. CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC (AADT)

TRAIN SPEED DATA (1982)**TABLE 55. TOTAL CROSSINGS BY MAXIMUM TIMETABLE SPEED**

<u>Timetable Speed</u>	<u>Crossings</u>
1-5	9,655
6-10	31,964
11-15	15,837
16-20	16,293
21-25	23,617
26-30	26,903
31-35	14,877
36-40	20,580
41-45	5,002
46-50	19,408
51-55	2,488
56-60	10,934
61-65	1,069
66-70	3,675
71-75	857
76-80	5,153
81-85	11
86-90	841
91-95	---
96-100	1
Unknown	376
Total	209,541

TABLE 56. TOTAL CROSSINGS BY TYPICAL TRAIN SPEED VARIATION

<u>Speed Variation</u>	<u>Crossings</u>
<1	3,339
1-5	58,152
6-10	53,527
11-15	22,713
16-20	19,630
21-25	12,303
26-30	12,559
31-35	5,812
36-40	6,643
41-45	2,926
46-50	5,548
51-55	1,089
56-60	2,224
61-65	698
66-70	701
71-75	651
76-80	596
81-85	56
86-90	60
91-95	---
96-100	---
Unknown	314
Total	209,541

NOTE: Typical speed variation is the difference between normal maximum speed and normal minimum speed.

HIGHWAY TRAFFIC DATA (1982)

TABLE 57. TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

<u>AADT</u>	<u>Crossings</u>
1-100	72,984
101-200	19,540
201-300	18,987
301-400	8,281
401-500	8,963
501-600	5,196
601-700	3,735
701-800	5,806
801-900	2,952
901-1,000	4,457
1,001-2,000	17,633
2,001-3,000	10,309
3,001-4,000	5,878
4,001-5,000	5,381
5,001-6,000	3,151
6,001-7,000	2,381
7,001-8,000	2,567
8,001-9,000	1,712
9,001-10,000	1,913
10,001-20,000	6,091
>20,000	1,624
Total	209,541

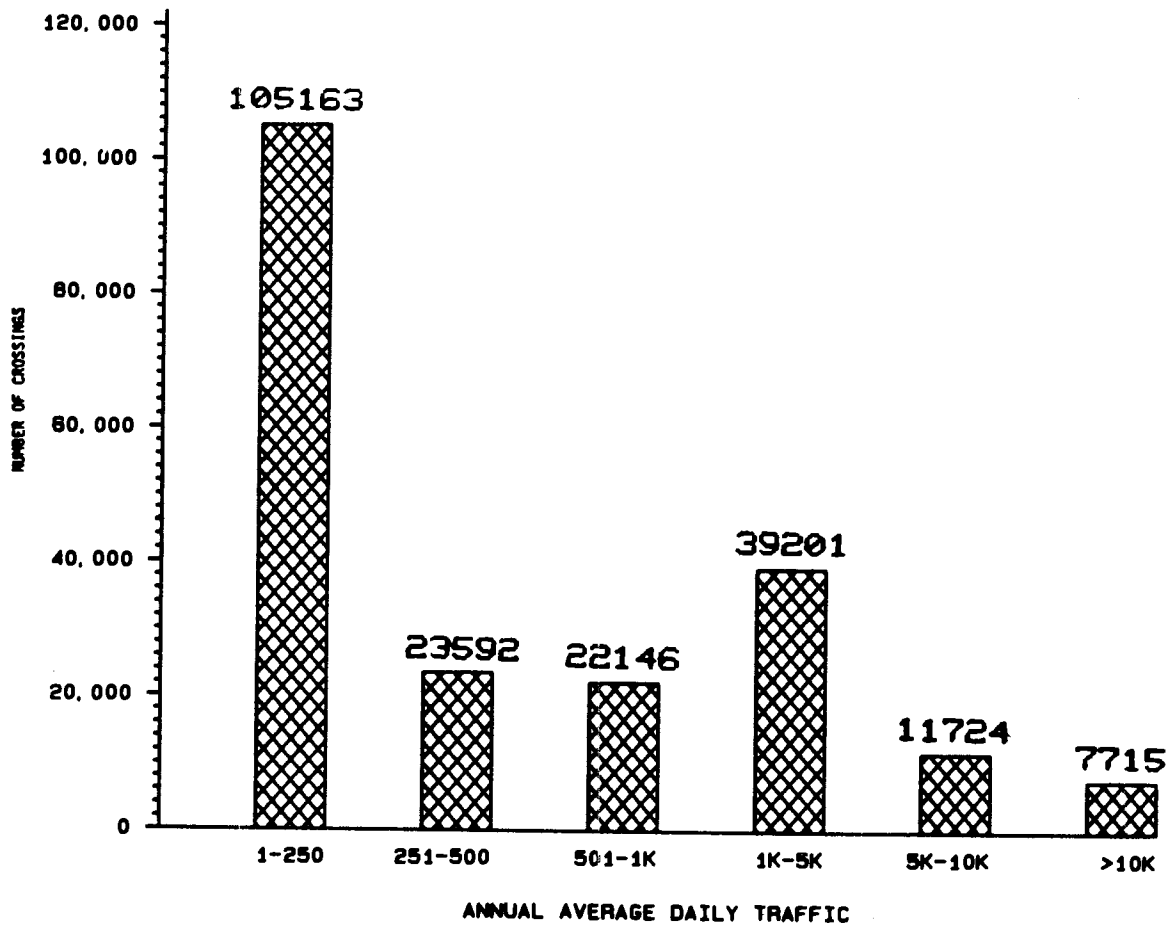


FIGURE 35 CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

TABLE 58. TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY

Warning device	ANNUAL AVERAGE DAILY TRAFFIC						Total
	1-250	251-500	501-1,000	1,001-5,000	5,001-10,000	> 10,000	
Gates.....	2,449	1,763	2,413	6,686	2,828	2,290	18,429
Flashing lights.....	5,010	3,674	5,208	12,982	4,472	3,050	34,396
Hwy. signals, wigwags, bells	854	333	395	693	246	210	2,731
Special warning devices.....	1,631	884	982	2,356	879	587	7,319
Crossbucks.....	86,961	15,150	11,472	13,980	2,586	1,189	131,338
Stop signs.....	707	189	178	252	44	28	1,398
Other signs.....	427	185	134	117	42	11	916
No signs or signals.....	7,124	1,414	1,364	2,135	627	350	13,014
Total.....	105,163	23,592	22,146	39,201	11,724	7,715	209,541

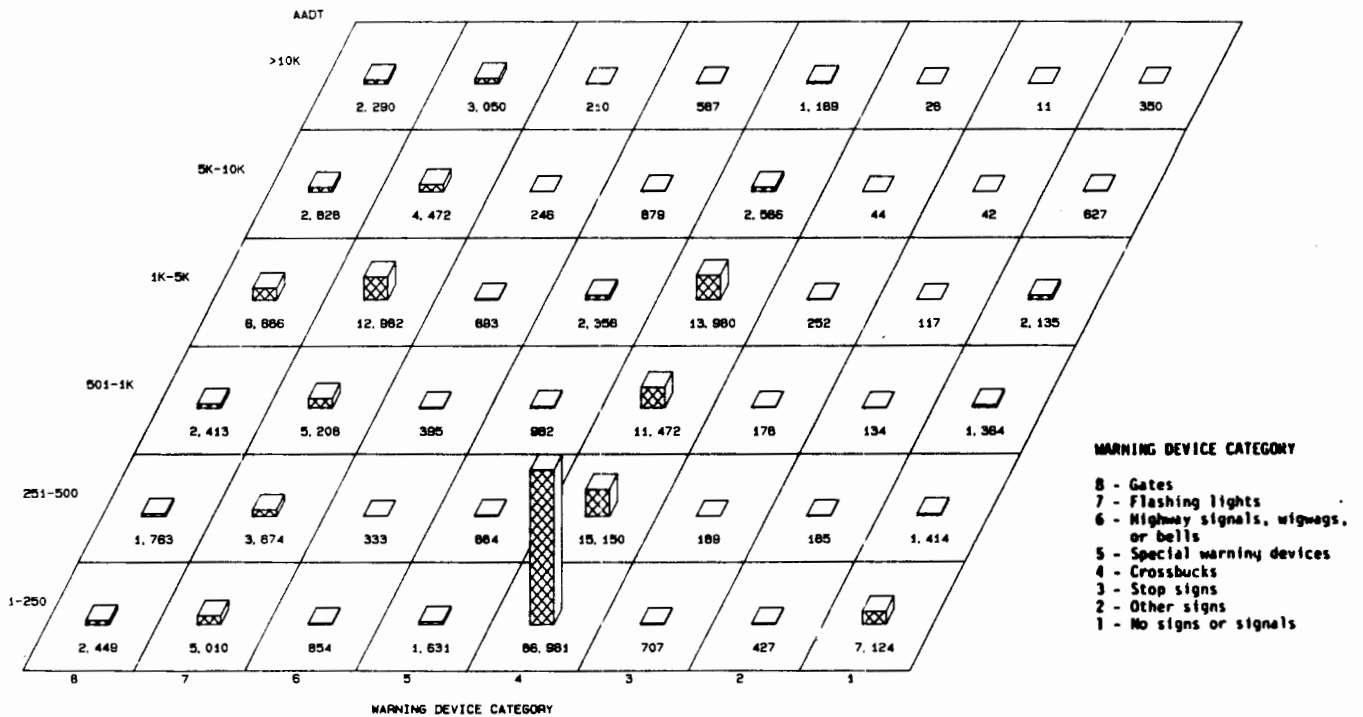


FIGURE 36 CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY

TABLE 59. TOTAL CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC

%	Crossings
<1	7,357
1-5	82,905
6-10	74,472
11-15	22,216
16-20	9,955
21-25	2,389
26-30	6,949
31-35	405
36-40	1,121
41-45	153
46-50	1,110
51-55	20
56-60	167
61-65	5
66-70	59
71-75	114
76-80	73
81-85	6
86-90	57
91-95	1
96-99	7
Total	209,541

APPENDIX A: REPORTING REQUIREMENTS AND DEFINITIONS

ACCIDENT/INCIDENT REPORTABILITY REQUIREMENTS

The rules governing monthly reporting of railroad accidents/incidents in effect in 1982 define a reportable accident/incident as an event arising from the operation of a railroad that results in one or more stated circumstances.

- (a) An impact occurs between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, pedestrian or other highway user at a rail-highway crossing.
- (b) Any collision, derailment, fire, explosion, act of God or other event involving the operation of railroad on-track equipment (standing or moving) which results in more than \$3,700 in damages to railroad on-track equipment, signals, track and/or track structures, and roadbed.
- (c) Any event arising from the operation of a railroad which results in:
 - (i) death of one or more persons;
 - (ii) injury to one or more persons, other than railroad employees, requiring medical treatment;
 - (iii) injury to one or more employees requiring medical treatment or resulting in restriction of work or motion for one or more days, one or more lost work days, transfer to another job, termination of employment or loss of consciousness;
 - (iv) any occupational illness of railroad employee diagnosed by a physician.

DEFINITIONS

Annual average daily traffic. An estimate of the annual average daily highway traffic in both traffic directions.

Active warning devices. A warning system activated by an approaching train: gates, flashing lights, highway signals, wigwags, or bells.

Car. A railway car designed to carry freight, railroad personnel, or passengers. This includes boxcars, covered hopper cars, flatcars, refrigerator cars, gondola cars, hopper cars, tank cars, cabooses, stock cars, ventilation cars, and special cars. Also includes on-track maintenance equipment.

Class I railroad. A railroad with an annual gross operating revenue in excess of \$50 million.

Class II railroad. A railroad with an annual gross operating revenue of between \$10 and \$50 million.

Class III railroads. All switching and terminal companies, and all railroads with annual operating revenues of less than \$10 million.

Commercial power. A source of commercial power within 500 feet of a crossing.

Consist. On-track railroad equipment such as a train, locomotive, group of railcars, or a single railcar not coupled to another car or to a locomotive.

Contractor employee. A person employed by a contractor hired by a railroad to perform normal maintenance work to railroad rolling stock, track structure, bridges, buildings, etc.

Crossing surfaces.

1. Sectional treated timber. Prefabricated units approximately eight feet long, made of treated timber, individually installed, and removable for maintenance and replacement purposes.

2. Full wood plank. A wood surface, other than sectional treated timber, covering the entire crossing area above crossties.

3. Asphalt. A surface over the entire crossing area or the area between planks or other material which forms flangeway openings with or without single planks on the outside of running rails.

4. Concrete slab. Precast concrete slabs which are installed and individually removable for maintenance and replacement.

5. Concrete pavement. A continuous concrete surface over the track area which cannot be removed except by destruction of the surface.

6. Rubber slabs. Preformed rubber sections which can be installed and removed individually for maintenance and replacement.

7. Metal sections. Preformed sections of steel or other metal which can be individually installed and removed for maintenance and replacement.

8. Other metal. A crossing area completed with covered rails or other permanent metal materials in limited sectional units.

9. Unconsolidated. Ballast or other unconsolidated material placed above the tops of crossties with or without planks on one or both sides of running rail.

Daylight train movements. Train movements between 6 am and 6 pm.

Employee. A person engaged in railroad operations who works for a railroad company in return for financial or other compensation.

Employee not on duty. A railroad employee who is on railroad property for a purpose connected with his employment or with other railroad permission, but who is not engaged in rail operations for financial or other compensation.

Fatality. The death of a person resulting from an injury incurred during railroad operations or resulting from an occupational illness if death occurs within 365 days of initial diagnosis.

Flashing lights. Cantilevered flashing lights, mast mounted flashing lights, and other flashing lights not conforming with the latest "Manual on Uniform Traffic Control Devices" (MUTCD).

Highway signals. Train-activated highway lights (red-amber-green) that control highway traffic over the crossing.

Locomotive. A self-propelled unit of on-track equipment designed for moving other rail freight and passenger equipment on rail tracks, including self-propelled units.

Main track. Any track other than auxiliary track that extends through railroad yards or between stations and over which trains operate by time-table and/or train orders or the use of the track is governed by a signal system.

Maximum timetable speed. Maximum train speed permitted over a crossing.

Nearby intersecting highway. A highway intersection within 75 feet of the crossing.

Night train movements. Train movements between 6 pm and 6 am.

Non-trespasser. A person who is lawfully on any part of railroad property which is used in railroad operations or a person who is adjacent to railroad premises when injured as the result of railroad operations.

Number of crossbucks. Masts with crossbucks; a mast with two or more crossbucks is counted as one. A crossbuck on an active device is not counted.

On-track equipment. Railroad rolling stock used to transport freight or passengers. It includes locomotives, railroad cars, maintenance equipment, and one or more locomotives coupled to one or more cars.

Other signs. Signs other than crossbucks or stop signs.

Other stop signs. Stop signs other than standard highway stop signs.

Passenger. A person who is on, boarding, or alighting from a railroad car for the purpose of travel, without participating in its operation.

Passive warning device. A warning system not automatically activated by an approaching train: signs (crossbucks or standard highway signs) or special warning devices (manually operated gates, flood lights, etc.).

Pavement markings. Markings prescribed or generally similar to those in highway traffic manuals, in particular, stoplines and railroad crossing symbols.

Percentage trucks. The percentage of total daily highway traffic represented by trucks.

Public crossing. A location open to public travel where railroad tracks cross a road that is under the jurisdiction and maintenance of a public authority.

Rail-highway crossing. A location where one or more railroad tracks intersect a public or private thoroughfare, a side walk, or a pathway.

Railroad. Any surface transportation system which carries passengers, goods, materials, or property over rails.

Railroad advance warning. Advance warning signs on any highway approach.

Rural crossing. A crossing classification derived from the Functional Classification Code.

Signals for train operation. Automatic signals or interlocks which control train operations in the vicinity of a crossing.

Smallest crossing angle. The smallest angle between the highway and the track.

Special warning devices. Non-train-activated devices other than signs including manually operated gates, train crews flagging a crossing, watchmen, and flood lights.

Speed selection for trains. A uniform warning time for the speed range of trains normally encountered at the crossing.

Standard highway stop sign. Octagonal red sign with white lettering STOP.

Stop signs. The standard highway stop sign or other stop signs.

Switch trains. All trains other than thru trains, including locals, industrial runs, and switch engines.

Thru trains. Trains whose primary responsibility is to move cars over the road; they may have a limited number of pickups and setouts along the route.

Total train movements. All train movements for the reporting company and all other railroads operating over the crossing.

Traffic lanes. Number of highway traffic lanes not including shoulders or parking lanes.

Trespasser. Any person whose presence on railroad property, used in railroad operations, is prohibited or unlawful.

Truck pullout lane. A special lane designed to accommodate vehicles which are required to stop at a crossing.

Type of development.

1. Open space. An area that is undeveloped, sparsely developed, very lightly populated, or agricultural.
2. Residential. An area comprised of private residences.
3. Commercial. An area with retail stores, businesses, offices, and personal service offices.
4. Industrial. An area with manufacturing, construction, heavy products, factories, and warehouses.
5. Institutional. An area with schools, churches, hospitals, parks, and other community facilities.

Urban crossing. A crossing classification derived from the Functional Classification Code.

Warning device category. At crossings which have more than one warning device, the warning category is determined by the following method:

- | | | |
|---------|----|-----------------------------------|
| Highest | 8) | Gates ¹ |
| | 7) | Flashing lights ¹ |
| | 6) | Highway signals, wigwags or bells |
| | 5) | Special warning devices |
| | 4) | Crossbucks |
| Lowest | 3) | Stop signs |
| | 2) | Other signs |
| | 1) | No signs or signals |

¹When cantilevered flashing lights are categorized separately, they are ranked eighth and gates are ranked ninth.

REVISION IN HIGHWAY SYSTEM AND FUNCTIONAL CLASSIFICATION CODES:

The Highway System and Functional Classification Codes in the Inventory have been revised from those used in the original inventory to those currently in use by the Federal Highway Administration. The revisions are as follows:

FUNCTIONAL CLASSIFICATION CODES

<u>RURAL</u>	<u>PREVIOUS</u>				<u>PRESENT</u>
Interstate	01				01
Other principal arterial	02				02
Minor arterial	03				06
Major collector	04				07
Minor collector	05				08
Local	06				09

<u>URBAN</u>	<u>PREVIOUS</u>				<u>PRESENT*</u>
	Population (Thousands)				
	<u>5-10</u>	<u>10-25</u>	<u>25-50</u>	<u>Over 50</u>	
Interstate	11	21	31	41	11
Other freeway and expressway	12	22	32	42	12
Other principal arterial	13	23	33	43	14
Minor arterial	14	24	34	44	16
Collector	15	25	35	45	17
Local	16	26	36	46	19

*NOTE: The present Functional Classification Codes will not contain a population code. The tens digit for the urban codes must be "1".

HIGHWAY SYSTEM CODES

PRESENT

PREVIOUS

1	Interstate	01 Interstate, rural, open to traffic 02 Interstate, urban, open to traffic
2	Federal-aid primary	03 Other FA primary, rural 04 Other FA primary, urban
3	Federal-aid urban	14 Federal-aid urban
4	Federal-aid secondary	05 FA secondary rural, State jurisdiction 06 FA secondary urban, State jurisdiction 07 FA secondary rural, local jurisdiction 08 FA secondary urban, local jurisdiction
8	Non-Federal-aid	09 Other State highways, rural (non - FA) 10 - Other State highways, urban (non - FA) 11 Local rural roads 12 Local city streets

APPENDIX B: REPORTING FORMS

FORMS

Three separate forms may be required to properly report a rail-highway crossing accident/incident:

- FRA F 6180-57 Grade Crossing Accident/Incident Report
- FRA F 6180-55 Railroad Injury and Illness Summary
- FRA F 6180-54 Rail Equipment Accident/Incident Report

For all reportable rail-highway crossing accidents/incidents, form FRA F 6180-57 must be submitted by the carrier which has on-track equipment involved. If reportable casualties result, they must be individually reported on Form F 6180-55. If the accident resulted in more than \$3,700 in damages to railroad on-track equipment, signals, track, track structures, or roadbed, Form FRA 6180-54 must also be submitted.

DEPARTMENT OF TRANSPORTATION
FEDERAL RAILROAD ADMINISTRATION
RAILROAD INJURY AND ILLNESS SUMMARY

Form Approved
OMB No. 01-R4009

1. NAME OF REPORTING RAILROAD		2. ALPHABETIC CODE	3. REPORT MONTH & YEAR	4. STATE ALPHABETIC CODE	5. COUNTY
NAME OF REPORTING OFFICER				OFFICIAL TITLE	
ADDRESS				TELEPHONE (Area Code) (Number)	

I, _____, being first duly sworn, do say upon my oath that I am _____, of the railroad aforesaid and as such officer of the said railroad it is my duty to have supervision over the record of reportable incidents arising from the operation of the said railroad, and that I have caused to be compiled from the said record and to be carefully examined the annexed report of such incidents occurring during the month named at the head of this sheet; and that the said report is true and complete to the best of my knowledge and belief.

Subscribed and sworn to before me, a notary public in and for the State and County aforesaid, this _____ day of _____, 19 _____.

(Use an impression seal) _____
[L.S] _____

(Notary Public) _____ (Signature of affiant)

7. MILES RUN DURING MONTH			
A. LOCOMOTIVE TRAIN MILES	B. MOTOR TRAIN MILES	C. YARD SWITCHING MILES	D. TOTAL

8. A. EMPLOYEE MANHOURS WORKED		B. PASSENGER MILES OPERATED	C. NUMBER OF PASSENGERS TRANSPORTED
TOTAL TRAIN ACCIDENTS	TOTAL FRA FORMS 6180-55A	TOTAL FRA FORMS 6180-54	TOTAL FRA FORMS 6180-57

SECTION A—RECAPITULATION OF ALL CASUALTIES INCLUDING HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT CASUALTIES								CLASS OF PERSON FOR SECTIONS A AND B	SECTION B—RECAPITULATION OF ALL HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT CASUALTIES							
TRAIN ACCIDENTS		TRAIN INCIDENTS		NONTRAIN INCIDENTS		TOTAL			TRAIN ACCIDENTS		TRAIN INCIDENTS		NONTRAIN INCIDENTS		TOTAL	
Kid	Inj	Kid	Inj	Kid	Inj	Kid	Inj		Kid	Inj	Kid	Inj	Kid	Inj	Kid	Inj
								1. Employees on duty								
								2. Employees not on duty								
								3. Passengers on trains								
								4. Other nontrespassers								
								5. Trespassers (all classes)								
								6. Contractor Employees								
								7. GRAND TOTAL								

SECTION C—MEMORANDUM—SUBSEQUENT FATALITIES DEVELOPED FROM REPORTED CASUALTIES					
LINE NO.	ACCIDENT/INCIDENT NUMBER	TYPE PERSON OR JOB CODE	DATE OF INJURY	DATE OF DEATH	STATE
1.					
2.					
3.					
4.					

FORM FRA F 6180-55 (8-76) REPLACES FORM FRA F 6180-55 (12-74) WHICH IS OBSOLETE.

This report is required by law (45 USC 40). Failure to report can result in the imposition of civil penalties.

RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT

1. NAME OF REPORTING RAILROAD <div style="text-align: right;">Amtrak Autotrain</div>		1a. Alphabetic Code	1b. Railroad Accident/Incident No.
2. NAME OF OTHER RAILROAD INVOLVED IN TRAIN ACCIDENT/INCIDENT		2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. NAME OF RAILROAD RESPONSIBLE FOR TRACK MAINTENANCE (single entry)		3a. Alphabetic Code	3b. Railroad Accident/Incident No.
4. U. S. DOT-AAR GRADE CROSSING IDENTIFICATION NUMBER	5. DATE OF ACCIDENT/INCIDENT month | day | year		6. TIME OF ACCIDENT/INCIDENT am <input type="checkbox"/> pm <input type="checkbox"/>
7. TYPE OF ACCIDENT/INCIDENT (enter number in code box, single entry) 1. Derailment 3. Rear end collision 5. Raking collision 7. Rail-Hwy crossing 9. Obstruction 11. Fire or violent rupture 12. Other (specify) _____ 2. Head on collision 4. Side collision 6. Broken train collision 8. RR grade crossing 10. Explosion-Detonation			

HAZARDOUS MATERIALS (number of)

8. CARS CARRYING	9. CARS DAMAGED OR DERAILED	10. CARS WHICH RELEASED HAZ. MAT.	11. PEOPLE EVACUATED (est.)
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LOCATION

12. DIVISION	13. NEAREST STATION	14. MILEPOST (to nearest tenth)	15. STATE (two letter code) CODE
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ENVIRONMENTAL CONDITIONS

16. TEMPERATURE (specify if minus) °F	17. VISIBILITY (single entry) CODE 1. Dawn 3. Dusk 2. Day 4. Dark	18. WEATHER (single entry) CODE 1. Clear 2. Cloudy 3. Rain 4. Fog 5. Sleet 6. Snow
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OPERATIONAL DATA

19. METHOD (place X in appropriate box(es))	1. <input type="checkbox"/> Manual block	4. <input type="checkbox"/> Automatic block	7. <input type="checkbox"/> Yard rules	10. <input type="checkbox"/> Auto. train control	13. <input type="checkbox"/> Other (specify)
	2. <input type="checkbox"/> Interlocking	5. <input type="checkbox"/> Traffic control	8. <input type="checkbox"/> Time table	11. <input type="checkbox"/> Verbal permission	
	3. <input type="checkbox"/> Cab signal	6. <input type="checkbox"/> Auto. train stop	9. <input type="checkbox"/> Radio	12. <input type="checkbox"/> Train orders	
20. SPEED (recorded speed, if available) Est. MPH | Recorded MPH	21. TRAIN NUMBER	22. TIME TABLE DIRECTION CODE 1. North 2. South 3. East 4. West			

EQUIPMENT

23. TRAILING TONS (gross tonnage, excluding power units)	24. TYPE OF EQUIPMENT CONSIST (single entry) 1. Freight train 3. Mixed train 5. Single car 7. Yard/switching 2. Passenger train 4. Work train 6. Cut of cars 8. Light loco(s)	25. WAS THE EQUIPMENT IDENTIFIED IN ITEM 24 UNATTENDED? CODE 1. Yes 2. No	
26. TRACK NUMBER OR NAME	27. FRA TRACK CLASSIFICATION	28. ANNUAL TRACK DENSITY (gross tons in millions)	29. TYPE OF TRACK CODE 1. Main 3. Siding 2. Yard 4. Industry
30. PRINCIPLE CAR/UNIT	30a. Initial and Number	30b. Position in Train	30c. Loaded (yes or no)
(1) First Involved (derailed, struck, striking, etc.)			
(2) Causing (mechanical failures)			
31. LOCOMOTIVE UNITS (no. of)	a. Head End b. Manual c. Remote d. Manual e. Remote	32. CARS (no. of)	Loaded Empty a. Freight b. Pass. c. Freight d. Pass. e. Caboose
(1) Total in Train		(1) Total in Equipment Consist	
(2) Total Derailed		(2) Total Derailed	

PROPERTY DAMAGE (estimated cost, including labor, to repair or replace)

33. EQUIPMENT DAMAGE (to be reported for this equipment consist only) \$	34. TRACK, SIGNAL, WAY AND STRUCTURES DAMAGE (to be reported by railroad in item 3 only) \$
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ACCIDENT/INCIDENT CAUSE CODE

35. PRIMARY CAUSE CODE	36. CONTRIBUTING CAUSE CODE	37. If no code available, explain cause.
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CASUALTIES

38. NUMBER OF PERSONS INJURED	39. ESTIMATED TOTAL DAYS DISABILITY	40. NUMBER OF FATALITIES
-------------------------------	-------------------------------------	--------------------------

CREW (no. of)

HOURS ON DUTY

41. ENGINEERS	42. FIREMEN	43. CONDUCTORS	44. BRAKEMEN	45. ENGINEER Hrs: Mins:	46. CONDUCTOR Hrs: Mins:
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47. TYPED NAME AND TITLE	48. SIGNATURE	49. DATE
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50. NARRATIVE DESCRIPTION - Describe the cause, nature and circumstances of accident/incident

RAIL-HIGHWAY GRADE CROSSING
ACCIDENT/INCIDENT REPORT

1. NAME OF REPORTING RAILROAD		Amtrak	1a. Alphabetic Code	1b. Railroad Accident/Incident No.
		Autotrain		
2. NAME OF OTHER RAILROAD INVOLVED IN TRAIN ACCIDENT/INCIDENT			2a. Alphabetic Code	2b. Railroad Accident/Incident No.
3. NAME OF RAILROAD RESPONSIBLE FOR TRACK MAINTENANCE (single entry)			3a. Alphabetic Code	3b. Railroad Accident/Incident No.
4. U. S. DOT-AA R GRADE CROSSING IDENTIFICATION NUMBER			5. DATE OF ACCIDENT/INCIDENT month | day | year	6. TIME OF ACCIDENT/INCIDENT am <input type="checkbox"/> pm <input type="checkbox"/>

LOCATION

7. NEAREST RAILROAD STATION	8. COUNTY	9. STATE (two letter code)	CODE
10. CITY (if in a city)	11. HIGHWAY NAME OR NUMBER (if private crossing, so state)		

ACCIDENT/INCIDENT SITUATION

HIGHWAY USER INVOLVED				RAILROAD EQUIPMENT INVOLVED				
12. TYPE	3. Truck-Trailer	6. Motorcycle	CODE	16. EQUIPMENT	3. Train (standing)	6. Light loco(s) (moving)	CODE	
1. Auto	4. Bus	7. Pedestrian		1. Train (units pulling)	4. Car(s) (moving)	7. Light loco(s) (standing)		
2. Truck	5. School Bus	8. Other (specify)		2. Train (units pushing)	5. Car(s) (standing)	8. Other (specify)		
13. SPEED (estimated mph at impact)	14. DIRECTION (geographical)		CODE	17. POSITION OF CAR/UNIT IN TRAIN				CODE
	1. North	3. East						
	2. South	4. West						
15. POSITION	1. Stalled on crossing		CODE	18. CIRCUMSTANCE				CODE
	2. Stopped on crossing			1. Train struck highway user				
	3. Moving over crossing			2. Train struck by highway user				
19. Was the highway user and/or rail equipment involved in the impact transporting hazardous materials?								CODE
								1. Highway user 2. Rail equipment 3. Both 4. Neither

ENVIRONMENT

20. TEMPERATURE (specify, if minus) °F	21. VISIBILITY (single entry)	CODE	22. WEATHER (single entry)	CODE
	1. Dawn 3. Dusk		1. Clear 3. Rain 5. Sleet	
	2. Day 4. Dark		2. Cloudy 4. Fog 6. Snow	

TRAIN AND TRACK

23. TYPE OF TRAIN	3. Mixed		5. Yard/Switching	CODE	24. TRACK TYPE USED BY TRAIN INVOLVED	CODE
1. Freight	4. Work	6. Light Locomotive(s)			1. Main 3. Siding	
2. Passenger					2. Yard 4. Industry	
25. TRACK NUMBER OR NAME	26. FRA TRACK CLASSIFICATION				27. NUMBER OF LOCOMOTIVE UNITS	
28. NUMBER OF CARS	29. TRAIN SPEED (recorded speed, if available)			Est	30. TIME TABLE DIRECTION	
	MPH			Recorded	1. North 3. East	
					2. South 4. West	

CROSSING WARNING

31. TYPE	1. <input type="checkbox"/> Gates	5. <input type="checkbox"/> Hwy. Traffic Signals	9. <input type="checkbox"/> Watchman	32. SIGNALLED CROSSING WARNING		CODE
(place X in appropriate box(es))	2. <input type="checkbox"/> Cantilever FLS	6. <input type="checkbox"/> Audible	10. <input type="checkbox"/> Flagged by crew	Was the signaled crossing warning identified in item 31 operating?		
	3. <input type="checkbox"/> Standard FLS	7. <input type="checkbox"/> Crossbucks	11. <input type="checkbox"/> Other (specify)	1. Yes 2. No		
	4. <input type="checkbox"/> Wig Wags	8. <input type="checkbox"/> Stop Signs	12. <input type="checkbox"/> None			
33. LOCATION OF WARNING	CODE		34. CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS	CODE	35. CROSSING ILLUMINATED BY STREET LIGHTS OR SPECIAL LIGHTS	
1. Both sides	2. Side of vehicle approach		1. Yes 2. No 3. Unknown		1. Yes 2. No 3. Unknown	
	3. Opposite side of vehicle approach					

MOTORIST ACTION

36. MOTORIST PASSED STANDING HIGHWAY VEHICLE	CODE	37. MOTORIST DROVE BEHIND OR IN FRONT OF TRAIN AND STRUCK OR WAS STRUCK BY SECOND TRAIN	CODE
1. Yes 2. No 3. Unknown		1. Yes 2. No 3. Unknown	
38. MOTORIST	CODE		
1. Drove around or thru the gate	2. Stopped and then proceeded	3. Did not stop	4. Other (specify)
			5. Unknown
39. VIEW OF TRACK OBSCURED BY (primary obstruction)	CODE		
1. Permanent structure	2. Standing railroad equipment	3. Passing train	5. Vegetation
		4. Topography	6. Highway vehicles
			7. Other (specify)
			8. Not obstructed

HIGHWAY VEHICLE PROPERTY DAMAGE/CASUALTIES

40. HIGHWAY VEHICLE PROPERTY DAMAGE (est. dollar damage)	41. DRIVER WAS	CODE	42. WAS DRIVER IN THE VEHICLE?	CODE
	1. Killed 2. Injured 3. Uninjured		1. Yes 2. No	
43. TOTAL NUMBER OF OCCUPANTS KILLED	44. TOTAL NUMBER OF OCCUPANTS INJURED		45. TOTAL NUMBER OF OCCUPANTS (include driver)	
46. IS A RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT BEING FILED? 1. Yes 2. No				
CODE				
47. TYPED NAME AND TITLE	48. SIGNATURE		49. DATE	

U.S. DOT - AAR CROSSING INVENTORY FORM

A. INITIATING AGENCY
 RAILROAD STATE

C. REASON FOR UPDATE:
 CHANGES IN EXISTING CROSSING DATA
 NEW CROSSING
 CLOSED CROSSING

D. EFFECTIVE DATE

 M D Y

B. CROSSING NUMBER _____

Part I Location and Classification of All Crossings (Must Be Completed)

1. Railroad Operating Company _____	2. Railroad Division or Region _____	3. Railroad Subdivision or District _____
4. State _____	5. County _____	6. County Map. Ref. No. _____
7. City _____	8. Nearest City _____	9. Highway Type and No. _____
10. Street or Road Name _____	11. RR I. D. No. _____	
12. Nearest RR Timetable Station _____	13. Branch or Line Name _____	14. Railroad Mile Post _____

DO NOT WRITE IN THIS SPACE

State _____	County _____	
City _____	Nearest City _____	<input type="checkbox"/>
RR Code _____	Timetable Station _____	

15. Pedestrian Crossing
 1. at grade
 2. RR under
 3. RR over

16. Private Vehicle Crossing
 A. 1. Farm 2. Residential 3. Recreational 4. Industrial
 B. 5. at grade C. 8. signs-specify _____
 6. RR under 9. signals-specify _____
 7. RR over 0. none

17. Public Vehicle Crossing
 1. at grade
 2. RR under
 3. RR over

COMPLETE REMAINDER OF FORM ONLY FOR PUBLIC VEHICLE CROSSINGS AT GRADE

Part II Detailed Information for Public Vehicular at Grade Crossing

1A. Typical Number of Daily Train Movements

Daylight (6 AM to 6 PM)		Night (6 PM to 6 AM)	
thru trains _____	switching _____	thru trains _____	switching _____
1	2	3	4

1B. Check if Less Than One Movement Per Day 5

2. Speed of Train at Crossing

A. Maximum time table speed

B. Typical Speed Range Over Crossing
 from _____ to _____ mph

3. Type and Number of Tracks
 main _____ other _____ If other specify _____

4. Does Another RR Operate a Separate Track at Crossing?
 Yes No Specify: RR _____

5. Does Another RR Operate Over Your Track at Crossing?
 Yes No Specify: RR _____

6. Type of Warning Device at Crossing
A. Signs

Crossbucks		Standard Highway Stop Sign Number _____	Other Stop Signs Number _____	Other Signs: Specify Number _____
reflectORIZED Number _____	non-reflectORIZED Number _____			

B. Train Activated Devices

Gates		Cantilevered Flashing Lights		Mast Mounted Flashing Lights Number _____	Other Flashing Lights Specify _____ Number _____	Highway Traffic Signals Number _____	Wigwags Number _____	Bells Number _____
red & white reflectORIZED Number _____	other colored Number _____	over traffic lane Number _____	not over traffic lane Number _____					

C. Specify Special Warning Device not Train Activated _____

D. No Signs or Signals 20

7. Is Commercial Power Available? Yes No **8. Does Crossing Signal Provide Speed Selection for Trains?** Yes No N/A

9. Method of Signalling for Train Operation: Is Track Equipped with Signals? Yes No

Part III Physical Data

1. Type of Development <input type="checkbox"/> 1. Open Sp. <input type="checkbox"/> 2. Res. <input type="checkbox"/> 3. Comm. <input type="checkbox"/> 4. Ind. <input type="checkbox"/> 5. Inst.	5. Is Highway Paved <input type="checkbox"/> Yes <input type="checkbox"/> No	9. Does Track Run Down A Street? <input type="checkbox"/> Yes <input type="checkbox"/> No
2. Smallest Crossing Angle <input type="checkbox"/> 0°-29° <input type="checkbox"/> 30°-59° <input type="checkbox"/> 60°-90°	6. Pavement Markings <input type="checkbox"/> Stoplincs <input type="checkbox"/> RR Xing Sym. <input type="checkbox"/> None	10. Nearby Intersecting Highway? <input type="checkbox"/> Yes <input type="checkbox"/> No
3. Number of Traffic Lanes Crossing Railroad Number _____	7. Are RR Advance Warning Signs Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	
4. Are Truck Pullout Lanes Present? <input type="checkbox"/> Yes <input type="checkbox"/> No	8. Crossing Surface <input type="checkbox"/> 1. Sec. Timber <input type="checkbox"/> 2. Full Wd Plank <input type="checkbox"/> 3. Asphalt <input type="checkbox"/> 4. Concrete Sla <input type="checkbox"/> 5. Concrete Pave <input type="checkbox"/> 6. Rubber <input type="checkbox"/> 7. Metal Sect-ions <input type="checkbox"/> 8. Other Met <input type="checkbox"/> 9. Unconsolidated <input type="checkbox"/> 0. Other Specify	

Part IV Highway Department Information

1. Highway System _____	4. Estimate AADT _____	I. D. Number _____
2. Is Crossing on State Highway System? <input type="checkbox"/> Yes <input type="checkbox"/> No.	5. Estimate Percent Trucks _____	
3. Functional Classification of Road over Crossing _____		

APPENDIX C: MISCELLANEOUS DATA

**TABLE C-1 MISCELLANEOUS DATA RECEIVED FROM THE RAIL-HIGHWAY
CROSSING ACCIDENT/INCIDENT REPORTS**

1.	IS RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT BEING FILED?									
	YES	193	NO	7,739	NOT REPORTED	0				
2.	WAS DRIVER IN VEHICLE?									
	YES	6,631	NO	1,215	NOT REPORTED	86				
3.	DRIVER WAS:									
	KILLED	390	INJURED	1,739	UNINJURED	5,662	NOT REPORTED	142		
4.	IS CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS?									
	YES	404	NO	5,664	NOT REPORTED	1,200	N/A	664		
5.	DIRECTION (GEOGRAPHICAL) OF HIGHWAY USER INVOLVED:									
	NORTH	2,067	SOUTH	2,068	EAST	1,984	WEST	1,764	NOT REPORTED	49
6.	TRAIN TIMETABLE DIRECTION:									
	NORTH	1,610	SOUTH	1,593	EAST	2,366	WEST	2,328	NOT REPORTED	35

TABLE C-2 MISCELLANEOUS DATA RECEIVED FROM DOT-AAR INVENTORY FORMS

LESS THAN ONE TRAIN PER DAY?					
YES	33,208	NO	176,331	N/R	2
DOES ANOTHER RAILROAD OPERATE A SEPARATE TRACK AT CROSSINGS?					
YES	5,323	NO	204,120	N/R	98
DOES ANOTHER RAILROAD OPERATE OVER YOUR TRACK AT CROSSING?					
YES	28,396	NO	181,018	N/R	127
IS TRACK EQUIPPED WITH ANY SIGNS OR SIGNALS?					
YES	195,370	NO	14,165	N/R	6
IS TRACK EQUIPPED WITH SIGNALS FOR TRAIN OPERATION?					
YES	59,531	NO	149,621	N/R	389
IS HIGHWAY PAVED?					
YES	142,701	NO	68,826	N/R	14
IS COMMERCIAL POWER AVAILABLE?					
YES	189,149	NO	20,277	N/R	115
DOES TRACK RUN DOWN A STREET? ¹					
YES	6,477	NO	194,725	N/R	8,339
NEARBY INTERSECTING HIGHWAY? ¹					
YES	74,465	NO	126,671	N/R	8,405
RR ADVANCE WARNING SIGNS PRESENT?					
YES	97,661	NO	111,854	N/R	26
ARE TRUCK PULLOUT LANES PRESENT?					
YES	2,637	NO	206,832	N/R	72
IS CROSSING ON STATE HIGHWAY SYSTEM?					
YES	32,558	NO	176,936	N/R	45
DOES CROSSING PROVIDE SPEED SELECTION?					
YES	6,424	NO	72,924	N/R	129,652

¹NOT ON ORIGINAL INVENTORY FORM USED IN THE FIVE PILOT STATES.

N/R: NOT RECORDED
 N/A: NOT APPLICABLE

APPENDIX D: ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS

TABLE D-1 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND TYPE OF TRAIN

State	TYPE OF TRAIN											
	----Freight----			---Passenger---			-Yard Switching			-----Other-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Alabama.....	5	---	1	---	---	---	3	---	---	1	---	---
Alaska.....	---	---	---	---	---	---	---	---	---	---	---	---
Arizona.....	2	---	---	---	---	---	---	---	---	---	---	---
Arkansas.....	7	1	---	---	---	---	---	---	---	2	---	---
California.....	17	---	3	7	1	2	4	---	1	5	---	---
Colorado.....	8	---	---	---	---	---	---	---	---	---	---	---
Connecticut.....	2	---	---	3	---	2	---	---	---	---	---	---
Delaware.....	---	---	---	---	---	---	---	---	---	---	---	---
Dist. of Columbia	---	---	---	---	---	---	---	---	---	---	---	---
Florida.....	6	---	1	---	---	---	2	---	---	1	---	---
Georgia.....	4	---	1	---	---	---	3	---	2	---	---	---
Idaho.....	3	1	1	---	---	---	---	---	---	1	---	---
Illinois.....	13	---	5	1	1	---	9	1	---	2	---	---
Indiana.....	7	---	1	3	---	1	3	---	---	2	1	---
Iowa.....	7	---	3	---	---	---	1	---	---	2	---	---
Kansas.....	3	---	---	---	---	---	---	---	---	---	---	---
Kentucky.....	24	---	6	---	---	---	2	---	1	2	---	---
Louisiana.....	11	1	9	---	---	---	2	---	---	3	---	1
Maine.....	6	---	---	---	---	---	1	---	---	4	---	1
Maryland.....	1	---	---	---	---	---	2	---	---	1	---	---
Massachusetts....	2	---	1	1	1	---	1	---	---	1	---	---
Michigan.....	7	1	2	2	1	1	10	---	---	4	---	1
Minnesota.....	10	1	6	---	---	---	1	---	---	1	---	---
Mississippi.....	6	1	1	1	---	---	2	---	---	3	---	---
Missouri.....	11	2	3	---	---	---	2	---	---	2	---	---
Montana.....	5	---	---	1	---	1	2	---	---	---	---	---
Nebraska.....	8	---	1	---	---	---	1	---	---	2	---	---
Nevada.....	---	---	---	---	---	---	4	---	---	---	---	---
New Hampshire.....	---	---	---	---	---	---	---	---	---	---	---	---
New Jersey.....	4	---	---	---	---	---	3	---	---	1	---	---
New Mexico.....	3	---	1	---	---	---	---	---	---	---	---	---
New York.....	5	---	1	1	---	---	1	---	---	5	---	2
North Carolina...	14	---	9	1	---	---	2	---	---	1	---	---
North Dakota.....	1	---	1	---	---	---	2	---	---	1	---	---
Ohio.....	28	3	7	---	---	---	7	---	1	4	---	---
Oklahoma.....	5	---	2	---	---	---	2	---	---	1	---	---
Oregon.....	12	---	2	---	---	---	2	---	---	---	---	---
Pennsylvania.....	14	1	1	---	---	---	4	---	1	6	1	3
Rhode Island.....	---	---	---	---	---	---	---	---	---	---	---	---
South Carolina...	5	---	1	---	---	---	2	---	---	1	---	---
South Dakota.....	---	---	---	---	---	---	---	---	---	---	---	---
Tennessee.....	6	---	4	1	---	1	1	---	---	---	---	---
Texas.....	27	---	5	---	---	---	5	---	---	4	---	---
Utah.....	2	---	---	---	---	---	---	---	---	1	---	---
Vermont.....	2	---	---	---	---	---	---	---	---	1	---	---
Virginia.....	18	---	9	1	---	---	---	---	---	6	---	2
Washington.....	8	---	---	1	---	---	7	---	---	3	---	1
West Virginia....	16	1	4	---	---	---	---	---	---	---	---	---
Wisconsin.....	4	---	---	---	---	---	---	---	---	1	---	---
Wyoming.....	2	---	---	---	---	---	2	---	---	---	---	---
Unknown.....	---	---	---	---	---	---	---	---	---	---	---	---
Total.....	351	13	92	24	4	8	95	1	6	75	2	11

Note: "Other" includes mixed trains, work trains, light locomotives, single car or cut of cars

TABLE D-2 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY STATE AND WARNING DEVICE CATEGORY

State	WARNING DEVICE CATEGORY								Total
	Gates	Flashing Lights	Hwy Sig. Wigwags Bells	Special	Cross-Bucks	Stop Signs	Other Signs	No Signs Or Signals	
Alabama.....	---	---	---	4	2	---	1	2	9
Alaska.....	---	---	---	---	---	---	---	---	---
Arizona.....	---	---	---	2	---	---	---	---	2
Arkansas.....	---	---	---	---	5	---	---	4	9
California.....	1	---	3	---	5	17	1	6	33
Colorado.....	---	---	1	---	1	---	4	2	8
Connecticut.....	---	2	---	---	2	---	---	1	5
Delaware.....	---	---	---	---	---	---	---	---	---
Dist. of Columbia	---	---	---	---	---	---	---	---	---
Florida.....	---	---	---	1	6	---	---	2	9
Georgia.....	---	1	---	2	3	---	---	1	7
Idaho.....	---	---	---	---	2	---	---	2	4
Illinois.....	---	---	1	1	6	5	---	12	25
Indiana.....	---	1	1	---	4	---	---	9	15
Iowa.....	---	---	---	---	2	---	1	7	10
Kansas.....	---	---	---	---	2	---	---	1	3
Kentucky.....	---	1	---	---	8	---	---	19	28
Louisiana.....	---	1	---	---	7	---	1	7	16
Maine.....	---	1	---	---	1	2	3	4	11
Maryland.....	---	---	---	1	1	---	---	2	4
Massachusetts....	---	---	---	1	---	---	---	4	5
Michigan.....	---	6	---	---	3	---	---	14	23
Minnesota.....	---	---	3	---	3	---	---	6	12
Mississippi.....	---	---	---	1	6	---	---	5	12
Missouri.....	---	1	---	1	3	1	1	8	15
Montana.....	---	---	---	---	3	---	---	5	8
Nebraska.....	---	---	1	---	1	---	---	9	11
Nevada.....	---	---	---	---	1	2	---	1	4
New Hampshire.....	---	---	---	---	---	---	---	---	---
New Jersey.....	---	---	---	1	1	---	1	5	8
New Mexico.....	---	---	---	---	1	1	---	1	3
New York.....	---	---	---	---	2	3	1	6	12
North Carolina...	---	2	---	1	7	---	1	7	18
North Dakota.....	---	---	---	---	2	---	---	2	4
Ohio.....	---	---	2	1	8	2	1	25	39
Oklahoma.....	---	---	1	---	1	---	---	6	8
Oregon.....	---	---	4	1	7	2	---	---	14
Pennsylvania.....	---	2	---	1	6	---	3	12	24
Rhode Island.....	---	---	---	---	---	---	---	---	---
South Carolina...	---	---	---	2	2	1	---	3	8
South Dakota.....	---	---	---	---	---	---	---	---	---
Tennessee.....	---	---	---	1	3	---	---	4	8
Texas.....	---	---	---	1	18	---	1	16	36
Utah.....	---	---	---	---	1	---	1	1	3
Vermont.....	---	1	---	---	1	---	1	---	3
Virginia.....	---	---	---	2	5	2	1	15	25
Washington.....	---	---	4	1	7	---	---	7	19
West Virginia....	---	---	---	---	4	1	1	10	16
Wisconsin.....	---	1	---	---	---	---	1	3	5
Wyoming.....	---	---	---	---	---	---	1	3	4
Unknown.....	---	---	---	---	---	---	---	---	---
Total.....	1	20	21	26	153	39	26	259	545

Note: "Special" are crossings protected by watchmen or members of train crew

TABLE D-3 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS BY TYPE OF ROADWAY USER

Type Of Vehicle	---Acc/Inc---		---Killed---		---Injured---		Fatal Acc/Inc	Injury Acc/Inc
	No.	%	No.	%	No.	%		
Automobile.....	281	47.63	12	44.44	64	49.61	12	48
Truck.....	158	26.78	4	14.81	34	26.36	4	26
Truck-trailer....	101	17.12	3	11.11	18	13.95	3	15
Bus.....	2	.34	---	---	1	.78	---	1
School bus.....	1	.17	---	---	---	---	---	---
Motorcycle.....	2	.34	1	3.70	---	---	1	---
Pedestrian.....	5	.85	2	7.41	3	2.33	2	3
Other.....	40	6.78	5	18.52	9	6.98	2	8
Total.....	590	100.00	27	100.00	129	100.00	24	101

TABLE D-4 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY AND MOTORIST ACTION

Warning Device	--Drove Around-- -Or Thru Gate--			--Stopped And-- -Then Proceeded			-Did Not Stop--			---Other---			---Unknown---			---Total---		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
Gates.....	---	---	---	---	---	---	---	---	---	1	---	1	---	---	---	1	---	1
Cantilever flashrs	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Standard flashers	---	---	---	---	---	---	15	---	4	5	---	---	---	---	---	20	---	4
Hwy Sig,W W,Bells	---	---	---	1	---	---	14	---	---	5	---	---	1	---	---	21	---	---
Special Devices..	---	---	---	2	---	1	15	---	2	9	---	---	---	---	---	26	---	3
Crossbucks.....	---	---	---	8	1	---	68	2	22	71	---	12	6	---	1	153	3	35
Stopsigns.....	---	---	---	4	---	3	14	2	2	13	1	1	8	---	2	39	3	8
Other Signs.....	---	---	---	1	---	---	9	---	2	15	---	3	1	---	---	26	---	5
No Signs Or Signl	---	---	---	8	---	1	108	8	35	132	5	24	11	1	1	259	14	61
Total.....	---	---	---	24	1	5	243	12	67	251	6	41	27	1	4	545	20	117

Note: "Special" are crossings protected by watchmen or members of train crew.
 "Hwy Sig" = Highway signals, W W = Wigwags.

TABLE D-5 ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN, CIRCUMSTANCE, AND VISIBILITY

Speed Of Consist	VISIBILITY														
	-----Dawn-----			-----Day-----			-----Dusk-----			-----Dark-----			-----Total-----		
	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj	A/I	Kld	Inj
RAIL CONSIST STRUCK HIGHWAY USER															
Standing.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1-9.....	2	---	1	118	---	9	9	---	2	46	---	5	175	---	17
10-19.....	1	---	1	40	---	6	---	---	---	16	---	2	57	---	9
20-29.....	2	---	1	51	1	21	2	1	2	21	---	2	76	2	26
30-39.....	4	---	1	47	1	19	3	---	---	28	---	5	82	1	25
40-49.....	4	---	1	38	6	22	1	---	---	22	1	6	65	7	29
50-59.....	---	---	---	15	3	4	3	---	1	13	3	---	31	6	5
60-69.....	---	---	---	4	2	---	---	---	---	4	---	2	8	2	2
70-79.....	---	---	---	5	1	1	---	---	---	2	---	---	7	1	1
80-89.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
90 and over.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Unknown.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
Total.....	13	---	5	319	14	82	18	1	5	152	4	22	502	19	114
HIGHWAY USER STRUCK RAIL CONSIST															
Standing.....	---	---	---	3	---	---	1	---	---	4	---	---	8	---	---
1-9.....	1	---	---	7	---	---	---	---	---	14	1	1	22	1	1
10-19.....	---	---	---	4	---	1	---	---	---	1	---	---	5	---	1
20-29.....	---	---	---	1	---	---	---	---	---	1	---	---	2	---	---
30-39.....	---	---	---	3	---	1	---	---	---	---	---	---	3	---	1
40-49.....	---	---	---	2	---	---	---	---	---	---	---	---	2	---	---
50-59.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
60-69.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
70-79.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
80-89.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
90 and over.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Unknown.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total.....	1	---	---	21	---	2	1	---	---	20	1	1	43	1	3
GRAND TOTAL															
Standing.....	---	---	---	3	---	---	1	---	---	4	---	---	8	---	---
1-9.....	3	---	1	125	---	9	9	---	2	60	1	6	197	1	18
10-19.....	1	---	1	44	---	7	---	---	---	17	---	2	62	---	10
20-29.....	2	---	1	52	1	21	2	1	2	22	---	2	78	2	26
30-39.....	4	---	1	50	1	20	3	---	---	28	---	5	85	1	26
40-49.....	4	---	1	40	6	22	1	---	---	22	1	6	67	7	29
50-59.....	---	---	---	15	3	4	3	---	1	13	3	---	31	6	5
60-69.....	---	---	---	4	2	---	---	---	---	4	---	2	8	2	2
70-79.....	---	---	---	6	1	1	---	---	---	2	---	---	8	1	1
80-89.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
90 and over.....	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Unknown.....	---	---	---	1	---	---	---	---	---	---	---	---	1	---	---
Total.....	14	---	5	340	14	84	19	1	5	172	5	23	545	20	117

TABLE D-6 ACCIDENTS/INCIDENTS AT PRIVATE CROSSINGS INVOLVING MOTOR VEHICLES BY RAILROAD AND WARNING DEVICE CATEGORY

Railroad	WARNING DEVICE CATEGORY								Total
	Gates	Flashing Lights	Hwy Sig. Wigwags Bells	Special	Cross-Bucks	Stop Signs	Other Signs	No Signs Or Signals	
Alabama Great Southern Railroad.....	---	---	---	1	3	---	---	1	5
Amtrak (National Railroad Passenger Corp.)	1	1	---	---	7	4	---	7	20
Atchison, Topeka and Santa Fe Railway Co..	1	---	---	---	8	3	1	6	19
Baltimore and Ohio Railroad Company.....	---	---	---	1	3	3	---	10	17
Bessemer & Lake Erie Railroad Company.....	---	---	---	---	---	---	---	---	---
Boston and Maine Corporation.....	---	---	---	1	---	---	---	3	4
Burlington Northern.....	---	1	12	---	19	---	1	38	71
Central of Georgia Railroad Company.....	---	---	---	2	1	---	---	---	3
Chesapeake and Ohio Railway Company.....	---	---	---	---	8	2	2	14	26
Chicago and Northwestern Transportation Co	---	---	---	---	2	1	1	6	10
Chicago, Milwaukee, St. Paul & Pacific RR.	---	---	---	---	---	---	---	4	4
Cincinnati, New Orleans & Texas Pacific RR	---	---	---	---	---	---	---	1	1
Clinchfield Railroad.....	---	---	---	1	3	---	---	1	5
Consolidated Rail Corporation.....	---	5	1	4	14	4	5	46	79
Delaware and Hudson Railroad Company.....	---	---	---	---	1	---	---	1	2
Denver and Rio Grande Western Railroad Co.	---	---	---	---	---	---	5	---	5
Detroit, Toledo and Ironton Railroad Co...	---	---	---	---	---	---	---	1	1
Duluth, Missabe and Iron Range Railway Co.	---	---	---	---	---	---	---	---	---
Elgin, Joliet and Eastern Railway Company.	---	---	---	---	---	---	---	---	---
Florida East Coast Railway Company.....	---	---	---	---	1	---	---	---	1
Grand Trunk Western Railroad Company.....	---	2	---	---	1	---	---	1	4
Illinois Central Gulf Railroad.....	---	---	---	---	6	---	1	8	15
Kansas City Southern Railway Company.....	---	---	---	1	---	---	---	3	4
Long Island Railroad.....	---	---	---	---	---	---	---	---	---
Louisiana & Arkansas Railway Company.....	---	1	---	---	---	---	---	3	4
Louisville and Nashville Railroad Company.	---	1	---	1	5	---	---	15	22
Missouri Pacific Railroad Company.....	---	---	---	1	16	---	1	10	28
Missouri-Kansas-Texas Railroad Company...	---	---	---	---	3	---	---	5	8
Norfolk and Western Railway Company.....	---	1	---	1	10	1	1	30	44
Pittsburgh & Lake Erie Railroad.....	---	---	---	---	---	---	---	---	---
Seaboard Coast Line Railroad.....	---	---	---	4	6	1	---	5	16
Soo Line Railroad.....	---	1	---	---	---	---	1	4	6
Southern Pacific Transportation Company...	---	---	2	3	12	14	1	8	40
Southern Railway Company.....	---	1	---	2	8	---	1	6	18
St. Louis Southwestern Railway Company...	---	---	---	---	4	---	---	2	6
Union Pacific Railroad.....	---	---	3	1	7	2	1	8	22
Western Maryland Railway.....	---	---	---	---	---	---	---	2	2
Western Pacific Railroad Company.....	---	---	---	---	1	1	---	3	5
All Other Railroads.....	---	6	3	2	10	7	4	13	45
Total.....	2	20	21	26	159	43	26	265	562

Note: "Special" are crossings protected by watchmen or members of train crew.

The totals on this table are slightly higher than those shown on other tables. The reporting rules require that when an Amtrak train is being operated by a crew of another railroad, both Amtrak and the operating carrier must make a report of an accident/incident. In all other tables these accidents/incidents are only counted once.

TABLE D-7. ACCIDENTS/INCIDENTS AND CASUALTIES AT PRIVATE CROSSINGS BY RAILROAD

Railroad	-----Motor Vehicle-----			-----Other Highway Users-----			-----Total-----		
	Acc/Inc	Killed	Injured	Acc/Inc	Killed	Injured	Acc/Inc	Killed	Injured
Alabama Great Southern Railroad.....	5	---	---	---	---	---	5	---	---
Amtrak (National Railroad Passenger Corp.)	20	1	1	1	---	---	21	1	1
Atchison, Topeka and Santa Fe Railway Co..	19	1	4	1	---	---	20	1	4
Baltimore and Ohio Railroad Company.....	17	1	4	2	1	---	19	2	4
Bessemer & Lake Erie Railroad Company.....	---	---	---	---	---	---	---	---	---
Boston and Maine Corporation.....	4	---	1	---	---	---	4	---	1
Burlington Northern.....	71	1	15	5	---	1	76	1	16
Central of Georgia Railroad Company.....	3	---	---	---	---	---	3	---	---
Chesapeake and Ohio Railway Company.....	26	1	6	---	---	---	26	1	6
Chicago and Northwestern Transportation Co	10	---	---	1	---	---	11	---	---
Chicago, Milwaukee, St. Paul & Pacific RR.	4	1	---	---	---	---	4	1	---
Cincinnati, New Orleans & Texas Pacific RR	1	---	1	---	---	---	1	---	1
Clinchfield Railroad.....	5	---	3	---	---	---	5	---	3
Consolidated Rail Corporation.....	79	5	9	5	---	3	84	5	12
Delaware and Hudson Railroad Company.....	2	---	---	---	---	---	2	---	---
Denver and Rio Grande Western Railroad Co.	5	---	---	1	---	---	6	---	---
Detroit, Toledo and Ironton Railroad Co...	1	---	---	1	---	2	2	---	2
Duluth, Missabe and Iron Range Railway Co.	---	---	---	---	---	---	---	---	---
Elgin, Joliet and Eastern Railway Company.	---	---	---	---	---	---	---	---	---
Florida East Coast Railway Company.....	1	---	---	---	---	---	1	---	---
Grand Trunk Western Railroad Company.....	4	---	---	1	---	1	5	---	1
Illinois Central Gulf Railroad.....	15	2	7	3	---	1	18	2	8
Kansas City Southern Railway Company.....	4	1	4	---	---	---	4	1	4
Long Island Railroad.....	---	---	---	---	---	---	---	---	---
Louisiana & Arkansas Railway Company.....	4	---	2	---	---	---	4	---	2
Louisville and Nashville Railroad Company.	22	---	6	2	---	---	24	---	6
Missouri Pacific Railroad Company.....	28	2	5	1	---	---	29	2	5
Missouri-Kansas-Texas Railroad Company....	8	---	---	---	---	---	8	---	---
Norfolk and Western Railway Company.....	44	2	22	2	---	---	46	2	22
Pittsburgh & Lake Erie Railroad.....	---	---	---	---	---	---	---	---	---
Seaboard Coast Line Railroad.....	16	---	2	1	---	---	17	---	2
Soo Line Railroad.....	6	---	1	2	---	---	8	---	1
Southern Pacific Transportation Company...	40	---	4	7	1	1	47	1	5
Southern Railway Company.....	18	---	5	2	1	1	20	1	6
St. Louis Southwestern Railway Company....	6	---	1	---	---	---	6	---	1
Union Pacific Railroad.....	22	1	4	1	4	---	23	5	4
Western Maryland Railway.....	2	---	---	---	---	---	2	---	---
Western Pacific Railroad Company.....	5	---	---	---	---	---	5	---	---
All Other Railroads.....	45	1	10	7	---	2	52	1	12
Total.....	562	20	117	46	7	12	608	27	129

Note: A/I totals on this table are slightly higher than those shown on other tables. The reporting rules require that when an Amtrak train is being operated by a crew of another railroad, both Amtrak and the operating carrier must make a report of an accident/incident. In all other tables these accidents/incidents are only counted once.

KEYWORD INDEX

<u>Subject</u>	<u>Page</u>
rail-highway crossing accidents	
by state	5, 6, 7, 8, 11
by type of highway user.	14, 17
by railroad.	9, 10
by type of motor vehicle	4, 7, 15, 16, 19, 34
by warning device.	9, 11, 26, 28, 29
rail-highway crossings	
by state	45, 47, 52, 54, 56, 59, 62, 63, 64
by warning device category	51, 57, 59, 60, 69, 73
by railroad.	46
by number of trains per day.	66, 68, 69, 70
by annual average daily traffic.	70, 72, 73, 74
private crossings.	45, 46, D-2, D-3, D-4, D-5, D-6, D-7
casualties at rail-highway crossings	
by type of person.	17
by circumstance.	14, 16, 17, 18, 20, 22, 28, 30, 31, 32
by time of day	28, 31