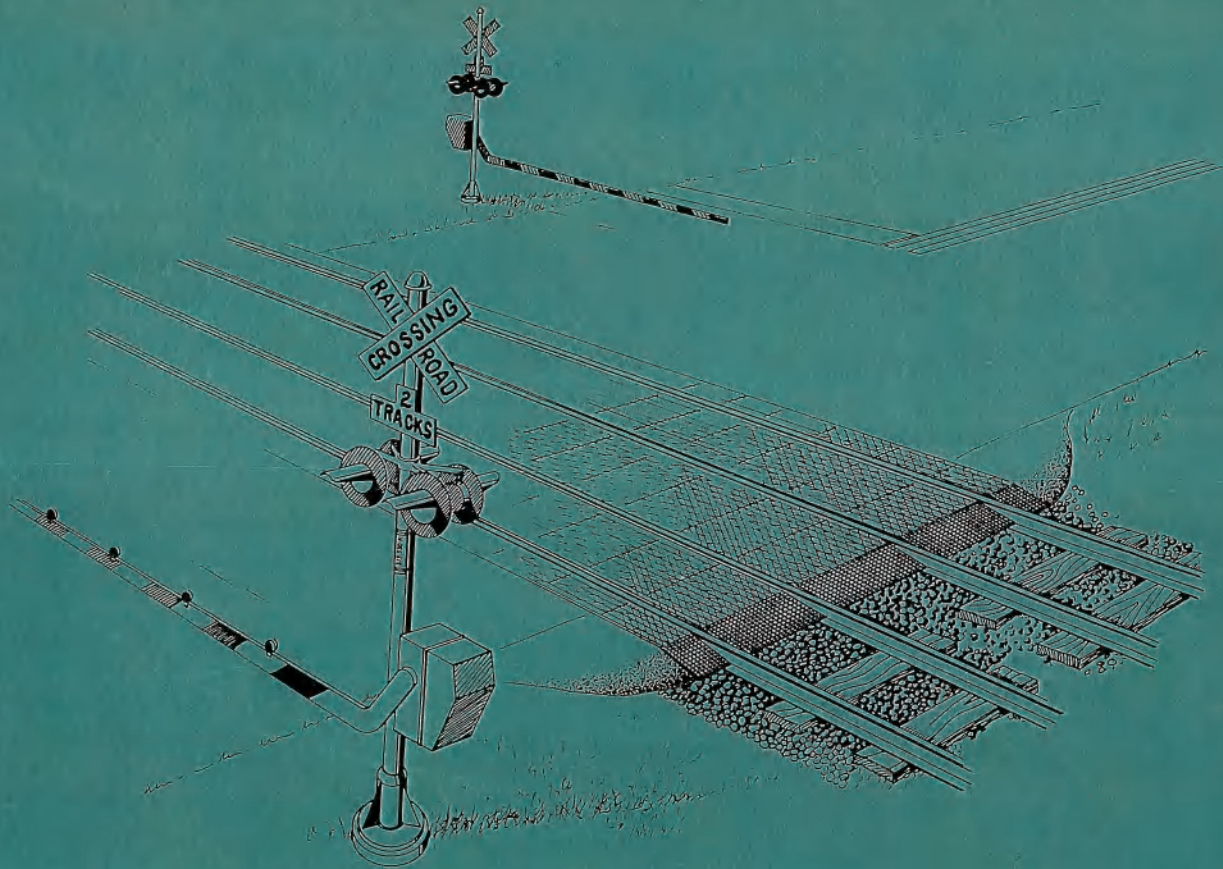


Thomas P. Wolf

RAIL-HIGHWAY CROSSING ACCIDENT/INCIDENT AND INVENTORY BULLETIN

No. 4 Calendar Year 1981



U.S. DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration
Office of Safety



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Federal Railroad Administration
Office of Safety, RRS-33
400 Seventh Street, S.W.
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LIST OF ABBREVIATIONS

ACC/INC - accident/incident
CAS - casualty
CONT - contractor employee
ENOD - employee not on duty
EOD - employee on duty
FA - Federal aid
HWY - highway
K - thousands
KLD - killed
LOCO(S) - locomotive
NONT - non-trespasser
PSGR - passenger
SIG - signal
TRES - trespasser
VEH REG - vehicles registered

INTRODUCTION

The fourth 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 in accordance with 49 CFR 225. The National Rail-Highway Crossing Inventory contains information about all rail-highway crossings in the United States.

Railroads file accident/incident reports with the FRA in accordance with the Federal Railroad Safety Act of 1970 (P.L. 91-458) and the Accident Reports Act (45 U.S.C. 38-43). The reports assist the FRA in carrying out its congressional mandate to record accidents and casualties resulting from the movement of freight and passengers by rail. 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 take action to improve rail-highway crossing safety.

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

Complete statistics on all railroad-related accidents/incidents are found in the Accident/Incident Bulletin, published annually by FRA Office of Safety.

Section 1 presents historical data on rail-highway crossing accidents/incidents for 1975 through 1981.

Section 2 contains accident/incident statistics for 1981. 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 public at-grade rail-highway crossings in the United States, as described by the National Inventory of September 30, 1981. (As a result of a delay in the award of the inventory-updating contract, updates received through September 30, 1981, have been processed but nothing received after that date has been processed. Normally, updates received during the 6 months following September would also be included. This backlog is expected to disappear before next year's publication.) More detailed information is available in the Department of Transportation publication, "Summary Statistics of the National Railroad-Highway Crossing Inventory for Public at Grade Crossings" (Accession Number PB 293070/AS, September 1978). This document may be obtained from the National Technical Information Service, Springfield, Virginia 22161.

The tables and figures in Sections 1, 2, 3, 4, and Appendix C present data on public rail-highway crossings. Appendix D and Tables 34 and 35 present data on private crossings. Tables 1, 3, 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 ACCIDENTS/INCIDENTS (1981)

| Type of Crossing |Total..... | | |Motor Vehicles.... | | | ...Non-Motor Vehicles.. | | |
|------------------|-----------------|-----------|------------|-------------------------|-----------|------------|-------------------------|----------|----------|
| | Accidents | Fatal | Injured | Accidents | Fatal | Injured | Accidents | Fatal | Injured |
| Public | 8,546 | 697 | 3,121 | 8,232 | 623 | 3,020 | 314 | 74 | 101 |
| Private | <u>749</u> | <u>31</u> | <u>172</u> | <u>704</u> | <u>27</u> | <u>167</u> | <u>45</u> | <u>4</u> | <u>5</u> |
| Total | 9,295 | 728 | 3,293 | 8,936 | 650 | 3,187 | 359 | 78 | 106 |

1. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS: HISTORICAL DATA 1975-1981

TABLE 1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1975-1981

| YEAR | NUMBER OF ACCIDENTS | KILLED | TOTAL INJURED | CASUALTIES | CASUALTIES PER ACCIDENT |
|------|---------------------|--------|---------------|------------|-------------------------|
| 1975 | 11,354 | 978 | 4,168 | 5,146 | 0.45 |
| 1976 | 12,114 | 1,114 | 4,831 | 5,945 | 0.49 |
| 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 |

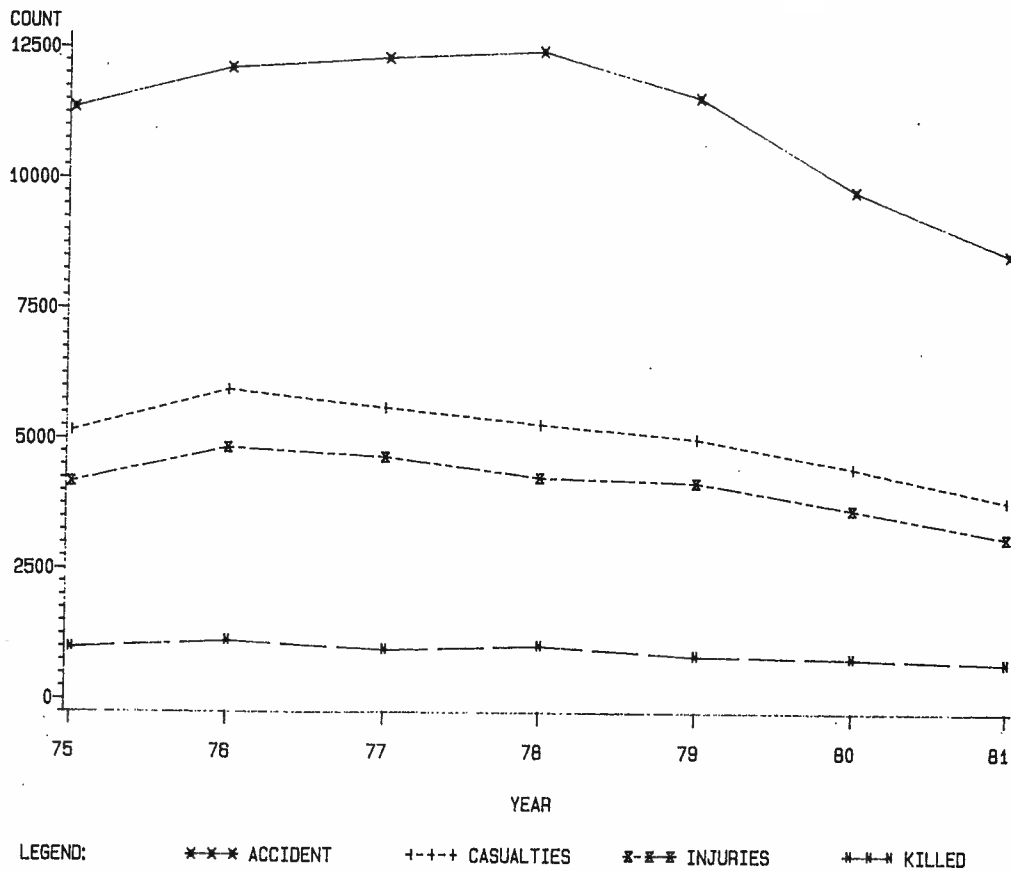


FIGURE 1 SUMMARY OF ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS, 1975-1981

TABLE 2 SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1975-1981

| YEAR | ACCIDENTS | MOTOR VEHICLES REGISTERED (000) ¹ | ACCIDENTS PER MILLION VEHICLES |
|------|-----------|--|--------------------------------|
| 1975 | 10,925 | 137,918 | 79.21 |
| 1976 | 11,700 | 143,538 | 81.51 |
| 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 |

¹ Figures for 1975-1980 supplied by the Federal Highway Administration. The 1981 figure is an estimate, and is not used in other tables.

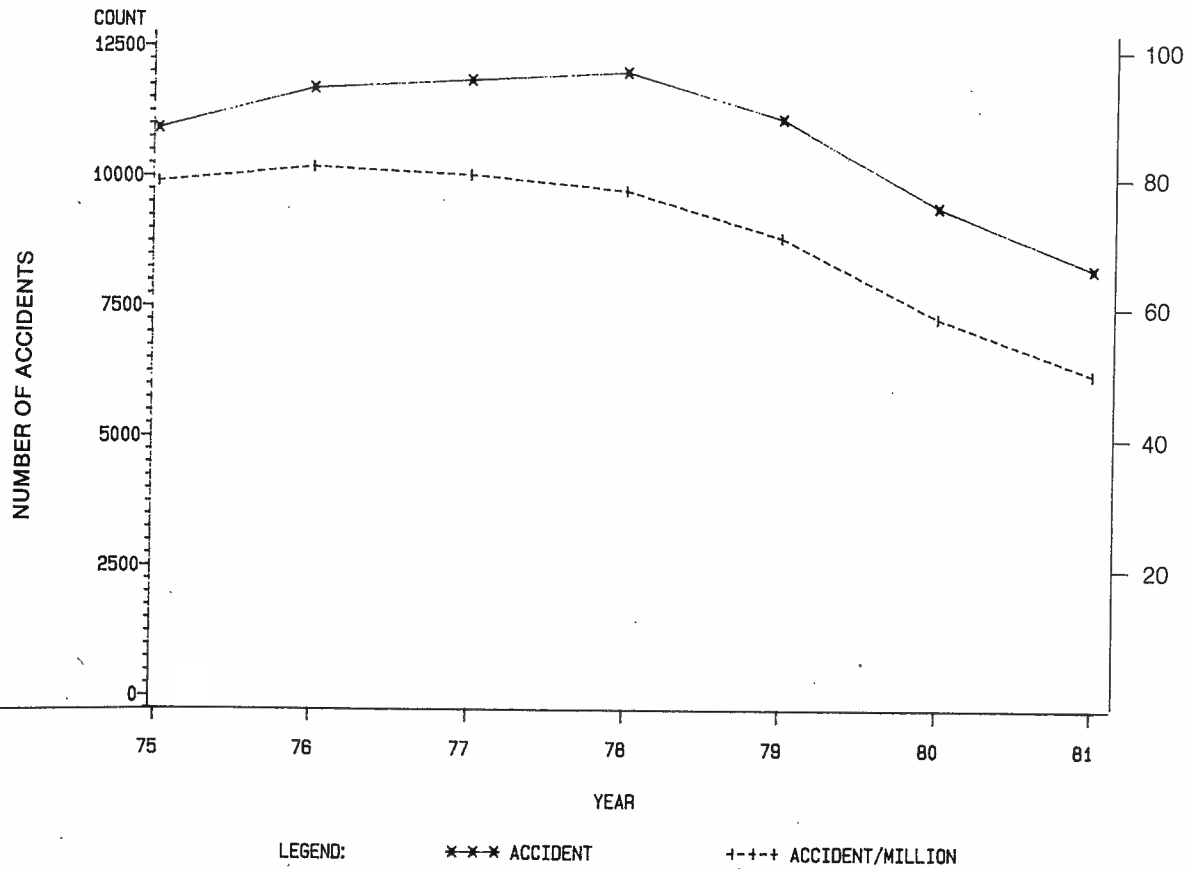


FIGURE 2 SUMMARY OF ACCIDENTS/INCIDENTS AND ACCIDENT RATES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES, 1975-1981

2. RAIL-HIGHWAY CROSSING ACCIDENTS/INCIDENTS 1981

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

| STATE | TOTAL | TOTAL | | TOTAL | | TOTAL | |
|----------------|---------|-------|--------|---------|--------|------------|--------|
| | ACC/INC | NO. | % | INJURED | % | CASUALTIES | % |
| ALABAMA | 244 | 25 | 3.59 | 94 | 3.01 | 119 | 3.12 |
| ALASKA | 27 | 0 | 0.0 | 1 | 0.03 | 1 | 0.03 |
| ARIZONA | 35 | 3 | 0.43 | 15 | 0.48 | 18 | 0.47 |
| ARKANSAS | 179 | 18 | 2.58 | 87 | 2.79 | 105 | 2.75 |
| CALIFORNIA | 408 | 35 | 5.02 | 138 | 4.42 | 173 | 4.53 |
| COLORADO | 116 | 9 | 1.29 | 39 | 1.25 | 48 | 1.26 |
| CONNECTICUT | 20 | 1 | 0.14 | 3 | 0.10 | 4 | 0.10 |
| DELAWARE | 13 | 0 | 0.0 | 5 | 0.16 | 5 | 0.13 |
| DIST. COLUMBIA | 2 | 0 | 0.0 | 1 | 0.03 | 1 | 0.03 |
| FLORIDA | 265 | 35 | 5.02 | 83 | 2.66 | 118 | 3.09 |
| GEORGIA | 281 | 18 | 2.58 | 105 | 3.36 | 123 | 3.22 |
| HAWAII | 0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| IDAHO | 55 | 0 | 0.0 | 20 | 0.64 | 20 | 0.52 |
| ILLINOIS | 547 | 59 | 8.46 | 234 | 7.50 | 293 | 7.67 |
| INDIANA | 494 | 46 | 6.60 | 166 | 5.32 | 212 | 5.55 |
| IOWA | 209 | 15 | 2.15 | 63 | 2.02 | 78 | 2.04 |
| KANSAS | 187 | 14 | 2.01 | 70 | 2.24 | 84 | 2.20 |
| KENTUCKY | 152 | 7 | 1.00 | 37 | 1.19 | 44 | 1.15 |
| LOUISIANA | 380 | 29 | 4.16 | 189 | 6.06 | 218 | 5.71 |
| MAINE | 19 | 3 | 0.43 | 11 | 0.35 | 14 | 0.37 |
| MARYLAND | 36 | 2 | 0.29 | 15 | 0.48 | 17 | 0.45 |
| MASSACHUSETTS | 30 | 1 | 0.14 | 2 | 0.06 | 3 | 0.08 |
| MICHIGAN | 337 | 24 | 3.44 | 133 | 4.26 | 157 | 4.11 |
| MINNESOTA | 196 | 16 | 2.30 | 69 | 2.21 | 85 | 2.23 |
| MISSISSIPPI | 220 | 10 | 1.43 | 152 | 4.87 | 162 | 4.24 |
| MISSOURI | 184 | 16 | 2.30 | 65 | 2.08 | 81 | 2.12 |
| MONTANA | 33 | 2 | 0.29 | 4 | 0.13 | 6 | 0.16 |
| NEBRASKA | 134 | 28 | 4.02 | 39 | 1.25 | 67 | 1.75 |
| NEVADA | 6 | 0 | 0.0 | 2 | 0.06 | 2 | 0.05 |
| NEW HAMPSHIRE | 6 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| NEW JERSEY | 76 | 13 | 1.87 | 11 | 0.35 | 24 | 0.63 |
| NEW MEXICO | 22 | 5 | 0.72 | 13 | 0.42 | 18 | 0.47 |
| NEW YORK | 100 | 14 | 2.01 | 31 | 0.99 | 45 | 1.18 |
| NORTH CAROLINA | 202 | 13 | 1.87 | 74 | 2.37 | 87 | 2.28 |
| NORTH DAKOTA | 30 | 3 | 0.43 | 11 | 0.35 | 14 | 0.37 |
| OHIO | 537 | 52 | 7.46 | 172 | 5.51 | 224 | 5.87 |
| OKLAHOMA | 267 | 15 | 2.15 | 107 | 3.43 | 122 | 3.20 |
| OREGON | 70 | 6 | 0.86 | 20 | 0.64 | 26 | 0.68 |
| PENNSYLVANIA | 178 | 11 | 1.58 | 53 | 1.70 | 64 | 1.68 |
| RHODE ISLAND | 1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| SOUTH CAROLINA | 173 | 7 | 1.00 | 62 | 1.99 | 69 | 1.81 |
| SOUTH DAKOTA | 26 | 0 | 0.0 | 6 | 0.19 | 6 | 0.16 |
| TENNESSEE | 200 | 16 | 2.30 | 81 | 2.60 | 97 | 2.54 |
| TEXAS | 1114 | 76 | 10.90 | 427 | 13.68 | 503 | 13.17 |
| UTAH | 46 | 3 | 0.43 | 12 | 0.38 | 15 | 0.39 |
| VERMONT | 14 | 0 | 0.0 | 12 | 0.38 | 12 | 0.31 |
| VIRGINIA | 128 | 8 | 1.15 | 44 | 1.41 | 52 | 1.36 |
| WASHINGTON | 142 | 12 | 1.72 | 31 | 0.99 | 43 | 1.13 |
| WEST VIRGINIA | 100 | 5 | 0.72 | 31 | 0.99 | 36 | 0.94 |
| WISCONSIN | 289 | 22 | 3.16 | 75 | 2.40 | 97 | 2.54 |
| WYOMING | 16 | 0 | 0.0 | 6 | 0.19 | 6 | 0.16 |
| TOTAL | 8546 | 697 | 100.00 | 3121 | 100.00 | 3818 | 100.00 |

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

| STATE | TOTAL ACC /INC | TOTAL KILLED | TOTAL INJURED | TOTAL CASUALTIES | VEHICLES REGISTERED (000) ¹ | ACC/CAS PER 10,000 REGISTRATION | | |
|----------------|-------------------|-----------------|------------------|---------------------|--|------------------------------------|--------|---------|
| | | | | | | ACC | KILLED | INJURED |
| ALABAMA | 242 | 25 | 93 | 118 | 3014 | 0.80 | 0.08 | 0.31 |
| ALASKA | 26 | 0 | 1 | 1 | 263 | 0.99 | 0.0 | 0.04 |
| ARIZONA | 33 | 2 | 15 | 17 | 2005 | 0.16 | 0.01 | 0.07 |
| ARKANSAS | 172 | 15 | 83 | 98 | 1607 | 1.07 | 0.09 | 0.52 |
| CALIFORNIA | 380 | 28 | 128 | 156 | 17618 | 0.22 | 0.02 | 0.07 |
| COLORADO | 109 | 7 | 38 | 45 | 2455 | 0.44 | 0.03 | 0.15 |
| CONNECTICUT | 19 | 0 | 3 | 3 | 2220 | 0.09 | 0.0 | 0.01 |
| DELAWARE | 13 | 0 | 5 | 5 | 408 | 0.32 | 0.0 | 0.12 |
| DIST. COLUMBIA | 2 | 0 | 1 | 1 | 271 | 0.07 | 0.0 | 0.04 |
| FLORIDA | 251 | 30 | 81 | 111 | 7833 | 0.32 | 0.04 | 0.10 |
| GEORGIA | 266 | 16 | 101 | 117 | 3927 | 0.68 | 0.04 | 0.26 |
| HAWAII | 0 | 0 | 0 | 0 | 576 | 0.0 | 0.0 | 0.0 |
| IDAHO | 51 | 0 | 18 | 18 | 890 | 0.57 | 0.0 | 0.20 |
| ILLINOIS | 520 | 51 | 224 | 275 | 7781 | 0.67 | 0.07 | 0.29 |
| INDIANA | 476 | 43 | 159 | 202 | 4006 | 1.19 | 0.11 | 0.40 |
| IOWA | 198 | 12 | 61 | 73 | 2548 | 0.78 | 0.05 | 0.24 |
| KANSAS | 184 | 14 | 70 | 84 | 2110 | 0.87 | 0.07 | 0.33 |
| KENTUCKY | 149 | 7 | 36 | 43 | 2656 | 0.56 | 0.03 | 0.14 |
| LOUISIANA | 371 | 28 | 186 | 214 | 2857 | 1.30 | 0.10 | 0.65 |
| MAINE | 18 | 3 | 11 | 14 | 771 | 0.23 | 0.04 | 0.14 |
| MARYLAND | 32 | 2 | 13 | 15 | 2884 | 0.11 | 0.01 | 0.05 |
| MASSACHUSETTS | 30 | 1 | 2 | 3 | 3849 | 0.08 | 0.0 | 0.01 |
| MICHIGAN | 327 | 22 | 126 | 148 | 6743 | 0.48 | 0.03 | 0.19 |
| MINNESOTA | 183 | 14 | 67 | 81 | 3260 | 0.56 | 0.04 | 0.21 |
| MISSISSIPPI | 211 | 9 | 143 | 152 | 1605 | 1.31 | 0.06 | 0.89 |
| MISSOURI | 179 | 14 | 65 | 79 | 3377 | 0.53 | 0.04 | 0.19 |
| MONTANA | 33 | 2 | 4 | 6 | 714 | 0.46 | 0.03 | 0.06 |
| NEBRASKA | 129 | 26 | 37 | 63 | 1337 | 0.96 | 0.19 | 0.28 |
| NEVADA | 6 | 0 | 2 | 2 | 674 | 0.09 | 0.0 | 0.03 |
| NEW HAMPSHIRE | 6 | 0 | 0 | 0 | 746 | 0.08 | 0.0 | 0.0 |
| NEW JERSEY | 71 | 9 | 10 | 19 | 4867 | 0.15 | 0.02 | 0.02 |
| NEW MEXICO | 19 | 4 | 13 | 17 | 1118 | 0.17 | 0.04 | 0.12 |
| NEW YORK | 88 | 10 | 27 | 37 | 8197 | 0.11 | 0.01 | 0.03 |
| NORTH CAROLINA | 194 | 11 | 73 | 84 | 4647 | 0.42 | 0.02 | 0.16 |
| NORTH DAKOTA | 29 | 3 | 11 | 14 | 656 | 0.44 | 0.05 | 0.17 |
| OHIO | 525 | 47 | 170 | 217 | 8047 | 0.65 | 0.06 | 0.21 |
| OKLAHOMA | 255 | 13 | 102 | 115 | 2812 | 0.91 | 0.05 | 0.36 |
| OREGON | 68 | 6 | 18 | 24 | 2171 | 0.31 | 0.03 | 0.08 |
| PENNSYLVANIA | 176 | 11 | 52 | 63 | 7139 | 0.25 | 0.02 | 0.07 |
| RHODE ISLAND | 1 | 0 | 0 | 0 | 647 | 0.02 | 0.0 | 0.0 |
| SOUTH CAROLINA | 172 | 6 | 62 | 68 | 2034 | 0.85 | 0.03 | 0.30 |
| SOUTH DAKOTA | 26 | 0 | 6 | 6 | 636 | 0.41 | 0.0 | 0.09 |
| TENNESSEE | 194 | 14 | 77 | 91 | 3355 | 0.58 | 0.04 | 0.23 |
| TEXAS | 1090 | 71 | 423 | 494 | 10791 | 1.01 | 0.07 | 0.39 |
| UTAH | 46 | 3 | 12 | 15 | 1055 | 0.44 | 0.03 | 0.11 |
| VERMONT | 12 | 0 | 11 | 11 | 371 | 0.32 | 0.0 | 0.30 |
| VIRGINIA | 126 | 7 | 44 | 51 | 3711 | 0.34 | 0.02 | 0.12 |
| WASHINGTON | 138 | 12 | 28 | 40 | 3365 | 0.41 | 0.04 | 0.08 |
| WEST VIRGINIA | 97 | 5 | 29 | 34 | 1359 | 0.71 | 0.04 | 0.21 |
| WISCONSIN | 274 | 20 | 74 | 94 | 3116 | 0.88 | 0.06 | 0.24 |
| WYOMING | 15 | 0 | 5 | 5 | 488 | 0.31 | 0.0 | 0.10 |
| TOTAL | 8232 | 623 | 3020 | 3643 | 161614 | 0.51 | 0.04 | 0.19 |

¹ (1980) FIGURES SUPPLIED BY FEDERAL HIGHWAY ADMINISTRATION.

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 | | | *****BUS***** | | | SCHOOL | | | ***MOTORCYCLE*** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| ALABAMA | 162 | 14 | 60 | 54 | 3 | 23 | 25 | 8 | 10 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| ALASKA | 20 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARIZONA | 27 | 2 | 11 | 6 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARKANSAS | 103 | 9 | 61 | 43 | 3 | 13 | 23 | 1 | 8 | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| CALIFORNIA | 252 | 17 | 89 | 84 | 5 | 29 | 30 | 1 | 5 | 2 | 0 | 1 | 0 | 0 | 0 | 12 | 5 | 4 |
| COLORADO | 61 | 3 | 22 | 35 | 3 | 14 | 12 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| CONNECTICUT | 18 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELAWARE | 11 | 0 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DIST. COLUMBIA | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FLORIDA | 179 | 26 | 59 | 49 | 3 | 17 | 20 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| GEORGIA | 174 | 7 | 66 | 63 | 4 | 23 | 25 | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 2 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 32 | 0 | 15 | 16 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ILLINOIS | 396 | 40 | 163 | 88 | 7 | 44 | 29 | 0 | 12 | 1 | 2 | 0 | 3 | 0 | 1 | 3 | 2 | 4 |
| INDIANA | 354 | 31 | 110 | 90 | 10 | 34 | 22 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 9 | 2 | 4 |
| IOWA | 127 | 6 | 36 | 54 | 5 | 22 | 15 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| KANSAS | 116 | 7 | 42 | 45 | 6 | 21 | 23 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| KENTUCKY | 99 | 6 | 26 | 41 | 1 | 6 | 6 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 |
| LOUISIANA | 223 | 19 | 120 | 107 | 5 | 51 | 35 | 3 | 13 | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 1 | 2 |
| MAINE | 13 | 2 | 10 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MARYLAND | 24 | 2 | 12 | 2 | 0 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MASSACHUSETTS | 25 | 0 | 1 | 5 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICHIGAN | 258 | 14 | 89 | 56 | 6 | 28 | 5 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 7 | 2 | 4 |
| MINNESOTA | 127 | 10 | 47 | 43 | 3 | 13 | 11 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 |
| MISSISSIPPI | 148 | 8 | 108 | 51 | 1 | 25 | 10 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| MISSOURI | 115 | 6 | 39 | 51 | 7 | 24 | 12 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| MONTANA | 14 | 0 | 3 | 15 | 1 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| NEBRASKA | 83 | 17 | 28 | 37 | 9 | 8 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEVADA | 2 | 0 | 1 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW HAMPSHIRE | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW JERSEY | 55 | 9 | 10 | 9 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| NEW MEXICO | 10 | 3 | 8 | 2 | 0 | 0 | 7 | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW YORK | 64 | 9 | 21 | 19 | 1 | 6 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| NORTH CAROLINA | 134 | 6 | 50 | 43 | 5 | 18 | 16 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| NORTH DAKOTA | 11 | 1 | 3 | 15 | 2 | 7 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OHIO | 391 | 34 | 116 | 92 | 9 | 36 | 34 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 4 |
| OKLAHOMA | 157 | 8 | 56 | 78 | 5 | 37 | 19 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| OREGON | 37 | 5 | 12 | 18 | 1 | 2 | 12 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| PENNSYLVANIA | 119 | 8 | 41 | 36 | 3 | 9 | 18 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 |
| RHODE ISLAND | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH CAROLINA | 133 | 6 | 48 | 25 | 0 | 11 | 13 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| SOUTH DAKOTA | 16 | 0 | 5 | 9 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TENNESSEE | 139 | 12 | 56 | 42 | 1 | 20 | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 0 |
| TEXAS | 694 | 45 | 269 | 280 | 22 | 109 | 98 | 1 | 32 | 2 | 0 | 2 | 0 | 0 | 0 | 16 | 3 | 11 |
| UTAH | 29 | 3 | 8 | 14 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VERMONT | 10 | 0 | 9 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VIRGINIA | 92 | 3 | 33 | 22 | 2 | 4 | 10 | 1 | 5 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| WASHINGTON | 92 | 8 | 15 | 30 | 1 | 7 | 15 | 1 | 6 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WEST VIRGINIA | 66 | 3 | 21 | 26 | 2 | 6 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| WISCONSIN | 209 | 16 | 57 | 44 | 1 | 12 | 15 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 |
| WYOMING | 10 | 0 | 2 | 3 | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 5640 | 425 | 2068 | 1862 | 139 | 700 | 613 | 24 | 192 | 15 | 5 | 11 | 12 | 0 | 4 | 90 | 30 | 45 |

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**** | | | 1 *****OTHER***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| ALABAMA | 179 | 23 | 73 | 4 | 0 | 1 | 36 | 0 | 9 | 23 | 2 | 10 |
| ALASKA | 2 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 8 | 0 | 1 |
| ARIZONA | 21 | 0 | 9 | 2 | 0 | 0 | 7 | 2 | 5 | 3 | 0 | 1 |
| ARKANSAS | 136 | 14 | 74 | 0 | 0 | 0 | 21 | 1 | 3 | 15 | 0 | 6 |
| CALIFORNIA | 238 | 21 | 88 | 19 | 4 | 17 | 77 | 1 | 11 | 46 | 2 | 12 |
| COLORADO | 78 | 6 | 30 | 3 | 0 | 0 | 11 | 0 | 3 | 17 | 1 | 5 |
| CONNECTICUT | 8 | 0 | 0 | 8 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| DELAWARE | 10 | 0 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| DIST. COLUMBIA | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FLORIDA | 191 | 26 | 61 | 8 | 3 | 0 | 23 | 0 | 6 | 29 | 1 | 14 |
| GEORGIA | 190 | 14 | 76 | 3 | 1 | 1 | 41 | 0 | 17 | 32 | 1 | 7 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 38 | 0 | 11 | 3 | 0 | 2 | 2 | 0 | 0 | 8 | 0 | 5 |
| ILLINOIS | 322 | 36 | 152 | 70 | 11 | 33 | 47 | 1 | 11 | 81 | 3 | 28 |
| INDIANA | 379 | 30 | 130 | 20 | 10 | 4 | 34 | 1 | 10 | 43 | 2 | 15 |
| IOWA | 130 | 9 | 50 | 2 | 3 | 0 | 40 | 0 | 6 | 26 | 0 | 5 |
| KANSAS | 151 | 8 | 62 | 4 | 2 | 2 | 11 | 0 | 3 | 18 | 4 | 3 |
| KENTUCKY | 99 | 6 | 29 | 1 | 0 | 1 | 17 | 1 | 3 | 32 | 0 | 3 |
| LOUISIANA | 257 | 27 | 134 | 5 | 0 | 0 | 68 | 1 | 33 | 41 | 0 | 19 |
| MAINE | 15 | 3 | 11 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| MARYLAND | 15 | 0 | 7 | 3 | 0 | 2 | 11 | 2 | 3 | 3 | 0 | 1 |
| MASSACHUSETTS | 15 | 1 | 0 | 10 | 0 | 1 | 2 | 0 | 0 | 3 | 0 | 1 |
| MICHIGAN | 220 | 18 | 95 | 10 | 1 | 3 | 54 | 0 | 19 | 43 | 3 | 9 |
| MINNESOTA | 127 | 13 | 54 | 4 | 0 | 2 | 25 | 0 | 3 | 27 | 1 | 8 |
| MISSISSIPPI | 142 | 7 | 114 | 6 | 1 | 4 | 33 | 0 | 13 | 30 | 1 | 12 |
| MISSOURI | 127 | 13 | 50 | 3 | 0 | 1 | 23 | 1 | 6 | 26 | 0 | 8 |
| MONTANA | 18 | 1 | 3 | 0 | 0 | 0 | 9 | 1 | 0 | 6 | 0 | 1 |
| NEBRASKA | 102 | 25 | 32 | 2 | 1 | 0 | 11 | 0 | 3 | 14 | 0 | 2 |
| NEVADA | 4 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| NEW HAMPSHIRE | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| NEW JERSEY | 32 | 1 | 4 | 18 | 8 | 4 | 11 | 0 | 1 | 10 | 0 | 1 |
| NEW MEXICO | 16 | 4 | 10 | 1 | 0 | 2 | 1 | 0 | 0 | 1 | 0 | 1 |
| NEW YORK | 55 | 3 | 17 | 16 | 6 | 6 | 5 | 0 | 1 | 12 | 1 | 3 |
| NORTH CAROLINA | 154 | 9 | 60 | 2 | 0 | 3 | 19 | 0 | 5 | 19 | 2 | 5 |
| NORTH DAKOTA | 23 | 3 | 10 | 1 | 0 | 1 | 3 | 0 | 0 | 2 | 0 | 0 |
| OHIO | 415 | 37 | 138 | 10 | 1 | 4 | 47 | 1 | 6 | 53 | 8 | 22 |
| OKLAHOMA | 176 | 11 | 81 | 0 | 0 | 0 | 50 | 2 | 11 | 29 | 0 | 10 |
| OREGON | 44 | 5 | 15 | 3 | 1 | 0 | 15 | 0 | 2 | 6 | 0 | 1 |
| PENNSYLVANIA | 121 | 10 | 37 | 23 | 1 | 10 | 12 | 0 | 2 | 20 | 0 | 3 |
| RHODE ISLAND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| SOUTH CAROLINA | 137 | 6 | 55 | 3 | 0 | 0 | 14 | 0 | 2 | 18 | 0 | 5 |
| SOUTH DAKOTA | 13 | 0 | 1 | 0 | 0 | 0 | 9 | 0 | 2 | 4 | 0 | 3 |
| TENNESSEE | 134 | 11 | 60 | 1 | 0 | 1 | 48 | 0 | 13 | 11 | 3 | 3 |
| TEXAS | 715 | 61 | 297 | 16 | 1 | 9 | 208 | 7 | 74 | 151 | 2 | 43 |
| UTAH | 35 | 3 | 12 | 3 | 0 | 0 | 5 | 0 | 0 | 3 | 0 | 0 |
| VERMONT | 7 | 0 | 4 | 1 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 5 |
| VIRGINIA | 85 | 6 | 36 | 1 | 0 | 0 | 19 | 0 | 3 | 21 | 1 | 5 |
| WASHINGTON | 77 | 11 | 24 | 2 | 0 | 0 | 32 | 0 | 3 | 27 | 1 | 1 |
| WEST VIRGINIA | 72 | 5 | 27 | 1 | 0 | 0 | 7 | 0 | 2 | 17 | 0 | 0 |
| WISCONSIN | 175 | 18 | 59 | 3 | 1 | 0 | 71 | 1 | 10 | 25 | 0 | 5 |
| WYOMING | 7 | 0 | 2 | 0 | 0 | 0 | 7 | 0 | 3 | 1 | 0 | 0 |
| TOTAL | 5714 | 505 | 2300 | 295 | 56 | 119 | 1207 | 23 | 307 | 1016 | 39 | 294 |

¹ INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

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

| | GATES | CANTI- LEVERED FLASHING LIGHTS | STANDARD FLASHING LIGHTS | HWY. SIG. WIGWAGS BELLS | WARNING DEVICE CATEGORY | | | | | TOTAL |
|---|-------|---|--------------------------------|-------------------------------|-------------------------|-----------------|---------------|----------------|---------------------------|-------|
| | | | | | SPECIAL | CROSS- BUCKS | STOP SIGNS | OTHER SIGNS | NO SIGNS OR SIGNALS | |
| CLASS I RAILROAD | | | | | | | | | | |
| ALABAMA GREAT SOUTHERN RAILROAD | 3 | 4 | 7 | 5 | 1 | 16 | 0 | 0 | 1 | 37 |
| AMTRAK ² | 49 | 10 | 28 | 2 | 0 | 53 | 2 | 0 | 3 | 147 |
| ATCHISON, TOPEKA & SANTA FE | 90 | 59 | 108 | 11 | 4 | 201 | 0 | 0 | 0 | 473 |
| BALTIMORE & OHIO RAILWAY | 17 | 22 | 88 | 5 | 5 | 115 | 6 | 0 | 3 | 261 |
| BESSEMER & LAKE ERIE RAILROAD | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| BOSTON & MAINE CORPORATION | 8 | 0 | 5 | 1 | 3 | 4 | 0 | 1 | 0 | 22 |
| BURLINGTON NORTHERN | 61 | 33 | 153 | 44 | 11 | 404 | 1 | 1 | 9 | 717 |
| CENTRAL OF GEORGIA RAILROAD | 3 | 1 | 13 | 11 | 5 | 37 | 0 | 0 | 1 | 71 |
| CHESAPEAKE & OHIO RAILWAY | 29 | 15 | 70 | 4 | 3 | 96 | 2 | 1 | 2 | 222 |
| CHICAGO & NORTH WESTERN | 54 | 10 | 89 | 43 | 10 | 136 | 2 | 1 | 10 | 355 |
| CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC | 30 | 7 | 51 | 15 | 7 | 75 | 1 | 0 | 3 | 189 |
| CINN., NEW ORLEANS & TEXAS PACIFIC | 5 | 1 | 1 | 3 | 0 | 3 | 0 | 0 | 0 | 13 |
| CLINCHFIELD RAILROAD | 0 | 0 | 1 | 2 | 1 | 7 | 0 | 0 | 0 | 11 |
| COLORADO & SOUTHERN RAILWAY | 1 | 1 | 5 | 5 | 0 | 9 | 0 | 0 | 1 | 22 |
| CONSOLIDATED RAIL CORPORATION | 161 | 22 | 335 | 5 | 13 | 261 | 15 | 8 | 8 | 828 |
| DELAWARE & HUDSON RAILWAY | 3 | 0 | 6 | 0 | 0 | 4 | 0 | 0 | 0 | 13 |
| DENVER & RIO GRANDE WESTERN | 4 | 2 | 16 | 1 | 0 | 21 | 0 | 0 | 0 | 44 |
| DETROIT, TOLEDO & IRONTON | 3 | 1 | 2 | 0 | 0 | 11 | 0 | 0 | 1 | 18 |
| DULUTH, MISSABE & IRON RANGE | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 3 |
| ELGIN, JOLIET & EASTERN | 3 | 1 | 5 | 0 | 0 | 5 | 0 | 0 | 0 | 14 |
| FLORIDA EAST COAST RAILWAY | 38 | 1 | 4 | 0 | 2 | 2 | 0 | 1 | 0 | 48 |
| FORT WORTH & DENVER RAILWAY | 1 | 6 | 17 | 3 | 0 | 30 | 1 | 0 | 0 | 58 |
| GRAND TRUNK WESTERN | 22 | 6 | 19 | 1 | 1 | 21 | 0 | 1 | 0 | 71 |
| ILLINOIS CENTRAL GULF RAILROAD | 27 | 47 | 94 | 19 | 6 | 199 | 2 | 0 | 6 | 400 |
| KANSAS CITY SOUTHERN RAILWAY | 2 | 14 | 26 | 5 | 1 | 29 | 0 | 0 | 1 | 78 |
| LONG ISLAND RAIL ROAD | 16 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 17 |
| LOUISIANA & ARKANSAS RAILWAY COMPANY | 2 | 27 | 28 | 3 | 0 | 32 | 0 | 0 | 0 | 92 |
| LOUISVILLE & NASHVILLE | 38 | 14 | 129 | 31 | 7 | 145 | 3 | 0 | 9 | 376 |
| MISSOURI-KANSAS-TEXAS RAILROAD | 7 | 11 | 54 | 3 | 4 | 63 | 0 | 1 | 0 | 143 |
| MISSOURI PACIFIC RAILROAD | 57 | 48 | 217 | 7 | 17 | 292 | 2 | 2 | 12 | 654 |
| NORFOLK & WESTERN RAILWAY | 51 | 19 | 108 | 9 | 4 | 188 | 0 | 5 | 3 | 387 |
| PITTSBURGH & LAKE ERIE RAILROAD | 1 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 5 |
| ST. LOUIS SOUTHWESTERN RAILWAY | 10 | 1 | 18 | 3 | 4 | 57 | 9 | 0 | 2 | 104 |
| SEABOARD COAST LINE RAILROAD | 72 | 32 | 90 | 16 | 16 | 280 | 3 | 1 | 3 | 513 |
| SOO LINE | 10 | 13 | 37 | 1 | 0 | 52 | 0 | 1 | 0 | 114 |
| SOUTHERN PACIFIC TRANSPORTATION COMPANY | 123 | 39 | 111 | 56 | 21 | 238 | 11 | 0 | 5 | 604 |
| SOUTHERN RAILWAY | 23 | 10 | 76 | 30 | 16 | 177 | 0 | 1 | 8 | 341 |
| UNION PACIFIC RAILROAD | 37 | 11 | 46 | 13 | 3 | 125 | 5 | 0 | 3 | 243 |
| WESTERN MARYLAND RAILWAY | 0 | 1 | 4 | 1 | 1 | 9 | 0 | 0 | 2 | 18 |
| WESTERN PACIFIC | 8 | 1 | 10 | 5 | 1 | 8 | 1 | 0 | 1 | 35 |
| TOTAL CLASS I RAILROADS | 1025 | 480 | 2046 | 362 | 167 | 3362 | 65 | 25 | 94 | 7626 |
| TOTAL CLASS II & III RAILROADS | 77 | 48 | 164 | 32 | 27 | 239 | 8 | 4 | 7 | 606 |
| GRAND TOTAL | 1102 | 528 | 2210 | 394 | 194 | 3601 | 73 | 29 | 101 | 8232 |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.
² AMTRAK AND AUTOTRAIN ACCIDENTS HAVE BEEN EXCLUDED IN ALL OTHER TABLES. THESE ACCIDENTS ARE REPORTED BY AMTRAK AND AUTOTRAIN AND BY THE OPERATING CARRIER. IN THIS TABLE THEY ARE INCLUDED IN THE DETAIL LINES BUT EXCLUDED IN THE TOTAL.

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

| STATE | WARNING DEVICE CATEGORY | | | | | | | | TOTAL |
|----------------|-------------------------|--------------------|-------------------------------|----------------------|-----------------|---------------|----------------|---------------------------|-------|
| | FLASHING GATES | FLASHING LIGHTS | HWY SIGS. WIGWAGS BELLS | ¹ SPECIAL | CROSS- BUCKS | STOP SIGNS | OTHER SIGNS | NO SIGNS OR SIGNALS | |
| ALABAMA | 12 | 60 | 33 | 12 | 123 | 1 | 0 | 1 | 242 |
| ALASKA | 0 | 8 | 0 | 0 | 18 | 0 | 0 | 0 | 26 |
| ARIZONA | 9 | 14 | 0 | 0 | 10 | 0 | 0 | 0 | 33 |
| ARKANSAS | 18 | 36 | 2 | 5 | 100 | 7 | 0 | 4 | 172 |
| CALIFORNIA | 124 | 92 | 52 | 11 | 90 | 6 | 0 | 5 | 380 |
| COLORADO | 10 | 41 | 13 | 2 | 42 | 0 | 0 | 1 | 109 |
| CONNECTICUT | 4 | 9 | 0 | 0 | 3 | 3 | 0 | 0 | 19 |
| DELAWARE | 1 | 5 | 0 | 0 | 7 | 0 | 0 | 0 | 13 |
| DIST. COLUMBIA | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| FLORIDA | 85 | 71 | 5 | 7 | 76 | 2 | 3 | 2 | 251 |
| GEORGIA | 26 | 60 | 23 | 11 | 143 | 2 | 0 | 1 | 266 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 2 | 7 | 1 | 0 | 41 | 0 | 0 | 0 | 51 |
| ILLINOIS | 156 | 196 | 18 | 7 | 138 | 2 | 0 | 3 | 520 |
| INDIANA | 88 | 189 | 10 | 4 | 174 | 5 | 3 | 3 | 476 |
| IOWA | 13 | 49 | 20 | 7 | 104 | 0 | 1 | 4 | 198 |
| KANSAS | 23 | 45 | 5 | 2 | 107 | 1 | 1 | 0 | 184 |
| KENTUCKY | 18 | 58 | 7 | 2 | 55 | 1 | 1 | 7 | 149 |
| LOUISIANA | 19 | 158 | 16 | 4 | 169 | 2 | 0 | 3 | 371 |
| MAINE | 0 | 9 | 2 | 1 | 3 | 1 | 1 | 1 | 18 |
| MARYLAND | 3 | 7 | 3 | 5 | 14 | 0 | 0 | 0 | 32 |
| MASSACHUSETTS | 7 | 16 | 1 | 2 | 3 | 0 | 1 | 0 | 30 |
| MICHIGAN | 51 | 137 | 9 | 3 | 120 | 3 | 2 | 2 | 327 |
| MINNESOTA | 12 | 57 | 11 | 3 | 94 | 2 | 0 | 4 | 183 |
| MISSISSIPPI | 5 | 50 | 14 | 6 | 124 | 4 | 1 | 7 | 211 |
| MISSOURI | 14 | 54 | 6 | 3 | 101 | 0 | 1 | 0 | 179 |
| MONTANA | 5 | 8 | 4 | 0 | 16 | 0 | 0 | 0 | 33 |
| NEBRASKA | 15 | 37 | 4 | 2 | 70 | 1 | 0 | 0 | 129 |
| NEVADA | 0 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 6 |
| NEW HAMPSHIRE | 1 | 2 | 0 | 1 | 2 | 0 | 0 | 0 | 6 |
| NEW JERSEY | 22 | 28 | 0 | 5 | 15 | 0 | 0 | 1 | 71 |
| NEW MEXICO | 4 | 4 | 0 | 0 | 11 | 0 | 0 | 0 | 19 |
| NEW YORK | 30 | 34 | 2 | 0 | 21 | 1 | 0 | 0 | 88 |
| NORTH CAROLINA | 15 | 43 | 4 | 5 | 122 | 0 | 0 | 5 | 194 |
| NORTH DAKOTA | 1 | 5 | 1 | 1 | 21 | 0 | 0 | 0 | 29 |
| OHIO | 65 | 195 | 5 | 5 | 243 | 4 | 3 | 5 | 525 |
| OKLAHOMA | 17 | 82 | 9 | 3 | 141 | 1 | 0 | 2 | 255 |
| OREGON | 8 | 6 | 3 | 5 | 37 | 7 | 0 | 2 | 68 |
| PENNS YLVANIA | 23 | 58 | 1 | 3 | 73 | 6 | 7 | 5 | 176 |
| RHODE ISLAND | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SOUTH CAROLINA | 6 | 32 | 5 | 12 | 115 | 1 | 0 | 1 | 172 |
| SOUTH DAKOTA | 0 | 10 | 1 | 0 | 13 | 0 | 0 | 2 | 26 |
| TENNESSEE | 23 | 64 | 15 | 6 | 80 | 0 | 0 | 6 | 194 |
| TEXAS | 97 | 468 | 37 | 30 | 439 | 8 | 1 | 10 | 1090 |
| UTAH | 4 | 14 | 0 | 0 | 27 | 1 | 0 | 0 | 46 |
| VERMONT | 0 | 6 | 1 | 0 | 5 | 0 | 0 | 0 | 12 |
| VIRGINIA | 23 | 33 | 4 | 7 | 57 | 0 | 0 | 2 | 126 |
| WASHINGTON | 9 | 24 | 11 | 5 | 80 | 0 | 1 | 8 | 138 |
| WEST VIRGINIA | 7 | 39 | 3 | 0 | 43 | 1 | 1 | 3 | 97 |
| WISCONSIN | 25 | 106 | 32 | 5 | 104 | 0 | 1 | 1 | 274 |
| WYOMING | 2 | 6 | 0 | 1 | 6 | 0 | 0 | 0 | 15 |
| TOTAL | 1102 | 2738 | 394 | 194 | 3601 | 73 | 29 | 101 | 8232 |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

HIGHWAY USER AND VEHICLE DATA (1981)

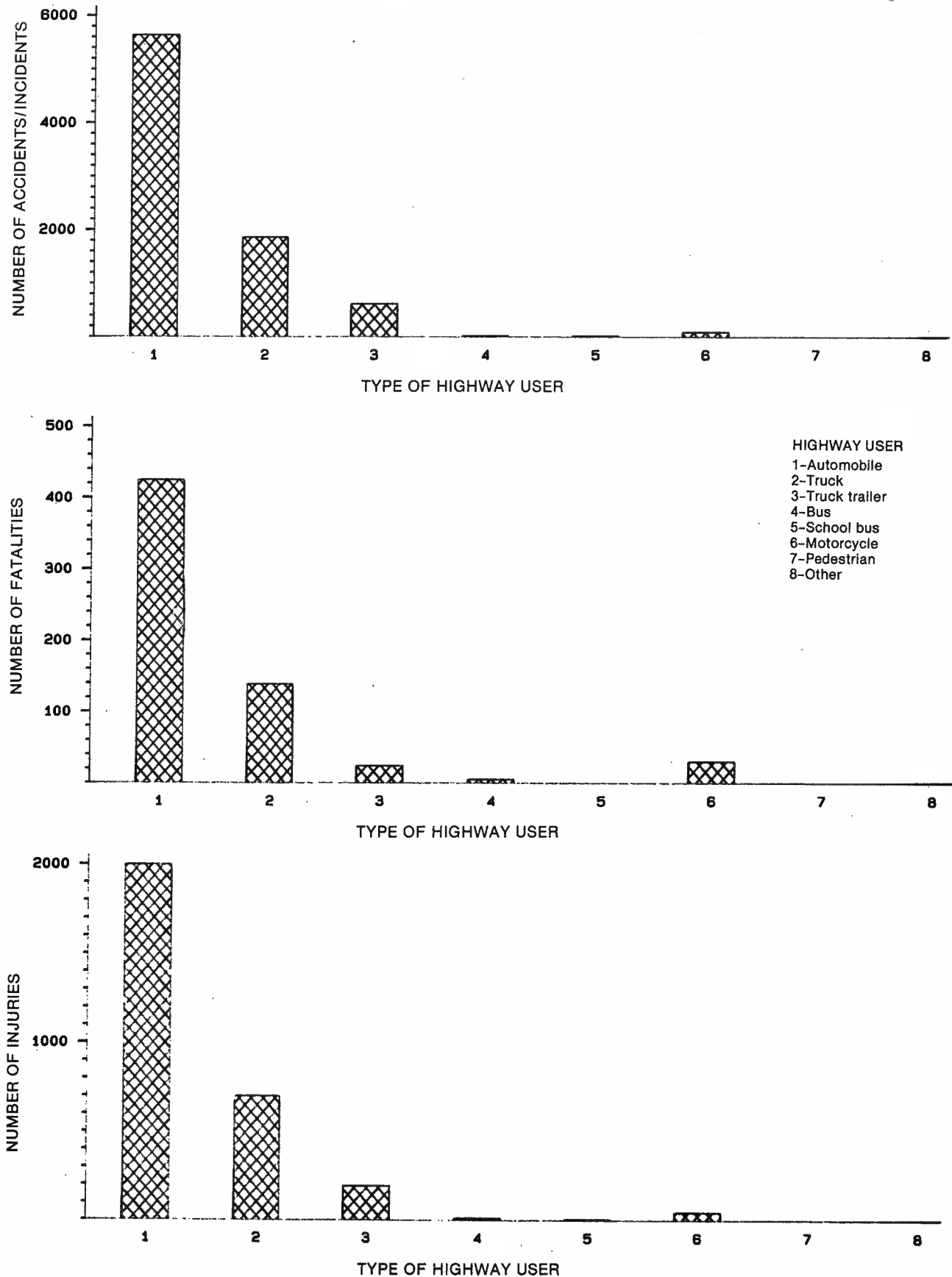


FIGURE 3 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS BY TYPE OF HIGHWAY USER

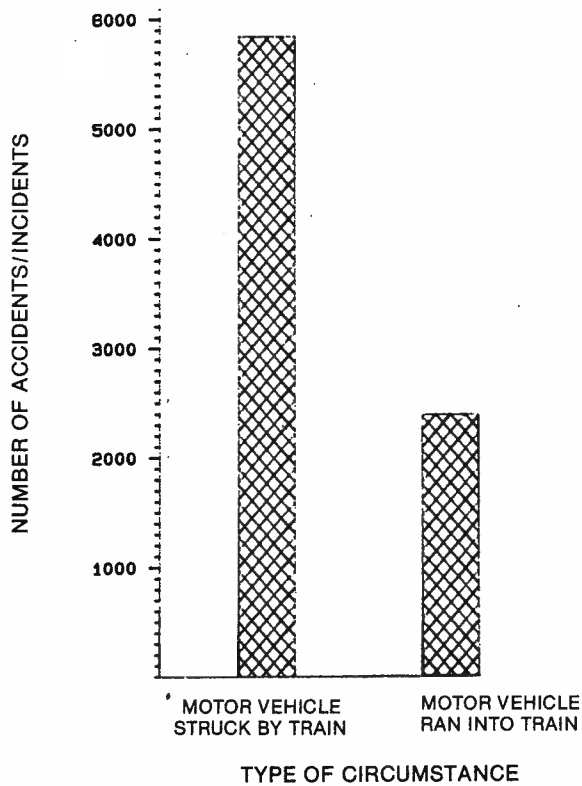
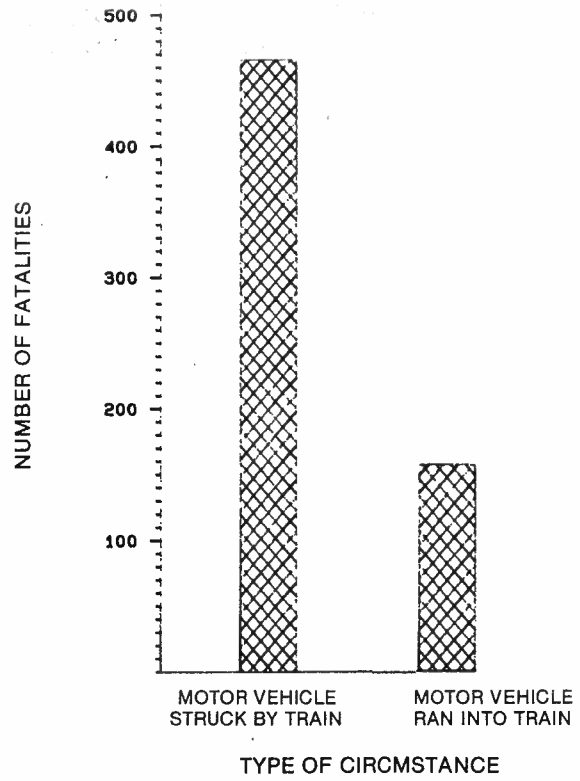
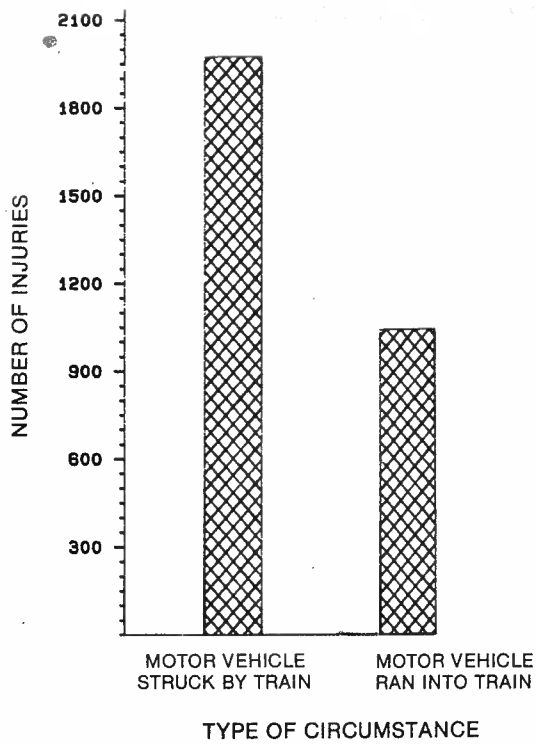


FIGURE 4 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY CIRCUMSTANCE

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

| TRAINS STRIKING OR BEING STRUCK BY: | **ACC/INC** | | ***KILLED*** | | **INJURED** | | INJURY ACC | FATAL ACC | INJ-IN-FATAL ACCIDENTS |
|--|-------------|--------|--------------|--------|-------------|--------|---------------|--------------|---------------------------|
| | NO. | % | NO. | % | NO. | % | | | |
| AUTOMOBILE | 5640 | 66.00 | 425 | 60.98 | 2068 | 66.26 | 1431 | 322 | 139 |
| TRUCK | 1862 | 21.79 | 139 | 19.94 | 700 | 22.43 | 533 | 123 | 43 |
| TRUCK TRAILER | 613 | 7.17 | 24 | 3.44 | 192 | 6.15 | 137 | 15 | 13 |
| BUS | 15 | 0.18 | 5 | 0.72 | 11 | 0.35 | 5 | 3 | 2 |
| SCHOOL BUS | 12 | 0.14 | 0 | 0.0 | 4 | 0.13 | 2 | 0 | 0 |
| MOTORCYCLE | 90 | 1.05 | 30 | 4.30 | 45 | 1.44 | 35 | 29 | 5 |
| PEDESTRIAN | 81 | 0.95 | 47 | 6.74 | 30 | 0.96 | 28 | 46 | 1 |
| OTHER | 233 | 2.73 | 27 | 3.87 | 71 | 2.27 | 53 | 23 | 7 |
| TOTAL | 8546 | 100.00 | 697 | 100.00 | 3121 | 100.00 | 2224 | 561 | 210 |

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

| CIRCUMSTANCE | **ACC/INC** | | ***KILLED*** | | **INJURED** | | INJURY ACC | FATAL ACC | INJ-IN-FATAL ACCIDENTS |
|-------------------------------|-------------|--------|--------------|--------|-------------|--------|---------------|--------------|---------------------------|
| | NO. | % | NO. | % | NO. | % | | | |
| MOTOR VEHICLE STRUCK BY TRAIN | 5845 | 71.00 | 466 | 74.80 | 1977 | 65.46 | 1380 | 359 | 150 |
| MOTOR VEHICLE RAN INTO TRAIN | 2387 | 29.00 | 157 | 25.20 | 1043 | 34.54 | 763 | 133 | 52 |
| TOTAL | 8232 | 100.00 | 623 | 100.00 | 3020 | 100.00 | 2143 | 492 | 202 |

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 | NUMBER OF ACC/INC | AVERAGE OCCUPANTS | | VEHICLE OCCUPANTS KILLED PER ACC/INC | AVERAGE HIGHWAY OCCUPANTS INJURED PER ACC/INC | PROPERTY DAMAGE PER ACC/INC (\$) | VEHICLES REG (000) ¹ | ACCIDENTS PER MILLION VEHICLES |
|-----------------|-------------------|-------------------|---------|--------------------------------------|---|----------------------------------|---------------------------------|--------------------------------|
| | | PER | ACC/INC | | | | | |
| AUTOMOBILE | 5640 | 1.47 | | 0.08 | 0.41 | 1563.07 | 121724 | 46.33 |
| MOTOR TRUCKS | 2475 | 1.24 | | 0.07 | 0.39 | 4249.13 | 33637 | 73.58 |
| MOTOR BUSES | 27 | 6.85 | | 0.19 | 0.56 | 5115.21 | 529 | 51.06 |
| MOTORCYCLE | 90 | 1.17 | | 0.39 | 0.58 | 1222.64 | 5724 | 15.72 |
| TOTAL | 8232 | 1.41 | | 0.08 | 0.41 | 2388.54 | 161614 | 50.94 |

¹(1980) FIGURES SUPPLIED BY FEDERAL HIGHWAY ADMINISTRATION.

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

| TYPE OF VEHICLE | VISIBILITY | | | | | | | | | | | |
|---------------------------|----------------|-----|-----|---------------|-----|------|----------------|-----|-----|----------------|-----|------|
| | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | |
| AUTOMOBILE | 77 | 6 | 25 | 2118 | 178 | 736 | 149 | 7 | 43 | 1682 | 156 | 565 |
| TRUCK | 40 | 3 | 9 | 833 | 67 | 300 | 39 | 4 | 11 | 334 | 18 | 116 |
| TRUCK TRAILER | 14 | 0 | 4 | 430 | 16 | 141 | 19 | 0 | 3 | 64 | 1 | 10 |
| BUS | 0 | 0 | 0 | 7 | 5 | 2 | 0 | 0 | 0 | 3 | 0 | 1 |
| SCHOOL BUS | 2 | 0 | 0 | 8 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| MOTORCYCLE | 0 | 0 | 0 | 18 | 4 | 5 | 2 | 0 | 1 | 6 | 1 | 1 |
| TOTAL | 133 | 9 | 38 | 3414 | 270 | 1188 | 209 | 11 | 58 | 2089 | 176 | 693 |
| R A N I N T O T R A I N | | | | | | | | | | | | |
| AUTOMOBILE | 32 | 2 | 12 | 603 | 17 | 266 | 49 | 1 | 19 | 930 | 58 | 402 |
| TRUCK | 17 | 1 | 5 | 283 | 17 | 109 | 14 | 1 | 3 | 302 | 28 | 147 |
| TRUCK TRAILER | 0 | 0 | 0 | 66 | 5 | 21 | 1 | 0 | 1 | 19 | 2 | 12 |
| BUS | 0 | 0 | 0 | 3 | 0 | 6 | 0 | 0 | 0 | 2 | 0 | 2 |
| SCHOOL BUS | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MOTORCYCLE | 2 | 0 | 2 | 22 | 4 | 15 | 5 | 3 | 3 | 35 | 18 | 18 |
| TOTAL | 51 | 3 | 19 | 979 | 43 | 417 | 69 | 5 | 26 | 1288 | 106 | 581 |
| G R A N D T O T A L | | | | | | | | | | | | |
| AUTOMOBILE | 109 | 8 | 37 | 2721 | 195 | 1002 | 198 | 8 | 62 | 2612 | 214 | 967 |
| TRUCK | 57 | 4 | 14 | 1116 | 84 | 409 | 53 | 5 | 14 | 636 | 46 | 263 |
| TRUCK TRAILER | 14 | 0 | 4 | 496 | 21 | 162 | 20 | 0 | 4 | 83 | 3 | 22 |
| BUS | 0 | 0 | 0 | 10 | 5 | 8 | 0 | 0 | 0 | 5 | 0 | 3 |
| SCHOOL BUS | 2 | 0 | 0 | 10 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| MOTORCYCLE | 2 | 0 | 2 | 40 | 8 | 20 | 7 | 3 | 4 | 41 | 19 | 19 |
| TOTAL | 184 | 12 | 57 | 4393 | 313 | 1605 | 278 | 16 | 84 | 3377 | 282 | 1274 |

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

| TYPE OF HIGHWAY USER | TYPE OF PERSON | | | | | | | | | | | | | | TOTAL ACCI- DENTS |
|----------------------------------|----------------|-----|------------|-----|------------|-----|------------|------|------------|-----|------------|-----|-----------|------|-------------------------|
| | ***EOD*** | | ***ENOD*** | | ***PSCR*** | | ***NONT*** | | ***TRES*** | | ***CONT*** | | **TOTAL** | | |
| | KLD | INJ | KLD | INJ | KLD | INJ | KLD | INJ | KLD | INJ | KLD | INJ | KLD | INJ | |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| AUTOMOBILE | 0 | 18 | 0 | 2 | 0 | 0 | 284 | 1254 | 63 | 95 | 0 | 0 | 347 | 1369 | 4026 |
| TRUCK | 0 | 19 | 0 | 0 | 0 | 1 | 90 | 396 | 2 | 20 | 0 | 0 | 92 | 436 | 1246 |
| TRUCK TRAILER | 0 | 58 | 0 | 0 | 0 | 0 | 17 | 98 | 0 | 1 | 0 | 1 | 17 | 158 | 527 |
| BUS | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 0 | 5 | 3 | 10 |
| SCHOOL BUS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 10 |
| MOTORCYCLE | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 7 | 1 | 0 | 0 | 0 | 5 | 7 | 26 |
| PEDESTRIAN | 0 | 1 | 0 | 0 | 0 | 0 | 20 | 14 | 27 | 10 | 0 | 0 | 47 | 25 | 73 |
| OTHER | 0 | 4 | 0 | 0 | 0 | 0 | 16 | 38 | 8 | 5 | 0 | 0 | 24 | 47 | 187 |
| TOTAL | 0 | 100 | 0 | 2 | 0 | 1 | 436 | 1814 | 101 | 131 | 0 | 1 | 537 | 2049 | 6105 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| AUTOMOBILE | 0 | 3 | 0 | 0 | 0 | 3 | 69 | 646 | 9 | 47 | 0 | 0 | 78 | 699 | 1614 |
| TRUCK | 0 | 4 | 0 | 0 | 0 | 0 | 45 | 249 | 2 | 11 | 0 | 0 | 47 | 264 | 616 |
| TRUCK TRAILER | 1 | 3 | 0 | 0 | 0 | 0 | 5 | 27 | 1 | 4 | 0 | 0 | 7 | 34 | 86 |
| BUS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 8 | 5 |
| SCHOOL BUS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| MOTORCYCLE | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 38 | 2 | 0 | 0 | 0 | 25 | 38 | 64 |
| PEDESTRIAN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 5 | 8 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 20 | 0 | 4 | 0 | 0 | 3 | 24 | 46 |
| TOTAL | 1 | 10 | 0 | 0 | 0 | 3 | 145 | 990 | 14 | 69 | 0 | 0 | 160 | 1072 | 2441 |
| G R A N D T O T A L | | | | | | | | | | | | | | | |
| AUTOMOBILE | 0 | 21 | 0 | 2 | 0 | 3 | 353 | 1900 | 72 | 142 | 0 | 0 | 425 | 2068 | 5640 |
| TRUCK | 0 | 23 | 0 | 0 | 0 | 1 | 135 | 645 | 4 | 31 | 0 | 0 | 139 | 700 | 1862 |
| TRUCK TRAILER | 1 | 61 | 0 | 0 | 0 | 0 | 22 | 125 | 1 | 5 | 0 | 1 | 24 | 192 | 613 |
| BUS | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 0 | 0 | 0 | 0 | 5 | 11 | 15 |
| SCHOOL BUS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 4 | 12 |
| MOTORCYCLE | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 45 | 3 | 0 | 0 | 0 | 30 | 45 | 90 |
| PEDESTRIAN | 0 | 1 | 0 | 0 | 0 | 0 | 20 | 16 | 27 | 13 | 0 | 0 | 47 | 30 | 81 |
| OTHER | 0 | 4 | 0 | 0 | 0 | 0 | 19 | 58 | 8 | 9 | 0 | 0 | 27 | 71 | 233 |
| TOTAL | 1 | 110 | 0 | 2 | 0 | 4 | 581 | 2804 | 115 | 200 | 0 | 1 | 697 | 3121 | 8546 |

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

| CIRCUMSTANCE AND VEHICLE SPEED (MPH) | VISIBILITY | | | | | | | | | | | | | | |
|--|-----------------|-----|------|----------------|-----|-----|---------------|-----|------|----------------|-----|-----|----------------|-----|------|
| | *****TOTAL***** | | | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| STANDING | 1976 | 54 | 354 | 47 | 0 | 8 | 1093 | 39 | 228 | 70 | 0 | 12 | 766 | 15 | 106 |
| 1-9 | 1104 | 75 | 331 | 25 | 0 | 6 | 701 | 46 | 232 | 55 | 0 | 13 | 323 | 29 | 80 |
| 10-19 | 1087 | 106 | 428 | 24 | 3 | 5 | 657 | 59 | 248 | 30 | 4 | 10 | 376 | 40 | 165 |
| 20-29 | 644 | 68 | 363 | 13 | 4 | 4 | 384 | 38 | 215 | 21 | 5 | 8 | 226 | 21 | 136 |
| 30-39 | 363 | 51 | 198 | 12 | 2 | 9 | 204 | 21 | 95 | 11 | 1 | 3 | 136 | 27 | 91 |
| 40-49 | 141 | 38 | 78 | 2 | 0 | 1 | 77 | 20 | 39 | 6 | 1 | 3 | 56 | 17 | 35 |
| 50-59 | 57 | 20 | 38 | 1 | 0 | 1 | 31 | 9 | 18 | 1 | 0 | 1 | 24 | 11 | 18 |
| 60 AND OVER | 12 | 5 | 7 | 0 | 0 | 0 | 7 | 5 | 5 | 0 | 0 | 0 | 5 | 0 | 2 |
| UNKNOWN | 461 | 49 | 180 | 9 | 0 | 4 | 260 | 33 | 108 | 15 | 0 | 8 | 177 | 16 | 60 |
| TOTAL | 5845 | 466 | 1977 | 133 | 9 | 38 | 3414 | 270 | 1188 | 209 | 11 | 58 | 2089 | 176 | 693 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| STANDING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1-9 | 494 | 6 | 94 | 13 | 0 | 3 | 222 | 1 | 43 | 9 | 1 | 1 | 250 | 4 | 47 |
| 10-19 | 560 | 18 | 200 | 9 | 0 | 4 | 224 | 2 | 79 | 18 | 1 | 7 | 309 | 15 | 110 |
| 20-29 | 382 | 16 | 172 | 12 | 1 | 4 | 160 | 3 | 73 | 10 | 1 | 4 | 200 | 11 | 91 |
| 30-39 | 306 | 16 | 202 | 1 | 0 | 1 | 128 | 6 | 78 | 15 | 1 | 5 | 162 | 9 | 118 |
| 40-49 | 169 | 38 | 122 | 2 | 0 | 0 | 77 | 19 | 48 | 3 | 0 | 1 | 87 | 19 | 73 |
| 50-59 | 109 | 30 | 74 | 3 | 2 | 2 | 48 | 9 | 35 | 3 | 0 | 4 | 55 | 19 | 33 |
| 60 AND OVER | 38 | 18 | 23 | 1 | 0 | 1 | 7 | 0 | 4 | 2 | 1 | 1 | 28 | 17 | 17 |
| UNKNOWN | 329 | 15 | 156 | 10 | 0 | 4 | 113 | 3 | 57 | 9 | 0 | 3 | 197 | 12 | 92 |
| TOTAL | 2387 | 157 | 1043 | 51 | 3 | 19 | 979 | 43 | 417 | 69 | 5 | 26 | 1288 | 106 | 581 |
| G R A N D T O T A L | | | | | | | | | | | | | | | |
| STANDING | 1976 | 54 | 354 | 47 | 0 | 8 | 1093 | 39 | 228 | 70 | 0 | 12 | 766 | 15 | 106 |
| 1-9 | 1598 | 81 | 425 | 38 | 0 | 9 | 923 | 47 | 275 | 64 | 1 | 14 | 573 | 33 | 127 |
| 10-19 | 1647 | 124 | 628 | 33 | 3 | 9 | 881 | 61 | 327 | 48 | 5 | 17 | 685 | 55 | 275 |
| 20-29 | 1026 | 84 | 535 | 25 | 5 | 8 | 544 | 41 | 288 | 31 | 6 | 12 | 426 | 32 | 227 |
| 30-39 | 669 | 67 | 400 | 13 | 2 | 10 | 332 | 27 | 173 | 26 | 2 | 8 | 298 | 36 | 209 |
| 40-49 | 310 | 76 | 200 | 4 | 0 | 1 | 154 | 39 | 87 | 9 | 1 | 4 | 143 | 36 | 108 |
| 50-59 | 166 | 50 | 112 | 4 | 2 | 3 | 79 | 18 | 53 | 4 | 0 | 5 | 79 | 30 | 51 |
| 60 AND OVER | 50 | 23 | 30 | 1 | 0 | 1 | 14 | 5 | 9 | 2 | 1 | 1 | 33 | 17 | 19 |
| UNKNOWN | 790 | 64 | 336 | 19 | 0 | 8 | 373 | 36 | 165 | 24 | 0 | 11 | 374 | 28 | 152 |
| TOTAL | 8232 | 623 | 3020 | 184 | 12 | 57 | 4393 | 313 | 1605 | 278 | 16 | 84 | 3377 | 282 | 1274 |

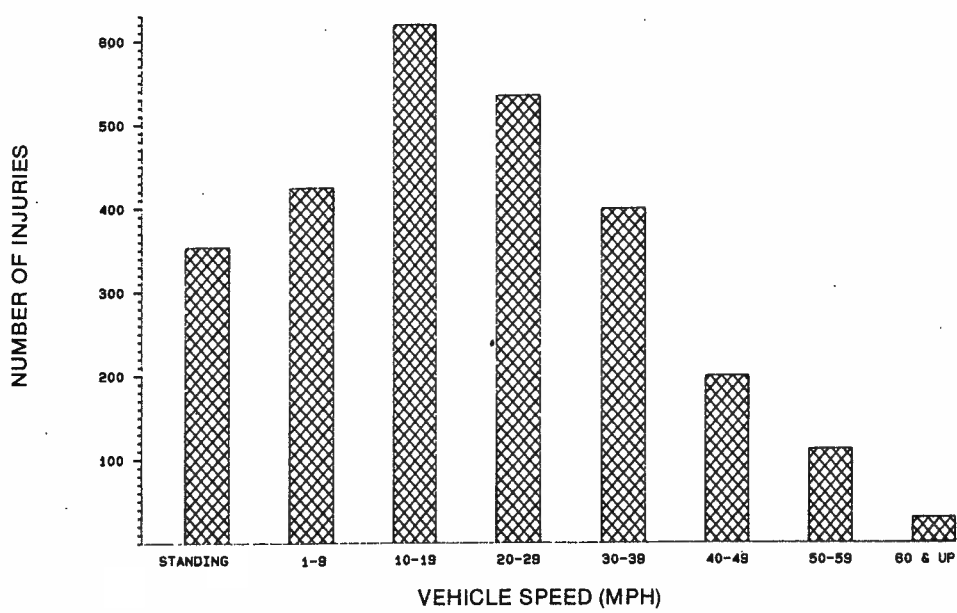
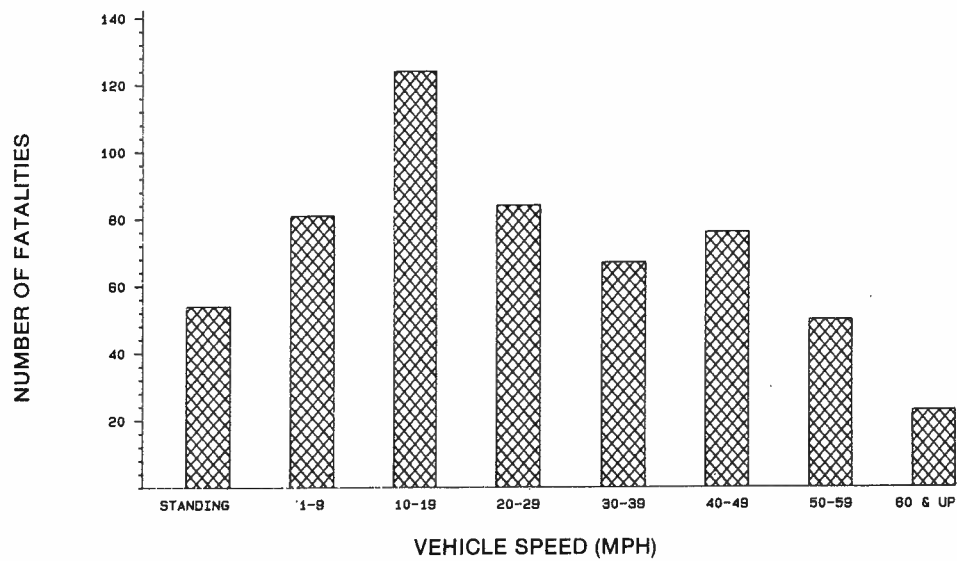
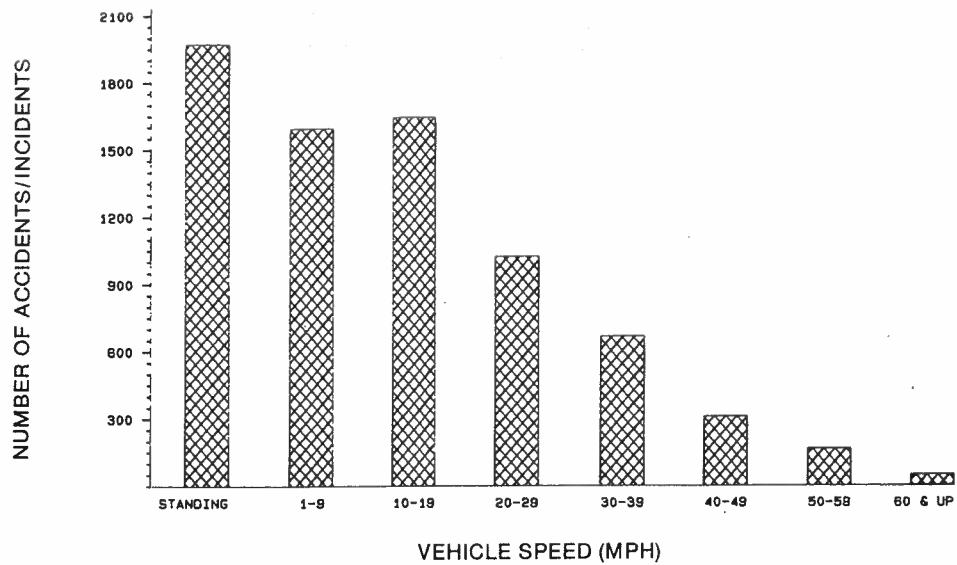


FIGURE 5 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY VEHICLE SPEED

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

| TYPE OF VEHICLE | POSITION OF HIGHWAY VEHICLE | | | | | | | | |
|--------------------|--------------------------------|-----|-----|--------------------------------|-----|-----|---------------------------------|-----|------|
| | STALLED ON ****CROSSING**** | | | STOPPED ON ****CROSSING**** | | | MOVING OVER ****CROSSING**** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| AUTOMOBILE | 674 | 17 | 95 | 795 | 28 | 173 | 4171 | 380 | 1800 |
| TRUCK | 157 | 3 | 22 | 231 | 4 | 52 | 1474 | 132 | 626 |
| TRUCK TRAILER | 44 | 1 | 3 | 59 | 1 | 7 | 510 | 22 | 182 |
| BUS | 1 | 0 | 0 | 0 | 0 | 0 | 14 | 5 | 11 |
| SCHOOL BUS | 2 | 0 | 0 | 3 | 0 | 1 | 7 | 0 | 3 |
| MOTORCYCLE | 5 | 0 | 0 | 5 | 0 | 1 | 80 | 30 | 44 |
| TOTAL | 883 | 21 | 120 | 1093 | 33 | 234 | 6256 | 569 | 2666 |

TRAIN AND TRACK DATA (1981)

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

| CIRCUMSTANCE AND TRAIN SPEED (MPH) | VISIBILITY | | | | | | | | | | | | | | |
|--|-----------------|-----|------|----------------|-----|-----|---------------|-----|------|----------------|-----|-----|----------------|-----|------|
| | *****TOTAL***** | | | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| STANDING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1-9 | 1597 | 12 | 254 | 33 | 0 | 2 | 910 | 3 | 115 | 54 | 1 | 4 | 600 | 8 | 133 |
| 10-19 | 1228 | 23 | 389 | 31 | 1 | 19 | 705 | 9 | 194 | 53 | 0 | 7 | 439 | 13 | 169 |
| 20-29 | 1118 | 76 | 517 | 26 | 2 | 5 | 651 | 48 | 332 | 40 | 0 | 19 | 401 | 26 | 161 |
| 30-39 | 840 | 118 | 360 | 13 | 2 | 6 | 495 | 59 | 225 | 30 | 1 | 16 | 302 | 56 | 113 |
| 40-49 | 689 | 152 | 304 | 18 | 2 | 5 | 432 | 100 | 212 | 20 | 6 | 11 | 219 | 44 | 76 |
| 50-59 | 236 | 47 | 95 | 7 | 1 | 1 | 137 | 27 | 65 | 8 | 2 | 0 | 84 | 17 | 29 |
| 60-69 | 80 | 25 | 36 | 3 | 1 | 0 | 48 | 15 | 29 | 3 | 1 | 0 | 26 | 8 | 7 |
| 70-79 | 47 | 11 | 16 | 0 | 0 | 0 | 32 | 9 | 12 | 1 | 0 | 1 | 14 | 2 | 3 |
| 80-89 | 3 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 1 |
| 90 AND OVER | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 6 | 0 | 2 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 |
| TOTAL | 5845 | 466 | 1977 | 133 | 9 | 38 | 3414 | 270 | 1188 | 209 | 11 | 58 | 2089 | 176 | 693 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| STANDING | 224 | 17 | 102 | 5 | 0 | 2 | 33 | 1 | 9 | 2 | 0 | 0 | 184 | 16 | 91 |
| 1-9 | 894 | 29 | 285 | 18 | 0 | 4 | 330 | 2 | 86 | 26 | 0 | 5 | 520 | 27 | 190 |
| 10-19 | 501 | 30 | 236 | 11 | 0 | 5 | 198 | 3 | 97 | 15 | 1 | 5 | 277 | 26 | 129 |
| 20-29 | 341 | 15 | 170 | 6 | 0 | 4 | 180 | 2 | 82 | 9 | 0 | 10 | 146 | 13 | 74 |
| 30-39 | 221 | 27 | 131 | 5 | 2 | 1 | 122 | 17 | 69 | 5 | 1 | 2 | 89 | 7 | 59 |
| 40-49 | 136 | 24 | 80 | 3 | 1 | 2 | 80 | 14 | 58 | 11 | 3 | 3 | 42 | 6 | 17 |
| 50-59 | 43 | 5 | 29 | 2 | 0 | 0 | 23 | 2 | 11 | 1 | 0 | 1 | 17 | 3 | 17 |
| 60-69 | 14 | 4 | 5 | 0 | 0 | 0 | 7 | 1 | 2 | 0 | 0 | 0 | 7 | 3 | 3 |
| 70-79 | 8 | 6 | 4 | 0 | 0 | 0 | 4 | 1 | 3 | 0 | 0 | 0 | 4 | 5 | 1 |
| 80-89 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 AND OVER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| TOTAL | 2387 | 157 | 1043 | 51 | 3 | 19 | 979 | 43 | 417 | 69 | 5 | 26 | 1288 | 106 | 581 |
| G R A N D T O T A L | | | | | | | | | | | | | | | |
| STANDING | 224 | 17 | 102 | 5 | 0 | 2 | 33 | 1 | 9 | 2 | 0 | 0 | 184 | 16 | 91 |
| 1-9 | 2491 | 41 | 539 | 51 | 0 | 6 | 1240 | 5 | 201 | 80 | 1 | 9 | 1120 | 35 | 323 |
| 10-19 | 1729 | 53 | 625 | 42 | 1 | 24 | 903 | 12 | 291 | 68 | 1 | 12 | 716 | 39 | 298 |
| 20-29 | 1459 | 91 | 687 | 32 | 2 | 9 | 831 | 50 | 414 | 49 | 0 | 29 | 547 | 39 | 235 |
| 30-39 | 1061 | 145 | 491 | 18 | 4 | 7 | 617 | 76 | 294 | 35 | 2 | 18 | 391 | 63 | 172 |
| 40-49 | 825 | 176 | 384 | 21 | 3 | 7 | 512 | 114 | 270 | 31 | 9 | 14 | 261 | 50 | 93 |
| 50-59 | 279 | 52 | 124 | 9 | 1 | 1 | 160 | 29 | 76 | 9 | 2 | 1 | 101 | 20 | 46 |
| 60-69 | 94 | 29 | 41 | 3 | 1 | 0 | 55 | 16 | 31 | 3 | 1 | 0 | 33 | 11 | 10 |
| 70-79 | 55 | 17 | 20 | 0 | 0 | 0 | 36 | 10 | 15 | 1 | 0 | 1 | 18 | 7 | 4 |
| 80-89 | 4 | 2 | 4 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 1 |
| 90 AND OVER | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 10 | 0 | 2 | 2 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 1 |
| TOTAL | 8232 | 623 | 3020 | 184 | 12 | 57 | 4393 | 313 | 1605 | 278 | 16 | 84 | 3377 | 282 | 1274 |

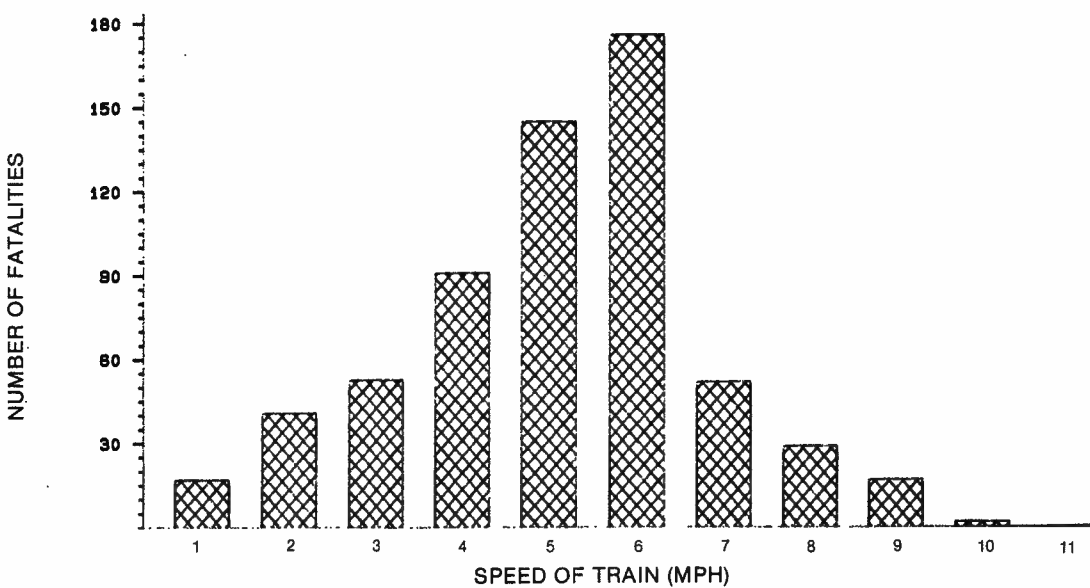
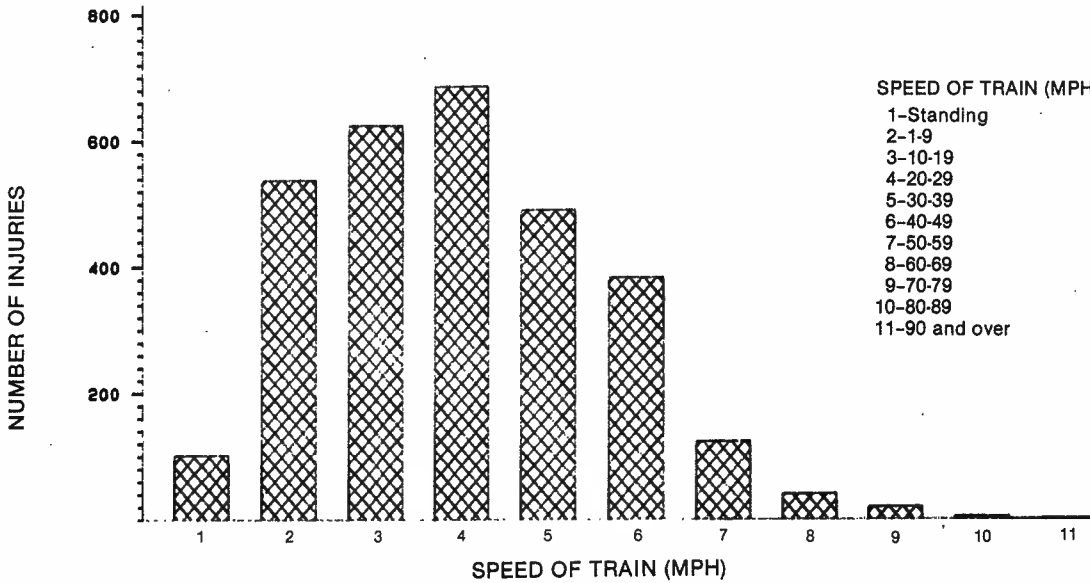
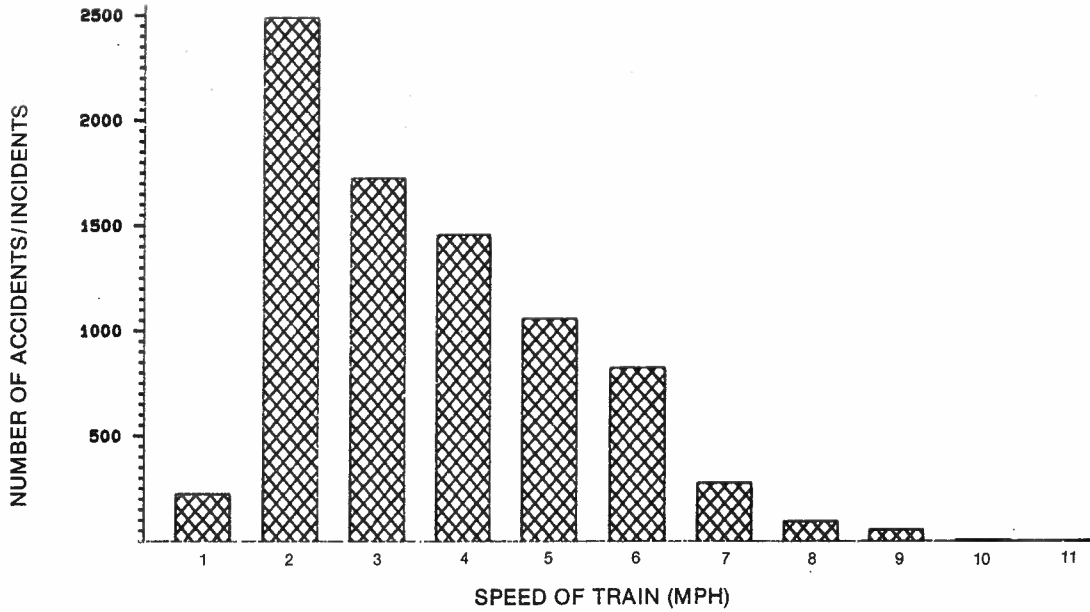


FIGURE 6 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY SPEED OF TRAIN

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

| RAILROAD EQUIPMENT INVOLVED | ***CIRCUMSTANCE*** | | | *****VISIBILITY***** | | | | | | | | |
|-----------------------------|------------------------|------------------------|---|--------------------------------|-----|-----|-----|------|-----|------|------|------|
| | CONSIDT STRUCK VEHICLE | VEHICLE STRUCK CONSIDT | *****PART OF TRAIN STRUCK***** ----QUARTER---- | *****PART OF TRAIN STRUCK***** | | | | DAWN | DAY | DUSK | DARK | |
| | VEHICLE ACC/INC | ACC/INC | | LOCO(S) | 1 | 2 | 3 | | | | | 4 |
| TRAIN (UNITS PULLING) | 4797 | 1695 | 1094 | 152 | 147 | 102 | 142 | 58 | 142 | 3558 | 224 | 2568 |
| TRAIN (UNITS PUSHING) | 415 | 222 | 59 | 81 | 33 | 19 | 28 | 2 | 7 | 292 | 27 | 311 |
| TRAIN (STANDING) | 0 | 189 | 44 | 30 | 24 | 40 | 48 | 3 | 4 | 17 | 2 | 166 |
| CARS (MOVING) | 116 | 68 | 0 | 2 | 2 | 1 | 62 | 1 | 4 | 164 | 2 | 14 |
| CARS (STANDING) | 0 | 14 | 0 | 0 | 2 | 0 | 11 | 1 | 1 | 9 | 0 | 4 |
| LIGHT LOCOS (MOVING) | 510 | 173 | 169 | 0 | 0 | 0 | 0 | 4 | 26 | 334 | 23 | 300 |
| LIGHT LOCOS (STANDING) | 0 | 20 | 19 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 0 | 13 |
| OTHER | 7 | 6 | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 12 | 0 | 1 |
| TOTAL | 5845 | 2387 | 1385 | 265 | 209 | 162 | 295 | 71 | 184 | 4393 | 278 | 3377 |

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

| TRAIN SPEED (MPH) | *****TOTAL***** | | | *****FREIGHT***** | | | *****PASSENGER***** | | | YARD/ *****SWITCHING***** | | | *****OTHER***** | | |
|-------------------|-----------------|-----|------|-------------------|-----|------|---------------------|-----|-----|------------------------------|-----|-----|-----------------|-----|-----|
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| STANDING | 224 | 17 | 102 | 132 | 14 | 60 | 0 | 0 | 0 | 59 | 1 | 29 | 33 | 2 | 13 |
| 1-9 | 2491 | 41 | 539 | 1037 | 24 | 245 | 21 | 0 | 5 | 873 | 14 | 182 | 560 | 3 | 107 |
| 10-19 | 1729 | 53 | 625 | 1242 | 47 | 454 | 33 | 0 | 9 | 218 | 4 | 70 | 236 | 2 | 92 |
| 20-29 | 1459 | 91 | 687 | 1282 | 83 | 602 | 40 | 3 | 26 | 47 | 1 | 21 | 90 | 4 | 38 |
| 30-39 | 1061 | 145 | 491 | 952 | 122 | 447 | 50 | 9 | 14 | 5 | 0 | 3 | 54 | 14 | 27 |
| 40-49 | 825 | 176 | 384 | 750 | 150 | 349 | 42 | 9 | 22 | 3 | 3 | 2 | 30 | 14 | 11 |
| 50-59 | 279 | 52 | 124 | 245 | 46 | 109 | 26 | 6 | 10 | 1 | 0 | 0 | 7 | 0 | 5 |
| 60-69 | 94 | 29 | 41 | 59 | 19 | 30 | 33 | 10 | 11 | 0 | 0 | 0 | 2 | 0 | 0 |
| 70-79 | 55 | 17 | 20 | 11 | 0 | 3 | 44 | 17 | 17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80-89 | 4 | 2 | 4 | 0 | 0 | 0 | 4 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 AND OVER | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 10 | 0 | 2 | 4 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 1 |
| TOTAL | 8232 | 623 | 3020 | 5714 | 505 | 2300 | 295 | 56 | 119 | 1207 | 23 | 307 | 1016 | 39 | 294 |

¹ INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

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 IN TRAIN | *****TOTAL***** | | | *****FREIGHT***** | | | *****PASSENGER***** | | | YARD/ *****SWITCHING***** | | | *****OTHER***** ¹ | | |
|----------------------------|-----------------|-----|------|-------------------|-----|------|---------------------|-----|-----|------------------------------|-----|-----|------------------------------|-----|-----|
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| LOCOMOTIVES ONLY | 781 | 40 | 218 | 27 | 2 | 13 | 48 | 9 | 20 | 17 | 1 | 4 | 689 | 28 | 181 |
| 1-9 | 2254 | 113 | 767 | 1095 | 62 | 420 | 187 | 33 | 80 | 692 | 14 | 176 | 280 | 4 | 91 |
| 10-19 | 920 | 55 | 296 | 588 | 34 | 212 | 52 | 12 | 19 | 256 | 4 | 61 | 24 | 5 | 4 |
| 20-29 | 532 | 28 | 239 | 414 | 25 | 205 | 4 | 1 | 0 | 106 | 2 | 27 | 8 | 0 | 7 |
| 30-39 | 430 | 49 | 182 | 365 | 49 | 162 | 1 | 0 | 0 | 60 | 0 | 13 | 4 | 0 | 7 |
| 40-49 | 383 | 28 | 150 | 343 | 28 | 137 | 0 | 0 | 0 | 37 | 0 | 10 | 3 | 0 | 3 |
| 50-59 | 381 | 45 | 166 | 366 | 44 | 160 | 0 | 0 | 0 | 13 | 0 | 6 | 2 | 1 | 0 |
| 60-69 | 370 | 38 | 145 | 358 | 38 | 141 | 0 | 0 | 0 | 10 | 0 | 4 | 2 | 0 | 0 |
| 70-79 | 466 | 49 | 169 | 456 | 48 | 165 | 1 | 1 | 0 | 7 | 0 | 3 | 2 | 0 | 1 |
| 80-89 | 375 | 47 | 139 | 368 | 45 | 137 | 1 | 0 | 0 | 5 | 1 | 2 | 1 | 1 | 0 |
| 90-99 | 369 | 37 | 153 | 366 | 37 | 152 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 |
| 100-109 | 355 | 40 | 137 | 353 | 39 | 137 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 110-119 | 273 | 25 | 105 | 272 | 25 | 105 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 120-129 | 136 | 11 | 64 | 136 | 11 | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 130-139 | 90 | 9 | 48 | 90 | 9 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 140-149 | 61 | 7 | 19 | 61 | 7 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 150 AND OVER | 56 | 2 | 23 | 56 | 2 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 8232 | 623 | 3020 | 5714 | 505 | 2300 | 295 | 56 | 119 | 1207 | 23 | 307 | 1016 | 39 | 294 |

¹ INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

TABLE 20 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY NUMBER OF CARS IN TRAIN, CIRCUMSTANCE, AND VISIBILITY

| NUMBER OF CARS IN TRAIN | *****TOTAL***** | | | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
|----------------------------|-----------------|-----|------|----------------|-----|-----|---------------|-----|------|----------------|-----|-----|----------------|-----|------|
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| LOCOMOTIVES ONLY | 574 | 28 | 149 | 22 | 0 | 5 | 308 | 15 | 75 | 18 | 0 | 3 | 226 | 13 | 66 |
| 1-9 | 1536 | 81 | 493 | 26 | 1 | 4 | 1070 | 53 | 349 | 50 | 3 | 11 | 390 | 24 | 129 |
| 10-19 | 647 | 40 | 208 | 14 | 1 | 9 | 392 | 24 | 115 | 35 | 0 | 11 | 206 | 15 | 73 |
| 20-29 | 365 | 23 | 151 | 5 | 0 | 3 | 225 | 16 | 96 | 15 | 1 | 2 | 120 | 6 | 50 |
| 30-39 | 298 | 39 | 109 | 7 | 1 | 3 | 169 | 18 | 63 | 11 | 1 | 3 | 111 | 19 | 40 |
| 40-49 | 269 | 25 | 107 | 2 | 0 | 1 | 139 | 15 | 58 | 12 | 1 | 2 | 116 | 9 | 46 |
| 50-59 | 276 | 34 | 111 | 12 | 2 | 3 | 144 | 20 | 56 | 9 | 0 | 1 | 111 | 12 | 51 |
| 60-69 | 286 | 31 | 102 | 7 | 1 | 2 | 142 | 17 | 51 | 6 | 0 | 4 | 131 | 13 | 45 |
| 70-79 | 340 | 40 | 98 | 8 | 1 | 1 | 173 | 20 | 58 | 10 | 3 | 2 | 149 | 16 | 37 |
| 80-89 | 282 | 35 | 90 | 7 | 0 | 2 | 152 | 19 | 60 | 8 | 0 | 3 | 115 | 16 | 25 |
| 90-99 | 273 | 28 | 103 | 6 | 0 | 2 | 146 | 16 | 63 | 11 | 1 | 4 | 110 | 11 | 34 |
| 100-109 | 254 | 27 | 84 | 4 | 0 | 1 | 127 | 16 | 53 | 7 | 0 | 4 | 116 | 11 | 26 |
| 110-119 | 208 | 19 | 72 | 4 | 2 | 0 | 114 | 15 | 36 | 7 | 0 | 4 | 83 | 2 | 32 |
| 120-129 | 98 | 5 | 44 | 2 | 0 | 0 | 46 | 2 | 24 | 3 | 0 | 0 | 47 | 3 | 20 |
| 130-139 | 63 | 8 | 33 | 4 | 0 | 2 | 30 | 3 | 19 | 2 | 1 | 0 | 27 | 4 | 12 |
| 140-149 | 38 | 2 | 8 | 0 | 0 | 0 | 19 | 0 | 2 | 2 | 0 | 1 | 17 | 2 | 5 |
| 150 AND OVER | 38 | 1 | 15 | 3 | 0 | 0 | 18 | 1 | 10 | 3 | 0 | 3 | 14 | 0 | 2 |
| TOTAL | 5845 | 466 | 1977 | 133 | 9 | 38 | 3414 | 270 | 1188 | 209 | 11 | 58 | 2089 | 176 | 693 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| LOCOMOTIVES ONLY | 207 | 12 | 69 | 7 | 0 | 1 | 78 | 3 | 30 | 8 | 0 | 2 | 114 | 9 | 36 |
| 1-9 | 718 | 32 | 274 | 11 | 0 | 4 | 378 | 15 | 133 | 19 | 1 | 7 | 310 | 16 | 130 |
| 10-19 | 273 | 15 | 88 | 6 | 1 | 3 | 137 | 6 | 43 | 9 | 1 | 4 | 121 | 7 | 38 |
| 20-29 | 167 | 5 | 88 | 2 | 0 | 1 | 64 | 1 | 31 | 8 | 1 | 1 | 93 | 3 | 55 |
| 30-39 | 132 | 10 | 73 | 5 | 0 | 2 | 52 | 3 | 37 | 3 | 0 | 0 | 72 | 7 | 34 |
| 40-49 | 114 | 3 | 43 | 2 | 1 | 0 | 36 | 0 | 15 | 3 | 0 | 2 | 73 | 2 | 26 |
| 50-59 | 105 | 11 | 55 | 3 | 1 | 1 | 40 | 4 | 27 | 2 | 0 | 2 | 60 | 6 | 25 |
| 60-69 | 84 | 7 | 43 | 2 | 0 | 0 | 30 | 0 | 13 | 1 | 0 | 1 | 51 | 7 | 29 |
| 70-79 | 126 | 9 | 71 | 3 | 0 | 1 | 34 | 4 | 18 | 7 | 1 | 4 | 82 | 4 | 48 |
| 80-89 | 93 | 12 | 49 | 2 | 0 | 2 | 20 | 0 | 10 | 2 | 0 | 0 | 69 | 12 | 37 |
| 90-99 | 96 | 9 | 50 | 2 | 0 | 1 | 31 | 2 | 17 | 1 | 0 | 0 | 62 | 7 | 32 |
| 100-109 | 101 | 13 | 53 | 3 | 0 | 3 | 29 | 3 | 18 | 2 | 0 | 2 | 67 | 10 | 30 |
| 110-119 | 65 | 6 | 33 | 2 | 0 | 0 | 23 | 1 | 9 | 0 | 0 | 0 | 40 | 5 | 24 |
| 120-129 | 38 | 6 | 20 | 1 | 0 | 0 | 8 | 0 | 4 | 1 | 1 | 0 | 28 | 5 | 16 |
| 130-139 | 27 | 1 | 15 | 0 | 0 | 0 | 9 | 0 | 7 | 1 | 0 | 1 | 17 | 1 | 7 |
| 140-149 | 23 | 5 | 11 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 17 | 5 | 9 |
| 150 AND OVER | 18 | 1 | 8 | 0 | 0 | 0 | 4 | 1 | 3 | 2 | 0 | 0 | 12 | 0 | 5 |
| TOTAL | 2387 | 157 | 1043 | 51 | 3 | 19 | 979 | 43 | 417 | 69 | 5 | 26 | 1288 | 106 | 581 |
| G R A N D T O T A L | | | | | | | | | | | | | | | |
| LOCOMOTIVES ONLY | 781 | 40 | 218 | 29 | 0 | 6 | 386 | 18 | 105 | 26 | 0 | 5 | 340 | 22 | 102 |
| 1-9 | 2254 | 113 | 767 | 37 | 1 | 8 | 1448 | 68 | 482 | 69 | 4 | 18 | 700 | 40 | 259 |
| 10-19 | 920 | 55 | 296 | 20 | 2 | 12 | 529 | 30 | 158 | 44 | 1 | 15 | 327 | 22 | 111 |
| 20-29 | 532 | 28 | 239 | 7 | 0 | 4 | 289 | 17 | 127 | 23 | 2 | 3 | 213 | 9 | 105 |
| 30-39 | 430 | 49 | 182 | 12 | 1 | 5 | 221 | 21 | 100 | 14 | 1 | 3 | 183 | 26 | 74 |
| 40-49 | 383 | 28 | 150 | 4 | 1 | 1 | 175 | 15 | 73 | 15 | 1 | 4 | 189 | 11 | 72 |
| 50-59 | 381 | 45 | 166 | 15 | 3 | 4 | 184 | 24 | 83 | 11 | 0 | 3 | 171 | 18 | 76 |
| 60-69 | 370 | 38 | 145 | 9 | 1 | 2 | 172 | 17 | 64 | 7 | 0 | 5 | 182 | 20 | 74 |
| 70-79 | 466 | 49 | 169 | 11 | 1 | 2 | 207 | 24 | 76 | 17 | 4 | 6 | 231 | 20 | 85 |
| 80-89 | 375 | 47 | 139 | 9 | 0 | 4 | 172 | 19 | 70 | 10 | 0 | 3 | 184 | 28 | 62 |
| 90-99 | 369 | 37 | 153 | 8 | 0 | 3 | 177 | 18 | 80 | 12 | 1 | 4 | 172 | 18 | 66 |
| 100-109 | 355 | 40 | 137 | 7 | 0 | 4 | 156 | 19 | 71 | 9 | 0 | 6 | 183 | 21 | 56 |
| 110-119 | 273 | 25 | 105 | 6 | 2 | 0 | 137 | 16 | 45 | 7 | 0 | 4 | 123 | 7 | 56 |
| 120-129 | 136 | 11 | 64 | 3 | 0 | 0 | 54 | 2 | 28 | 4 | 1 | 0 | 75 | 8 | 36 |
| 130-139 | 90 | 9 | 48 | 4 | 0 | 2 | 39 | 3 | 26 | 3 | 1 | 1 | 44 | 5 | 19 |
| 140-149 | 61 | 7 | 19 | 0 | 0 | 0 | 25 | 0 | 4 | 2 | 0 | 1 | 34 | 7 | 14 |
| 150 AND OVER | 56 | 2 | 23 | 3 | 0 | 0 | 22 | 2 | 13 | 5 | 0 | 3 | 26 | 0 | 7 |
| TOTAL | 8232 | 623 | 3020 | 184 | 12 | 57 | 4393 | 313 | 1605 | 278 | 16 | 84 | 3377 | 282 | 1274 |

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***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| 1 | 956 | 31 | 256 | 485 | 9 | 91 | 95 | 2 | 24 | 249 | 3 | 80 | 7 | 0 | 0 | 1792 | 45 | 451 |
| 2 | 1693 | 64 | 622 | 114 | 0 | 36 | 32 | 0 | 7 | 45 | 1 | 16 | 6 | 0 | 3 | 1890 | 65 | 684 |
| 3 | 2279 | 218 | 964 | 26 | 0 | 10 | 18 | 0 | 4 | 13 | 0 | 3 | 3 | 0 | 4 | 2339 | 218 | 985 |
| 4 | 1893 | 254 | 777 | 12 | 0 | 2 | 5 | 0 | 0 | 10 | 0 | 2 | 0 | 0 | 0 | 1920 | 254 | 781 |
| 5 | 134 | 29 | 52 | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 139 | 29 | 54 |
| 6 | 3 | 0 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 |
| UNKNOWN | 78 | 8 | 45 | 35 | 0 | 10 | 8 | 3 | 3 | 25 | 0 | 5 | 1 | 1 | 0 | 147 | 12 | 63 |
| TOTAL | 7036 | 604 | 2718 | 675 | 9 | 150 | 160 | 5 | 38 | 344 | 4 | 107 | 17 | 1 | 7 | 8232 | 623 | 3020 |

WARNING DEVICE DATA (1981)

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

| WARNING DEVICE CATEGORY | ****TOTAL**** | | | DROVE AROUND OR **THRU GATE** | | | STOPPED AND THEN **PROCEEDED** | | | DID NOT ****STOP**** | | | ****OTHER**** | | | ***UNKNOWN*** | | |
|----------------------------------|---------------|-----|------|-------------------------------------|-----|-----|--------------------------------------|-----|-----|-------------------------|-----|------|---------------|-----|-----|---------------|-----|-----|
| | 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 | 1102 | 113 | 323 | 546 | 87 | 206 | 33 | 1 | 8 | 123 | 7 | 63 | 388 | 17 | 43 | 12 | 1 | 3 |
| CANTILEVERED FLASHING LIGHTS | 528 | 34 | 230 | 0 | 0 | 0 | 31 | 0 | 10 | 396 | 31 | 198 | 92 | 2 | 21 | 9 | 1 | 1 |
| STANDARD FLASHING LIGHTS | 2210 | 171 | 860 | 0 | 0 | 0 | 148 | 4 | 50 | 1548 | 155 | 714 | 488 | 10 | 93 | 26 | 2 | 3 |
| HIGHWAY SIGNALS WIGWAGS OR BELLS | 394 | 19 | 122 | 0 | 0 | 0 | 37 | 0 | 13 | 250 | 18 | 92 | 97 | 1 | 13 | 10 | 0 | 4 |
| SPECIAL WARNING DEVICES | 194 | 1 | 55 | 0 | 0 | 0 | 21 | 0 | 1 | 139 | 1 | 43 | 23 | 0 | 4 | 11 | 0 | 7 |
| CROSSBUCKS | 3601 | 275 | 1377 | 0 | 0 | 0 | 173 | 10 | 55 | 2341 | 223 | 1038 | 910 | 23 | 213 | 177 | 19 | 71 |
| STOP SIGNS | 73 | 4 | 12 | 0 | 0 | 0 | 5 | 0 | 2 | 35 | 3 | 4 | 26 | 0 | 6 | 7 | 1 | 0 |
| OTHER SIGNS | 29 | 5 | 7 | 0 | 0 | 0 | 1 | 0 | 0 | 19 | 5 | 7 | 9 | 0 | 0 | 0 | 0 | 0 |
| NO SIGNS OR SIGNALS | 101 | 1 | 34 | 0 | 0 | 0 | 3 | 0 | 0 | 64 | 1 | 31 | 25 | 0 | 1 | 9 | 0 | 2 |
| TOTAL | 8232 | 623 | 3020 | 546 | 87 | 206 | 452 | 15 | 139 | 4915 | 444 | 2190 | 2058 | 53 | 394 | 261 | 24 | 91 |

A/I = ACCIDENTS/INCIDENTS

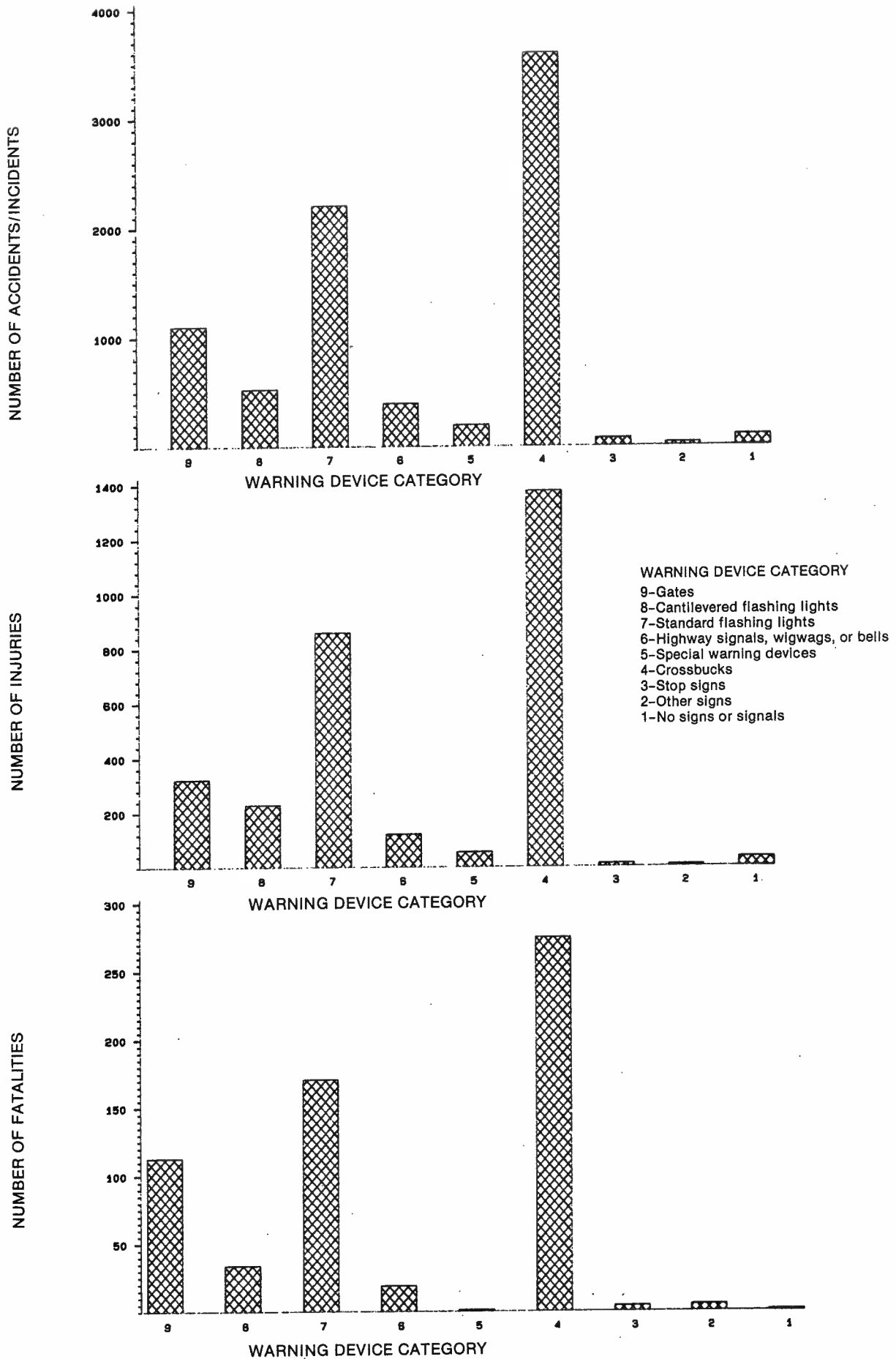


FIGURE 7 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY WARNING DEVICE CATEGORY

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

| WARNING DEVICE CATEGORY | *DEVICE(S) OPERATING* | | | *****CIRCUMSTANCE***** | | | | | | | |
|----------------------------------|-----------------------|----|--------------|-------------------------|------|------|------|------------------------|-----|------|------|
| | YES | NO | NOT REPORTED | ----STRUCK BY TRAIN---- | | | | ----RAN INTO TRAIN---- | | | |
| | | | | DAWN | DAY | DUSK | DARK | DAWN | DAY | DUSK | DARK |
| GATES | 1071 | 17 | 14 | 21 | 392 | 27 | 446 | 8 | 63 | 6 | 139 |
| FLASHING LIGHTS | 2676 | 30 | 32 | 31 | 1065 | 61 | 673 | 21 | 397 | 18 | 472 |
| HIGHWAY SIGNALS WIGWAGS OR BELLS | 302 | 3 | 89 | 5 | 174 | 13 | 88 | 1 | 50 | 2 | 61 |
| SPECIAL WARNING DEVICES | 0 | 0 | 194 | 4 | 54 | 6 | 41 | 1 | 29 | 1 | 58 |
| CROSSBUCKS | 0 | 0 | 3601 | 70 | 1640 | 98 | 782 | 20 | 420 | 42 | 529 |
| STOP SIGNS | 0 | 0 | 73 | 1 | 35 | 2 | 19 | 0 | 9 | 0 | 7 |
| OTHER SIGNS | 0 | 0 | 29 | 0 | 8 | 0 | 13 | 0 | 2 | 0 | 6 |
| NO SIGNS OR SIGNALS | 0 | 0 | 101 | 1 | 46 | 2 | 27 | 0 | 9 | 0 | 16 |
| TOTAL | 4049 | 50 | 4133 | 133 | 3414 | 209 | 2089 | 51 | 979 | 69 | 1288 |

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

| CROSSING ILLUMINATION | *****TOTAL***** | | | CIRCUMSTANCE | | | | | |
|-----------------------|-----------------|-----|------|---------------------|-----|-----|---------------------|-----|-----|
| | ACC/INC | KLD | INJ | **STRUCK BY TRAIN** | | | ***RAN INTO TRAIN** | | |
| | | | | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| LIGHTED | 1358 | 99 | 519 | 837 | 62 | 308 | 521 | 37 | 211 |
| NOT LIGHTED | 1523 | 139 | 584 | 969 | 90 | 307 | 554 | 49 | 277 |
| NOT REPORTED | 774 | 60 | 255 | 492 | 35 | 136 | 282 | 25 | 119 |
| TOTAL | 3655 | 298 | 1358 | 2298 | 187 | 751 | 1357 | 111 | 607 |

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 | | | | | | | | | | | | | | |
|--|-----------------|------------|-------------|----------------|-----------|-----------|---------------|------------|-------------|----------------|-----------|-----------|----------------|------------|-------------|
| | *****TOTAL***** | | | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| AUTOMATIC, BOTH SIDES ¹ | 2880 | 240 | 948 | 54 | 2 | 23 | 1565 | 124 | 492 | 95 | 5 | 18 | 1166 | 109 | 415 |
| AUTOMATIC, SIDE OF APPROACH | 92 | 6 | 25 | 3 | 0 | 0 | 47 | 6 | 10 | 5 | 0 | 2 | 37 | 0 | 13 |
| AUTOMATIC, OPPOSITE SIDE | 18 | 1 | 9 | 0 | 0 | 0 | 16 | 1 | 8 | 1 | 0 | 0 | 1 | 0 | 1 |
| AUTOMATIC, SIDE NOT REPORTED | 6 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| MANUAL, BOTH SIDES ² | 80 | 0 | 20 | 4 | 0 | 0 | 39 | 0 | 15 | 4 | 0 | 0 | 33 | 0 | 5 |
| MANUAL, SIDE OF APPROACH | 20 | 0 | 2 | 0 | 0 | 0 | 11 | 0 | 0 | 2 | 0 | 1 | 7 | 0 | 1 |
| MANUAL, OPPOSITE SIDE | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MANUAL, SIDE NOT REPORTED | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| OTHER, BOTH SIDES ³ | 2396 | 205 | 876 | 66 | 7 | 12 | 1516 | 131 | 598 | 89 | 4 | 33 | 725 | 63 | 233 |
| OTHER, SIDE OF APPROACH | 201 | 10 | 58 | 3 | 0 | 1 | 128 | 6 | 40 | 6 | 0 | 4 | 64 | 4 | 13 |
| OTHER, OPPOSITE SIDE | 65 | 3 | 21 | 2 | 0 | 1 | 35 | 1 | 12 | 5 | 2 | 0 | 23 | 0 | 8 |
| OTHER, SIDE NOT REPORTED | 6 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| NO SIGNS OR SIGNALS | 76 | 1 | 17 | 1 | 0 | 1 | 46 | 1 | 12 | 2 | 0 | 0 | 27 | 0 | 4 |
| SUBTOTAL | 5845 | 466 | 1977 | 133 | 9 | 38 | 3414 | 270 | 1188 | 209 | 11 | 58 | 2089 | 176 | 693 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| AUTOMATIC, BOTH SIDES | 1172 | 87 | 525 | 28 | 1 | 12 | 480 | 24 | 208 | 26 | 1 | 7 | 638 | 61 | 298 |
| AUTOMATIC, SIDE OF APPROACH | 52 | 2 | 19 | 2 | 1 | 1 | 24 | 0 | 8 | 0 | 0 | 0 | 26 | 1 | 10 |
| AUTOMATIC, OPPOSITE SIDE | 7 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 |
| AUTOMATIC, SIDE NOT REPORTED | 7 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 7 |
| MANUAL, BOTH SIDES | 70 | 1 | 28 | 1 | 0 | 0 | 22 | 0 | 6 | 1 | 0 | 0 | 46 | 1 | 22 |
| MANUAL, SIDE OF APPROACH | 10 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 8 | 0 | 2 |
| MANUAL, OPPOSITE SIDE | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| MANUAL, SIDE NOT REPORTED | 6 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| OTHER, BOTH SIDES | 954 | 59 | 409 | 19 | 1 | 6 | 394 | 17 | 165 | 40 | 4 | 18 | 501 | 37 | 220 |
| OTHER, SIDE OF APPROACH | 64 | 7 | 28 | 1 | 0 | 0 | 29 | 2 | 15 | 1 | 0 | 1 | 33 | 5 | 12 |
| OTHER, OPPOSITE SIDE | 13 | 0 | 2 | 0 | 0 | 0 | 7 | 0 | 2 | 1 | 0 | 0 | 5 | 0 | 0 |
| OTHER, SIDE NOT REPORTED | 4 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| NO SIGNS OR SIGNALS | 25 | 0 | 17 | 0 | 0 | 0 | 9 | 0 | 10 | 0 | 0 | 0 | 16 | 0 | 7 |
| SUBTOTAL | 2387 | 157 | 1043 | 51 | 3 | 19 | 979 | 43 | 417 | 69 | 5 | 26 | 1288 | 106 | 581 |
| T O T A L | | | | | | | | | | | | | | | |
| AUTOMATIC, BOTH SIDES | 4052 | 327 | 1473 | 82 | 3 | 35 | 2045 | 148 | 700 | 121 | 6 | 25 | 1804 | 170 | 713 |
| AUTOMATIC, SIDE OF APPROACH | 144 | 8 | 44 | 5 | 1 | 1 | 71 | 6 | 18 | 5 | 0 | 2 | 63 | 1 | 23 |
| AUTOMATIC, OPPOSITE SIDE | 25 | 1 | 11 | 0 | 0 | 0 | 22 | 1 | 10 | 1 | 0 | 0 | 2 | 0 | 1 |
| AUTOMATIC, SIDE NOT REPORTED | 13 | 1 | 7 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 7 |
| MANUAL, BOTH SIDES | 150 | 1 | 48 | 5 | 0 | 0 | 61 | 0 | 21 | 5 | 0 | 0 | 79 | 1 | 27 |
| MANUAL, SIDE OF APPROACH | 30 | 0 | 5 | 0 | 0 | 0 | 13 | 0 | 1 | 2 | 0 | 1 | 15 | 0 | 3 |
| MANUAL, OPPOSITE SIDE | 5 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| MANUAL, SIDE NOT REPORTED | 9 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 |
| OTHER, BOTH SIDES | 3350 | 264 | 1285 | 85 | 8 | 18 | 1910 | 148 | 763 | 129 | 8 | 51 | 1226 | 100 | 453 |
| OTHER, SIDE OF APPROACH | 265 | 17 | 86 | 4 | 0 | 1 | 157 | 8 | 55 | 7 | 0 | 5 | 97 | 9 | 25 |
| OTHER, OPPOSITE SIDE | 78 | 3 | 23 | 2 | 0 | 1 | 42 | 1 | 14 | 6 | 2 | 0 | 28 | 0 | 8 |
| OTHER, SIDE NOT REPORTED | 10 | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 |
| NO SIGNS OR SIGNALS | 101 | 1 | 34 | 1 | 0 | 1 | 55 | 1 | 22 | 2 | 0 | 0 | 43 | 0 | 11 |
| G R A N D T O T A L | 8232 | 623 | 3020 | 184 | 12 | 57 | 4393 | 313 | 1605 | 278 | 16 | 84 | 3377 | 282 | 1274 |

¹ AUTOMATIC DEVICES INCLUDE GATES, FLASHING LIGHTS, HIGHWAY SIGNALS, WIGWAGS, AND BELLS

² WHICH ARE TRAIN ACTIVATED.

³ MANUAL DEVICES INCLUDE "WATCHMAN" AND "FLAGGED BY CREW."

⁴ OTHER DEVICES INCLUDE CROSSBUCKS, STOP SIGNS, ETC.

TIME, DAY, AND WEATHER DATA (1981)

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

| VISIBILITY | CIRCUMSTANCE | | | | | | | | |
|------------|-----------------|-----|------|---------------------|-----|------|---------------------|-----|------|
| | *****TOTAL***** | | | **STRUCK BY TRAIN** | | | ***RAN INTO TRAIN** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| DAWN | 184 | 12 | 57 | 133 | 9 | 38 | 51 | 3 | 19 |
| DAY | 4393 | 313 | 1605 | 3414 | 270 | 1188 | 979 | 43 | 417 |
| DUSK | 278 | 16 | 84 | 209 | 11 | 58 | 69 | 5 | 26 |
| DARK | 3377 | 282 | 1274 | 2089 | 176 | 693 | 1288 | 106 | 581 |
| TOTAL | 8232 | 623 | 3020 | 5845 | 466 | 1977 | 2387 | 157 | 1043 |

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

| TEMPERATURE DEGREES F | TOTAL ACC/INC | CIRCUMSTANCE | | | | | | | |
|--------------------------|------------------|-----------------------|------|------|------|------------------------|-----|------|------|
| | | ***STRUCK BY TRAIN*** | | | | ****RAN INTO TRAIN**** | | | |
| | | DAWN | DAY | DUSK | DARK | DAWN | DAY | DUSK | DARK |
| OVER 100 | 9 | 0 | 5 | 0 | 0 | 0 | 4 | 0 | 0 |
| 80 TO 100 | 1305 | 5 | 855 | 27 | 113 | 1 | 235 | 7 | 62 |
| 60 TO 79 | 2657 | 48 | 1186 | 66 | 635 | 15 | 308 | 26 | 373 |
| 40 TO 59 | 2432 | 51 | 812 | 82 | 752 | 19 | 215 | 19 | 482 |
| 20 TO 39 | 1446 | 23 | 449 | 26 | 479 | 13 | 151 | 14 | 291 |
| 0 TO 19 | 345 | 6 | 100 | 5 | 101 | 3 | 58 | 3 | 69 |
| -20 TO -1 | 37 | 0 | 7 | 3 | 9 | 0 | 7 | 0 | 11 |
| UNDER -20 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TOTAL | 8232 | 133 | 3414 | 209 | 2089 | 51 | 979 | 69 | 1288 |

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

| HOUR | CIRCUMSTANCE | | | | | | | | |
|----------------------|-----------------|------------|-------------|---------------------|------------|-------------|---------------------|------------|-------------|
| | *****TOTAL***** | | | **STRUCK BY TRAIN** | | | ***RAN INTO TRAIN** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| MIDNIGHT TO 12:59 AM | 313 | 32 | 133 | 176 | 18 | 69 | 137 | 14 | 64 |
| 1 TO 1:59 AM | 318 | 33 | 134 | 170 | 21 | 47 | 148 | 12 | 87 |
| 2 TO 2:59 AM | 303 | 21 | 137 | 153 | 7 | 57 | 150 | 14 | 80 |
| 3 TO 3:59 AM | 184 | 4 | 73 | 100 | 1 | 31 | 84 | 3 | 42 |
| 4 TO 4:59 AM | 153 | 18 | 48 | 87 | 9 | 19 | 66 | 9 | 29 |
| 5 TO 5:59 AM | 140 | 6 | 39 | 86 | 3 | 20 | 54 | 3 | 19 |
| 6 TO 6:59 AM | 216 | 13 | 65 | 154 | 10 | 45 | 62 | 3 | 20 |
| 7 TO 7:59 AM | 317 | 28 | 111 | 256 | 25 | 86 | 61 | 3 | 25 |
| 8 TO 8:59 AM | 340 | 24 | 120 | 264 | 24 | 91 | 76 | 0 | 29 |
| 9 TO 9:59 AM | 373 | 37 | 120 | 285 | 30 | 86 | 88 | 7 | 34 |
| 10 TO 10:59 AM | 382 | 35 | 118 | 298 | 30 | 95 | 84 | 5 | 23 |
| 11 TO 11:59 AM | 404 | 30 | 148 | 306 | 19 | 104 | 98 | 11 | 44 |
| NOON TO 12:59 PM | 379 | 14 | 143 | 288 | 13 | 99 | 91 | 1 | 44 |
| 1 TO 1:59 PM | 405 | 21 | 169 | 307 | 21 | 127 | 98 | 0 | 42 |
| 2 TO 2:59 PM | 441 | 27 | 161 | 339 | 26 | 124 | 102 | 1 | 37 |
| 3 TO 3:59 PM | 470 | 35 | 178 | 378 | 27 | 135 | 92 | 8 | 43 |
| 4 TO 4:59 PM | 418 | 23 | 115 | 328 | 21 | 85 | 90 | 2 | 30 |
| 5 TO 5:59 PM | 417 | 28 | 147 | 309 | 22 | 113 | 108 | 6 | 34 |
| 6 TO 6:59 PM | 431 | 27 | 167 | 330 | 18 | 129 | 101 | 9 | 38 |
| 7 TO 7:59 PM | 375 | 28 | 157 | 259 | 25 | 89 | 116 | 3 | 68 |
| 8 TO 8:59 PM | 336 | 29 | 124 | 230 | 26 | 75 | 106 | 3 | 49 |
| 9 TO 9:59 PM | 361 | 37 | 125 | 260 | 33 | 78 | 101 | 4 | 47 |
| 10 TO 10:59 PM | 368 | 44 | 149 | 237 | 26 | 94 | 131 | 18 | 55 |
| 11 TO 11:59 PM | 388 | 29 | 139 | 245 | 11 | 79 | 143 | 18 | 60 |
| TOTAL | 8232 | 623 | 3020 | 5845 | 466 | 1977 | 2387 | 157 | 1043 |

TABLE 29 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY DAY OF WEEK AND CIRCUMSTANCE

| DAY | CIRCUMSTANCE | | | | | | | | |
|-----------|-----------------|-----|------|---------------------|-----|------|---------------------|-----|------|
| | *****TOTAL***** | | | **STRUCK BY TRAIN** | | | ***RAN INTO TRAIN** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| SUNDAY | 717 | 66 | 287 | 503 | 47 | 177 | 214 | 19 | 110 |
| MONDAY | 1110 | 62 | 336 | 808 | 50 | 227 | 302 | 12 | 109 |
| TUESDAY | 1224 | 80 | 430 | 892 | 61 | 315 | 332 | 19 | 115 |
| WEDNESDAY | 1212 | 85 | 450 | 859 | 59 | 305 | 353 | 26 | 145 |
| THURSDAY | 1298 | 97 | 420 | 906 | 75 | 261 | 392 | 22 | 159 |
| FRIDAY | 1447 | 127 | 553 | 1036 | 90 | 358 | 411 | 37 | 195 |
| SATURDAY | 1224 | 106 | 544 | 841 | 84 | 334 | 383 | 22 | 210 |
| TOTAL | 8232 | 623 | 3020 | 5845 | 466 | 1977 | 2387 | 157 | 1043 |

TABLE 30 ACCIDENTS/INCIDENTS AND CASUALTIES AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY MONTH AND CIRCUMSTANCE

| MONTH | CIRCUMSTANCE | | | | | | | | |
|-----------|-----------------|-----|------|---------------------|-----|------|---------------------|-----|------|
| | *****TOTAL***** | | | **STRUCK BY TRAIN** | | | ***RAN INTO TRAIN** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| JANUARY | 890 | 82 | 346 | 623 | 69 | 229 | 267 | 13 | 117 |
| FEBRUARY | 780 | 46 | 259 | 544 | 33 | 187 | 236 | 13 | 72 |
| MARCH | 731 | 36 | 266 | 524 | 28 | 163 | 207 | 8 | 103 |
| APRIL | 584 | 60 | 204 | 414 | 44 | 135 | 170 | 16 | 69 |
| MAY | 634 | 56 | 219 | 478 | 42 | 150 | 156 | 14 | 69 |
| JUNE | 611 | 56 | 246 | 433 | 41 | 145 | 178 | 15 | 101 |
| JULY | 568 | 43 | 258 | 421 | 37 | 186 | 147 | 6 | 72 |
| AUGUST | 587 | 52 | 196 | 430 | 40 | 129 | 157 | 12 | 67 |
| SEPTEMBER | 601 | 61 | 219 | 422 | 42 | 142 | 179 | 19 | 77 |
| OCTOBER | 746 | 41 | 253 | 535 | 27 | 154 | 211 | 14 | 99 |
| NOVEMBER | 668 | 37 | 238 | 459 | 27 | 159 | 209 | 10 | 79 |
| DECEMBER | 832 | 53 | 316 | 562 | 36 | 198 | 270 | 17 | 118 |
| TOTAL | 8232 | 623 | 3020 | 5845 | 466 | 1977 | 2387 | 157 | 1043 |

**TABLE 31 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING
MOTOR VEHICLES BY WEATHER CONDITIONS, CIRCUMSTANCE, AND
VISIBILITY**

| WEATHER | TOTAL ACC/INC | CIRCUMSTANCE | | | | | | | |
|--------------|------------------|-----------------------|------|------|------|------------------------|-----|------|------|
| | | ***STRUCK BY TRAIN*** | | | | ****RAN INTO TRAIN**** | | | |
| | | DAWN | DAY | DUSK | DARK | DAWN | DAY | DUSK | DARK |
| CLEAR | 5467 | 82 | 2432 | 125 | 1295 | 34 | 637 | 42 | 820 |
| CLOUDY | 1770 | 26 | 684 | 52 | 478 | 6 | 222 | 20 | 282 |
| RAIN | 647 | 11 | 219 | 23 | 208 | 7 | 75 | 5 | 99 |
| FOG | 141 | 10 | 29 | 2 | 42 | 4 | 7 | 0 | 47 |
| SLEET | 9 | 0 | 0 | 0 | 5 | 0 | 3 | 0 | 1 |
| SNOW | 191 | 3 | 50 | 7 | 57 | 0 | 34 | 2 | 38 |
| NOT REPORTED | 7 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 1 |
| TOTAL | 8232 | 133 | 3414 | 209 | 2089 | 51 | 979 | 69 | 1288 |

MOTORIST ACTION DATA (1981)

TABLE 32 ACCIDENTS/INCIDENTS AT RAIL-HIGHWAY CROSSINGS INVOLVING MOTOR VEHICLES BY OBSTRUCTION OF MOTORISTS' VIEW, CIRCUMSTANCE, AND VISIBILITY

| OBSTRUCTION OF MOTORISTS' VIEW | CIRCUMSTANCE | | | | | | | | | | | |
|-----------------------------------|-----------------|------|------|------|-----------------------|------|------|------|------------------------|-----|------|------|
| | *****TOTAL***** | | | | ***STRUCK BY TRAIN*** | | | | ****RAN INTO TRAIN**** | | | |
| | DAWN | DAY | DUSK | DARK | DAWN | DAY | DUSK | DARK | DAWN | DAY | DUSK | DARK |
| PERMANENT STRUCTURE | 6 | 155 | 8 | 91 | 5 | 122 | 7 | 60 | 1 | 33 | 1 | 31 |
| STANDING RR EQUIPMENT | 3 | 49 | 1 | 16 | 3 | 46 | 1 | 10 | 0 | 3 | 0 | 6 |
| PASSING TRAIN | 0 | 22 | 0 | 13 | 0 | 19 | 0 | 11 | 0 | 3 | 0 | 2 |
| TOPOGRAPHY | 1 | 55 | 2 | 13 | 1 | 44 | 0 | 8 | 0 | 11 | 2 | 5 |
| VEGETATION | 6 | 136 | 9 | 23 | 6 | 93 | 5 | 13 | 0 | 43 | 4 | 10 |
| HIGHWAY VEHICLE | 1 | 20 | 1 | 9 | 1 | 15 | 1 | 5 | 0 | 5 | 0 | 4 |
| OTHER | 0 | 32 | 0 | 23 | 0 | 27 | 0 | 14 | 0 | 5 | 0 | 9 |
| NOT OBSTRUCTED | 167 | 3919 | 257 | 3187 | 117 | 3044 | 195 | 1967 | 50 | 875 | 62 | 1220 |
| UNKNOWN | 0 | 5 | 0 | 2 | 0 | 4 | 0 | 1 | 0 | 1 | 0 | 1 |
| TOTAL | 184 | 4393 | 278 | 3377 | 133 | 3414 | 209 | 2089 | 51 | 979 | 69 | 1288 |

TABLE 33 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 | 136 | 5411 | 93 | 205 | 4888 | 547 |
| TRUCK | 33 | 1809 | 20 | 53 | 1659 | 150 |
| TRUCK TRAILER | 21 | 587 | 5 | 9 | 556 | 48 |
| BUS | 0 | 14 | 1 | 0 | 13 | 2 |
| SCHOOL BUS | 0 | 12 | 0 | 0 | 12 | 0 |
| MOTORCYCLE | 1 | 88 | 1 | 4 | 70 | 16 |
| TOTAL | 191 | 7921 | 120 | 271 | 7198 | 763 |

3. RAIL-HIGHWAY CROSSING ACCIDENT RATES (1981)

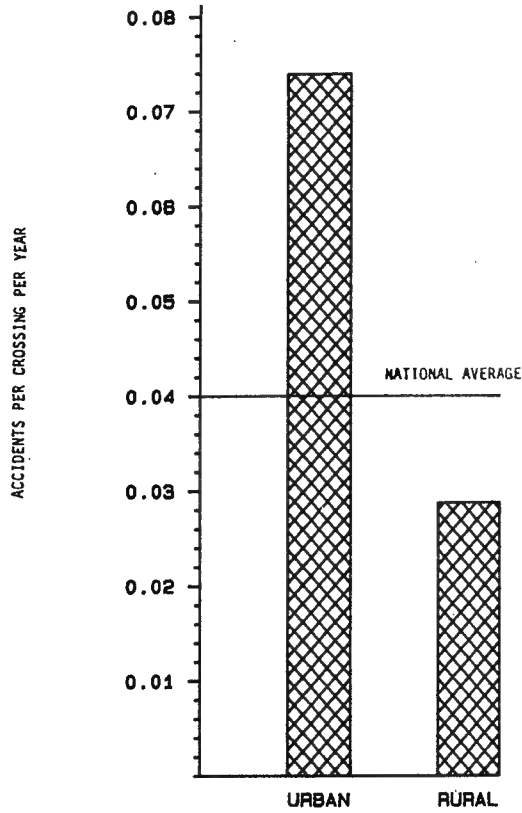


FIGURE 8 CROSSING ACCIDENT RATE BY LOCATION: URBAN OR RURAL

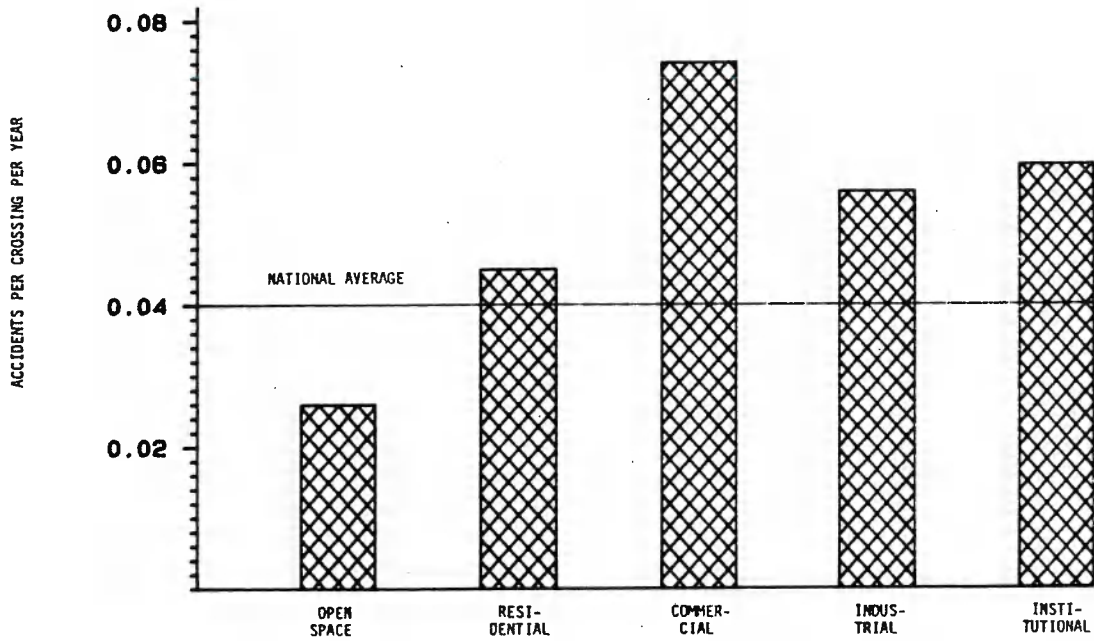


FIGURE 9 CROSSING ACCIDENT RATE BY TYPE OF DEVELOPMENT

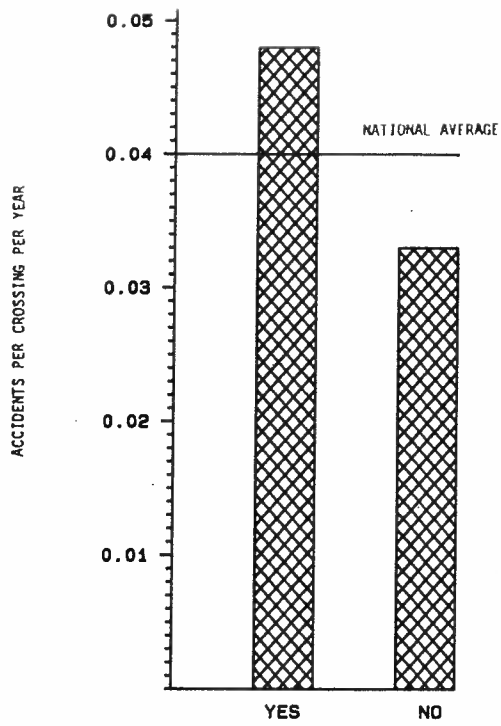


FIGURE 10 CROSSING ACCIDENT RATE BY ADVANCE WARNING SIGNS

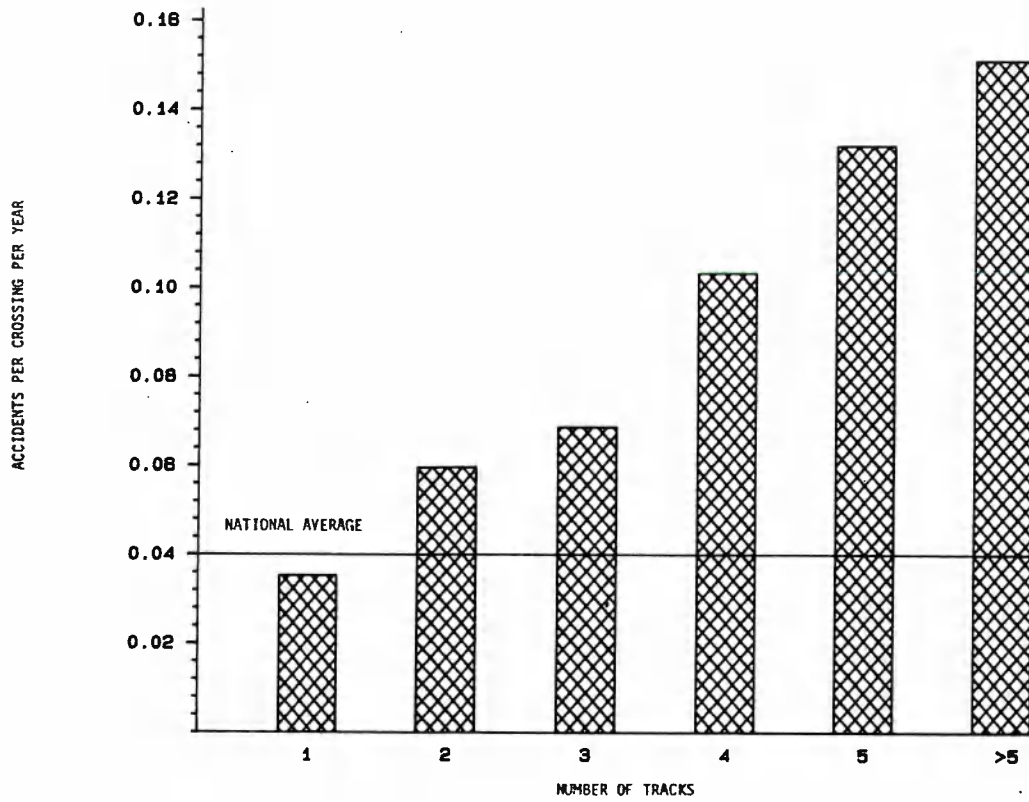


FIGURE 11 CROSSING ACCIDENT RATE BY NUMBER OF TRACKS

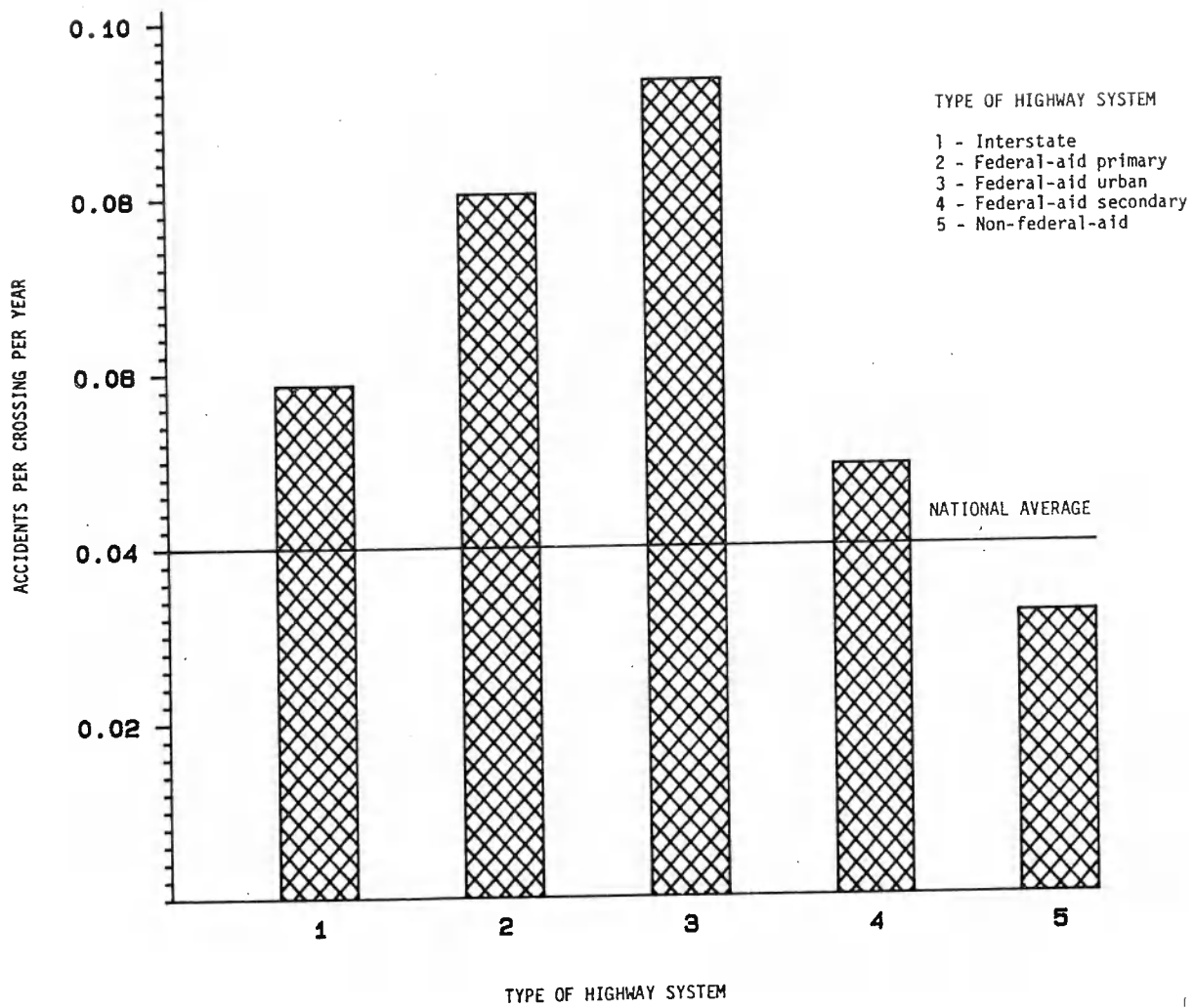


FIGURE 12 CROSSING ACCIDENT RATE BY HIGHWAY SYSTEM

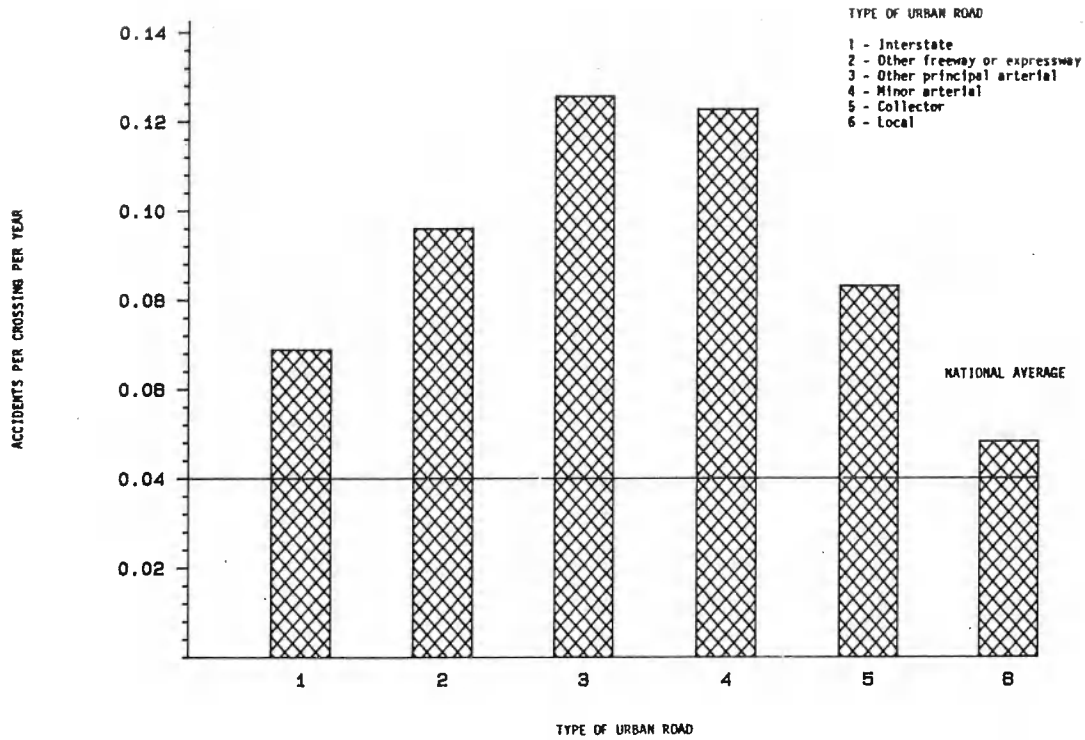


FIGURE 13 CROSSING ACCIDENT RATE BY TYPE OF URBAN ROAD

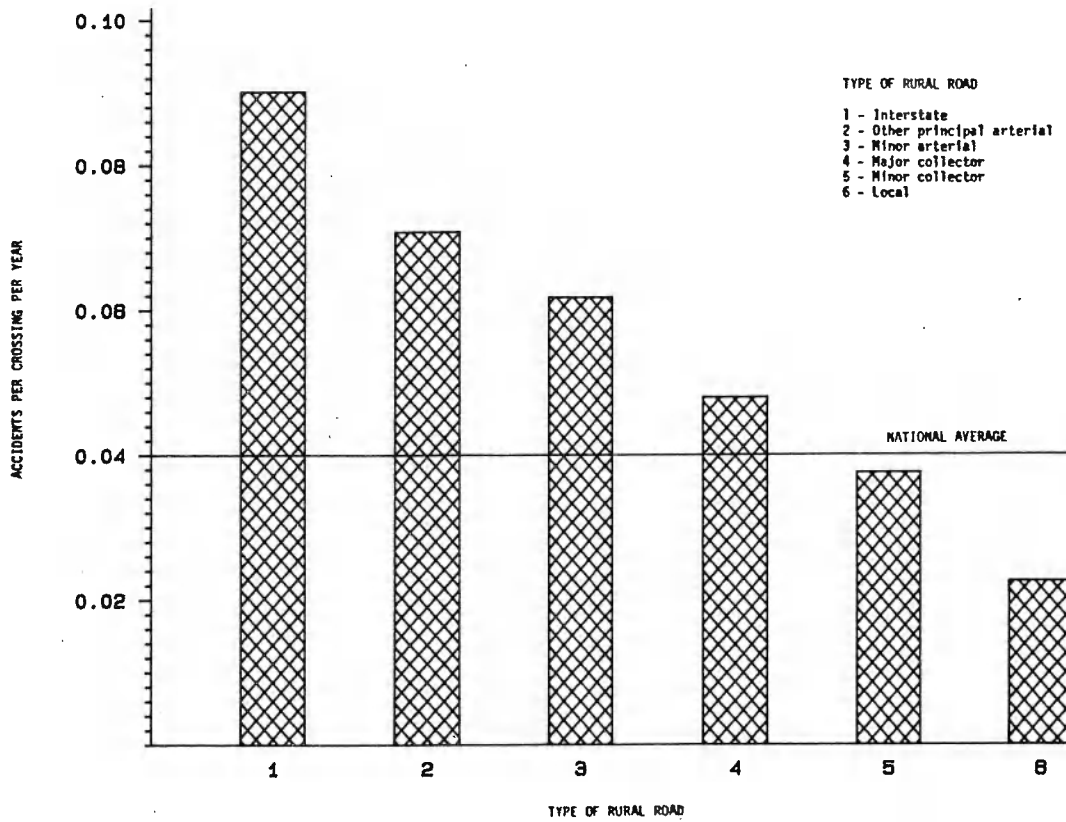


FIGURE 14 CROSSING ACCIDENT RATE BY TYPE OF RURAL ROAD

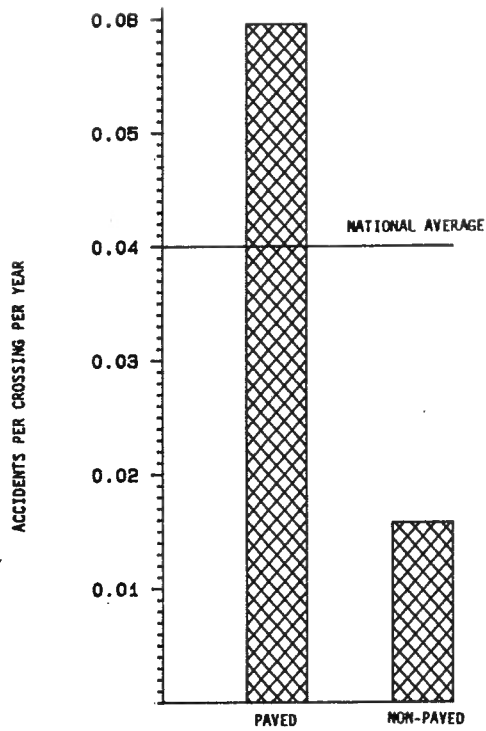


FIGURE 15 CROSSING ACCIDENT RATE BY PAVED OR NON-PAVED ROAD SURFACE

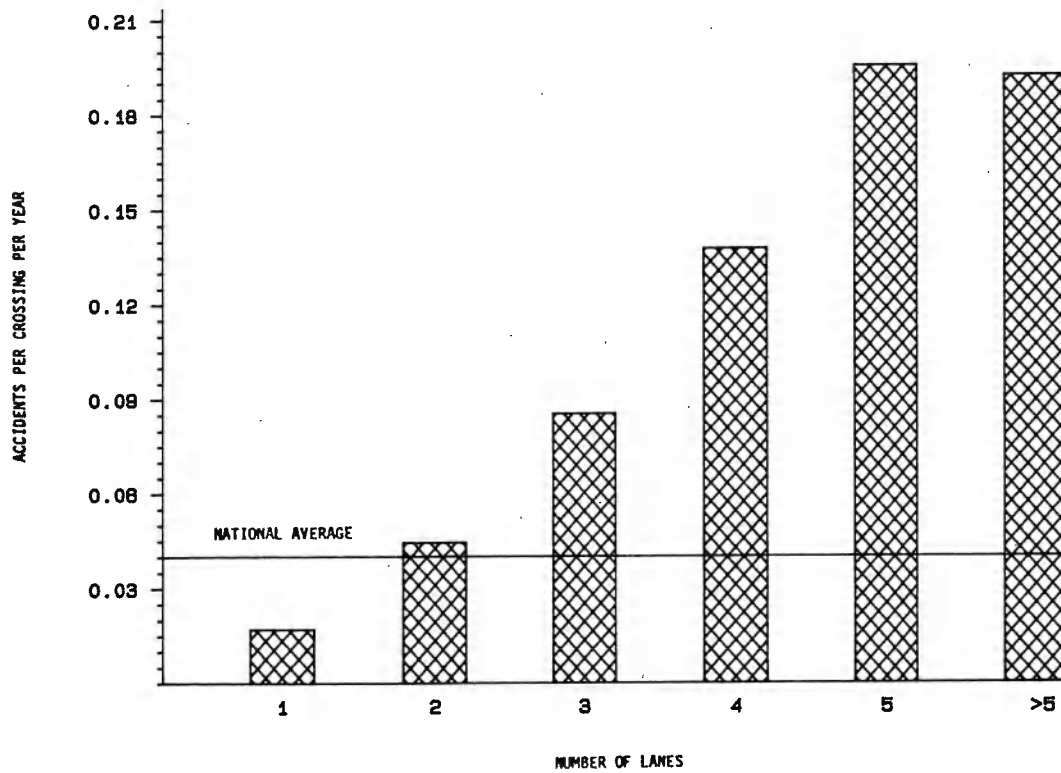


FIGURE 16 CROSSING ACCIDENT RATE BY NUMBER OF TRAFFIC LANES

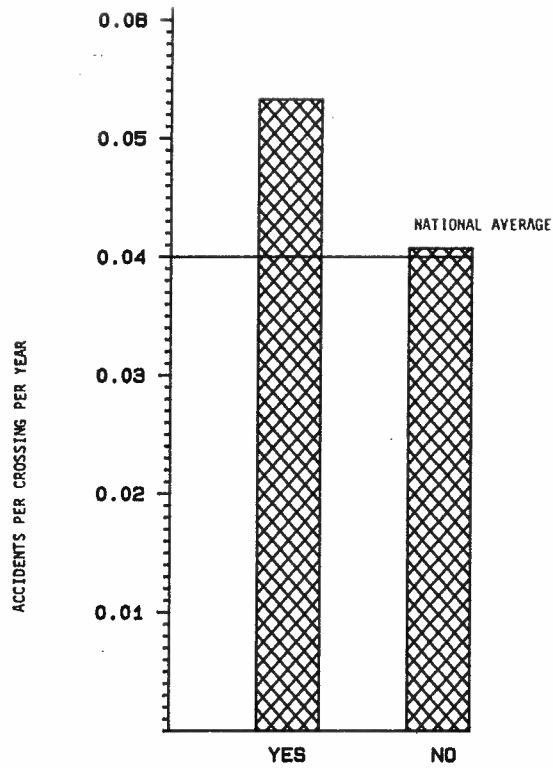


FIGURE 17 CROSSING ACCIDENT RATE BY NEARBY INTERSECTING HIGHWAY

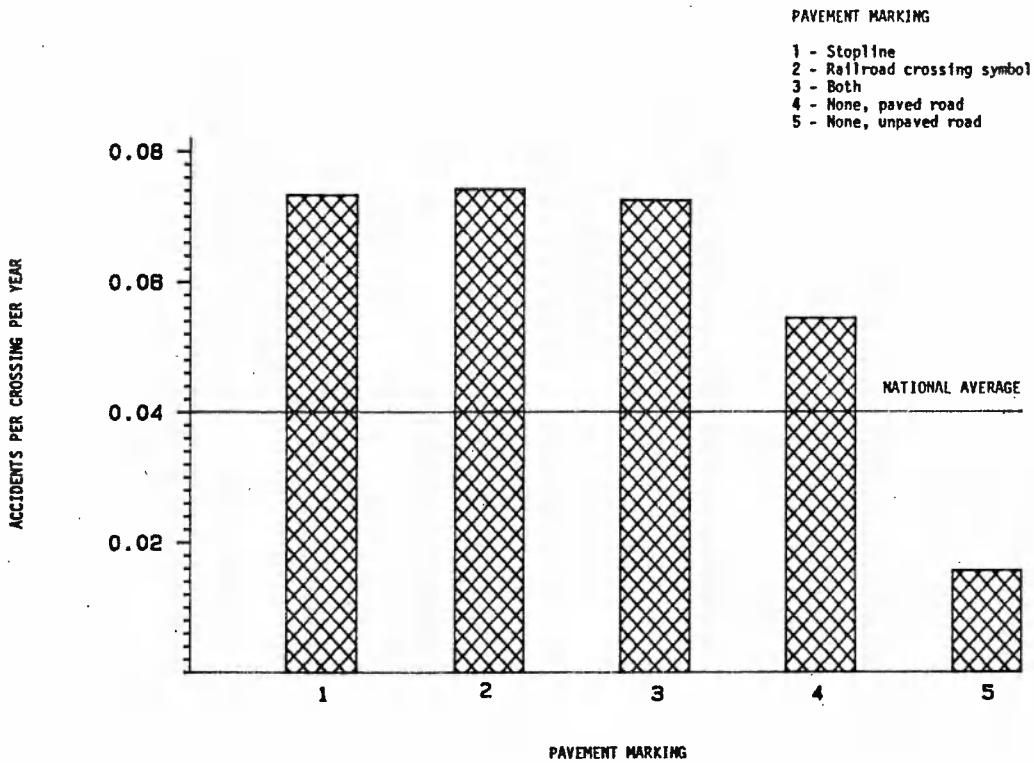


FIGURE 18 CROSSING ACCIDENT RATE BY PAVEMENT MARKINGS

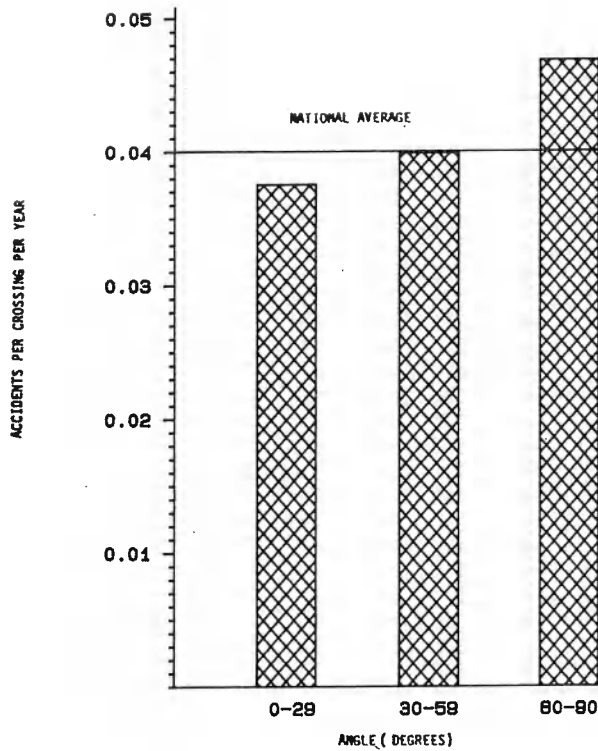


FIGURE 19 CROSSING ACCIDENT RATE BY SMALLEST CROSSING ANGLE

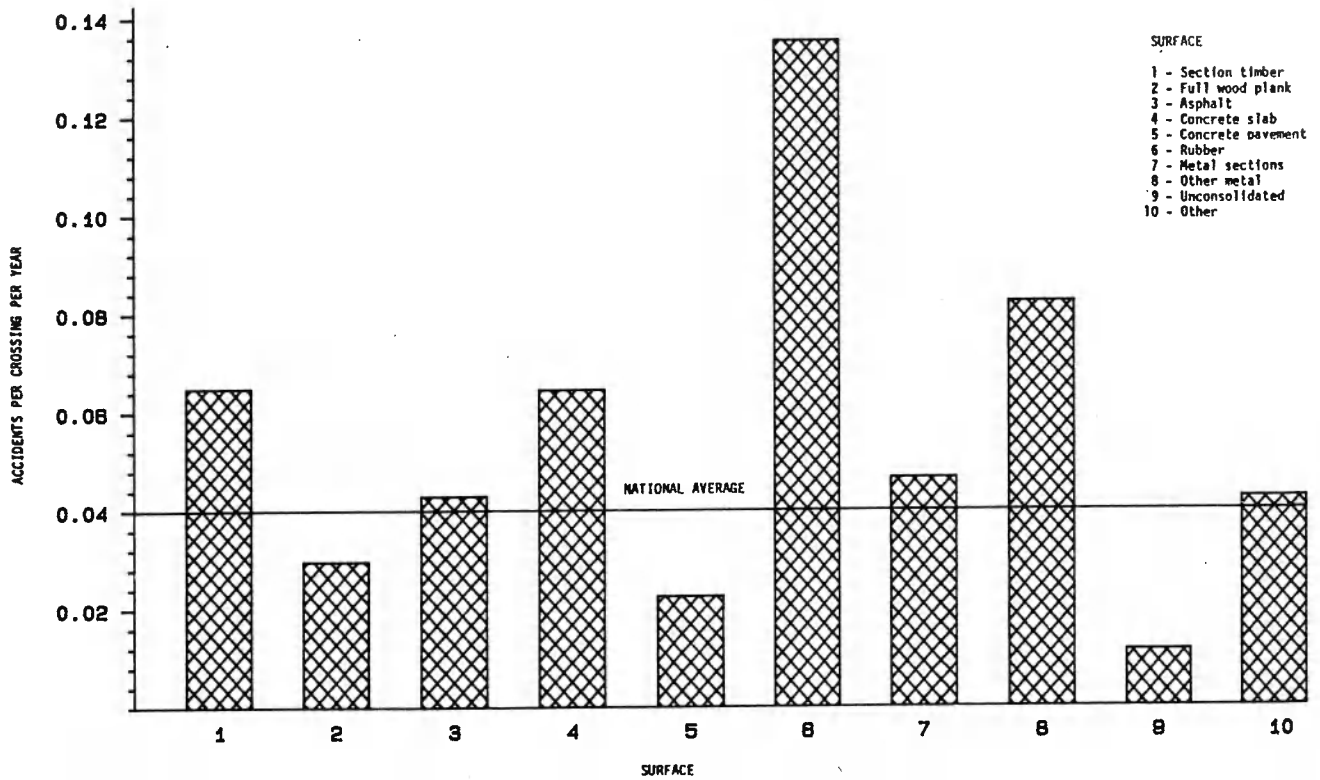


FIGURE 20 CROSSING ACCIDENT RATE BY CROSSING SURFACE

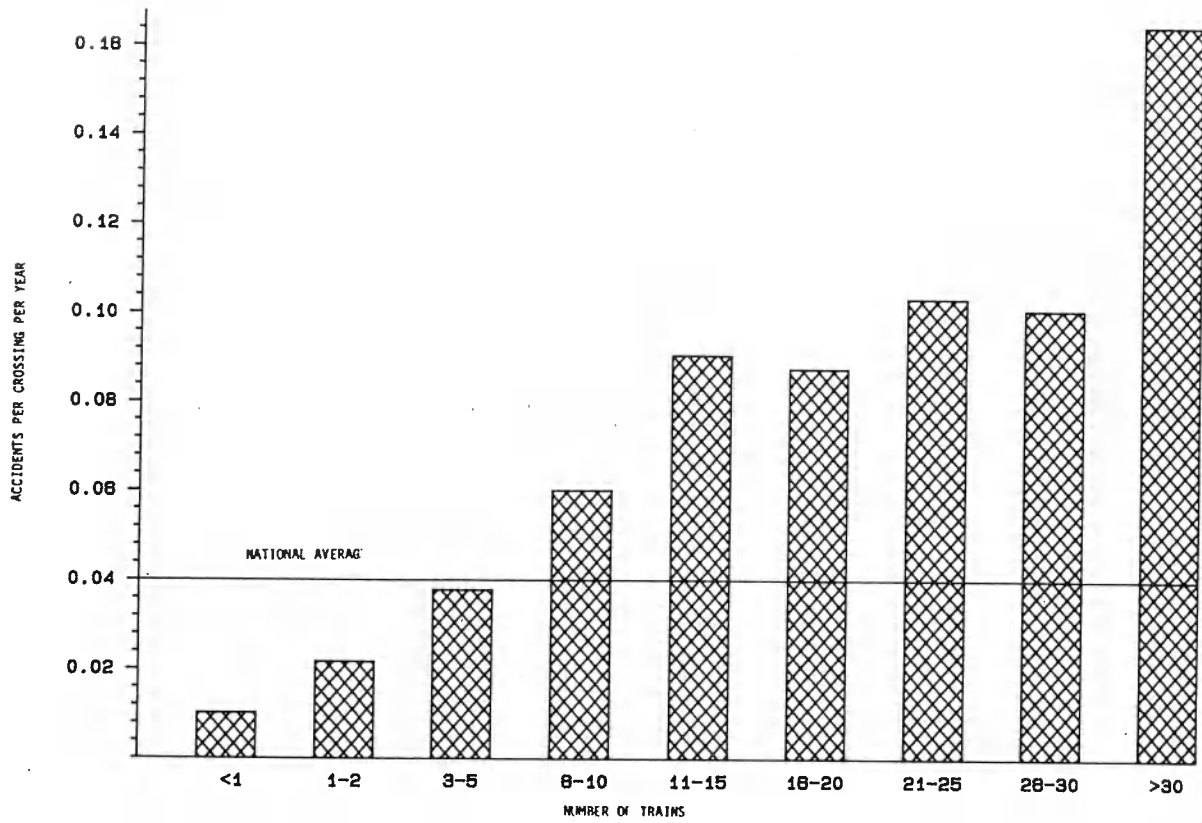


FIGURE 21 CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY

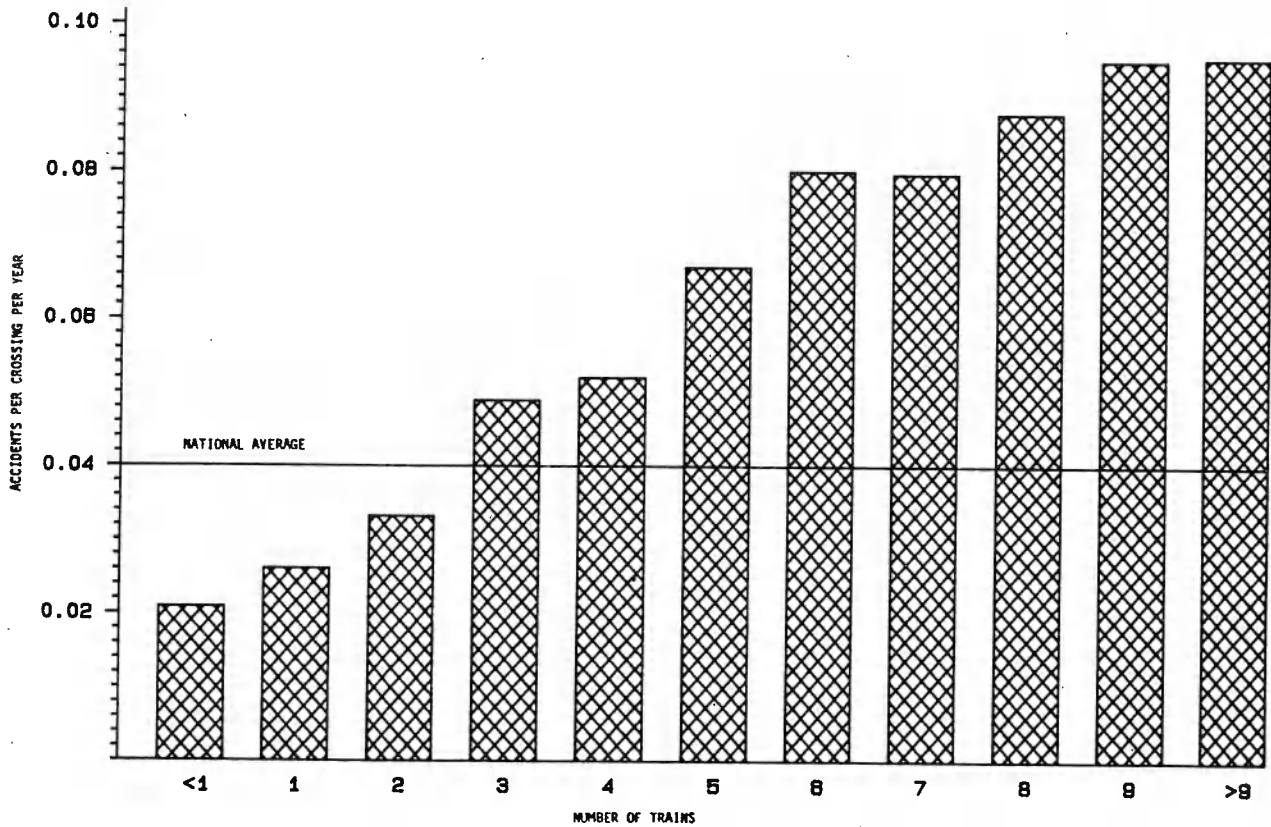


FIGURE 22 CROSSING ACCIDENT RATE BY NUMBER OF THRU-TRAINS DURING DAYLIGHT HOURS (6AM to 6PM)

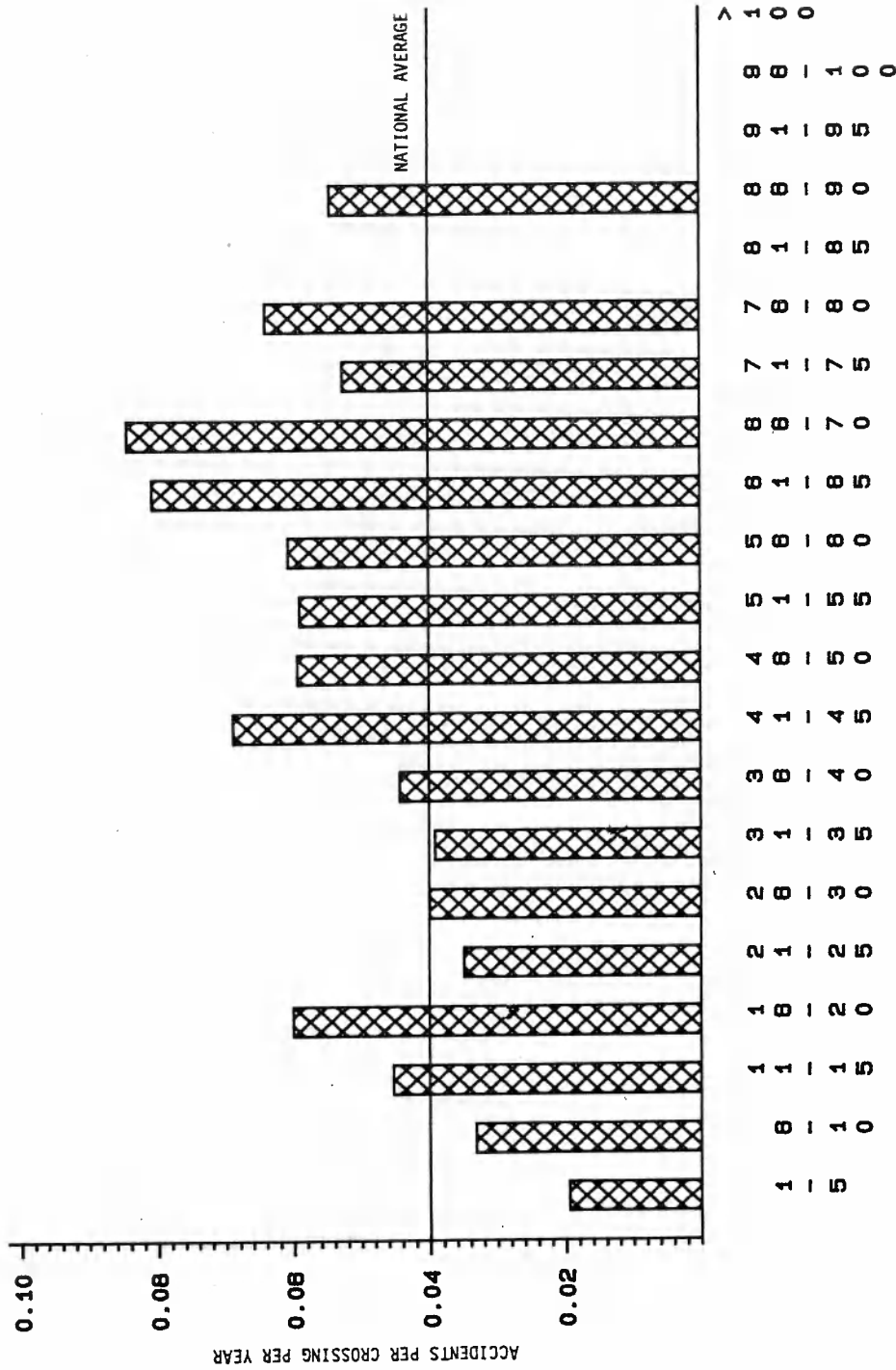


FIGURE 23 CROSSING ACCIDENT RATE BY MAXIMUM TIMETABLE SPEED

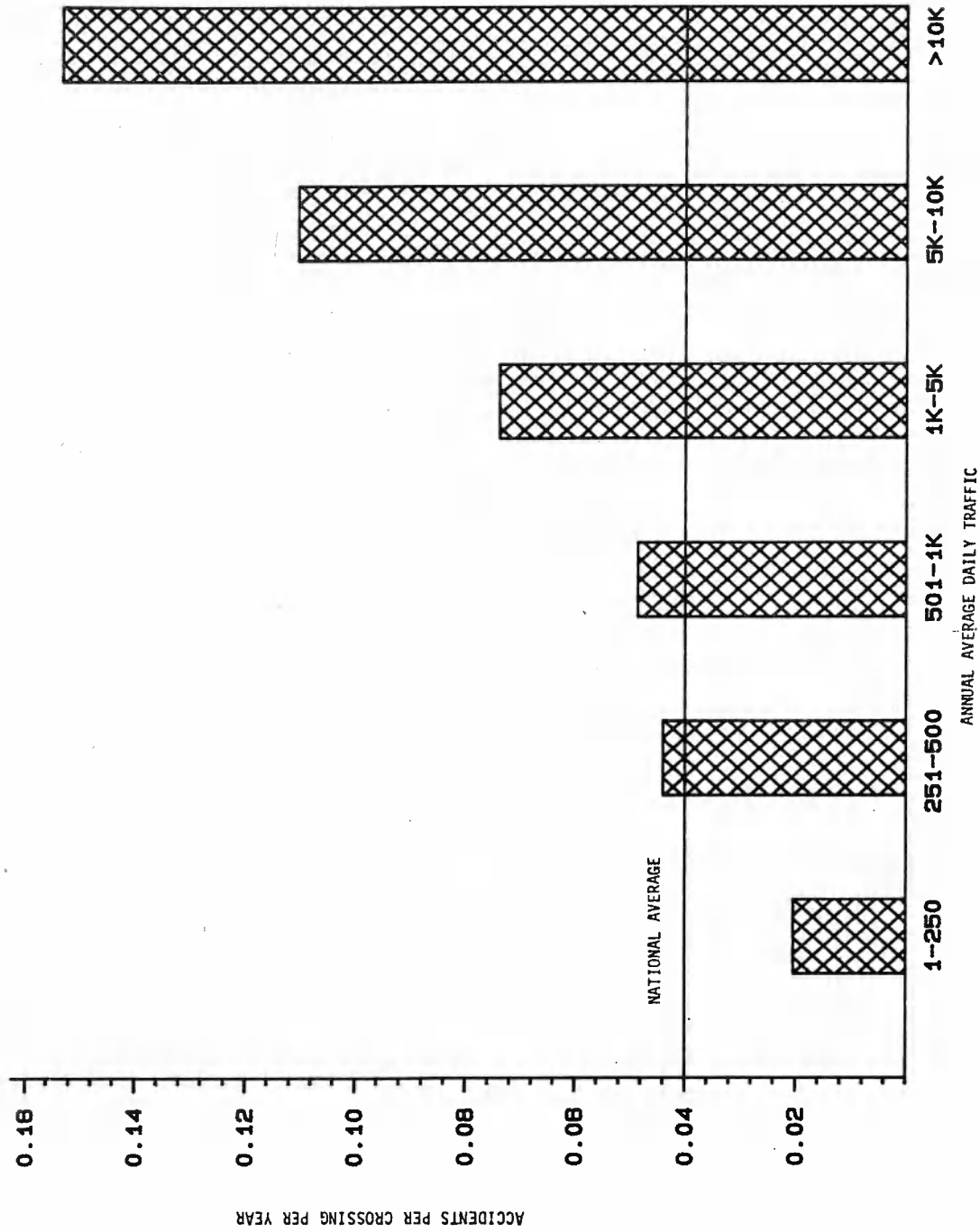


FIGURE 24 CROSSING ACCIDENT RATE BY ANNUAL AVERAGE DAILY TRAFFIC

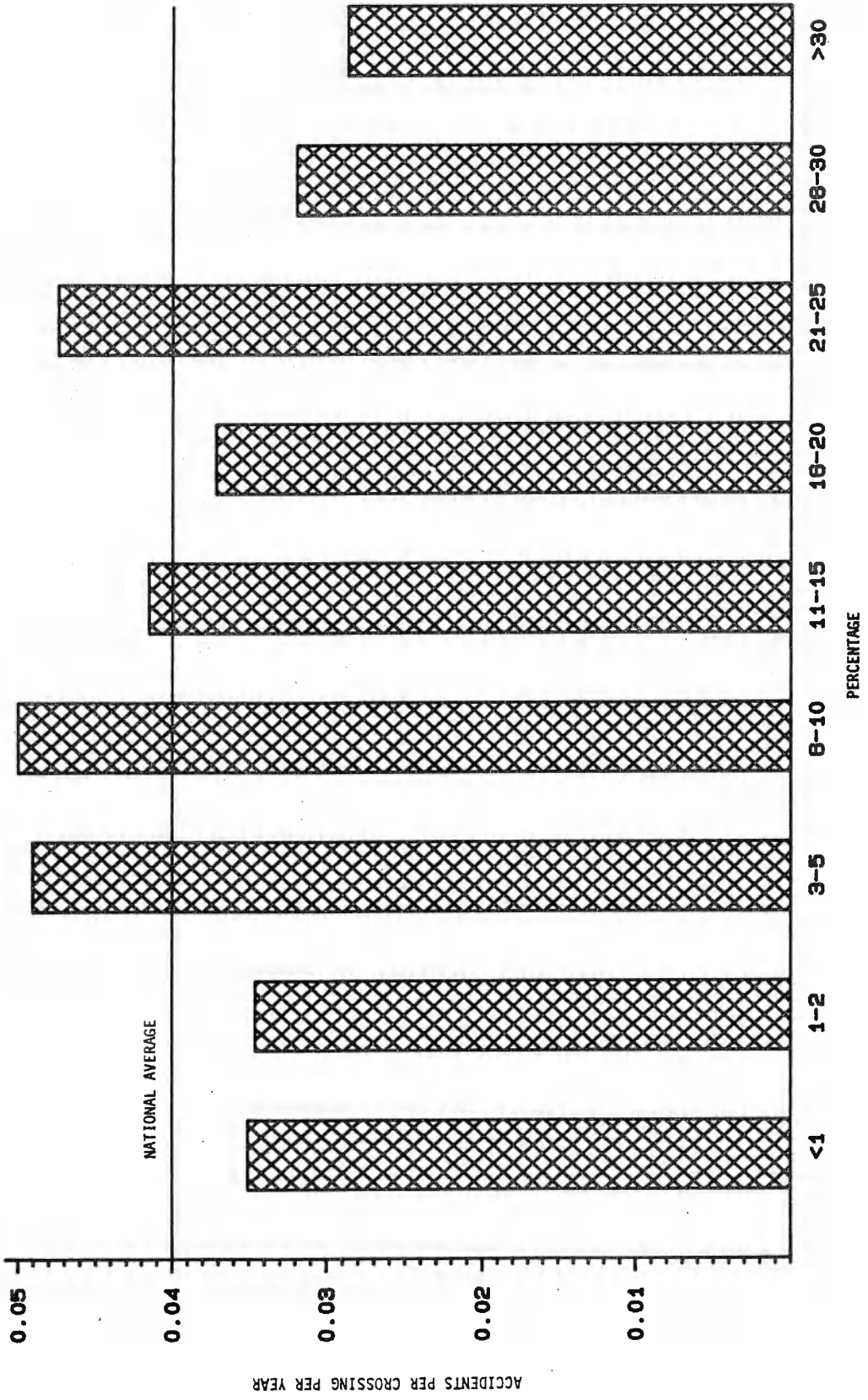


FIGURE 25 CROSSING ACCIDENT RATE BY TRUCKS AS PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC

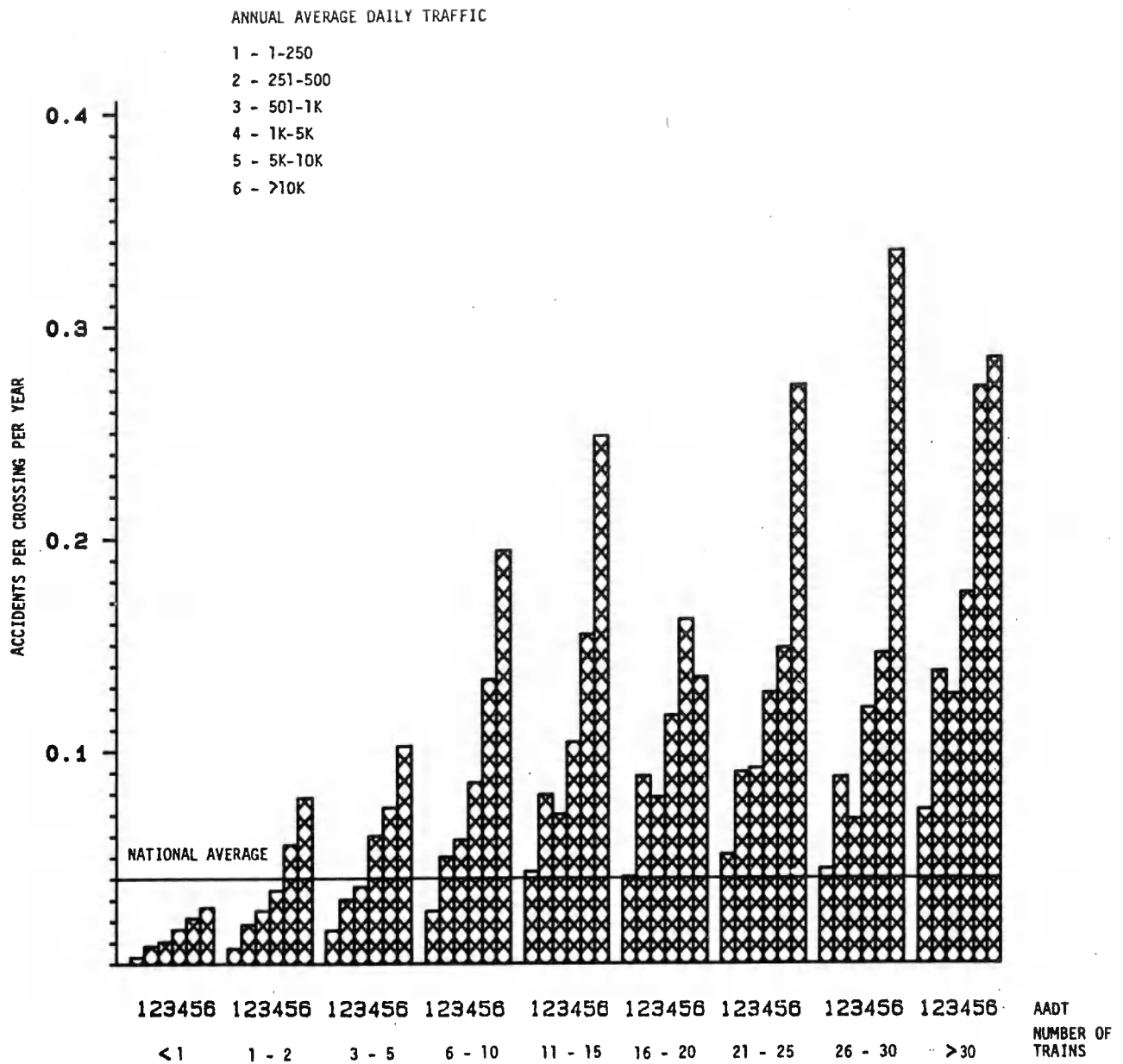


FIGURE 26 CROSSING ACCIDENT RATE BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC

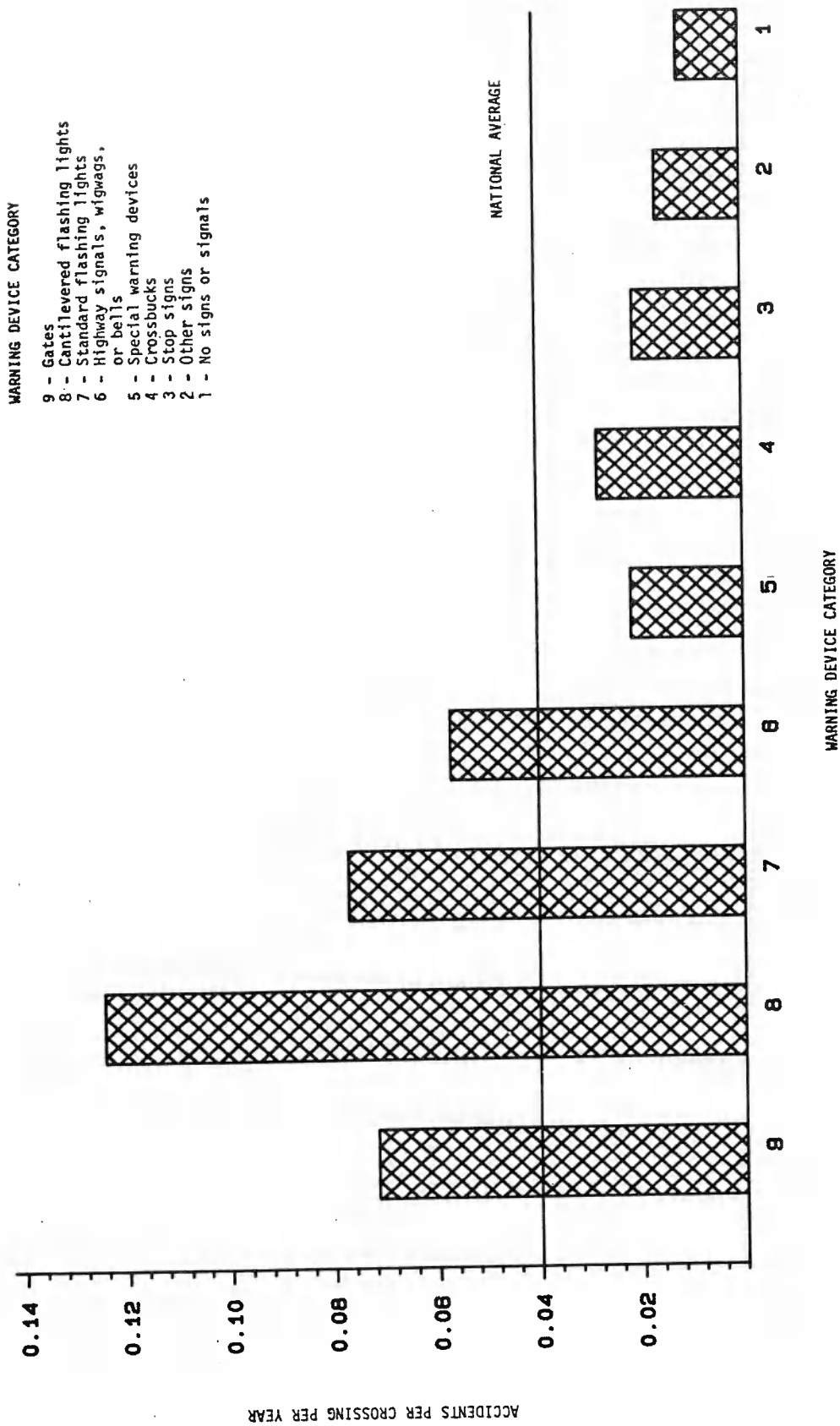


FIGURE 27 CROSSING ACCIDENT RATE BY WARNING DEVICE CATEGORY

4. RAIL-HIGHWAY CROSSING INVENTORY (1981)

PHYSICAL CHARACTERISTICS

TABLE 34 TOTAL PUBLIC AND PRIVATE CROSSINGS BY STATE AND TYPE

| STATE | PUBLIC AT GRADE | PUBLIC GRADE SEPARATION | | PRIVATE | PEDESTRIAN | TOTAL |
|----------------------|-----------------------|----------------------------|---------------|----------------|--------------|----------------|
| | | RR UNDER | RR OVER | | | |
| ALABAMA | 4,763 | 502 | 191 | 2,536 | 33 | 8,025 |
| ALASKA | 224 | 9 | 1 | 74 | 0 | 308 |
| ARIZONA | 1,030 | 80 | 79 | 856 | 7 | 2,052 |
| ARKANSAS | 3,991 | 181 | 139 | 1,920 | 17 | 6,248 |
| CALIFORNIA | 8,966 | 920 | 559 | 5,643 | 248 | 16,336 |
| COLORADO | 2,405 | 193 | 109 | 1,608 | 12 | 4,327 |
| CONNECTICUT | 528 | 335 | 262 | 483 | 55 | 1,663 |
| DELAWARE | 263 | 42 | 53 | 170 | 6 | 534 |
| DISTRICT OF COLUMBIA | 55 | 30 | 38 | 15 | 13 | 151 |
| FLORIDA | 5,695 | 233 | 57 | 2,338 | 74 | 8,397 |
| GEORGIA | 6,923 | 578 | 256 | 3,123 | 42 | 10,922 |
| HAWAII | 6 | 0 | 0 | 0 | 0 | 6 |
| IDAHO | 2,127 | 95 | 65 | 1,830 | 8 | 4,125 |
| ILLINOIS | 13,289 | 1,008 | 2,012 | 7,813 | 424 | 24,546 |
| INDIANA | 10,080 | 554 | 655 | 4,177 | 123 | 15,589 |
| IOWA | 8,689 | 618 | 461 | 5,983 | 62 | 15,813 |
| KANSAS | 9,551 | 353 | 233 | 4,875 | 34 | 15,046 |
| KENTUCKY | 3,662 | 471 | 482 | 3,807 | 114 | 8,536 |
| LOUISIANA | 4,839 | 217 | 129 | 4,130 | 46 | 9,361 |
| MAINE | 1,096 | 124 | 81 | 1,125 | 15 | 2,441 |
| MARYLAND | 1,023 | 325 | 219 | 898 | 28 | 2,493 |
| MASSACHUSETTS | 1,205 | 809 | 446 | 599 | 103 | 3,162 |
| MICHIGAN | 8,232 | 354 | 429 | 3,692 | 110 | 12,817 |
| MINNESOTA | 7,190 | 540 | 449 | 5,013 | 84 | 13,276 |
| MISSISSIPPI | 3,589 | 236 | 116 | 2,770 | 21 | 6,732 |
| MISSOURI | 6,459 | 735 | 464 | 4,862 | 101 | 12,621 |
| MONTANA | 2,168 | 154 | 108 | 3,297 | 24 | 5,751 |
| NEBRASKA | 5,469 | 241 | 169 | 4,009 | 25 | 9,913 |
| NEVADA | 358 | 48 | 37 | 301 | 2 | 746 |
| NEW HAMPSHIRE | 658 | 159 | 66 | 520 | 23 | 1,426 |
| NEW JERSEY | 2,211 | 555 | 747 | 780 | 130 | 4,423 |
| NEW MEXICO | 844 | 67 | 80 | 614 | 4 | 1,609 |
| NEW YORK | 4,435 | 1,452 | 1,203 | 4,042 | 305 | 11,437 |
| NORTH CAROLINA | 5,503 | 523 | 301 | 4,344 | 76 | 10,747 |
| NORTH DAKOTA | 5,731 | 82 | 92 | 2,785 | 37 | 8,727 |
| OHIO | 9,950 | 1,261 | 1,233 | 6,014 | 113 | 18,571 |
| OKLAHOMA | 5,695 | 273 | 225 | 2,427 | 20 | 8,640 |
| OREGON | 2,877 | 286 | 177 | 3,357 | 102 | 6,799 |
| PENNSYLVANIA | 6,661 | 1,693 | 2,027 | 4,238 | 344 | 14,963 |
| RHODE ISLAND | 141 | 101 | 43 | 81 | 4 | 370 |
| SOUTH CAROLINA | 4,408 | 406 | 131 | 1,856 | 19 | 6,820 |
| SOUTH DAKOTA | 3,173 | 106 | 64 | 1,974 | 8 | 5,325 |
| TENNESSEE | 4,172 | 514 | 503 | 2,417 | 37 | 7,643 |
| TEXAS | 14,569 | 795 | 798 | 7,573 | 51 | 23,786 |
| UTAH | 1,374 | 123 | 54 | 907 | 6 | 2,464 |
| VERMONT | 595 | 76 | 86 | 793 | 51 | 1,601 |
| VIRGINIA | 2,842 | 652 | 481 | 3,837 | 69 | 7,881 |
| WASHINGTON | 4,314 | 416 | 392 | 4,473 | 117 | 9,712 |
| WEST VIRGINIA | 2,419 | 291 | 379 | 2,937 | 111 | 6,137 |
| WISCONSIN | 6,780 | 471 | 381 | 4,255 | 178 | 12,065 |
| WYOMING | 625 | 89 | 52 | 1,009 | 8 | 1,783 |
| PUERTO RICO | 55 | 0 | 0 | 2 | 0 | 57 |
| TOTAL | 213,907 | 20,376 | 17,814 | 139,182 | 3,644 | 394,923 |

TABLE 35 TOTAL PUBLIC AND PRIVATE CROSSINGS BY CLASS I RAILROAD AND TYPE

| RAILROAD | PUBLIC AT GRADE | PUBLIC GRADE SEPARATION | | PRIVATE | PEDESTRIAN | TOTAL |
|--|-----------------------|----------------------------|---------|---------|------------|---------|
| | | RR UNDER | RR OVER | | | |
| CLASS I RAILROAD | | | | | | |
| ALABAMA GREAT SOUTHERN RAILROAD ¹ | 0 | 0 | 0 | 0 | 0 | 0 |
| AMTRAK | 230 | 513 | 496 | 132 | 73 | 1,444 |
| ATCHISON, TOPEKA AND SANTA FE | 11,611 | 653 | 643 | 7,100 | 85 | 20,092 |
| BALTIMORE AND OHIO RAILROAD | 5,275 | 831 | 704 | 3,639 | 132 | 10,581 |
| BESSEMER AND LAKE ERIE RAILROAD | 145 | 32 | 49 | 96 | 2 | 324 |
| BOSTON AND MAINE CORPORATION | 1,128 | 482 | 235 | 587 | 56 | 2,488 |
| BURLINGTON NORTHERN | 25,584 | 1,523 | 1,293 | 18,679 | 337 | 47,416 |
| CENTRAL OF GEORGIA RAILROAD ¹ | 0 | 0 | 0 | 0 | 0 | 0 |
| CHESAPEAKE AND OHIO RAILWAY | 4,564 | 393 | 477 | 4,218 | 148 | 9,800 |
| CHICAGO AND NORTHWESTERN | 10,561 | 651 | 831 | 6,743 | 210 | 18,996 |
| CHI., MILW., ST. PAUL & PACIFIC | 7,623 | 610 | 569 | 5,695 | 119 | 14,616 |
| CHICAGO, ROCK ISLAND & PACIFIC | 5,830 | 430 | 400 | 3,434 | 26 | 10,120 |
| CINN., N.O. & TEXAS PACIFIC | 0 | 0 | 0 | 0 | 0 | 0 |
| CLINCHFIELD RAILROAD | 145 | 52 | 67 | 232 | 4 | 500 |
| COLORADO AND SOUTHERN RAILWAY | 463 | 41 | 22 | 315 | 3 | 844 |
| CONSOLIDATED RAIL CORPORATION | 17,384 | 3,374 | 3,494 | 8,862 | 433 | 33,547 |
| THE ESTATES ² | 5,162 | 392 | 312 | 3,140 | 59 | 9,065 |
| DELAWARE AND HUDSON RAILROAD | 556 | 104 | 110 | 717 | 28 | 1,515 |
| DENVER AND RIO GRANDE WESTERN | 1,120 | 128 | 69 | 609 | 4 | 1,930 |
| DETROIT, TOLEDO AND Ironton | 498 | 23 | 43 | 462 | 5 | 1,031 |
| DULUTH, MISSABE AND IRON RANGE | 222 | 27 | 34 | 159 | 8 | 450 |
| ELGIN, JOLIET AND EASTERN | 249 | 32 | 28 | 102 | 0 | 411 |
| FLORIDA EAST COAST RAILWAY | 794 | 33 | 2 | 113 | 10 | 952 |
| FORT WORTH AND DENVER RAILWAY | 907 | 38 | 17 | 429 | 0 | 1,391 |
| GRAND TRUNK WESTERN | 1,614 | 101 | 150 | 716 | 25 | 2,606 |
| ILLINOIS CENTRAL GULF RAILROAD | 9,854 | 825 | 759 | 6,735 | 197 | 18,370 |
| KANSAS CITY SOUTHERN RAILWAY | 1,017 | 89 | 75 | 475 | 6 | 1,662 |
| LONG ISLAND RAILROAD | 310 | 294 | 105 | 82 | 88 | 879 |
| LOUISIANA & ARKANSAS RAILWAY | 722 | 60 | 33 | 561 | 5 | 1,381 |
| LOUISVILLE AND NASHVILLE | 7,882 | 773 | 574 | 4,902 | 198 | 14,329 |
| MISSOURI-KANSAS-TEXAS RAILROAD | 2,101 | 148 | 134 | 1,153 | 7 | 3,543 |
| MISSOURI PACIFIC RAILROAD | 12,541 | 678 | 514 | 8,009 | 113 | 21,855 |
| NORFOLK AND WESTERN RAILWAY | 7,860 | 763 | 1,019 | 6,009 | 115 | 15,766 |
| PITTSBURG AND LAKE ERIE RAILROAD | 112 | 46 | 27 | 107 | 18 | 310 |
| ST. LOUIS SOUTHWESTERN RAILWAY | 2,229 | 118 | 88 | 968 | 2 | 3,405 |
| SEABOARD COAST LINE RAILROAD | 11,714 | 858 | 291 | 5,503 | 128 | 18,494 |
| SOO LINE | 4,369 | 147 | 163 | 2,760 | 46 | 7,485 |
| SOUTHERN PACIFIC TRANS. COMPANY | 11,461 | 987 | 652 | 7,973 | 254 | 21,327 |
| SOUTHERN RAILWAY | 13,083 | 1,345 | 769 | 8,057 | 74 | 23,328 |
| UNION PACIFIC RAILROAD | 7,709 | 579 | 270 | 6,161 | 59 | 14,778 |
| WESTERN MARYLAND RAILWAY | 493 | 76 | 66 | 498 | 11 | 1,144 |
| WESTERN PACIFIC | 625 | 78 | 57 | 371 | 10 | 1,141 |
| TOTAL CLASS I | 195,747 | 18,327 | 15,641 | 126,503 | 3,098 | 359,316 |
| TOTAL CLASS II & III | 18,160 | 2,049 | 2,173 | 12,679 | 546 | 35,607 |
| TOTAL | 213,907 | 20,376 | 17,814 | 139,182 | 3,644 | 394,923 |

¹ CROSSINGS ARE INCLUDED UNDER SOUTHERN RAILWAY

² CROSSINGS ON PREDECESSOR LINES NOT MERGED IN CONRAIL

TABLE 36 TOTAL CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL

Public at Grade

| STATE | LOCATION | | TOTAL |
|----------------|----------|--------|--------|
| | URBAN | RURAL | |
| ALABAMA | 2067 | 2696 | 4763 |
| ALASKA | 41 | 183 | 224 |
| ARIZONA | 524 | 506 | 1030 |
| ARKANSAS | 1718 | 2273 | 3991 |
| CALIFORNIA | 6494 | 2472 | 8966 |
| COLORADO | 864 | 1541 | 2405 |
| CONNECTICUT | 417 | 111 | 528 |
| DELAWARE | 89 | 174 | 263 |
| DIST. COLUMBIA | 55 | 0 | 55 |
| FLORIDA | 2594 | 3101 | 5695 |
| GEORGIA | 2505 | 4418 | 6923 |
| HAWAII | 0 | 6 | 6 |
| IDAHO | 369 | 1758 | 2127 |
| ILLINOIS | 4364 | 8925 | 13289 |
| INDIANA | 4100 | 5980 | 10080 |
| IOWA | 2158 | 6531 | 8689 |
| KANSAS | 1734 | 7817 | 9551 |
| KENTUCKY | 1034 | 2628 | 3662 |
| LOUISIANA | 2092 | 2747 | 4839 |
| MAINE | 286 | 810 | 1096 |
| MARYLAND | 449 | 574 | 1023 |
| MASSACHUSETTS | 850 | 355 | 1205 |
| MICHIGAN | 3212 | 5020 | 8232 |
| MINNESOTA | 1815 | 5375 | 7190 |
| MISSISSIPPI | 1144 | 2445 | 3589 |
| MISSOURI | 1935 | 4524 | 6459 |
| MONTANA | 381 | 1787 | 2168 |
| NEBRASKA | 827 | 4642 | 5469 |
| NEVADA | 90 | 268 | 358 |
| NEW HAMPSHIRE | 288 | 370 | 658 |
| NEW JERSEY | 1519 | 692 | 2211 |
| NEW MEXICO | 245 | 599 | 844 |
| NEW YORK | 1961 | 2474 | 4435 |
| NORTH CAROLINA | 2128 | 3375 | 5503 |
| NORTH DAKOTA | 363 | 5368 | 5731 |
| OHIO | 3789 | 6161 | 9950 |
| OKLAHOMA | 254 | 5441 | 5695 |
| OREGON | 1267 | 1610 | 2877 |
| PENNSYLVANIA | 3336 | 3325 | 6661 |
| RHODE ISLAND | 131 | 10 | 141 |
| SOUTH CAROLINA | 1718 | 2690 | 4408 |
| SOUTH DAKOTA | 362 | 2811 | 3173 |
| TENNESSEE | 1719 | 2453 | 4172 |
| TEXAS | 7707 | 6862 | 14569 |
| UTAH | 706 | 668 | 1374 |
| VERMONT | 208 | 387 | 595 |
| VIRGINIA | 1360 | 1482 | 2842 |
| WASHINGTON | 1991 | 2323 | 4314 |
| WEST VIRGINIA | 508 | 1911 | 2419 |
| WISCONSIN | 2573 | 4207 | 6780 |
| WYOMING | 57 | 568 | 625 |
| PUERTO RICO | 8 | 47 | 55 |
| TOTAL | 78406 | 135501 | 213907 |

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.

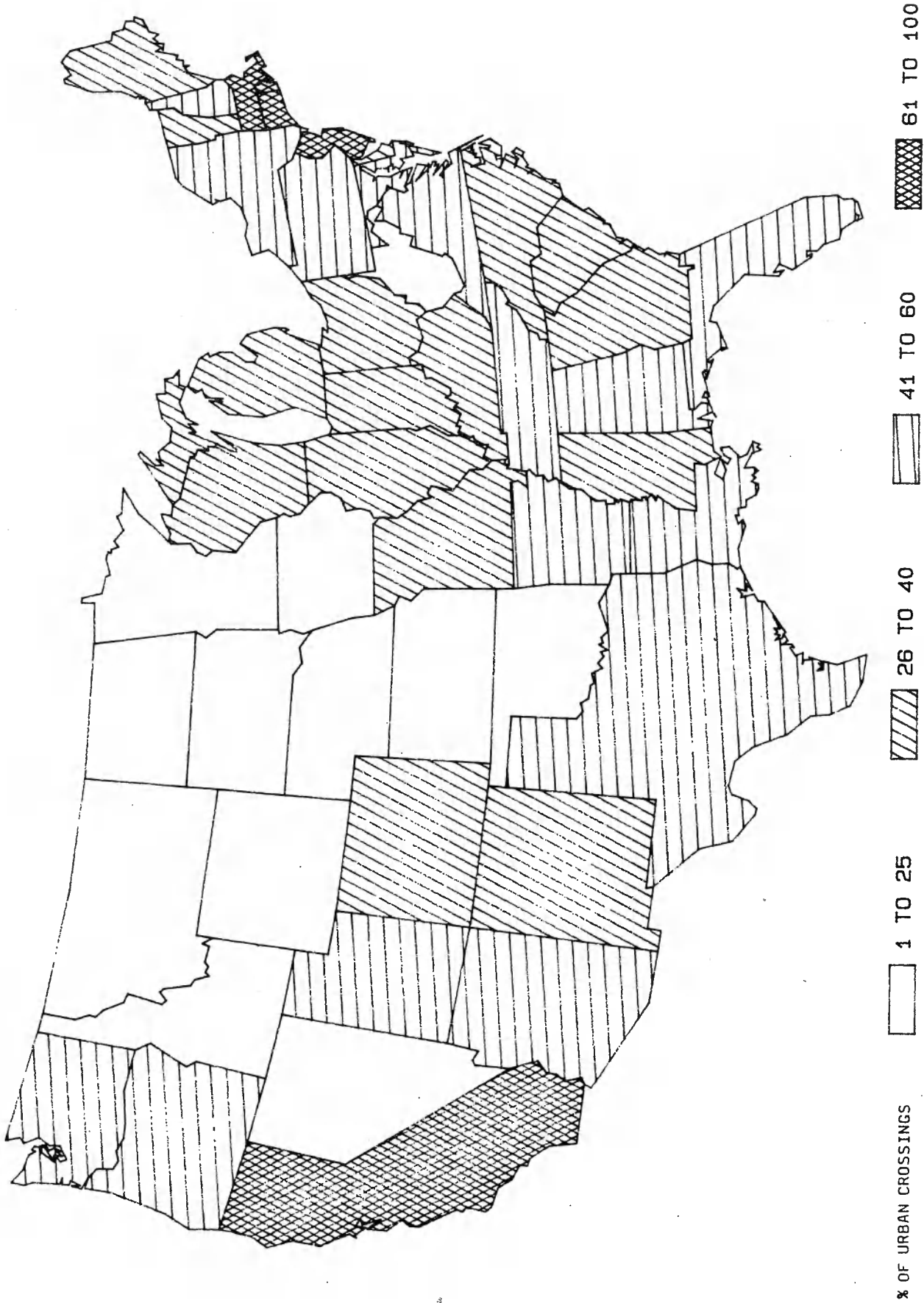


FIGURE 28 CROSSINGS BY STATE AND LOCATION: URBAN OR RURAL

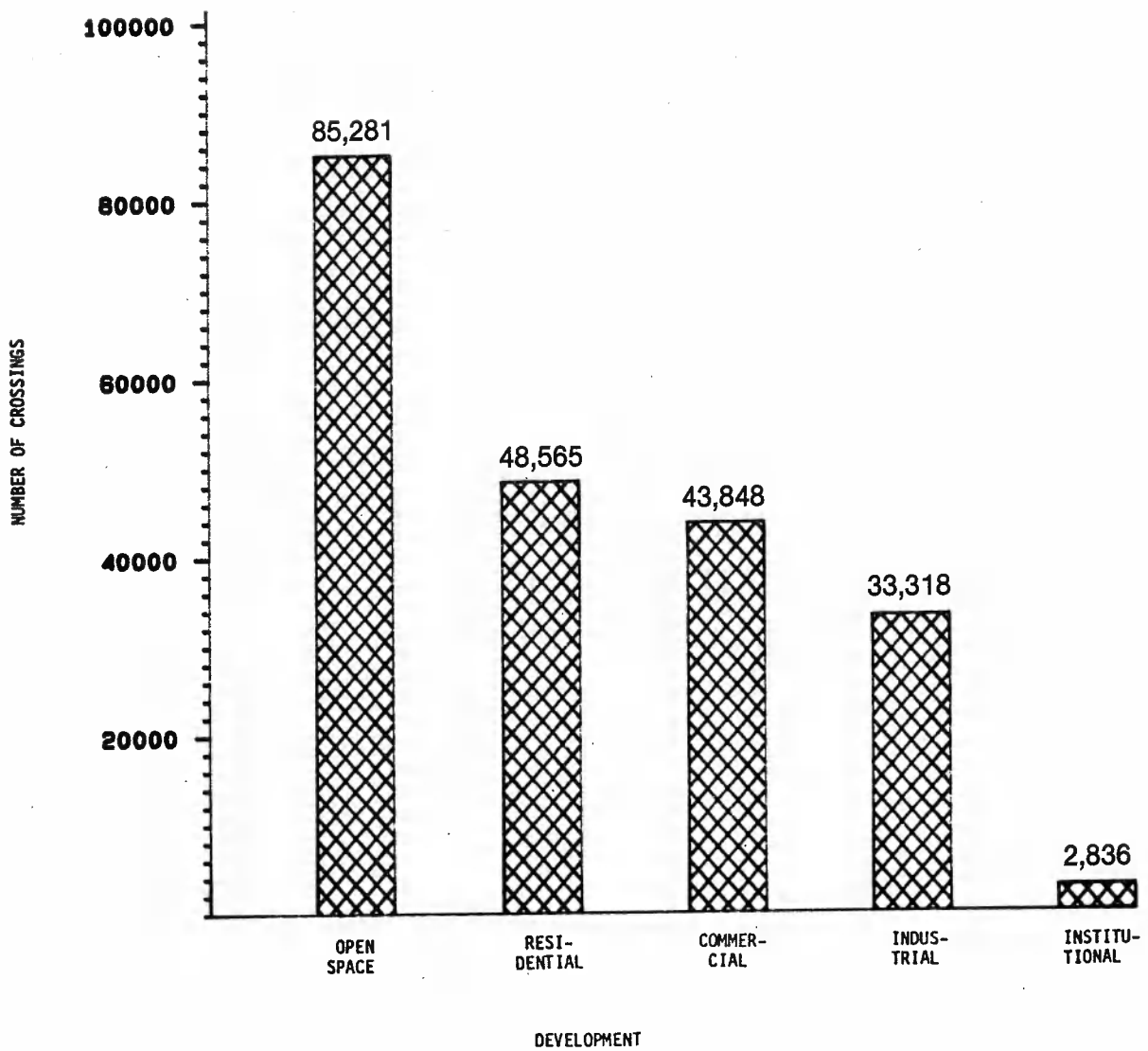


FIGURE 29 CROSSINGS BY TYPE OF DEVELOPMENT

TRACK DATA (1981)

TABLE 37 TOTAL CROSSINGS BY NUMBER OF MAIN AND OTHER TRACKS

| NUMBER OF OTHER TRACKS | NUMBER OF MAIN TRACKS | | | | | | | TOTAL |
|---------------------------|-----------------------|---------------|--------------|------------|------------|-----------|----------|---------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| 0 | 229* | 126059 | 10227 | 324 | 89 | 11 | 2 | 136941 |
| 1 | 23793 | 26341 | 2907 | 100 | 23 | 3 | 0 | 53167 |
| 2 | 5485 | 9109 | 1295 | 44 | 12 | 2 | 0 | 15947 |
| 3 | 1667 | 2736 | 449 | 23 | 7 | 0 | 0 | 4882 |
| 4 | 474 | 941 | 208 | 12 | 9 | 0 | 0 | 1644 |
| 5 | 172 | 368 | 109 | 7 | 3 | 0 | 0 | 659 |
| OVER 5 | 184 | 364 | 106 | 2 | 7 | 4 | 0 | 667 |
| TOTAL | 32004 | 165918 | 15301 | 512 | 150 | 20 | 2 | 213907 |

*CROSSINGS FOR WHICH DATA WAS NOT REPORTED IN INVENTORY.

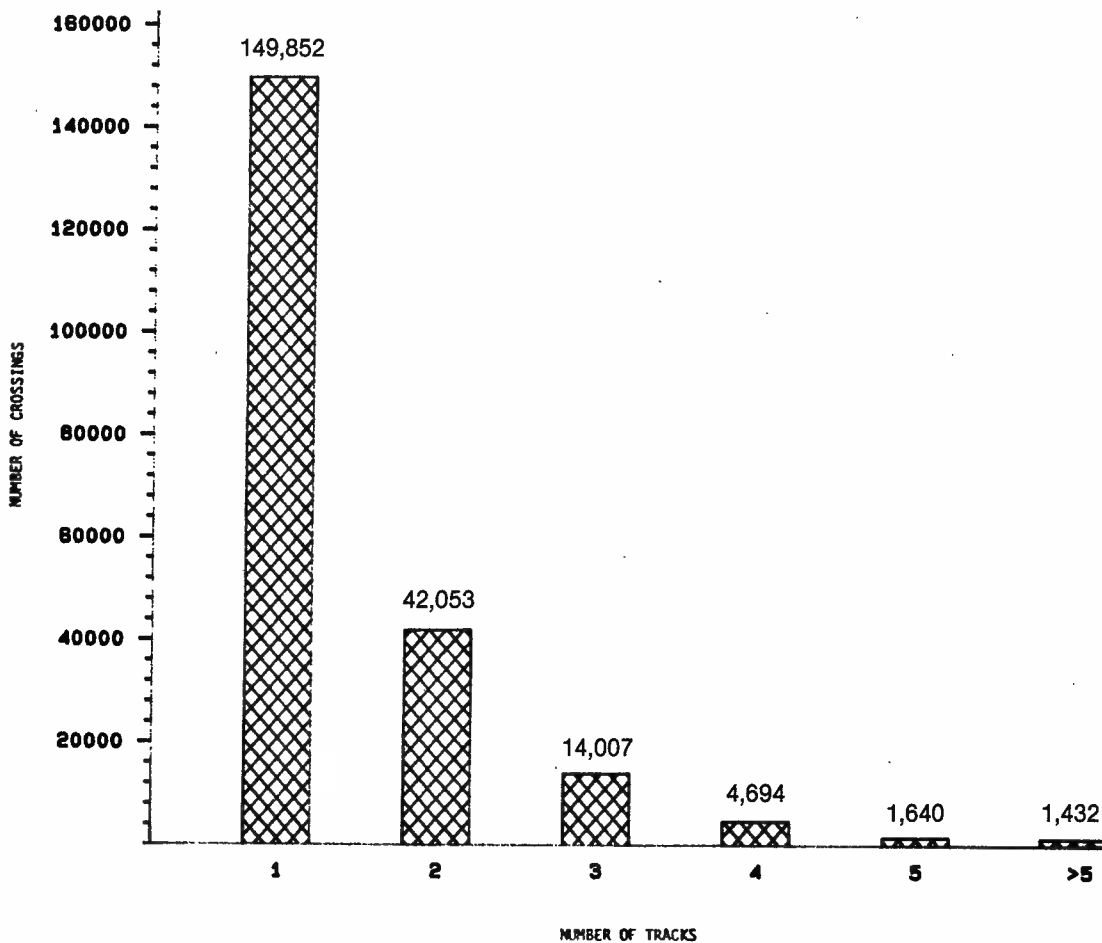


FIGURE 30 CROSSINGS BY NUMBER OF TRACKS

TABLE 38 TOTAL CROSSINGS BY NUMBER OF TRACKS AND WARNING DEVICE CATEGORY

| WARNING DEVICE CATEGORY | NUMBER OF TRACKS | | | | | | TOTAL |
|---------------------------------|------------------|-------|-------|------|------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| GATES | 5854 | 6448 | 2721 | 1086 | 390 | 388 | 16887 |
| FLASHING LIGHTS | 22119 | 7580 | 3023 | 1088 | 418 | 339 | 34567 |
| HWY. SIGNALS, WIGWAGS, BELLS | 1697 | 693 | 295 | 106 | 51 | 24 | 2866 |
| SPECIAL WARNING DEVICES | 5166 | 1311 | 470 | 181 | 65 | 77 | 7270 |
| CROSSBUCKS | 102909 | 23336 | 6737 | 1988 | 635 | 507 | 136112 |
| STOP SIGNS | 1039 | 255 | 87 | 28 | 9 | 11 | 1429 |
| OTHER SIGNS | 717 | 173 | 40 | 18 | 11 | 7 | 966 |
| NO SIGNS OR SIGNALS | 10351 | 2257 | 634 | 199 | 61 | 79 | 13581 |
| TOTAL | 149852 | 42053 | 14007 | 4694 | 1640 | 1432 | 213678 |

TABLE 39 TOTAL CROSSINGS BY NUMBER OF TRACKS AND TRAFFIC LANES

| NUMBER OF TRAFFIC LANES | NUMBER OF TRACKS | | | | | | TOTAL |
|-------------------------------|------------------|-------|-------|------|------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| 1 | 29308 | 5769 | 1173 | 311 | 87 | 87 | 36735 |
| 2 | 112583 | 33436 | 11720 | 3950 | 1395 | 1197 | 164281 |
| 3 | 740 | 294 | 110 | 42 | 12 | 14 | 1212 |
| 4 | 6373 | 2325 | 922 | 359 | 138 | 127 | 10244 |
| 5 | 314 | 88 | 31 | 17 | 4 | 1 | 455 |
| OVER 5 | 492 | 126 | 43 | 13 | 4 | 6 | 684 |
| TOTAL | 149810 | 42038 | 13999 | 4692 | 1640 | 1432 | 213611 |

TABLE 40 TOTAL CROSSINGS BY NUMBER OF TRACKS AND STATE

| STATE | NUMBER OF TRACKS | | | | | | TOTAL |
|----------------|------------------|-------|-------|------|------|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| ALABAMA | 3472 | 823 | 312 | 86 | 36 | 34 | 4763 |
| ALASKA | 181 | 34 | 6 | 1 | 1 | 1 | 224 |
| ARIZONA | 742 | 185 | 69 | 22 | 6 | 6 | 1030 |
| ARKANSAS | 2796 | 811 | 257 | 75 | 32 | 20 | 3991 |
| CALIFORNIA | 6217 | 1697 | 624 | 212 | 108 | 98 | 8956 |
| COLORADO | 1655 | 477 | 160 | 49 | 31 | 33 | 2405 |
| CONNECTICUT | 399 | 93 | 24 | 8 | 4 | 0 | 528 |
| DELAWARE | 213 | 32 | 10 | 4 | 4 | 0 | 263 |
| DIST. COLUMBIA | 35 | 14 | 6 | 0 | 0 | 0 | 55 |
| FLORIDA | 3835 | 1233 | 391 | 120 | 46 | 30 | 5655 |
| GEORGIA | 5100 | 1212 | 369 | 143 | 39 | 41 | 6904 |
| HAWAII | 6 | 0 | 0 | 0 | 0 | 0 | 6 |
| IDAHO | 1486 | 373 | 142 | 61 | 22 | 21 | 2105 |
| ILLINOIS | 8104 | 3496 | 1091 | 363 | 124 | 95 | 13273 |
| INDIANA | 6668 | 2412 | 624 | 236 | 82 | 49 | 10071 |
| IOWA | 6050 | 1585 | 652 | 229 | 80 | 76 | 8672 |
| KANSAS | 6977 | 1543 | 656 | 233 | 76 | 65 | 9550 |
| KENTUCKY | 2475 | 851 | 226 | 72 | 17 | 21 | 3662 |
| LOUISIANA | 3479 | 897 | 279 | 91 | 32 | 36 | 4814 |
| MAINE | 843 | 186 | 47 | 15 | 3 | 1 | 1095 |
| MARYLAND | 710 | 207 | 66 | 26 | 3 | 9 | 1021 |
| MASSACHUSETTS | 934 | 203 | 41 | 16 | 6 | 4 | 1204 |
| MICHIGAN | 5850 | 1617 | 471 | 170 | 61 | 58 | 8227 |
| MINNESOTA | 5129 | 1321 | 483 | 151 | 47 | 59 | 7190 |
| MISSISSIPPI | 2418 | 756 | 248 | 103 | 33 | 30 | 3588 |
| MISSOURI | 4354 | 1275 | 550 | 166 | 54 | 56 | 6455 |
| MONTANA | 1565 | 382 | 153 | 34 | 14 | 19 | 2167 |
| NEBRASKA | 3888 | 1002 | 384 | 104 | 43 | 48 | 5469 |
| NEVADA | 235 | 86 | 23 | 7 | 3 | 4 | 358 |
| NEW HAMPSHIRE | 557 | 84 | 11 | 3 | 2 | 0 | 657 |
| NEW JERSEY | 1578 | 461 | 128 | 22 | 12 | 8 | 2209 |
| NEW MEXICO | 593 | 166 | 54 | 20 | 4 | 7 | 844 |
| NEW YORK | 3199 | 902 | 228 | 69 | 17 | 19 | 4434 |
| NORTH CAROLINA | 4004 | 994 | 315 | 117 | 35 | 31 | 5496 |
| NORTH DAKOTA | 4673 | 730 | 254 | 51 | 19 | 4 | 5731 |
| OHIO | 5819 | 2752 | 856 | 339 | 112 | 65 | 9943 |
| OKLAHOMA | 4288 | 797 | 379 | 136 | 45 | 50 | 5695 |
| OREGON | 2100 | 500 | 200 | 54 | 14 | 9 | 2877 |
| PENNSYLVANIA | 4455 | 1526 | 426 | 160 | 45 | 44 | 6656 |
| RHODE ISLAND | 88 | 43 | 8 | 2 | 0 | 0 | 141 |
| SOUTH CAROLINA | 3327 | 759 | 224 | 52 | 26 | 15 | 4403 |
| SOUTH DAKOTA | 2575 | 383 | 140 | 44 | 18 | 11 | 3171 |
| TENNESSEE | 2857 | 892 | 273 | 86 | 30 | 34 | 4172 |
| TEXAS | 10410 | 2663 | 929 | 333 | 114 | 114 | 14563 |
| UTAH | 968 | 263 | 83 | 22 | 20 | 10 | 1366 |
| VERMONT | 479 | 81 | 25 | 4 | 1 | 5 | 595 |
| VIRGINIA | 1895 | 638 | 199 | 73 | 22 | 13 | 2840 |
| WASHINGTON | 3038 | 787 | 307 | 118 | 31 | 30 | 4311 |
| WEST VIRGINIA | 1721 | 496 | 156 | 29 | 6 | 10 | 2418 |
| WISCONSIN | 4930 | 1217 | 399 | 141 | 52 | 36 | 6775 |
| WYOMING | 429 | 114 | 49 | 22 | 8 | 3 | 625 |
| PUERTO RICO | 53 | 2 | 0 | 0 | 0 | 0 | 55 |
| TOTAL | 149852 | 42053 | 14007 | 4694 | 1640 | 1432 | 213678 |

HIGHWAY SYSTEM DATA (1981)

TABLE 41 TOTAL CROSSINGS BY TYPE OF HIGHWAY SYSTEM AND STATE

| STATE | TYPE OF HIGHWAY SYSTEM | | | | | TOTAL |
|----------------|------------------------|-----------|-------|-------|--------|--------|
| | 01 | 02 | 03 | 04 | 08 | |
| ALABAMA | 0 | 460 | 13 | 438 | 3852 | 4763 |
| ALASKA | 0 | 25 | 7 | 45 | 147 | 224 |
| ARIZONA | 10 | 43 | 115 | 99 | 763 | 1030 |
| ARKANSAS | 1 | 153 | 169 | 475 | 3193 | 3991 |
| CALIFORNIA | 0 | 1142 | 823 | 727 | 6274 | 8966 |
| COLORADO | 0 | 108 | 448 | 108 | 1741 | 2405 |
| CONNECTICUT | 0 | 27 | 64 | 38 | 396 | 525 |
| DELAWARE | 0 | 38 | 11 | 123 | 91 | 263 |
| DIST. COLUMBIA | 0 | 4 | 1 | 3 | 47 | 55 |
| FLORIDA | 0 | 170 | 77 | 808 | 4602 | 5657 |
| GEORGIA | 3 | 401 | 84 | 862 | 5573 | 6923 |
| HAWAII | 0 | 0 | 0 | 0 | 6 | 6 |
| IDAHO | 1 | 66 | 64 | 162 | 1834 | 2127 |
| ILLINOIS | 0 | 791 | 1421 | 1035 | 10042 | 13289 |
| INDIANA | 0 | 401 | 419 | 1890 | 7370 | 10080 |
| IOWA | 6 | 474 | 805 | 892 | 6512 | 8689 |
| KANSAS | 0 | 395 | 487 | 1238 | 7431 | 9551 |
| KENTUCKY | 0 | 134 | 261 | 369 | 2898 | 3662 |
| LOUISIANA | 0 | 179 | 35 | 481 | 4144 | 4839 |
| MAINE | 1 | 108 | 23 | 106 | 858 | 1096 |
| MARYLAND | 0 | 64 | 211 | 93 | 655 | 1023 |
| MASSACHUSETTS | 0 | 119 | 304 | 124 | 658 | 1205 |
| MICHIGAN | 2 | 382 | 882 | 1288 | 5677 | 8231 |
| MINNESOTA | 1 | 269 | 93 | 1182 | 5645 | 7190 |
| MISSISSIPPI | 1 | 167 | 208 | 565 | 2648 | 3589 |
| MISSOURI | 0 | 148 | 308 | 778 | 5225 | 6459 |
| MONTANA | 5 | 96 | 64 | 183 | 1820 | 2168 |
| NEBRASKA | 0 | 281 | 311 | 603 | 4274 | 5469 |
| NEVADA | 1 | 20 | 11 | 30 | 296 | 358 |
| NEW HAMPSHIRE | 0 | 73 | 124 | 39 | 420 | 656 |
| NEW JERSEY | 0 | 72 | 214 | 197 | 1727 | 2210 |
| NEW MEXICO | 0 | 25 | 61 | 58 | 700 | 844 |
| NEW YORK | 0 | 277 | 1 | 811 | 3346 | 4435 |
| NORTH CAROLINA | 0 | 126 | 215 | 424 | 4737 | 5502 |
| NORTH DAKOTA | 1 | 205 | 107 | 715 | 4703 | 5731 |
| OHIO | 0 | 440 | 129 | 1990 | 7388 | 9947 |
| OKLAHOMA | 0 | 191 | 311 | 484 | 4709 | 5695 |
| OREGON | 0 | 161 | 322 | 296 | 2098 | 2877 |
| PENNSYLVANIA | 1 | 456 | 442 | 571 | 5191 | 6661 |
| RHODE ISLAND | 0 | 7 | 29 | 24 | 81 | 141 |
| SOUTH CAROLINA | 1 | 275 | 97 | 1529 | 2506 | 4408 |
| SOUTH DAKOTA | 0 | 146 | 120 | 377 | 2529 | 3172 |
| TENNESSEE | 0 | 180 | 8 | 381 | 3603 | 4172 |
| TEXAS | 89 | 451 | 99 | 1351 | 12578 | 14568 |
| UTAH | 1 | 26 | 1 | 165 | 1181 | 1374 |
| VERMONT | 0 | 62 | 4 | 70 | 459 | 595 |
| VIRGINIA | 0 | 112 | 367 | 455 | 1908 | 2842 |
| WASHINGTON | 2 | 94 | 234 | 645 | 3339 | 4314 |
| WEST VIRGINIA | 0 | 143 | 45 | 426 | 1805 | 2419 |
| WISCONSIN | 0 | 439 | 926 | 515 | 4900 | 6780 |
| WYOMING | 1 | 32 | 17 | 61 | 514 | 625 |
| PUERTO RICO | 0 | 14 | 0 | 3 | 38 | 55 |
| TOTAL | | 128 10672 | 11592 | 26332 | 165132 | 213856 |

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 42 TOTAL CROSSINGS BY HIGHWAY SYSTEM GROUP AND STATE

| HIGHWAY SYSTEM GROUP | | | |
|----------------------|----------|-----------|--------|
| STATE | ON-STATE | OFF-STATE | TOTAL |
| ALABAMA | 328 | 4435 | 4763 |
| ALASKA | 99 | 125 | 224 |
| ARIZONA | 71 | 959 | 1030 |
| ARKANSAS | 623 | 3368 | 3991 |
| CALIFORNIA | 389 | 8577 | 8966 |
| COLORADO | 281 | 2124 | 2405 |
| CONNECTICUT | 95 | 432 | 527 |
| DELAWARE | 257 | 6 | 263 |
| DIST. COLUMBIA | 54 | 1 | 55 |
| FLORIDA | 1077 | 4573 | 5650 |
| GEORGIA | 801 | 6122 | 6923 |
| HAWAII | 0 | 6 | 6 |
| IDAHO | 151 | 1976 | 2127 |
| ILLINOIS | 1616 | 11673 | 13289 |
| INDIANA | 967 | 9113 | 10080 |
| IOWA | 550 | 8139 | 8689 |
| KANSAS | 537 | 9014 | 9551 |
| KENTUCKY | 1029 | 2633 | 3662 |
| LOUISIANA | 1034 | 3805 | 4839 |
| MAINE | 226 | 870 | 1096 |
| MARYLAND | 169 | 854 | 1023 |
| MASSACHUSETTS | 44 | 1161 | 1205 |
| MICHIGAN | 501 | 7731 | 8232 |
| MINNESOTA | 406 | 6784 | 7190 |
| MISSISSIPPI | 343 | 3246 | 3589 |
| MISSOURI | 928 | 5531 | 6459 |
| MONTANA | 339 | 1829 | 2168 |
| NEBRASKA | 427 | 5042 | 5469 |
| NEVADA | 66 | 292 | 358 |
| NEW HAMPSHIRE | 192 | 466 | 658 |
| NEW JERSEY | 207 | 2004 | 2211 |
| NEW MEXICO | 182 | 662 | 844 |
| NEW YORK | 466 | 3969 | 4435 |
| NORTH CAROLINA | 3568 | 1935 | 5503 |
| NORTH DAKOTA | 287 | 5444 | 5731 |
| OHIO | 1335 | 8615 | 9950 |
| OKLAHOMA | 432 | 5263 | 5695 |
| OREGON | 185 | 2692 | 2877 |
| PENNSYLVANIA | 2317 | 4344 | 6661 |
| RHODE ISLAND | 31 | 110 | 141 |
| SOUTH CAROLINA | 2921 | 1487 | 4408 |
| SOUTH DAKOTA | 222 | 2951 | 3173 |
| TENNESSEE | 276 | 3896 | 4172 |
| TEXAS | 2392 | 12177 | 14569 |
| UTAH | 147 | 1227 | 1374 |
| VERMONT | 147 | 448 | 595 |
| VIRGINIA | 1739 | 1103 | 2842 |
| WASHINGTON | 256 | 4058 | 4314 |
| WEST VIRGINIA | 1466 | 953 | 2419 |
| WISCONSIN | 589 | 6191 | 6780 |
| WYOMING | 99 | 526 | 625 |
| PUERTO RICO | 38 | 17 | 55 |
| TOTAL | 32902 | 180959 | 213861 |

TABLE 43 TOTAL CROSSINGS BY FUNCTIONAL CLASSIFICATION OF ROAD AT RAIL-HIGHWAY CROSSING

| CODE | NUMBER OF CROSSINGS | CODE | NUMBER OF CROSSINGS |
|------|---------------------|------|---------------------|
| 01 | 27 | 11 | 106 |
| 02 | 1616 | 12 | 558 |
| 06 | 5006 | 14 | 7778 |
| 07 | 13931 | 16 | 13309 |
| 08 | 14289 | 17 | 11397 |
| 09 | 100562 | 19 | 45258 |

SEE APPENDIX A FOR EXPLANATION OF REVISION IN CODES.

| RURAL CODES | | URBAN CODES | |
|--------------------------|----|------------------------------|----|
| INTERSTATE | 01 | INTERSTATE | 11 |
| OTHER PRINCIPAL ARTERIAL | 02 | OTHER FREEWAY AND EXPRESSWAY | 12 |
| MINOR ARTERIAL | 06 | OTHER PRINCIPAL ARTERIAL | 14 |
| MAJOR COLLECTOR | 07 | MINOR ARTERIAL | 16 |
| MINOR COLLECTOR | 08 | COLLECTOR | 17 |
| LOCAL | 09 | LOCAL | 19 |

TABLE 44 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND STATE

| STATE | NUMBER OF LANES (BOTH DIRECTIONS) | | | | | | TOTAL |
|----------------|-----------------------------------|--------|------|-------|-----|--------|--------|
| | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| ALABAMA | 975 | 3521 | 25 | 222 | 9 | 11 | 4763 |
| ALASKA | 29 | 186 | 1 | 7 | 1 | 0 | 224 |
| ARIZONA | 148 | 746 | 6 | 102 | 10 | 18 | 1030 |
| ARKANSAS | 1062 | 2858 | 13 | 57 | 0 | 1 | 3991 |
| CALIFORNIA | 490 | 6309 | 176 | 1602 | 165 | 224 | 8966 |
| COLORADO | 174 | 2052 | 22 | 147 | 5 | 5 | 2405 |
| CONNECTICUT | 34 | 464 | 5 | 24 | 0 | 0 | 527 |
| DELAWARE | 4 | 237 | 3 | 18 | 0 | 1 | 263 |
| DIST. COLUMBIA | 2 | 47 | 1 | 3 | 0 | 2 | 55 |
| FLORIDA | 324 | 4683 | 70 | 459 | 39 | 54 | 5629 |
| GEORGIA | 1405 | 5268 | 28 | 214 | 1 | 7 | 6923 |
| HAWAII | 0 | 6 | 0 | 0 | 0 | 0 | 6 |
| IDAHO | 600 | 1436 | 10 | 76 | 2 | 3 | 2127 |
| ILLINOIS | 2875 | 9623 | 54 | 707 | 11 | 19 | 13289 |
| INDIANA | 2055 | 7537 | 50 | 420 | 6 | 12 | 10080 |
| IOWA | 2177 | 6269 | 23 | 211 | 3 | 6 | 8689 |
| KANSAS | 2365 | 6876 | 8 | 299 | 0 | 3 | 9551 |
| KENTUCKY | 1150 | 2438 | 7 | 66 | 1 | 0 | 3662 |
| LOUISIANA | 684 | 3906 | 14 | 210 | 8 | 17 | 4839 |
| MAINE | 67 | 1011 | 4 | 14 | 0 | 0 | 1096 |
| MARYLAND | 160 | 785 | 9 | 63 | 2 | 4 | 1023 |
| MASSACHUSETTS | 45 | 1095 | 7 | 57 | 1 | 0 | 1205 |
| MICHIGAN | 640 | 6830 | 60 | 626 | 31 | 45 | 8232 |
| MINNESOTA | 1242 | 5654 | 17 | 274 | 3 | 0 | 7190 |
| MISSISSIPPI | 489 | 2977 | 8 | 108 | 2 | 5 | 3589 |
| MISSOURI | 1779 | 4524 | 8 | 141 | 2 | 5 | 6459 |
| MONTANA | 300 | 1836 | 4 | 27 | 1 | 0 | 2168 |
| NEBRASKA | 1341 | 4016 | 4 | 103 | 2 | 3 | 5469 |
| NEVADA | 134 | 197 | 1 | 25 | 0 | 1 | 358 |
| NEW HAMPSHIRE | 40 | 586 | 4 | 25 | 2 | 1 | 658 |
| NEW JERSEY | 132 | 1913 | 11 | 147 | 2 | 5 | 2210 |
| NEW MEXICO | 282 | 520 | 2 | 34 | 3 | 3 | 844 |
| NEW YORK | 431 | 3834 | 24 | 136 | 4 | 6 | 4435 |
| NORTH CAROLINA | 347 | 4897 | 37 | 201 | 11 | 10 | 5503 |
| NORTH DAKOTA | 1299 | 4395 | 1 | 36 | 0 | 0 | 5731 |
| OHIO | 1457 | 8064 | 72 | 331 | 14 | 12 | 9950 |
| OKLAHOMA | 999 | 4404 | 7 | 277 | 6 | 2 | 5695 |
| OREGON | 342 | 2387 | 46 | 95 | 4 | 3 | 2877 |
| PENNSYLVANIA | 1040 | 5267 | 124 | 200 | 2 | 28 | 6661 |
| RHODE ISLAND | 6 | 114 | 0 | 21 | 0 | 0 | 141 |
| SOUTH CAROLINA | 741 | 3450 | 15 | 183 | 7 | 12 | 4408 |
| SOUTH DAKOTA | 900 | 2202 | 5 | 62 | 1 | 3 | 3173 |
| TENNESSEE | 770 | 3157 | 22 | 203 | 14 | 6 | 4172 |
| TEXAS | 2598 | 10592 | 72 | 1173 | 40 | 93 | 14568 |
| UTAH | 258 | 1020 | 0 | 85 | 1 | 10 | 1374 |
| VERMONT | 136 | 447 | 4 | 8 | 0 | 0 | 595 |
| VIRGINIA | 46 | 2642 | 25 | 111 | 8 | 10 | 2842 |
| WASHINGTON | 440 | 3406 | 75 | 351 | 28 | 14 | 4314 |
| WEST VIRGINIA | 1229 | 1169 | 9 | 11 | 0 | 1 | 2419 |
| WISCONSIN | 379 | 6106 | 17 | 258 | 1 | 19 | 6780 |
| WYOMING | 150 | 445 | 2 | 26 | 2 | 0 | 625 |
| PUERTO RICO | 2 | 53 | 0 | 0 | 0 | 0 | 55 |
| TOTAL | 36774 | 164457 | 1212 | 10256 | 455 | 684 | 213838 |

TABLE 45 TOTAL CROSSINGS BY NUMBER OF TRAFFIC LANES AND WARNING DEVICE CATEGORY

| WARNING DEVICE CATEGORY | NUMBER OF LANES (BOTH DIRECTIONS) | | | | | | TOTAL |
|---------------------------------|-----------------------------------|---------------|-------------|--------------|------------|------------|---------------|
| | 1 | 2 | 3 | 4 | 5 | OVER 5 | |
| GATES | 295 | 13378 | 261 | 2532 | 174 | 244 | 16884 |
| FLASHING LIGHTS | 828 | 29018 | 372 | 3936 | 179 | 242 | 34575 |
| HWY. SIGNALS, WIGWAGS, BELLS | 303 | 2218 | 34 | 241 | 27 | 45 | 2868 |
| SPECIAL WARNING DEVICES | 488 | 5930 | 127 | 664 | 16 | 35 | 7260 |
| CROSSBUCKS | 30943 | 102596 | 309 | 2258 | 45 | 91 | 136242 |
| STOP SIGNS | 242 | 1131 | 9 | 46 | 0 | 2 | 1430 |
| OTHER SIGNS | 222 | 730 | 5 | 19 | 0 | 2 | 978 |
| NO SIGNS OR SIGNALS | 3453 | 9456 | 95 | 560 | 14 | 23 | 13601 |
| TOTAL | 36774 | 164457 | 1212 | 10256 | 455 | 684 | 213838 |

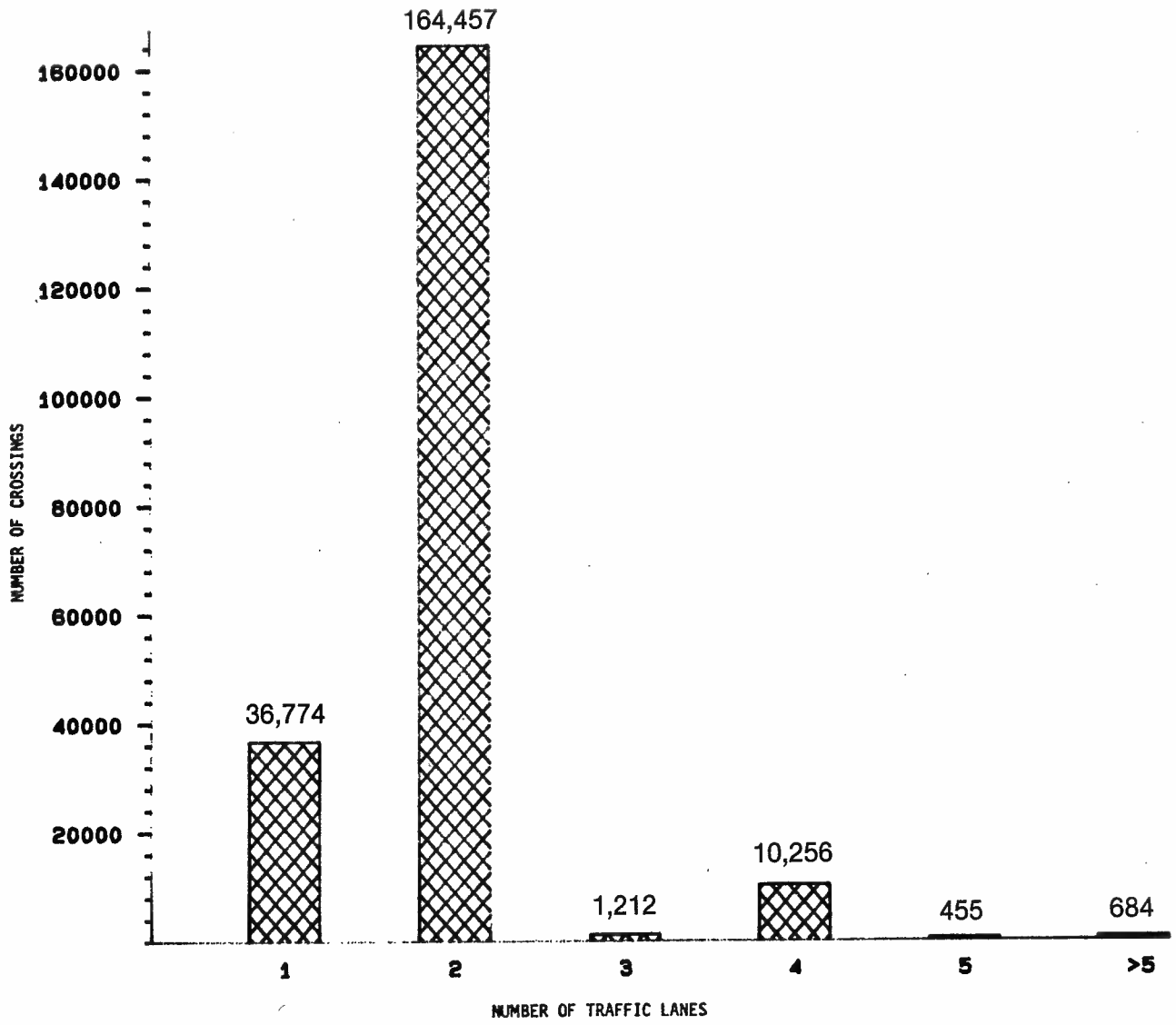


FIGURE 31 CROSSINGS BY NUMBER OF TRAFFIC LANES

WARNING DEVICE DATA

Public at Grad

TABLE 46 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND STATE

| STATE | GATES | WARNING DEVICE CATEGORY | | | | | CROSS- BUCKS | STOP SIGNS | OTHER SIGNS | NO SIGNS OR SIGNALS | TOTAL |
|----------------|-------|---|--------------------------------|------------------------------|----------------------|--------|-----------------|---------------|----------------|---------------------------|-------|
| | | CANTI- LEVERED FLASHING LIGHTS | STANDARD FLASHING LIGHTS | HWY.SIG. WIGWAGS BELLS | SPECIAL ¹ | | | | | | |
| ALABAMA | 161 | 73 | 535 | 20 | 57 | 3389 | 73 | 10 | 445 | 4763 | |
| ALASKA | 1 | 3 | 41 | 0 | 18 | 145 | 2 | 1 | 13 | 224 | |
| ARIZONA | 225 | 20 | 77 | 14 | 91 | 548 | 8 | 0 | 47 | 1030 | |
| ARKANSAS | 167 | 56 | 385 | 30 | 110 | 2793 | 21 | 1 | 428 | 3991 | |
| CALIFORNIA | 2799 | 270 | 930 | 435 | 206 | 4007 | 88 | 20 | 211 | 8966 | |
| COLORADO | 142 | 52 | 313 | 43 | 78 | 1607 | 26 | 2 | 142 | 2405 | |
| CONNECTICUT | 48 | 10 | 164 | 8 | 91 | 74 | 10 | 2 | 121 | 528 | |
| DELAWARE | 31 | 14 | 77 | 0 | 48 | 74 | 2 | 0 | 17 | 263 | |
| DIST. COLUMBIA | 0 | 1 | 2 | 0 | 6 | 15 | 11 | 0 | 20 | 55 | |
| FLORIDA | 1198 | 334 | 649 | 11 | 152 | 2924 | 36 | 96 | 295 | 5695 | |
| GEORGIA | 447 | 71 | 527 | 24 | 162 | 5205 | 12 | 11 | 464 | 6923 | |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | |
| IDAHO | 54 | 77 | 139 | 15 | 21 | 1482 | 88 | 10 | 241 | 2127 | |
| ILLINOIS | 1733 | 331 | 2614 | 208 | 304 | 7525 | 7 | 3 | 564 | 13289 | |
| INDIANA | 775 | 287 | 2063 | 166 | 278 | 5738 | 88 | 14 | 671 | 10080 | |
| IOWA | 385 | 159 | 958 | 148 | 84 | 6644 | 6 | 2 | 303 | 8689 | |
| KANSAS | 309 | 157 | 646 | 102 | 259 | 7832 | 2 | 2 | 242 | 9551 | |
| KENTUCKY | 223 | 60 | 647 | 37 | 115 | 2146 | 5 | 0 | 429 | 3662 | |
| LOUISIANA | 196 | 206 | 542 | 15 | 75 | 3315 | 33 | 22 | 435 | 4839 | |
| MAINE | 64 | 15 | 349 | 10 | 161 | 477 | 0 | 4 | 16 | 1096 | |
| MARYLAND | 70 | 17 | 169 | 37 | 69 | 451 | 30 | 38 | 142 | 1023 | |
| MASSACHUSETTS | 166 | 22 | 425 | 40 | 242 | 262 | 2 | 2 | 44 | 1205 | |
| MICHIGAN | 607 | 422 | 1469 | 75 | 252 | 5142 | 19 | 24 | 222 | 8232 | |
| MINNESOTA | 285 | 102 | 798 | 19 | 39 | 5664 | 48 | 2 | 233 | 7190 | |
| MISSISSIPPI | 31 | 62 | 297 | 19 | 60 | 2240 | 448 | 11 | 421 | 3589 | |
| MISSOURI | 248 | 180 | 956 | 134 | 143 | 4349 | 11 | 4 | 434 | 6459 | |
| MONTANA | 97 | 30 | 188 | 11 | 22 | 1610 | 3 | 4 | 203 | 2168 | |
| NEBRASKA | 290 | 74 | 460 | 61 | 25 | 4329 | 9 | 5 | 216 | 5469 | |
| NEVADA | 67 | 11 | 39 | 1 | 5 | 196 | 0 | 7 | 32 | 358 | |
| NEW HAMPSHIRE | 26 | 17 | 137 | 16 | 164 | 260 | 9 | 4 | 25 | 658 | |
| NEW JERSEY | 384 | 35 | 645 | 30 | 396 | 592 | 6 | 3 | 120 | 2211 | |
| NEW MEXICO | 137 | 22 | 87 | 8 | 11 | 556 | 0 | 5 | 18 | 844 | |
| NEW YORK | 724 | 55 | 1192 | 106 | 518 | 1550 | 1 | 56 | 233 | 4435 | |
| NORTH CAROLINA | 431 | 246 | 552 | 41 | 246 | 3456 | 19 | 21 | 491 | 5503 | |
| NORTH DAKOTA | 169 | 31 | 192 | 0 | 2 | 4946 | 2 | 0 | 389 | 5731 | |
| OHIO | 756 | 330 | 1956 | 96 | 106 | 6241 | 14 | 16 | 435 | 9950 | |
| OKLAHOMA | 168 | 172 | 582 | 53 | 142 | 4391 | 3 | 9 | 175 | 5695 | |
| OREGON | 330 | 28 | 137 | 71 | 113 | 1745 | 100 | 11 | 342 | 2877 | |
| PENNSYLVANIA | 585 | 174 | 1185 | 108 | 786 | 2706 | 74 | 435 | 608 | 6661 | |
| RHODE ISLAND | 9 | 0 | 25 | 19 | 33 | 28 | 5 | 3 | 19 | 141 | |
| SOUTH CAROLINA | 147 | 102 | 273 | 5 | 368 | 3220 | 1 | 17 | 275 | 4408 | |
| SOUTH DAKOTA | 1 | 47 | 151 | 5 | 0 | 2862 | 0 | 1 | 106 | 3173 | |
| TENNESSEE | 151 | 106 | 499 | 19 | 296 | 2279 | 35 | 2 | 785 | 4172 | |
| TEXAS | 926 | 1110 | 1611 | 125 | 117 | 9618 | 34 | 17 | 1011 | 14569 | |
| UTAH | 55 | 52 | 173 | 13 | 118 | 810 | 5 | 50 | 98 | 1374 | |
| VERMONT | 16 | 28 | 154 | 5 | 56 | 314 | 1 | 6 | 15 | 595 | |
| VIRGINIA | 472 | 54 | 452 | 30 | 250 | 1338 | 1 | 6 | 239 | 2842 | |
| WASHINGTON | 116 | 229 | 338 | 57 | 63 | 2956 | 20 | 10 | 525 | 4314 | |
| WEST VIRGINIA | 101 | 90 | 279 | 15 | 47 | 1540 | 8 | 6 | 333 | 2419 | |
| WISCONSIN | 336 | 218 | 1125 | 358 | 218 | 4262 | 2 | 3 | 258 | 6780 | |
| WYOMING | 36 | 16 | 117 | 3 | 2 | 391 | 2 | 2 | 56 | 625 | |
| PUERTO RICO | 4 | 0 | 1 | 2 | 48 | 0 | 0 | 0 | 0 | 55 | |
| TOTAL | 16899 | 6278 | 28322 | 2868 | 7273 | 136250 | 1430 | 980 | 13607 | 213907 | |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, SUCH AS CROSSING FLAGGED BY CREW

TABLE 47 TOTAL CROSSINGS BY WARNING DEVICE CATEGORY AND RAILROAD

| | WARNING DEVICE CATEGORY | | | | | | | | | TOTAL |
|---|-------------------------|---|--------------------------------|-------------------------------|----------------------|-----------------|---------------|----------------|---------------------------|--------|
| | GATES | CANTI- LEVERED FLASHING LIGHTS | STANDARD FLASHING LIGHTS | HWY. SIG. WIGWAGS BELLS | SPECIAL ¹ | CROSS- BUCKS | STOP SIGNS | OTHER SIGNS | NO SIGNS OR SIGNALS | |
| CLASS I RAILROAD | | | | | | | | | | |
| ALABAMA GREAT SOUTHERN RAILROAD ² | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AMTRAK | 71 | 5 | 32 | 0 | 26 | 62 | 4 | 3 | 27 | 230 |
| ATCHISON, TOPEKA & SANTA FE | 1413 | 457 | 1079 | 239 | 573 | 7781 | 7 | 11 | 51 | 11611 |
| BALTIMORE & OHIO RAILWAY | 297 | 230 | 937 | 46 | 112 | 3354 | 19 | 7 | 273 | 5275 |
| BESSEMER & LAKE ERIE RAILROAD | 29 | 2 | 23 | 0 | 3 | 85 | 0 | 0 | 3 | 145 |
| BOSTON & MAINE CORPORATION | 170 | 14 | 252 | 29 | 244 | 366 | 4 | 3 | 46 | 1128 |
| BURLINGTON NORTHERN | 1227 | 575 | 2260 | 194 | 316 | 19233 | 154 | 12 | 1613 | 25584 |
| CENTRAL OF GEORGIA RAILROAD ² | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CHESAPEAKE & OHIO RAILWAY | 344 | 164 | 749 | 14 | 76 | 2939 | 6 | 2 | 270 | 4564 |
| CHICAGO & NORTH WESTERN | 490 | 237 | 1313 | 432 | 120 | 7519 | 7 | 7 | 436 | 10561 |
| CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC | 293 | 205 | 906 | 103 | 207 | 5447 | 9 | 11 | 442 | 7623 |
| CHICAGO, ROCK ISLAND & PACIFIC | 396 | 133 | 633 | 52 | 11 | 4344 | 9 | 1 | 251 | 5830 |
| CINN., NEW ORLEANS & TEXAS PACIFIC ² | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CLINCHFIELD RAILROAD | 7 | 1 | 19 | 3 | 10 | 96 | 0 | 0 | 9 | 145 |
| COLORADO & SOUTHERN RAILWAY | 29 | 22 | 62 | 9 | 1 | 296 | 4 | 1 | 39 | 463 |
| CONSOLIDATED RAIL CORPORATION | 1906 | 494 | 4151 | 316 | 1435 | 7229 | 121 | 346 | 1386 | 17384 |
| THE ESTATES ³ | 107 | 81 | 778 | 67 | 216 | 3301 | 40 | 132 | 440 | 5162 |
| DELAWARE & HUDSON RAILWAY | 161 | 7 | 152 | 8 | 21 | 162 | 0 | 23 | 22 | 556 |
| DENVER & RIO GRANDE WESTERN | 52 | 23 | 185 | 3 | 11 | 743 | 4 | 3 | 96 | 1120 |
| DETROIT, TOLEDO & IRONTON | 29 | 16 | 78 | 0 | 4 | 359 | 1 | 0 | 11 | 498 |
| DULUTH, MISSABE & IRON RANGE | 8 | 0 | 40 | 0 | 3 | 169 | 1 | 1 | 0 | 222 |
| ELGIN, JOLIET & EASTERN | 76 | 7 | 66 | 2 | 12 | 85 | 0 | 0 | 1 | 249 |
| FLORIDA EAST COAST RAILWAY | 445 | 22 | 101 | 0 | 5 | 211 | 0 | 0 | 10 | 794 |
| FORT WORTH & DENVER RAILWAY | 17 | 57 | 50 | 0 | 2 | 674 | 0 | 2 | 105 | 907 |
| GRAND TRUNK WESTERN | 274 | 95 | 340 | 15 | 98 | 774 | 2 | 0 | 16 | 1614 |
| ILLINOIS CENTRAL GULF RAILROAD | 420 | 206 | 1229 | 177 | 173 | 6663 | 316 | 10 | 660 | 9854 |
| KANSAS CITY SOUTHERN RAILWAY | 24 | 49 | 117 | 9 | 0 | 744 | 0 | 2 | 72 | 1017 |
| LONG ISLAND RAIL ROAD | 269 | 0 | 29 | 0 | 0 | 11 | 0 | 0 | 1 | 310 |
| LOUISIANA & ARKANSAS RAILWAY COMPANY | 15 | 61 | 102 | 0 | 0 | 520 | 0 | 0 | 24 | 722 |
| LOUISVILLE & NASHVILLE | 397 | 156 | 1364 | 50 | 189 | 4752 | 61 | 10 | 903 | 7882 |
| MISSOURI-KANSAS-TEXAS RAILROAD | 71 | 121 | 262 | 39 | 2 | 1434 | 2 | 1 | 169 | 2101 |
| MISSOURI PACIFIC RAILROAD | 516 | 482 | 1524 | 60 | 130 | 8902 | 20 | 2 | 905 | 12541 |
| NORFOLK & WESTERN RAILWAY | 690 | 215 | 1569 | 134 | 193 | 4804 | 18 | 6 | 231 | 7860 |
| PITTSBURGH & LAKE ERIE RAILROAD | 18 | 0 | 10 | 2 | 3 | 64 | 0 | 0 | 15 | 112 |
| ST. LOUIS SOUTHWESTERN RAILWAY | 137 | 70 | 241 | 3 | 14 | 1635 | 11 | 0 | 118 | 2229 |
| SEABOARD COAST LINE RAILROAD | 1227 | 479 | 1039 | 23 | 505 | 7869 | 34 | 9 | 529 | 11714 |
| SOO LINE | 133 | 72 | 495 | 25 | 3 | 3532 | 2 | 1 | 106 | 4369 |
| SOUTHERN PACIFIC TRANSPORTATION COMPANY | 2631 | 382 | 1009 | 417 | 29 | 6206 | 78 | 22 | 687 | 11461 |
| SOUTHERN RAILWAY | 782 | 321 | 1304 | 29 | 585 | 8313 | 31 | 33 | 1685 | 13083 |
| UNION PACIFIC RAILROAD | 448 | 230 | 642 | 82 | 170 | 5362 | 84 | 59 | 632 | 7709 |
| WESTERN MARYLAND RAILWAY | 26 | 14 | 124 | 11 | 27 | 248 | 1 | 17 | 25 | 493 |
| WESTERN PACIFIC | 195 | 24 | 58 | 14 | 0 | 298 | 10 | 1 | 25 | 625 |
| TOTAL CLASS I RAILROADS | 15840 | 5729 | 25324 | 2607 | 5529 | 126586 | 1060 | 738 | 12334 | 195747 |
| TOTAL CLASS II & III RAILROADS | 1059 | 549 | 2998 | 261 | 1744 | 9664 | 370 | 242 | 1273 | 18160 |
| TOTAL | 16899 | 6278 | 28322 | 2868 | 7273 | 136250 | 1430 | 980 | 13607 | 213907 |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, SUCH AS CROSSING FLAGGED BY CREW

² CROSSINGS INCLUDED UNDER SOUTHERN RAILWAY COMPANY

³ CROSSING ON PREDECESSOR LINES NOT MERGED INTO CONRAIL

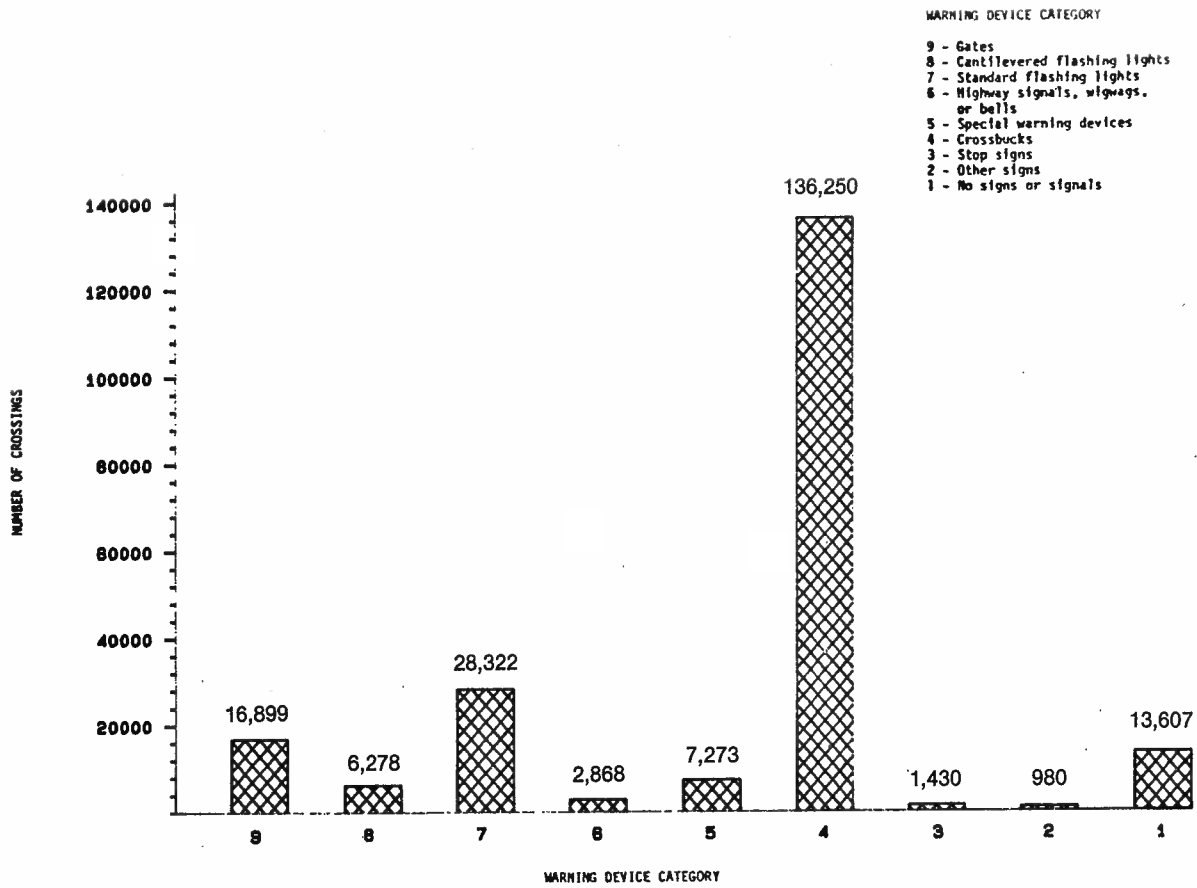


FIGURE 32 CROSSINGS BY WARNING DEVICE CATEGORY

TABLE 48 TOTAL CROSSINGS BY PAVEMENT MARKINGS AND STATE

| STATE | STOP LINES | RR XING SYMBOL | PAVEMENT MARKING ¹ | | | TOTAL |
|----------------|---------------|-------------------|-------------------------------|---------------|-----------------|--------|
| | | | BOTH | NONE PAVED | NONE UNPAVED | |
| ALABAMA | 43 | 131 | 130 | 3302 | 1157 | 4763 |
| ALASKA | 3 | 1 | 13 | 93 | 114 | 224 |
| ARIZONA | 55 | 16 | 191 | 462 | 306 | 1030 |
| ARKANSAS | 51 | 97 | 107 | 2051 | 1685 | 3991 |
| CALIFORNIA | 1090 | 228 | 5089 | 2196 | 363 | 8966 |
| COLORADO | 17 | 22 | 96 | 1314 | 956 | 2405 |
| CONNECTICUT | 14 | 3 | 91 | 414 | 6 | 528 |
| DELAWARE | 2 | 17 | 15 | 221 | 8 | 263 |
| DIST. COLUMBIA | 0 | 0 | 31 | 24 | 0 | 55 |
| FLORIDA | 322 | 121 | 1426 | 2718 | 1094 | 5681 |
| GEORGIA | 80 | 156 | 371 | 4134 | 2182 | 6923 |
| HAWAII | 2 | 0 | 0 | 4 | 0 | 6 |
| IDAHO | 1 | 1 | 332 | 904 | 889 | 2127 |
| ILLINOIS | 62 | 151 | 1280 | 5781 | 6015 | 13289 |
| INDIANA | 94 | 270 | 2094 | 5693 | 1929 | 10080 |
| IOWA | 80 | 112 | 583 | 3129 | 4785 | 8689 |
| KANSAS | 1 | 5 | 513 | 3024 | 6008 | 9551 |
| KENTUCKY | 63 | 404 | 568 | 1675 | 952 | 3662 |
| LOUISIANA | 22 | 535 | 254 | 2842 | 1186 | 4839 |
| MAINE | 9 | 15 | 95 | 824 | 153 | 1096 |
| MARYLAND | 41 | 22 | 89 | 798 | 73 | 1023 |
| MASSACHUSETTS | 49 | 22 | 57 | 1039 | 38 | 1205 |
| MICHIGAN | 91 | 127 | 683 | 4927 | 2404 | 8232 |
| MINNESOTA | 132 | 187 | 503 | 2695 | 3673 | 7190 |
| MISSISSIPPI | 12 | 8 | 424 | 1983 | 1162 | 3589 |
| MISSOURI | 88 | 166 | 573 | 2670 | 2962 | 6459 |
| MONTANA | 3 | 18 | 230 | 450 | 1467 | 2168 |
| NEBRASKA | 46 | 136 | 262 | 1445 | 3580 | 5469 |
| NEVADA | 6 | 1 | 73 | 125 | 153 | 358 |
| NEW HAMPSHIRE | 19 | 11 | 38 | 520 | 70 | 658 |
| NEW JERSEY | 50 | 87 | 89 | 1850 | 135 | 2211 |
| NEW MEXICO | 4 | 19 | 39 | 359 | 423 | 844 |
| NEW YORK | 132 | 249 | 295 | 3358 | 401 | 4435 |
| NORTH CAROLINA | 384 | 172 | 1055 | 3011 | 881 | 5503 |
| NORTH DAKOTA | 14 | 14 | 180 | 766 | 4757 | 5731 |
| OHIO | 739 | 810 | 4701 | 2825 | 875 | 9950 |
| OKLAHOMA | 22 | 23 | 51 | 2896 | 2703 | 5695 |
| OREGON | 151 | 315 | 471 | 1313 | 627 | 2877 |
| PENNSYLVANIA | 66 | 354 | 164 | 5303 | 774 | 6661 |
| RHODE ISLAND | 13 | 0 | 14 | 114 | 0 | 141 |
| SOUTH CAROLINA | 96 | 101 | 1196 | 2204 | 811 | 4408 |
| SOUTH DAKOTA | 19 | 3 | 95 | 862 | 2194 | 3173 |
| TENNESSEE | 15 | 26 | 133 | 3026 | 972 | 4172 |
| TEXAS | 188 | 469 | 1549 | 7853 | 4510 | 14569 |
| UTAH | 13 | 17 | 106 | 870 | 368 | 1374 |
| VERMONT | 24 | 14 | 46 | 323 | 188 | 595 |
| VIRGINIA | 120 | 92 | 1207 | 1114 | 309 | 2842 |
| WASHINGTON | 164 | 34 | 591 | 2550 | 975 | 4314 |
| WEST VIRGINIA | 25 | 14 | 106 | 1467 | 807 | 2419 |
| WISCONSIN | 91 | 37 | 332 | 5285 | 1035 | 6780 |
| WYOMING | 9 | 14 | 76 | 134 | 392 | 625 |
| PUERTO RICO | 0 | 14 | 0 | 36 | 5 | 55 |
| TOTAL | 4837 | 5861 | 28707 | 104976 | 69512 | 213893 |

¹ THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DOES NOT REQUIRE PAVEMENT MARKINGS AT ALL CROSSINGS.

TABLE 49 TOTAL CROSSINGS BY RAILROAD ADVANCE WARNING AND STATE

| STATE | RAILROAD ADVANCE WARNING ¹ | | TOTAL |
|----------------|---------------------------------------|--------|--------|
| | YES | NO | |
| ALABAMA | 913 | 3850 | 4763 |
| ALASKA | 67 | 157 | 224 |
| ARIZONA | 478 | 552 | 1030 |
| ARKANSAS | 597 | 3394 | 3991 |
| CALIFORNIA | 7053 | 1913 | 8966 |
| COLORADO | 842 | 1563 | 2405 |
| CONNECTICUT | 233 | 294 | 527 |
| DELAWARE | 223 | 40 | 263 |
| DIST. COLUMBIA | 30 | 25 | 55 |
| FLORIDA | 2382 | 3286 | 5668 |
| GEORGIA | 1163 | 5760 | 6923 |
| HAWAII | 1 | 5 | 6 |
| IDAHO | 1706 | 421 | 2127 |
| ILLINOIS | 6339 | 6950 | 13289 |
| INDIANA | 6371 | 3709 | 10080 |
| IOWA | 4509 | 4180 | 8689 |
| KANSAS | 3878 | 5673 | 9551 |
| KENTUCKY | 777 | 2885 | 3662 |
| LOUISIANA | 2437 | 2402 | 4839 |
| MAINE | 872 | 224 | 1096 |
| MARYLAND | 393 | 630 | 1023 |
| MASSACHUSETTS | 875 | 330 | 1205 |
| MICHIGAN | 5405 | 2827 | 8232 |
| MINNESOTA | 3489 | 3701 | 7190 |
| MISSISSIPPI | 662 | 2927 | 3589 |
| MISSOURI | 1283 | 5176 | 6459 |
| MONTANA | 617 | 1551 | 2168 |
| NEBRASKA | 2294 | 3175 | 5469 |
| NEVADA | 128 | 230 | 358 |
| NEW HAMPSHIRE | 464 | 194 | 658 |
| NEW JERSEY | 785 | 1426 | 2211 |
| NEW MEXICO | 163 | 681 | 844 |
| NEW YORK | 3267 | 1168 | 4435 |
| NORTH CAROLINA | 4284 | 1219 | 5503 |
| NORTH DAKOTA | 938 | 4793 | 5731 |
| OHIO | 6209 | 3741 | 9950 |
| OKLAHOMA | 1038 | 4657 | 5695 |
| OREGON | 1796 | 1081 | 2877 |
| PENNSYLVANIA | 2425 | 4236 | 6661 |
| RHODE ISLAND | 28 | 113 | 141 |
| SOUTH CAROLINA | 2468 | 1940 | 4408 |
| SOUTH DAKOTA | 864 | 2309 | 3173 |
| TENNESSEE | 608 | 3564 | 4172 |
| TEXAS | 3583 | 10986 | 14569 |
| UTAH | 403 | 971 | 1374 |
| VERMONT | 338 | 257 | 595 |
| VIRGINIA | 1942 | 900 | 2842 |
| WASHINGTON | 2869 | 1445 | 4314 |
| WEST VIRGINIA | 504 | 1915 | 2419 |
| WISCONSIN | 3935 | 2845 | 6780 |
| WYOMING | 131 | 494 | 625 |
| PUERTO RICO | 32 | 23 | 55 |
| TOTAL | 95091 | 118788 | 213879 |

¹ THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES DOES NOT REQUIRE RAILROAD ADVANCE WARNING AT ALL CROSSINGS.

**OPERATIONAL CHARACTERISTICS
TRAIN TRAFFIC DATA (1981)**

TABLE 51 TOTAL CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY

| TRAINS PER DAY | CROSSINGS | TRAINS PER DAY | CROSSINGS |
|----------------|-----------|----------------|-----------|
| 01-05 | 101975 | 101-105 | 25 |
| 06-10 | 35986 | 106-110 | 55 |
| 11-15 | 12143 | 111-115 | 4 |
| 16-20 | 12721 | 116-120 | 10 |
| 21-25 | 5729 | 121-125 | 7 |
| 26-30 | 4302 | 126-130 | 3 |
| 31-35 | 2437 | 131-135 | 6 |
| 36-40 | 1536 | 136-140 | 13 |
| 41-45 | 648 | 141-145 | 7 |
| 46-50 | 1060 | 146-150 | 2 |
| 51-55 | 289 | 151-155 | 2 |
| 56-60 | 340 | 156-160 | 3 |
| 61-65 | 211 | 161-165 | 2 |
| 66-70 | 117 | 166-170 | 5 |
| 71-75 | 90 | 171-175 | 0 |
| 76-80 | 244 | 176-180 | 1 |
| 81-85 | 41 | 181-185 | 0 |
| 86-90 | 18 | 186-190 | 1 |
| 91-95 | 13 | 191-195 | 2 |
| 96-100 | 58 | 196-200 | 23 |
| UNDER 1 | 33770 | OVER 200 | 8 |

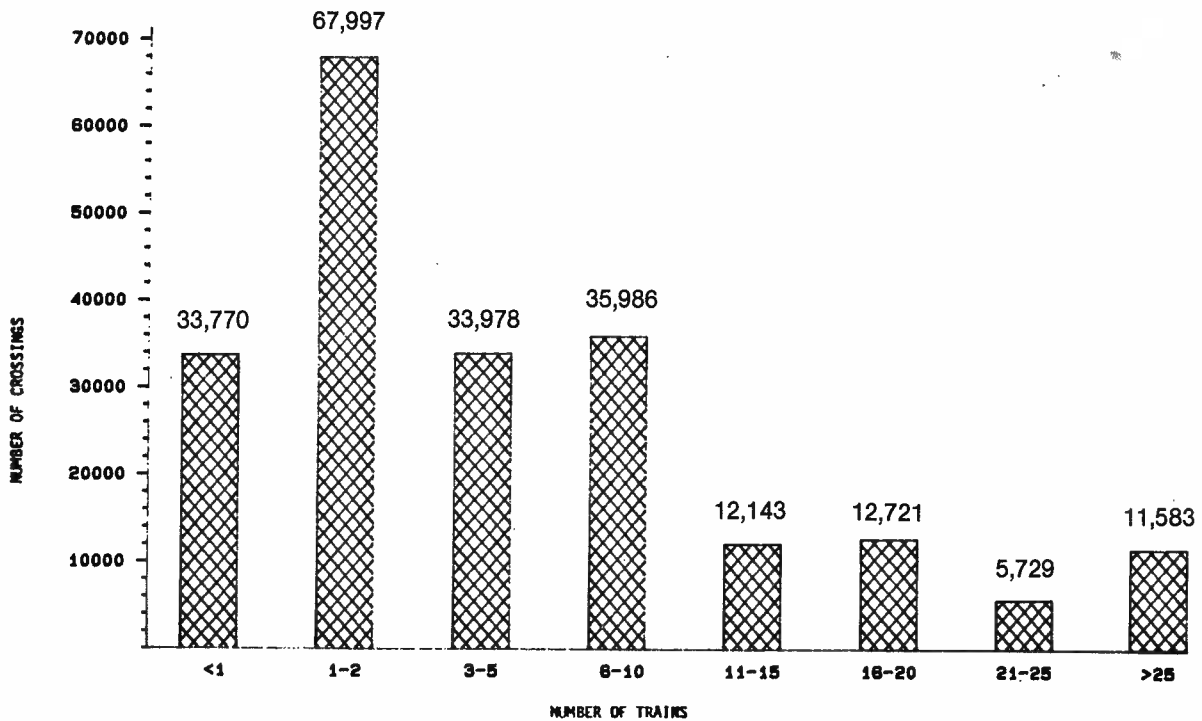


FIGURE 35 CROSSINGS BY TOTAL NUMBER OF TRAINS PER DAY

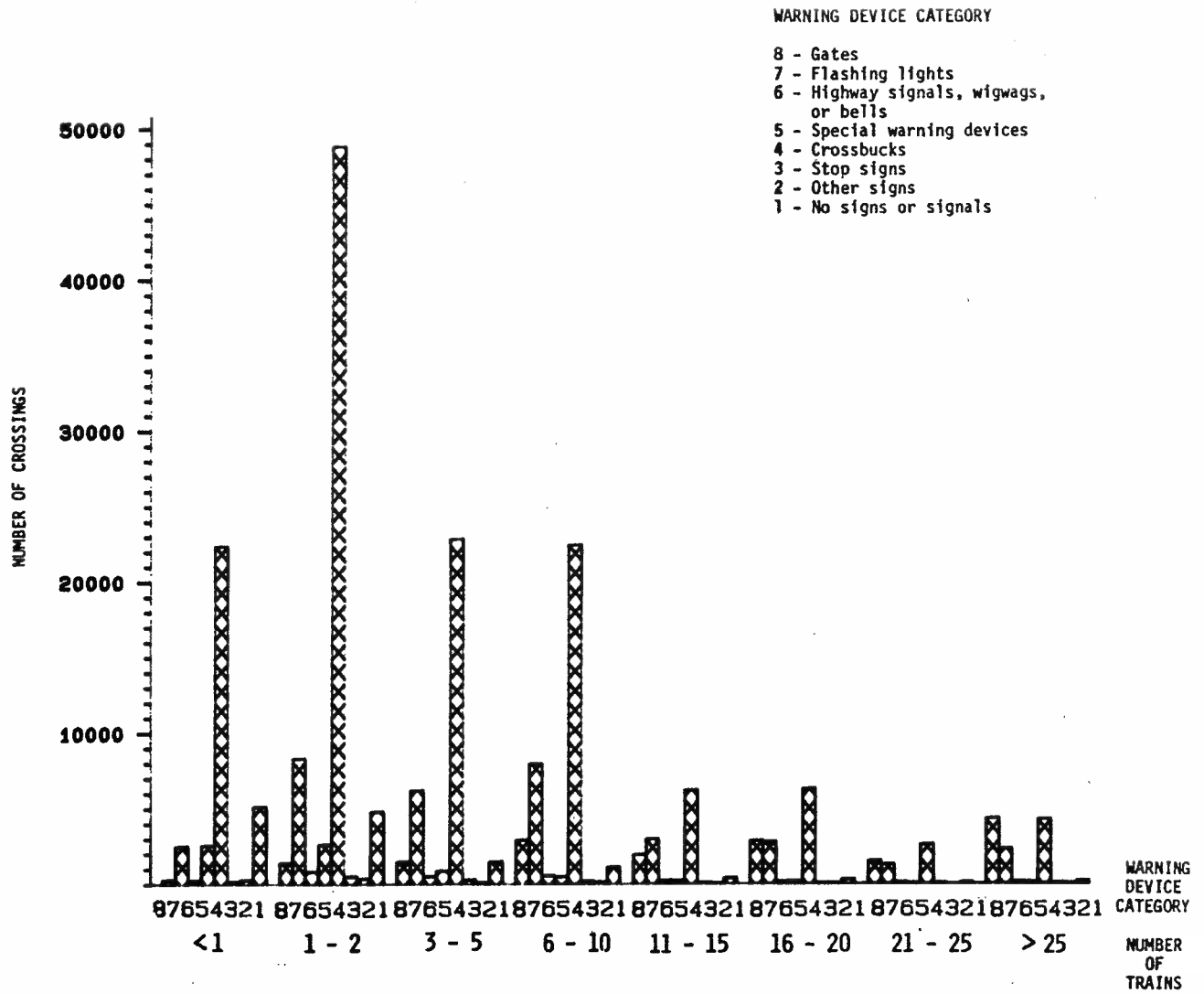


FIGURE 36 CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY

TABLE 52 TOTAL CROSSINGS BY NUMBER OF THRU TRAINS AND SWITCHING TRAINS PER DAY

| NUMBER OF SWITCHING TRAINS | NUMBER OF THRU TRAINS | | | | | | | | TOTAL |
|----------------------------|-----------------------|--------------|--------------|--------------|-------------|--------------|-------------|-------------|---------------|
| | UNDER 1 | 1-2 | 3-5 | 6-10 | 11-15 | 16-20 | 21-25 | OVER 25 | |
| UNDER 1 | 33770 | 37492 | 16317 | 16847 | 4596 | 6233 | 2361 | 4643 | 122259 |
| 1-2 | 29119 | 9508 | 6814 | 6778 | 2751 | 2398 | 933 | 1804 | 60105 |
| 3-5 | 6769 | 1939 | 1977 | 2614 | 1262 | 728 | 516 | 757 | 16562 |
| 6-10 | 3795 | 972 | 958 | 1553 | 805 | 1013 | 291 | 592 | 9979 |
| 11-15 | 771 | 153 | 190 | 314 | 92 | 107 | 80 | 113 | 1820 |
| 16-20 | 653 | 133 | 130 | 244 | 82 | 94 | 123 | 126 | 1585 |
| 21-25 | 162 | 33 | 20 | 98 | 16 | 15 | 38 | 52 | 434 |
| OVER 25 | 402 | 95 | 83 | 163 | 107 | 128 | 32 | 153 | 1163 |
| TOTAL | 75441 | 50325 | 26489 | 28611 | 9711 | 10716 | 4374 | 8240 | 213907 |

TABLE 53 TOTAL CROSSINGS BY NUMBER OF DAY AND NIGHT TRAINS PER DAY

| NUMBER OF DAY TRAINS (6 a.m. to 6 p.m.) | NUMBER OF NIGHT TRAINS (6 p.m. to 6 a.m.) | | | | | | | | TOTAL |
|---|---|--------------|--------------|--------------|-------------|-------------|-------------|-------------|---------------|
| | UNDER 1 | 1-2 | 3-5 | 6-10 | 11-15 | 16-20 | 21-25 | OVER 25 | |
| UNDER 1 | 33770 | 9324 | 1242 | 250 | 16 | 4 | 2 | 1 | 44609 |
| 1-2 | 41971 | 34091 | 3478 | 555 | 23 | 44 | 0 | 0 | 80162 |
| 3-5 | 6795 | 12932 | 18055 | 1880 | 254 | 175 | 3 | 3 | 40097 |
| 6-10 | 2832 | 2851 | 7121 | 14624 | 1592 | 187 | 226 | 16 | 29449 |
| 11-15 | 355 | 278 | 745 | 3589 | 5041 | 621 | 10 | 36 | 10675 |
| 16-20 | 349 | 40 | 86 | 624 | 1272 | 1857 | 127 | 244 | 4599 |
| 21-25 | 53 | 13 | 35 | 119 | 347 | 262 | 587 | 100 | 1516 |
| OVER 25 | 495 | 43 | 44 | 99 | 314 | 420 | 426 | 959 | 2800 |
| TOTAL | 86620 | 59572 | 30806 | 21740 | 8859 | 3570 | 1381 | 1359 | 213907 |

TABLE 54 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND WARNING DEVICE CATEGORY

| WARNING DEVICE CATEGORY | NUMBER OF TRAINS | | | | | | | | TOTAL |
|---------------------------------|------------------|-------|-------|-------|-------|-------|-------|---------|--------|
| | UNDER 1 | 1-2 | 3-5 | 6-10 | 11-15 | 16-20 | 21-25 | OVER 25 | |
| GATES | 301 | 1427 | 1485 | 2948 | 1975 | 2872 | 1531 | 4360 | 16899 |
| FLASHING LIGHTS | 2532 | 8374 | 6249 | 8000 | 2999 | 2810 | 1304 | 2332 | 34600 |
| HWY. SIGNALS, WIGWAGS, BELLS | 266 | 855 | 522 | 564 | 223 | 163 | 105 | 170 | 2868 |
| SPECIAL WARNING DEVICES | 2594 | 2669 | 894 | 515 | 240 | 183 | 38 | 140 | 7273 |
| CROSSBUCKS | 22431 | 48913 | 22916 | 22500 | 6228 | 6334 | 2626 | 4302 | 136250 |
| STOP SIGNS | 196 | 542 | 301 | 192 | 65 | 50 | 25 | 59 | 1430 |
| OTHER SIGNS | 284 | 389 | 115 | 118 | 26 | 20 | 4 | 24 | 980 |
| NO SIGNS OR SIGNALS | 5166 | 4828 | 1496 | 1149 | 387 | 289 | 96 | 196 | 13607 |
| TOTAL | 33770 | 67997 | 33978 | 35986 | 12143 | 12721 | 5729 | 11583 | 213907 |

TABLE 55 TOTAL CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC

| NUMBER OF TRAINS | ANNUAL AVERAGE DAILY TRAFFIC | | | | | | TOTAL |
|------------------|------------------------------|--------------|--------------|--------------|--------------|-------------|---------------|
| | 1-250 | 251-500 | 501-1K | 1K-5K | 5K-10K | OVER 10K | |
| UNDER 1 | 16675 | 3907 | 3565 | 6452 | 1941 | 1179 | 33719 |
| 1-2 | 37367 | 7441 | 6790 | 11154 | 3243 | 1949 | 67944 |
| 3-5 | 17547 | 3923 | 3587 | 6102 | 1695 | 1098 | 33952 |
| 6-10 | 18798 | 4132 | 3701 | 6289 | 1853 | 1175 | 35948 |
| 11-15 | 5646 | 1294 | 1312 | 2521 | 789 | 579 | 12141 |
| 16-20 | 5959 | 1410 | 1428 | 2610 | 801 | 502 | 12710 |
| 21-25 | 2574 | 690 | 676 | 1212 | 361 | 209 | 5722 |
| OVER 25 | 4549 | 1222 | 1303 | 2794 | 1014 | 689 | 11571 |
| TOTAL | 109115 | 24019 | 22362 | 39134 | 11697 | 7380 | 213707 |

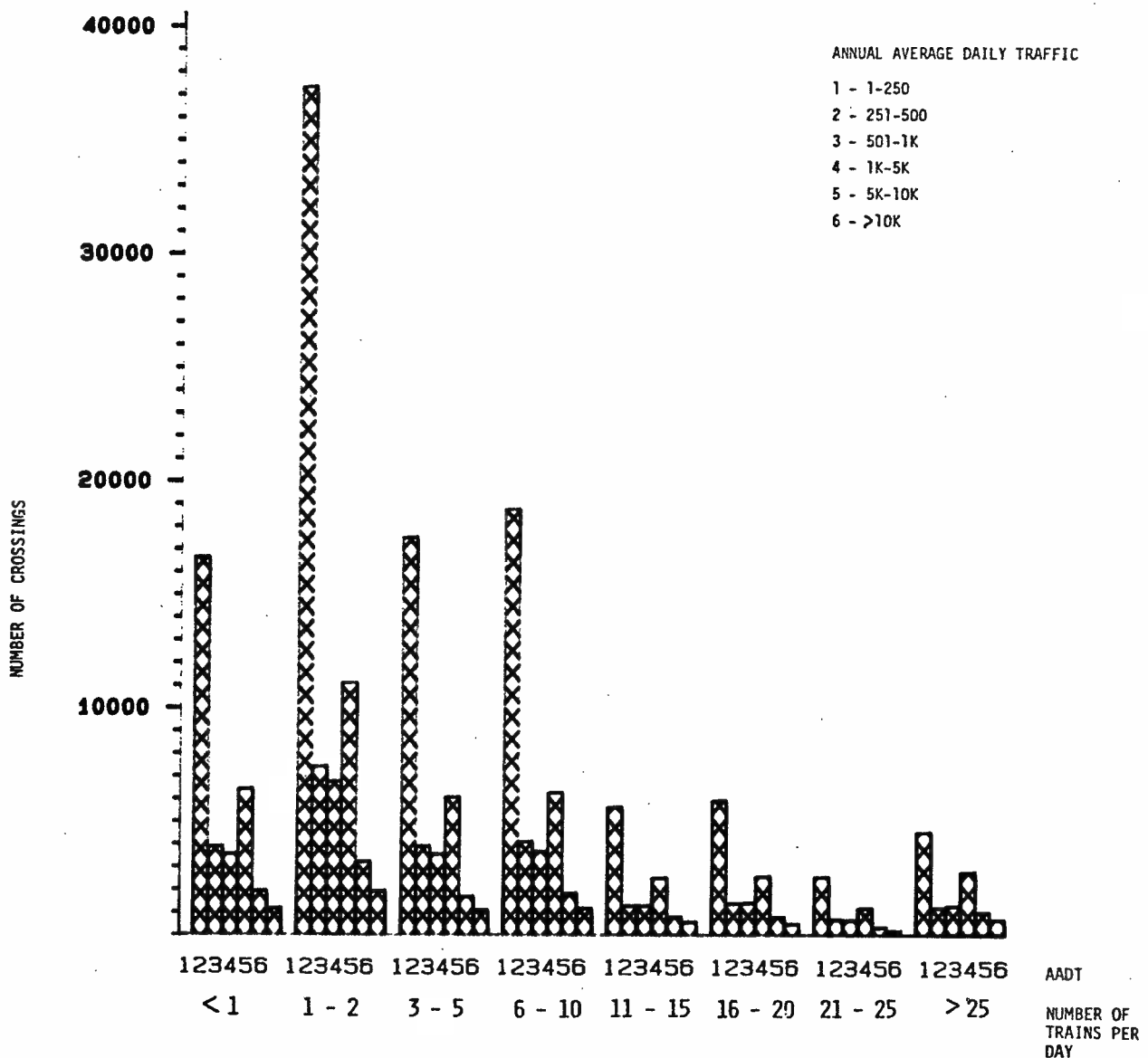


FIGURE 37 CROSSINGS BY NUMBER OF TRAINS PER DAY AND ANNUAL AVERAGE DAILY TRAFFIC (AADT)

TRAIN SPEED DATA (1981)**TABLE 56 TOTAL CROSSINGS BY MAXIMUM TIMETABLE SPEED**

| MAXIMUM SPEED (MPH) | CROSSINGS | MAXIMUM SPEED (MPH) | CROSSINGS | MAXIMUM SPEED (MPH) | CROSSINGS |
|---------------------------|-----------|---------------------------|-----------|---------------------------|-----------|
| 01-05 | 9594 | 36-40 | 20564 | 71-75 | 856 |
| 06-10 | 31736 | 41-45 | 5327 | 76-80 | 5168 |
| 11-15 | 16338 | 46-50 | 19247 | 81-85 | 11 |
| 16-20 | 16811 | 51-55 | 2513 | 86-90 | 849 |
| 21-25 | 24761 | 56-60 | 11193 | 91-95 | 0 |
| 26-30 | 28029 | 61-65 | 1160 | 96-100 | 2 |
| 31-35 | 15545 | 66-70 | 3764 | OVER 100 | 2 |

TABLE 57 TOTAL CROSSINGS BY TYPICAL TRAIN SPEED VARIATION

| TYPICAL SPEED VARIATION ¹ (MPH) | CROSSINGS | TYPICAL SPEED VARIATION (MPH) | CROSSINGS | TYPICAL SPEED VARIATION (MPH) | CROSSINGS |
|---|-----------|--|-----------|--|-----------|
| 01-05 | 59363 | 36-40 | 6737 | 71-75 | 670 |
| 06-10 | 54676 | 41-45 | 3278 | 76-80 | 486 |
| 11-15 | 23751 | 46-50 | 5357 | 81-85 | 58 |
| 16-20 | 19935 | 51-55 | 1025 | 86-90 | 61 |
| 21-25 | 12737 | 56-60 | 2588 | 91-95 | 0 |
| 26-30 | 12499 | 61-65 | 721 | 96-100 | 0 |
| 31-35 | 5847 | 66-70 | 716 | OVER 100 | 1 |
| UNDER 1 | 3401 | | | | |

¹ TYPICAL SPEED VARIATION IS THE DIFFERENCE BETWEEN NORMAL MAXIMUM SPEED AND NORMAL MINIMUM SPEED.

HIGHWAY TRAFFIC DATA (1981)

TABLE 58 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

| AADT | CROSSINGS | AADT | CROSSINGS | AADT | CROSSINGS |
|---------|-----------|--------|-----------|-----------|-----------|
| 1-100 | 76279 | 1-1K | 155496 | 1-10K | 206327 |
| 101-200 | 19939 | 1K-2K | 17613 | 10K-20K | 5967 |
| 201-300 | 19330 | 2K-3K | 10287 | 20K-30K | 1145 |
| 301-400 | 8487 | 3K-4K | 5893 | 30K-40K | 207 |
| 401-500 | 9099 | 4K-5K | 5341 | 40K-50K | 38 |
| 501-600 | 5272 | 5K-6K | 3157 | 50K-60K | 6 |
| 601-700 | 3755 | 6K-7K | 2388 | 60K-70K | 1 |
| 701-800 | 5819 | 7K-8K | 2577 | 70K-80K | 3 |
| 801-900 | 3002 | 8K-9K | 1652 | 80K-90K | 3 |
| 901-1K | 4514 | 9K-10K | 1923 | 90K-100K | 2 |
| | | | | OVER 100K | 8 |

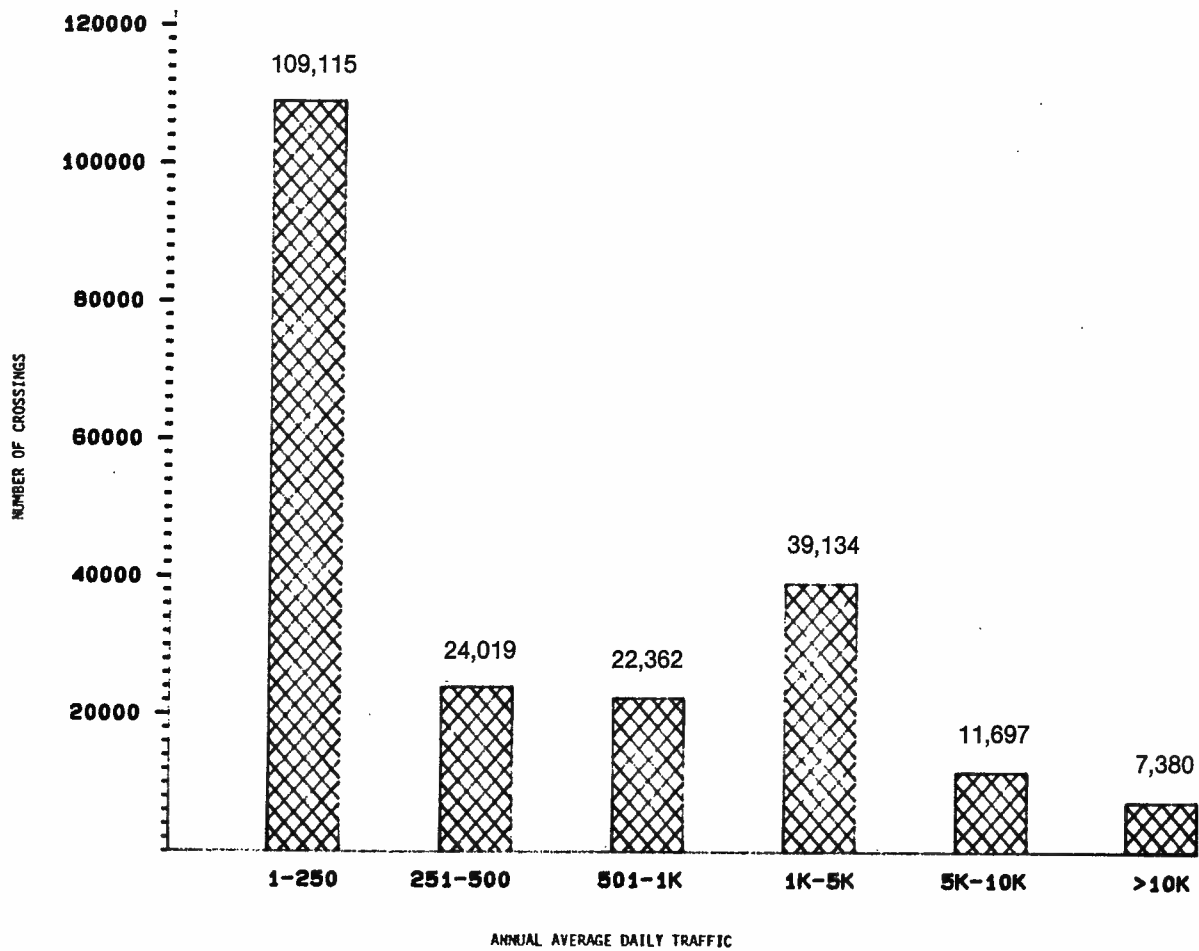


FIGURE 38 CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC

TABLE 59 TOTAL CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY

| WARNING DEVICE CATEGORY | ANNUAL AVERAGE DAILY TRAFFIC | | | | | | TOTAL |
|------------------------------|------------------------------|---------|--------|-------|--------|----------|--------|
| | 1-250 | 251-500 | 501-1K | 1K-5K | 5K-10K | OVER 10K | |
| GATES | 2206 | 1604 | 2240 | 6060 | 2663 | 2101 | 16874 |
| FLASHING LIGHTS | 5068 | 3743 | 5249 | 13022 | 4537 | 2964 | 34583 |
| HWY. SIGNALS, WIGWAGS, BELLS | 903 | 350 | 407 | 745 | 252 | 210 | 2867 |
| SPECIAL WARNING DEVICES | 1550 | 890 | 982 | 2385 | 854 | 608 | 7269 |
| CROSSBUCKS | 90730 | 15543 | 11762 | 14335 | 2655 | 1131 | 136156 |
| STOP SIGNS | 733 | 192 | 182 | 252 | 45 | 24 | 1428 |
| OTHER SIGNS | 469 | 197 | 136 | 122 | 43 | 9 | 976 |
| NO SIGNS OR SIGNALS | 7456 | 1500 | 1404 | 2213 | 648 | 333 | 13554 |
| TOTAL | 109115 | 24019 | 22362 | 39134 | 11697 | 7380 | 213707 |

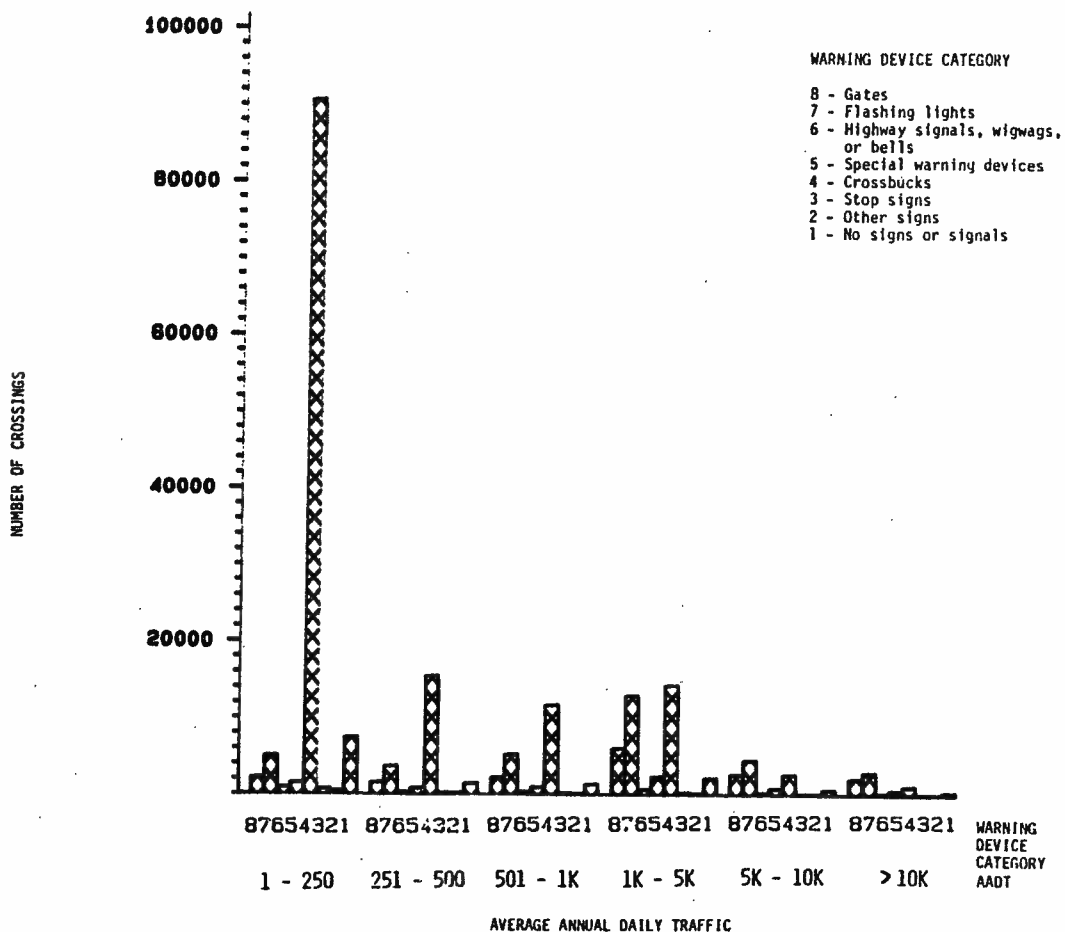


FIGURE 39 CROSSINGS BY ANNUAL AVERAGE DAILY TRAFFIC AND WARNING DEVICE CATEGORY

TABLE 60 TOTAL CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC

| % | CROSSINGS | % | CROSSINGS |
|---------|-----------|-------|-----------|
| UNDER 1 | 7524 | 51-55 | 22 |
| 01-05 | 84768 | 56-60 | 164 |
| 06-10 | 76027 | 61-65 | 5 |
| 11-15 | 22887 | 66-70 | 56 |
| 16-20 | 9985 | 71-75 | 118 |
| 21-25 | 2363 | 76-80 | 59 |
| 26-30 | 7043 | 81-85 | 6 |
| 31-35 | 409 | 86-90 | 57 |
| 36-40 | 1140 | 91-95 | 1 |
| 41-45 | 155 | 96-99 | 6 |
| 46-50 | 1112 | | |

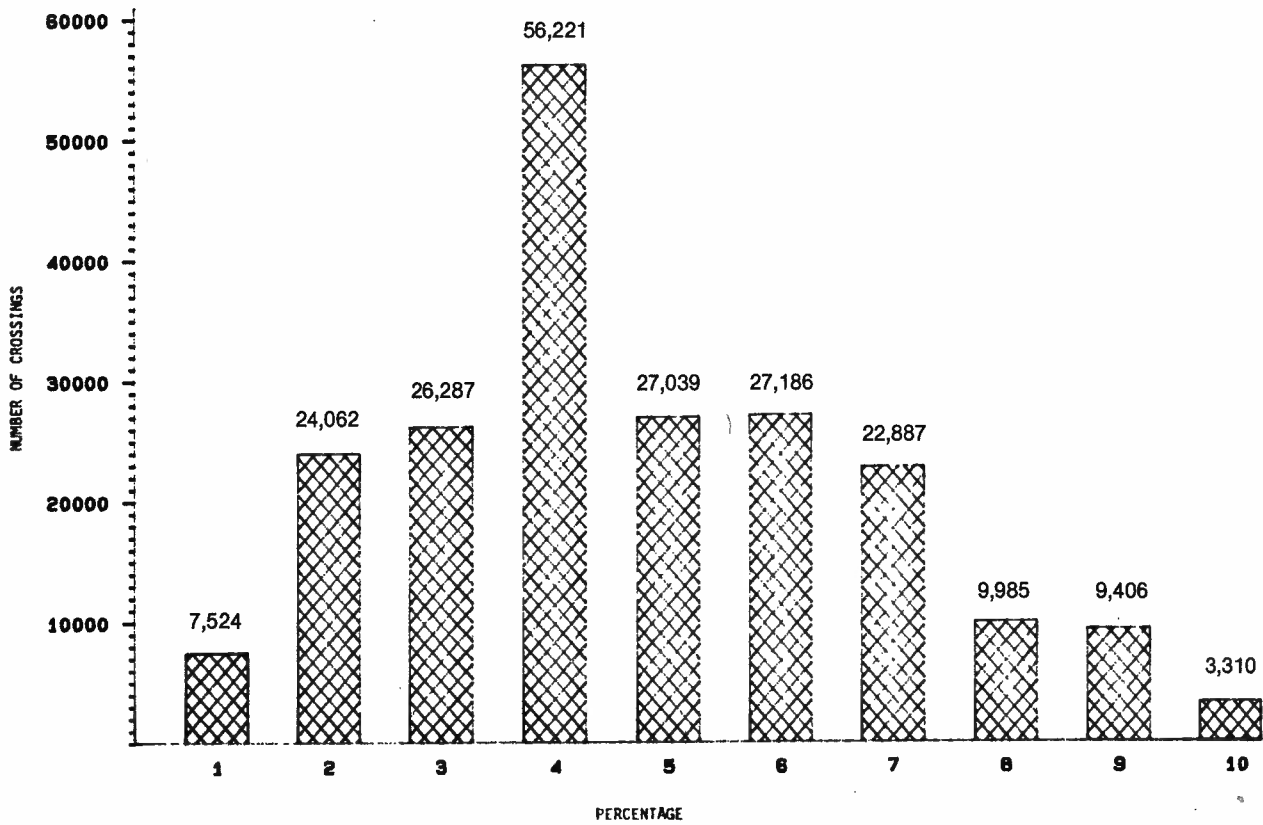


FIGURE 40 CROSSINGS BY TRUCK TRAFFIC AS A PERCENTAGE OF ANNUAL AVERAGE DAILY TRAFFIC

APPENDIX A: REPORTING REQUIREMENTS AND DEFINITIONS

ACCIDENT/INCIDENT REPORTABILITY REQUIREMENTS

The rules governing monthly reporting of railroad accidents/incidents in effect in 1981 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. 04-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) | |

6. 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 | |
| Kld | Inj | Kld | Inj | Kld | Inj | Kld | Inj | | Kld | Inj | Kld | Inj | Kld | Inj | Kld | 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: center;">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.) |
|------------------|-----------------------------|-----------------------------------|-----------------------------|

LOCATION

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

ENVIRONMENTAL CONDITIONS

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

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) | | 21. TRAIN NUMBER | | 22. TIME TABLE DIRECTION | | CODE |
| Est. MPH Recorded | | | | 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) | | CODE | 25. WAS THE EQUIPMENT IDENTIFIED IN ITEM 24 UNATTENDED? 1. Yes 2. No | | CODE | | | | | | | | | | |
| 26. TRACK NUMBER OR NAME | | 27. FRA TRACK CLASSIFICATION | | 28. ANNUAL TRACK DENSITY (gross tons in millions) | | 29. TYPE OF TRACK 1. Main 3. Siding 2. Yard 4. Industry | | CODE | | | | | | | | | |
| 30. PRINCIPLE CAR/UNIT (1) First Involved (derailed, struck, striking, etc.) (2) Causing (mechanical failures) | | 30a. Initial and Number | | 30b. Position in Train | | 30c. Loaded (yes or no) | | | | | | | | | | | |
| 31. LOCOMOTIVE UNITS (no. of) | | a. Head End | | Mid Train | | Rear End | | 32. CARS (no. of) | | Loaded | | Empty | | e. Caboose | | | |
| | | b. Manual | | c. Remote | | d. Manual | | e. Remote | | a. Freight | | b. Pass. | | c. Freight | | d. Pass. | |
| (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) | \$ |
|--|----|---|----|

ACCIDENT/INCIDENT CAUSE CODE

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

CASUALTIES

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

CREW (no. of)

| | | | | | | | | | | | |
|---------------|-------------|----------------|--------------|--------------|--|-------|--|---------------|--|-------|--|
| 41. ENGINEERS | 42. FIREMEN | 43. CONDUCTORS | 44. BRAKEMEN | 45. ENGINEER | | | | 46. CONDUCTOR | | | |
| | | | | Hrs: | | Mins: | | Hrs: | | Mins: | |

| | | |
|--------------------------|---------------|----------|
| 47. TYPED NAME AND TITLE | 48. SIGNATURE | 49. DATE |
|--------------------------|---------------|----------|

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 Autotrain | 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"/> |

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

ENVIRONMENT

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

TRAIN AND TRACK

| | | | |
|---|---|---|--------------------------------|
| 23. TYPE OF TRAIN 1. Freight 3. Mixed 5. Yard/Switching 2. Passenger 4. Work 6. Light Locomotive(s) | CODE | 24. TRACK TYPE USED BY TRAIN INVOLVED 1. Main 3. Siding 2. Yard 4. Industry | CODE |
| 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) MPH Recorded | 30. TIME TABLE DIRECTION 1. North 3. East 2. South 4. West | CODE |

CROSSING WARNING

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

MOTORIST ACTION

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

HIGHWAY VEHICLE PROPERTY DAMAGE/CASUALTIES

| | | |
|--|---|---|
| 40. HIGHWAY VEHICLE PROPERTY DAMAGE (est. dollar damage) | 41. DRIVER WAS 1. Killed 2. Injured 3. Uninjured CODE | 42. WAS DRIVER IN THE VEHICLE? 1. Yes 2. No CODE |
| 43. TOTAL NUMBER OF OCCUPANTS KILLED | 44. TOTAL NUMBER OF OCCUPANTS INJURED | 45. TOTAL NUMBER OF OCCUPANTS (include driver) CODE |

| | | |
|--|---------------|----------|
| 46. IS A RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT BEING FILED? 1. Yes 2. No | | |
| 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 SPAC.

State County
City Nearest City
RR Code Timetable Station

15. Pedestrian Crossing

16. Private Vehicle Crossing

17. Public Vehicle Crossing

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

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 timetable 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 | Other Stop Signs | Other Signs: Specify | |
|---------------|-------------------|----------------------------|------------------|----------------------|--------|
| reflectORIZED | non-reflectORIZED | | | 05 | 06 |
| 01 | 02 | 03 | 04 | 07 | 08 |
| Number | Number | Number | Number | Number | Number |

B. Train Activated Devices

| Gates | | Cantilevered Flashing Lights | | Mast Mounted Flashing Lights | Other Flashing Lights | Highway Traffic Signals | Wigwags | Bells | |
|---------------------------|---------------|------------------------------|-----------------------|------------------------------|-----------------------|-------------------------|---------|--------|---------|
| red & white reflectORIZED | other colored | over traffic lane | not over traffic lane | | | | | | Specify |
| 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| Number | Number | Number | Number | Number | Number | Number | Number | Number | Number |

C. Specify Special Warning Device not Train Activated

 19

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 1. Open Sp. 2. Res 3. Comm. 4. Ind. 5. Inst.

2. Smallest Crossing Angle 0°-29° 30°-59° 60°-90°

3. Number of Traffic Lanes Crossing Railroad

4. Are Truck Pullout Lanes Present? Yes No

5. Is Highway Paved Yes No

6. Pavement Markings Stoplines RR Xing Sym. None

7. Are RR Advance Warning Signs Present? Yes No

8. Crossing Surface 1. Sec. Timber 2. Full Wd. Plank 3. Asphalt 4. Concrete Slab
 5. Concrete Pave. 6. Rubber 7. Metal Sections 8. Other Meta
 9. Unconsolidated 0. Other Specify

9. Does Track Run Down A Street? Yes No

10. Nearby Intersecting Highway? Yes No

Part IV Highway Department Information

1. Highway System

2. Is Crossing on State Highway System? Yes No.

4. Estimate AADT

I.D. Number

3. Functional Classification of Road over Crossing

5. Estimate Percent Trucks

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 | 181 | NO | 8365 | NOT REPORTED | | | 0 | | |
| 2. WAS DRIVER IN VEHICLE? | | | | | | | | | |
| YES | 7424 | NO | 1038 | NOT REPORTED | | | 84 | | |
| 3. DRIVER WAS: | | | | | | | | | |
| KILLED | 450 | INJURED | 2056 | UNINJURED | 5962 | NOT REPORTED | 78 | | |
| 4. IS CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS? | | | | | | | | | |
| YES | 452 | NO | 6162 | NOT REPORTED | | | 1932 | | |
| 5. DIRECTION (GEOGRAPHICAL) OF HIGHWAY USER INVOLVED: | | | | | | | | | |
| NORTH | 2249 | SOUTH | 2147 | EAST | 2134 | WEST | 1988 | NOT REPORTED | 28 |
| 6. TRAIN TIMETABLE DIRECTION: | | | | | | | | | |
| NORTH | 1696 | SOUTH | 1748 | EAST | 2446 | WEST | 2616 | NOT REPORTED | 40 |

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

| | | | | |
|---|--------|----|--------|------------|
| LESS THAN ONE TRAIN PER DAY? | | | | |
| YES | 35214 | NO | 178691 | N/R 2 |
| DOES ANOTHER RAILROAD OPERATE A SEPARATE TRACK AT CROSSING? | | | | |
| YES | 5361 | NO | 208447 | N/R 99 |
| DOES ANOTHER RAILROAD OPERATE OVER YOUR TRACK AT CROSSING? | | | | |
| YES | 28168 | NO | 185609 | N/R 130 |
| IS TRACK EQUIPPED WITH ANY SIGNS OR SIGNALS? | | | | |
| YES | 199069 | NO | 14832 | N/R 6 |
| IS TRACK EQUIPPED WITH SIGNALS FOR TRAIN OPERATION? | | | | |
| YES | 59811 | NO | 153704 | N/R 392 |
| IS HIGHWAY PAVED? | | | | |
| YES | 144381 | NO | 69512 | N/R 14 |
| IS COMMERCIAL POWER AVAILABLE? | | | | |
| YES | 192724 | NO | 21068 | N/R 115 |
| DOES TRACK RUN DOWN A STREET? ¹ | | | | |
| YES | 6566 | NO | 198829 | N/R 8512 |
| NEARBY INTERSECTING HIGHWAY? ¹ | | | | |
| YES | 75491 | NO | 129814 | N/R 8602 |
| RR ADVANCE WARNING SIGNS PRESENT? | | | | |
| YES | 95091 | NO | 118788 | N/R 28 |
| ARE TRUCK PULLOUT LANES PRESENT? | | | | |
| YES | 2653 | NO | 211182 | N/R 72 |
| IS CROSSING ON STATE HIGHWAY SYSTEM? | | | | |
| YES | 32902 | NO | 180959 | N/R 46 |
| DOES CROSSING PROVIDE SPEED SELECTION? | | | | |
| YES | 6323 | NO | 74011 | N/A 133573 |

¹ NOT 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***** ¹ | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| ALABAMA | 15 | 0 | 9 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| ALASKA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARIZONA | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARKANSAS | 9 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CALIFORNIA | 17 | 0 | 2 | 1 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 0 |
| COLORADO | 9 | 1 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| CONNECTICUT | 1 | 0 | 1 | .3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| DELAWARE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| DIST. COLUMBIA | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FLORIDA | 5 | 0 | 3 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 |
| GEORGIA | 12 | 1 | 2 | 0 | 0 | 0 | 7 | 0 | 3 | 2 | 0 | 1 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| ILLINOIS | 12 | 0 | 5 | 1 | 0 | 0 | 9 | 0 | 1 | 4 | 0 | 2 |
| INDIANA | 12 | 1 | 1 | 1 | 0 | 0 | 5 | 0 | 0 | 2 | 0 | 0 |
| IOWA | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 |
| KANSAS | 6 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 1 | 2 | 0 | 0 |
| KENTUCKY | 19 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 1 | 0 |
| LOUISIANA | 21 | 1 | 7 | 2 | 0 | 1 | 10 | 0 | 3 | 2 | 0 | 1 |
| MAINE | 5 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 |
| MARYLAND | 1 | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 8 | 0 | 0 |
| MASSACHUSETTS | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MICHIGAN | 12 | 0 | 6 | 2 | 0 | 1 | 9 | 0 | 2 | 6 | 0 | 1 |
| MINNESOTA | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 |
| MISSISSIPPI | 8 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| MISSOURI | 17 | 0 | 2 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 |
| MONTANA | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEBRASKA | 8 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 3 | 5 | 0 | 0 |
| NEVADA | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 1 |
| NEW HAMPSHIRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW JERSEY | 2 | 0 | 1 | 2 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 0 |
| NEW MEXICO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| NEW YORK | 6 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 3 |
| NORTH CAROLINA | 10 | 2 | 7 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 1 |
| NORTH DAKOTA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OHIO | 16 | 0 | 2 | 1 | 0 | 0 | 10 | 0 | 2 | 5 | 0 | 1 |
| OKLAHOMA | 9 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 2 | 2 | 0 | 0 |
| OREGON | 10 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 1 |
| PENNSYLVANIA | 10 | 0 | 3 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 0 |
| RHODE ISLAND | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH CAROLINA | 8 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| SOUTH DAKOTA | 1 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| TENNESSEE | 5 | 1 | 3 | 0 | 0 | 0 | 7 | 0 | 3 | 2 | 0 | 0 |
| TEXAS | 44 | 4 | 15 | 1 | 0 | 0 | 16 | 0 | 1 | 11 | 0 | 4 |
| UTAH | 5 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 0 |
| VERMONT | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| VIRGINIA | 28 | 1 | 19 | 1 | 0 | 1 | 2 | 0 | 0 | 6 | 0 | 0 |
| WASHINGTON | 17 | 1 | 2 | 1 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 |
| WEST VIRGINIA | 27 | 4 | 7 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 |
| WISCONSIN | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| WYOMING | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 1 |
| TOTAL | 421 | 21 | 120 | 23 | 4 | 5 | 155 | 0 | 23 | 105 | 2 | 19 |

¹INCLUDES MIXED TRAINS, WORK TRAINS, AND LIGHT LOCOMOTIVES.

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 SIGS. WIGWAGS BELLS | SPECIAL ¹ | CROSS-BUCKS | STOP SIGNS | OTHER SIGNS | NO SIGNS OR SIGNALS | |
| ALABAMA | 0 | 2 | 1 | 1 | 5 | 0 | 0 | 8 | 17 |
| ALASKA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ARIZONA | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ARKANSAS | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 5 | 9 |
| CALIFORNIA | 0 | 4 | 2 | 1 | 5 | 9 | 1 | 4 | 26 |
| COLORADO | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 3 | 10 |
| CONNECTICUT | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 4 |
| DELAWARE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| DIST. COLUMBIA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| FLORIDA | 1 | 0 | 0 | 1 | 5 | 0 | 0 | 6 | 13 |
| GEORGIA | 0 | 2 | 1 | 1 | 5 | 0 | 0 | 12 | 21 |
| HAWAII | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| IDAHO | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 5 |
| ILLINOIS | 1 | 1 | 0 | 3 | 6 | 1 | 3 | 11 | 26 |
| INDIANA | 0 | 2 | 0 | 1 | 6 | 2 | 1 | 8 | 20 |
| IOWA | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 5 | 9 |
| KANSAS | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 4 | 10 |
| KENTUCKY | 0 | 2 | 0 | 1 | 3 | 0 | 2 | 16 | 24 |
| LOUISIANA | 0 | 0 | 0 | 3 | 15 | 4 | 1 | 12 | 35 |
| MAINE | 0 | 0 | 2 | 0 | 1 | 1 | 3 | 2 | 9 |
| MARYLAND | 1 | 0 | 3 | 1 | 7 | 0 | 0 | 3 | 15 |
| MASSACHUSETTS | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 3 |
| MICHIGAN | 1 | 9 | 0 | 1 | 3 | 3 | 1 | 11 | 29 |
| MINNESOTA | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 | 6 |
| MISSISSIPPI | 0 | 1 | 0 | 0 | 6 | 0 | 0 | 3 | 10 |
| MISSOURI | 0 | 1 | 0 | 2 | 5 | 0 | 0 | 13 | 21 |
| MONTANA | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 4 | 9 |
| NEBRASKA | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 12 | 17 |
| NEVADA | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 4 |
| NEW HAMPSHIRE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NEW JERSEY | 0 | 1 | 0 | 2 | 4 | 0 | 1 | 4 | 12 |
| NEW MEXICO | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| NEW YORK | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 9 | 14 |
| NORTH CAROLINA | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 9 | 17 |
| NORTH DAKOTA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OHIO | 0 | 5 | 4 | 1 | 4 | 1 | 1 | 16 | 32 |
| OKLAHOMA | 0 | 0 | 0 | 1 | 8 | 0 | 0 | 6 | 15 |
| OREGON | 0 | 0 | 5 | 0 | 7 | 2 | 0 | 4 | 18 |
| PENNSYLVANIA | 0 | 2 | 0 | 1 | 4 | 2 | 1 | 4 | 14 |
| RHODE ISLAND | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| SOUTH CAROLINA | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 2 | 11 |
| SOUTH DAKOTA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| TENNESSEE | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 8 | 14 |
| TEXAS | 1 | 2 | 0 | 5 | 38 | 0 | 0 | 26 | 72 |
| UTAH | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 4 | 10 |
| VERMONT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| VIRGINIA | 0 | 0 | 0 | 2 | 6 | 4 | 1 | 24 | 37 |
| WASHINGTON | 0 | 3 | 3 | 1 | 8 | 1 | 1 | 8 | 25 |
| WEST VIRGINIA | 0 | 1 | 0 | 0 | 8 | 2 | 1 | 22 | 34 |
| WISCONSIN | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 | 10 |
| WYOMING | 0 | 0 | 4 | 0 | 2 | 1 | 0 | 2 | 9 |
| TOTAL | 5 | 42 | 27 | 37 | 216 | 37 | 27 | 313 | 704 |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.

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

| TRAINS STRIKING OR BEING STRUCK BY: | **ACC/INC** | | ***KILLED*** | | **INJURED** | | INJURY ACC | FATAL ACC | INJ-IN-FATAL ACCIDENTS |
|--|-------------|--------|--------------|--------|-------------|--------|---------------|--------------|---------------------------|
| | NO. | % | NO. | % | NO. | % | | | |
| AUTOMOBILE | 346 | 46.19 | 15 | 48.39 | 92 | 53.49 | 61 | 14 | 11 |
| TRUCK | 221 | 29.51 | 10 | 32.26 | 52 | 30.23 | 40 | 8 | 0 |
| TRUCK TRAILER | 132 | 17.62 | 1 | 3.23 | 21 | 12.21 | 18 | 1 | 0 |
| BUS | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |
| SCHOOL BUS | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |
| MOTORCYCLE | 5 | 0.67 | 1 | 3.23 | 2 | 1.16 | 2 | 1 | 0 |
| PEDESTRIAN | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 |
| OTHER | 45 | 6.01 | 4 | 12.90 | 5 | 2.91 | 4 | 3 | 1 |
| TOTAL | 749 | 100.00 | 31 | 100.00 | 172 | 100.00 | 125 | 27 | 12 |

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

| WARNING DEVICE CATEGORY | ****TOTAL**** | | | DROVE AROUND OR **THRU GATE** | | | STOPPED AND THEN **PROCEEDED** | | | DID NOT ****STOP***** | | | ****OTHER**** | | | ***UNKNOWN*** | | |
|----------------------------------|---------------|-----|-----|----------------------------------|-----|-----|-----------------------------------|-----|-----|--------------------------|-----|-----|---------------|-----|-----|---------------|-----|-----|
| | 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 | 5 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| CANTILEVERED FLASHING LIGHTS | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| STANDARD FLASHING LIGHTS | 41 | 0 | 13 | 0 | 0 | 0 | 5 | 0 | 2 | 25 | 0 | 10 | 11 | 0 | 1 | 0 | 0 | 0 |
| HIGHWAY SIGNALS WIGWAGS OR BELLS | 27 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 12 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 |
| SPECIAL WARNING DEVICES | 37 | 0 | 4 | 0 | 0 | 0 | 10 | 0 | 1 | 22 | 0 | 2 | 3 | 0 | 0 | 2 | 0 | 1 |
| CROSSBUCKS | 216 | 7 | 53 | 0 | 0 | 0 | 23 | 2 | 6 | 105 | 5 | 30 | 78 | 0 | 14 | 10 | 0 | 3 |
| STOP SIGNS | 37 | 0 | 9 | 0 | 0 | 0 | 3 | 0 | 0 | 21 | 0 | 9 | 11 | 0 | 0 | 2 | 0 | 0 |
| OTHER SIGNS | 27 | 1 | 6 | 0 | 0 | 0 | 3 | 1 | 1 | 15 | 0 | 3 | 8 | 0 | 2 | 1 | 0 | 0 |
| NO SIGNS OR SIGNALS | 313 | 19 | 80 | 0 | 0 | 0 | 17 | 1 | 3 | 139 | 9 | 43 | 146 | 9 | 32 | 11 | 0 | 2 |
| TOTAL | 704 | 27 | 167 | 2 | 0 | 0 | 66 | 4 | 13 | 341 | 14 | 99 | 269 | 9 | 49 | 26 | 0 | 6 |

A/I = ACCIDENTS/INCIDENTS

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

| CIRCUMSTANCE AND TRAIN SPEED (MPH) | VISIBILITY | | | | | | | | | | | | | | |
|--|-----------------|-----|-----|----------------|-----|-----|---------------|-----|-----|----------------|-----|-----|----------------|-----|-----|
| | *****TOTAL***** | | | *****DAWN***** | | | *****DAY***** | | | *****DUSK***** | | | *****DARK***** | | |
| | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ | ACC/INC | KLD | INJ |
| S T R U C K B Y T R A I N | | | | | | | | | | | | | | | |
| STANDING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1-9 | 248 | 0 | 30 | 8 | 0 | 0 | 162 | 0 | 19 | 8 | 0 | 1 | 70 | 0 | 10 |
| 10-19 | 79 | 1 | 19 | 4 | 0 | 1 | 53 | 1 | 11 | 5 | 0 | 2 | 17 | 0 | 5 |
| 20-29 | 84 | 1 | 28 | 2 | 0 | 0 | 57 | 1 | 22 | 4 | 0 | 2 | 21 | 0 | 4 |
| 30-39 | 89 | 13 | 44 | 2 | 0 | 0 | 52 | 11 | 31 | 3 | 0 | 1 | 32 | 2 | 12 |
| 40-49 | 81 | 6 | 18 | 2 | 0 | 0 | 43 | 6 | 13 | 2 | 0 | 0 | 34 | 0 | 5 |
| 50-59 | 31 | 1 | 8 | 1 | 0 | 1 | 18 | 1 | 6 | 2 | 0 | 0 | 10 | 0 | 1 |
| 60-69 | 11 | 4 | 3 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 | 0 | 5 | 1 | 2 |
| 70-79 | 9 | 1 | 1 | 0 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 |
| 80-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 AND OVER | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TOTAL | 634 | 27 | 151 | 19 | 0 | 2 | 397 | 24 | 104 | 25 | 0 | 6 | 193 | 3 | 39 |
| R A N I N T O T R A I N | | | | | | | | | | | | | | | |
| STANDING | 6 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| 1-9 | 38 | 0 | 6 | 0 | 0 | 0 | 19 | 0 | 2 | 2 | 0 | 0 | 17 | 0 | 4 |
| 10-19 | 14 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 |
| 20-29 | 8 | 0 | 4 | 0 | 0 | 0 | 6 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 1 |
| 30-39 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40-49 | 2 | 0 | 2 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50-59 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 60-69 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 70-79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 80-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 AND OVER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 70 | 0 | 16 | 2 | 0 | 2 | 40 | 0 | 5 | 3 | 0 | 0 | 25 | 0 | 9 |
| G R A N D T O T A L | | | | | | | | | | | | | | | |
| STANDING | 6 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| 1-9 | 286 | 0 | 36 | 8 | 0 | 0 | 181 | 0 | 21 | 10 | 0 | 1 | 87 | 0 | 14 |
| 10-19 | 93 | 1 | 22 | 4 | 0 | 1 | 63 | 1 | 11 | 5 | 0 | 2 | 21 | 0 | 8 |
| 20-29 | 92 | 1 | 32 | 2 | 0 | 0 | 63 | 1 | 25 | 5 | 0 | 2 | 22 | 0 | 5 |
| 30-39 | 91 | 13 | 44 | 3 | 0 | 0 | 53 | 11 | 31 | 3 | 0 | 1 | 32 | 2 | 12 |
| 40-49 | 83 | 6 | 20 | 3 | 0 | 2 | 44 | 6 | 13 | 2 | 0 | 0 | 34 | 0 | 5 |
| 50-59 | 31 | 1 | 8 | 1 | 0 | 1 | 18 | 1 | 6 | 2 | 0 | 0 | 10 | 0 | 1 |
| 60-69 | 11 | 4 | 3 | 0 | 0 | 0 | 5 | 3 | 1 | 1 | 0 | 0 | 5 | 1 | 2 |
| 70-79 | 9 | 1 | 1 | 0 | 0 | 0 | 6 | 1 | 1 | 0 | 0 | 0 | 3 | 0 | 0 |
| 80-89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 AND OVER | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNKNOWN | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| TOTAL | 704 | 27 | 167 | 21 | 0 | 4 | 437 | 24 | 109 | 28 | 0 | 6 | 218 | 3 | 48 |

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

| | WARNING DEVICE CATEGORY | | | | | | | | TOTAL | |
|---|-------------------------|---|--------------------------------|-------------------------------|----------------------|-----------------|---------------|----------------|-------|---------------------------|
| | GATES | CANTI- LEVERED FLASHING LIGHTS | STANDARD FLASHING LIGHTS | HWY. SIG. WIGWAGS BELLS | SPECIAL ¹ | CROSS- BUCKS | STOP SIGNS | OTHER SIGNS | | NO SIGNS OR SIGNALS |
| CLASS I RAILROAD | | | | | | | | | | |
| ALABAMA GREAT SOUTHERN RAILROAD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| AMTRAK ² | 0 | 0 | 1 | 0 | 0 | 4 | 3 | 2 | 6 | 16 |
| ATCHISON, TOPEKA & SANTA FE | 0 | 0 | 2 | 0 | 0 | 12 | 1 | 1 | 5 | 21 |
| BALTIMORE & OHIO RAILWAY | 0 | 0 | 1 | 0 | 1 | 3 | 2 | 1 | 10 | 18 |
| BESSEMER & LAKE ERIE RAILROAD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| BOSTON & MAINE CORPORATION | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| BURLINGTON NORTHERN | 0 | 0 | 6 | 14 | 6 | 25 | 1 | 2 | 44 | 98 |
| CENTRAL OF GEORGIA RAILROAD | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| CHESAPEAKE & OHIO RAILWAY | 0 | 0 | 1 | 0 | 2 | 5 | 4 | 2 | 14 | 28 |
| CHICAGO & NORTH WESTERN | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 6 |
| CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 2 | 7 |
| CINN., NEW ORLEANS & TEXAS PACIFIC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| CLINCHFIELD RAILROAD | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| COLORADO & SOUTHERN RAILWAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| CONSOLIDATED RAIL CORPORATION | 0 | 0 | 10 | 0 | 6 | 10 | 9 | 4 | 39 | 78 |
| DELAWARE & HUDSON RAILWAY | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| DENVER & RIO GRANDE WESTERN | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 1 | 9 |
| DETROIT, TOLEDO & Ironton | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| DULUTH, MISSABE & IRON RANGE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ELGIN, JOLIET & EASTERN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| FLORIDA EAST COAST RAILWAY | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| FORT WORTH & DENVER RAILWAY | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 |
| GRAND TRUNK WESTERN | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 7 | 10 |
| ILLINOIS CENTRAL GULF RAILROAD | 0 | 0 | 0 | 0 | 3 | 11 | 1 | 1 | 7 | 23 |
| KANSAS CITY SOUTHERN RAILWAY | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 5 |
| LONG ISLAND RAIL ROAD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LOUISIANA & ARKANSAS RAILWAY COMPANY | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 3 |
| LOUISVILLE & NASHVILLE | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 1 | 11 | 18 |
| MISSOURI-KANSAS-TEXAS RAILROAD | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 5 | 9 |
| MISSOURI PACIFIC RAILROAD | 0 | 0 | 0 | 0 | 4 | 21 | 1 | 0 | 27 | 53 |
| NORFOLK & WESTERN RAILWAY | 1 | 0 | 1 | 0 | 1 | 10 | 2 | 1 | 43 | 59 |
| PITTSBURGH & LAKE ERIE RAILROAD | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| ST. LOUIS SOUTHWESTERN RAILWAY | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 5 |
| SEABOARD COAST LINE RAILROAD | 1 | 0 | 0 | 1 | 2 | 20 | 0 | 0 | 13 | 37 |
| SOO LINE | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 |
| SOUTHERN PACIFIC TRANSPORTATION COMPANY | 0 | 0 | 5 | 1 | 2 | 15 | 8 | 0 | 13 | 44 |
| SOUTHERN RAILWAY | 0 | 0 | 4 | 0 | 3 | 12 | 0 | 0 | 16 | 35 |
| UNION PACIFIC RAILROAD | 0 | 0 | 0 | 0 | 1 | 11 | 2 | 14 | 14 | 28 |
| WESTERN MARYLAND RAILWAY | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| WESTERN PACIFIC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| TOTAL CLASS I RAILROADS | 4 | 1 | 35 | 17 | 34 | 187 | 32 | 21 | 294 | 625 |
| CLASS II & III RAILROADS | 1 | 0 | 6 | 10 | 3 | 29 | 5 | 6 | 19 | 79 |
| TOTAL | 5 | 1 | 41 | 27 | 37 | 216 | 37 | 27 | 313 | 704 |

¹ SPECIAL WARNING DEVICE NOT TRAIN ACTIVATED, E.G. CROSSING FLAGGED BY TRAIN CREW.
² AMTRAK AND AUTOTRAIN ACCIDENTS HAVE BEEN EXCLUDED IN ALL OTHER TABLES. THESE ACCIDENTS ARE REPORTED BY AMTRAK AND AUTOTRAIN AND BY THE OPERATING CARRIER. IN THIS TABLE THEY ARE INCLUDED IN THE DETAIL LINES BUT EXCLUDED IN THE RECAPITULATION.

KEYWORD INDEX

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| 9 | by railroad |
| 4,7,14,15, 19,34 | by type of motor vehicle |
| 9,10,26,28, 29 | by warning device |
| | rail-highway crossings |
| 49,51,56, 58,60,63, 66,67,68 | by state |
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| 28,31 | by time of day |