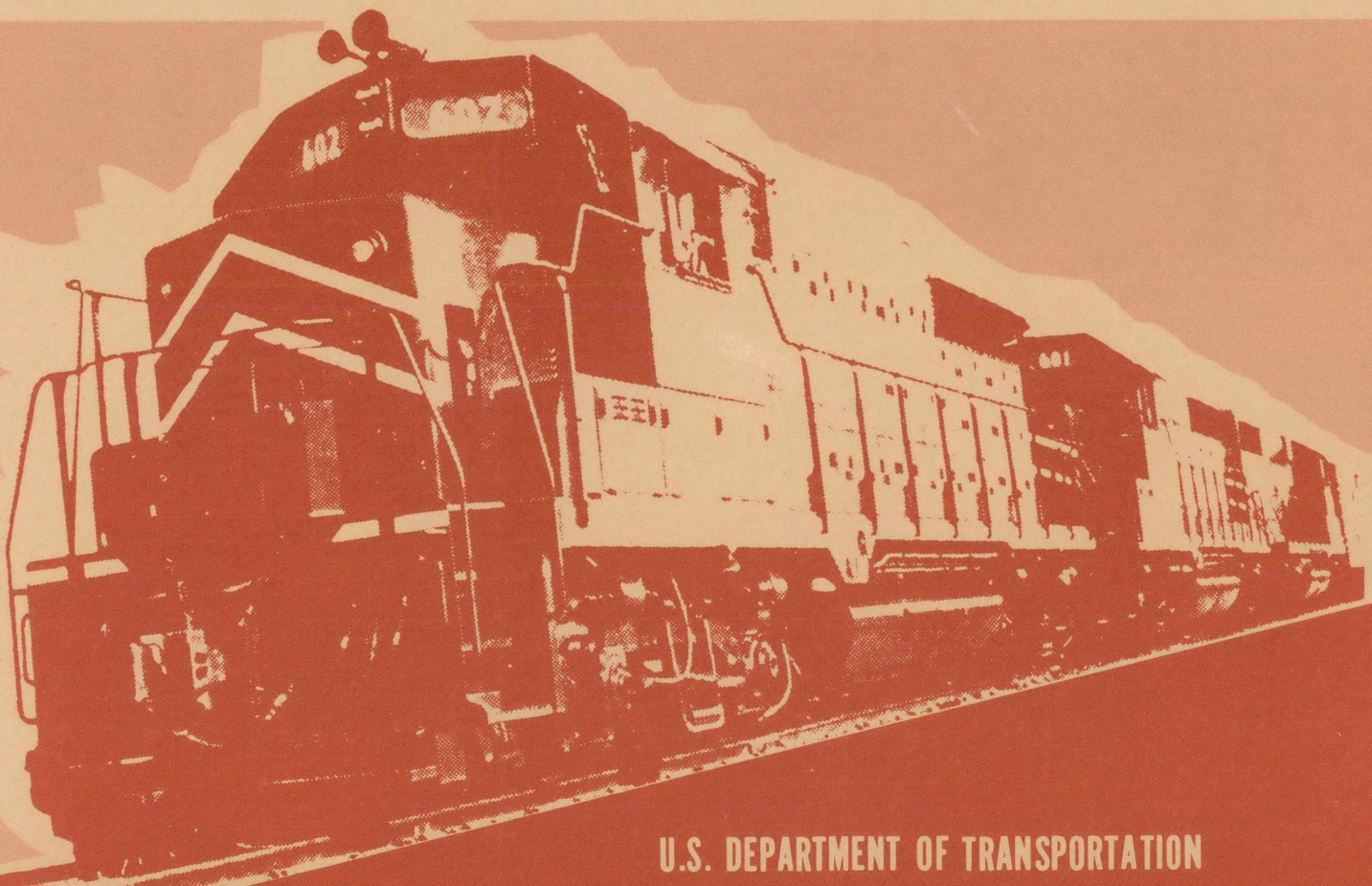


# ACCIDENT/INCIDENT BULLETIN

No. 147

Calendar Year 1978



U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL RAILROAD ADMINISTRATION  
OFFICE OF SAFETY



OCTOBER 1979

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The Federal Railroad Administration's Office of Safety wishes to solicit the opinions of the recipients of its annual Accident/Incident Bulletin as to how this publication can be improved. Please complete the following questionnaire and return it as soon as possible. By so doing you will greatly contribute to the ongoing effort to improve the FRA's information reporting services.

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1. Do you feel that the Accident/Incident Bulletin in its present form is generally satisfactory and requires no major modifications or improvements?  
 Yes  No

2. If your answer to Question 1 is No, please check which of the following statements represent your views on the Accident/Incident Bulletin (you may check more than one box).

a. The Bulletin often contains inaccurate, misleading and/or inconsistent data.

b. The Bulletin's data tables are poorly designed and difficult to read and interpret.

c. Important categories of accident/incident data are not reported in the Bulletin.

d. Additional interpretation and analysis of data is needed (e.g. trends, risks, projections).

e. The publication cycle of the Bulletin is such that the information it contains is not sufficiently current.

f. The Bulletin would be greatly improved through the use of histograms, pie charts and other graphical displays.

3. Please check which of the following terms most accurately describes the level of use within your organization of the Accident/Incident Bulletin:

Rarely Used  Occasionally Used  Often Used  Heavily Used

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\_\_\_\_\_  
\_\_\_\_\_

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5. Would you be willing to participate in a telephone interview during which your views on the Accident/Incident Bulletin would be more thoroughly discussed:  
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## INTRODUCTION

In accordance with 49 CFR 225, all railroads are required to file monthly accident/incident reports with the Office of Safety, Federal Railroad Administration (FRA). This Bulletin covers all reported accidents/incidents within the United States, including those accidents/incidents reportable by Canadian railroads while operating in U.S. territory. Beginning with this issue, the definition specifically excludes rapid transit railways. Unless the title of a table indicates otherwise, each table covers all U.S. railroads of Classes I, II, and III. Appendix A contains lists of railroads of Classes I and II.

The purpose of reporting to the FRA the occupational illness of employees, damage to railroad equipment and structures, and injury to persons arising from the operation of a railroad, is to carry out the intent of Congress as expressed in the Federal Railroad Safety Act of 1970 (PL-91-458) and the Accident Reports Act, as amended (45 USC-38-43), namely the identification of hazards arising in providing carrier transportation by rail.

A direct comparison of data from 1975 and later years with data from previous years is not feasible due to major revisions in reporting requirements effective January 1, 1975. These major changes are in the following categories: Railroad Equipment Accidents/Incidents, Fatalities, Occupational Injuries, and Occupational Illnesses. Due to the scope of these changes, it is felt that data collected during 1975 may be somewhat understated. (See Appendix C for a definition of these revisions.)

The reporting forms and guide used to complete accident/incident reports is reviewed every two years to locate areas where improvements can be made. In 1976 it was determined that in many instances, the cause and occurrence codes being used were not specific enough to accurately describe the accident/incident which had occurred. After a thorough examination new codes were added and others were redefined prior to the release of the 1977 reporting instructions. Totals for major code groupings have not been significantly affected by these changes. However, care should be taken when making comparisons of individual codes used in 1977 and 1978 with those used in 1975 and 1976.

Due to the fact that more than one person can be injured in a single railroad accident/incident, and because certain accidents/incidents are reportable even though they result in no personal casualty, the total number of accidents and casualties shown in accident tables may differ. When a table is concerned solely with occupational illnesses, it is so noted in the table heading. In those tables where injuries and illnesses are combined, the heading of "Nonfatal Casualties" is used. Nonfatal illnesses are included in the injury data of this publication, unless otherwise noted.

Tables and data pertaining to Rail Rapid Transit have been removed from the 1978 Bulletin. The Urban Mass Transportation Administration is publishing a separate summary covering rapid transit systems starting with 1978.

Some tables and data relating to rail-highway crossing accidents/incidents are omitted from this Accident/Incident Bulletin. The omitted data is fully covered by the separate FRA bulletin entitled "Rail-Highway Crossing Accident/Incident and Inventory Bulletin No. 1, Calendar Year 1978", which has been expanded and revised in format.

The structure of the 1978 Accident/Incident Bulletin has been revised from that used in earlier years. The general three-fold division of tables has been retained (historical, summary for all railroads, and breakdown by specific railroads) but within each division the tables have been rearranged into a logical structural sequence:

Operations

Accidents/Incidents

Numbers

Train accident

Train incident

Nontrain incident

Causes

Operating practices

Mechanical and electrical

Track, roadbed and structure

Miscellaneous causes

Accidents with hazardous material present

Casualties

Killed

Injured

Nonfatal illness

Property damage

To achieve this ordering it has been necessary to relocate many of the tables and in a few cases to adopt more descriptive titles. New table numbers have been assigned to all tables, consisting of a sequential numeric prefixed by a letter H, S, or R to indicate in which major section the table is located (Historical, Summary for all railroads, or Railroad breakdown). To assist users in correlating these tables with similar tables in the 1977 and prior Accident/Incident Bulletins, a bridge between old and new numbers is supplied in Appendix D. That Appendix also serves as a pointer to scattered tables which contain data on topics which are not specific categories of the Bulletin such as distribution by month, by state, by class of track, etc.

Reportability requirements, classifications and definitions used in this Bulletin are contained in 49 CFR 225, in the FRA Guide for Preparing Accident/Incident Reports, and in Appendix C.

## **1.0 SUMMARY FOR 1978**

## 1.1 Operations

Certain gross operating statistics for U.S. Railroads are reported in Table H 1 and displayed graphically in Figure 1. Over the last three years, there has been a remarkable stability to the operational background as expressed in terms of man hours, motor train miles, yard switching miles, locomotive miles, and total train miles. No significant trends are found for changes in these overall operating measures.

## 1.2 Accidents/Incidents

Railroad accidents/incidents are reported in three categories: train accidents, train incidents, and nontrain incidents. (See Appendix C for definitions.)

The number of events in each category during 1978 are as follows:

|                    |        |
|--------------------|--------|
| Train Accidents    | 11,277 |
| Train Incidents    | 14,918 |
| Nontrain Incidents | 55,391 |
| Total              | 81,586 |

### 1.2.1 Train Accidents

There were 11,277 train accidents in 1978, of which 286 were classified as rail-highway crossing accidents. The comparison of 1978 is as follows:

|  | <u>1978</u> | <u>1977</u> | <u>Change</u> |
|--|-------------|-------------|---------------|
| Train Accidents                              | 11,277      | 10,362      | +8.8%         |
| Train Accidents per<br>Million Train Miles   | 15.00       | 13.82       | +8.5%         |
| Non Rail-Highway Crossing<br>Train Accidents | 10,991      | 10,040      | +9.5%         |

Reportable train accidents tend to occur more frequently at lower speeds and at lower FRA ratings of track class (as defined by 49 CFR 213). Analogous, though less pronounced, effects will be exhibited for property damage in Section 1.4.

### 1.2.2 Train Incidents

There were 14,918 train incidents in 1978, of which 3,706 (or 24.8%) were rail-highway crossing incidents. In 1977 the rail-highway crossing incidents constituted 3,975 (or 27.2%) of the train incidents for that year.

### 1.2.3 Nontrain Incidents

There were 55,391 nontrain incidents in 1978, as compared with 51,601 in 1977.

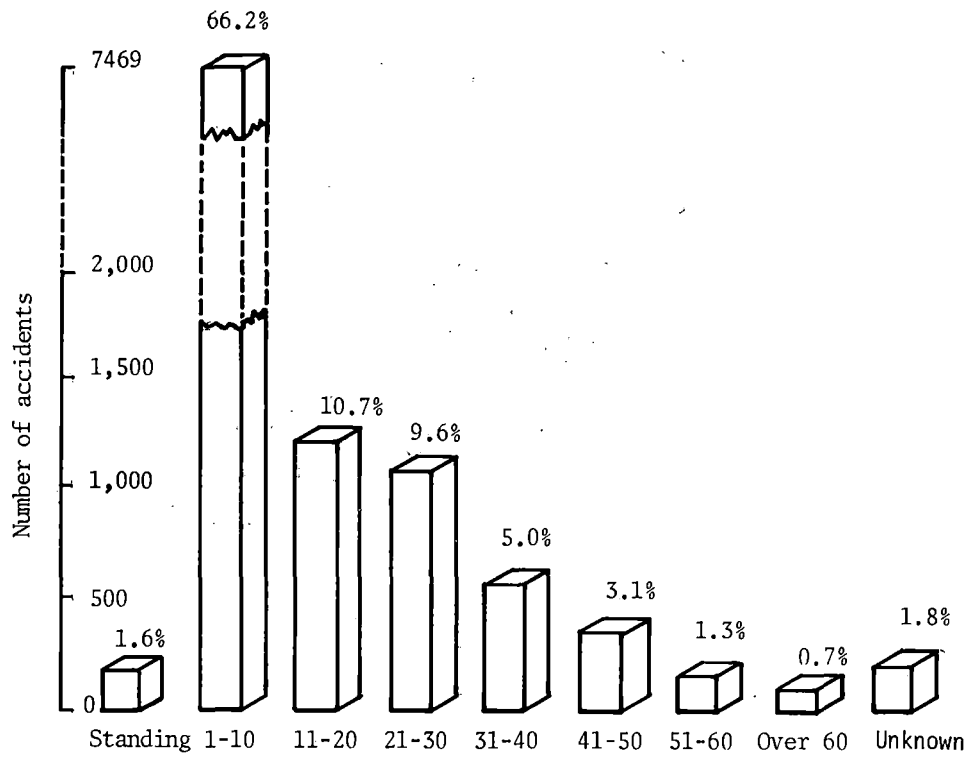


FIGURE A. DISTRIBUTION OF NUMBER OF REPORTABLE ACCIDENTS BY SPEED (mph), 1978

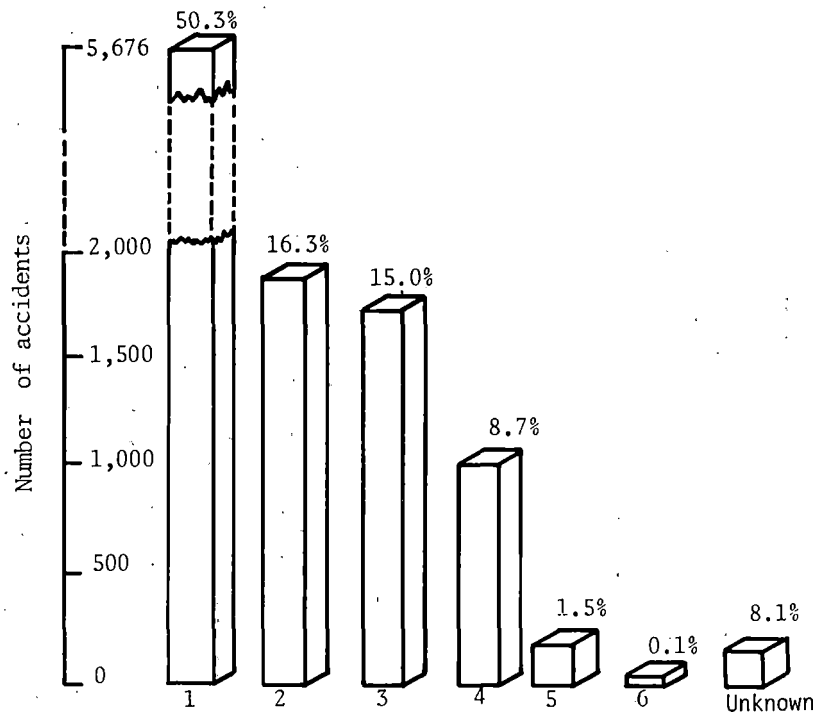


FIGURE B. DISTRIBUTION OF NUMBER OF REPORTABLE ACCIDENTS BY CLASS OF TRACK, 1978

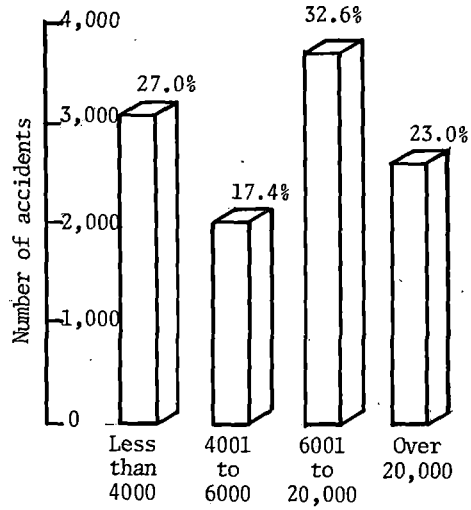


FIGURE C. DISTRIBUTION OF NUMBER OF REPORTABLE ACCIDENTS BY REPORTABLE DOLLAR DAMAGE, 1978

NOTE: DAMAGE LESS THAN \$2300 IS NOT REPORTED

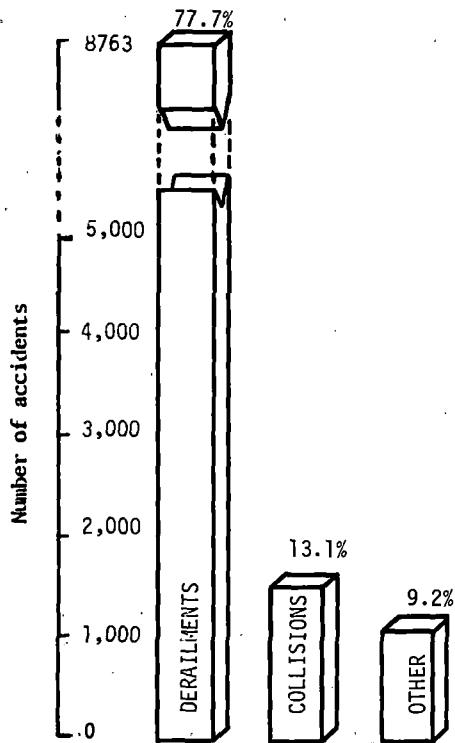


FIGURE D. DISTRIBUTION OF TRAIN ACCIDENTS BY CLASS, 1978

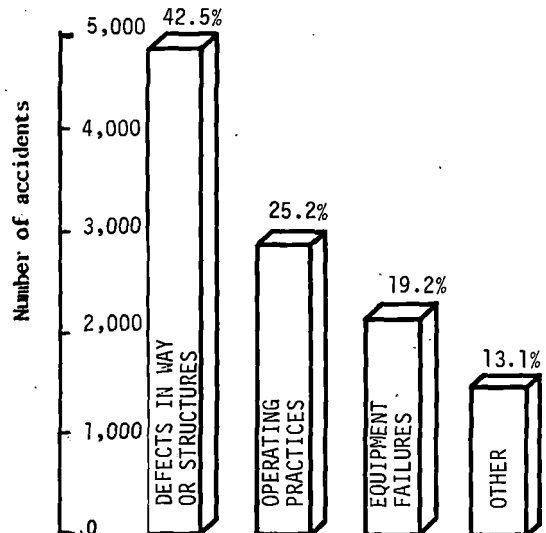


FIGURE E. DISTRIBUTION OF TRAIN ACCIDENTS BY CAUSE, 1978



### 1.3 Casualties

During 1978, casualties occurred as follows:

|                                    | <u>Killed</u> | <u>Injured</u> | <u>Nonfatal<br/>Illness</u> | <u>Total</u> |
|------------------------------------|---------------|----------------|-----------------------------|--------------|
| Train Accidents <sup>1</sup>       | 61            | 1,646          | 15                          | 1,722        |
| Train Incidents <sup>1</sup>       | 457           | 10,741         | 216                         | 11,414       |
| Nontrain Incidents <sup>1</sup>    | 64            | 53,966         | 1,513                       | 55,543       |
| Rail-Highway Crossing <sup>2</sup> | 1,064         | 4,447          | 1                           | 5,512        |
| Total                              | 1,646         | 70,800         | 1,745                       | 74,191       |

<sup>1</sup>Rail-highway crossing casualties not included.

<sup>2</sup>Includes casualties occurring at both public and private crossings.

For more detailed analysis of highway crossing accidents, reference may be made to the new FRA publication, "Rail-Highway Crossing Accident/Incident and Inventory Bulletin No. 1, Calendar Year 1978".

#### 1.3.1 Types of Persons

In this subsection, the casualties are broken down to show distribution among different types of persons. The presentation is still summary, and more detailed breakdowns are available from the tables.

After subtracting rail-highway crossing casualties, the distribution of casualties is shown in the following matrix.

CASUALTIES, 1978  
MATRIX FOR TYPES OF PERSONS

| Type of person                   | Train Accidents <sup>1</sup> |       |     | Train Incidents <sup>1</sup> |        |     | Nontrain Incidents <sup>1</sup> |        |       | Rail-Highway Crossing |       |     | Total |        |       |
|----------------------------------|------------------------------|-------|-----|------------------------------|--------|-----|---------------------------------|--------|-------|-----------------------|-------|-----|-------|--------|-------|
|                                  | K                            | I     | NFI | K                            | I      | NFI | K                               | I      | NFI   | K                     | I     | NFI | K     | I      | NFI   |
| Employee on Duty                 | 27                           | 625   | 15  | 50                           | 10,016 | 216 | 42                              | 52,491 | 1,509 | 3                     | 198   | 1   | 122   | 63,330 | 1,741 |
| Employee Not on Duty             | 1                            | 4     | -   | 1                            | 11     | -   | 4                               | 699    | 4     | 3                     | 5     | -   | 9     | 719    | 4     |
| Passenger on Train               | 4                            | 825   | -   | 9                            | 175    | -   | -                               | 234    | -     | -                     | 18    | -   | 13    | 1,252  | -     |
| Nontrespasser                    | 24                           | 183   | -   | 10                           | 85     | -   | 5                               | 438    | -     | 969                   | 4,010 | -   | 1,008 | 4,716  | -     |
| Trespasser                       | 5                            | 7     | -   | 386                          | 451    | -   | 12                              | 73     | -     | 89                    | 215   | -   | 492   | 746    | -     |
| Contractor Employee <sup>2</sup> | -                            | 2     | -   | 1                            | 3      | -   | 1                               | 31     | -     | -                     | 1     | -   | 2     | 37     | -     |
| Total                            | 61                           | 1,646 | 15  | 457                          | 10,741 | 216 | 64                              | 53,966 | 1,513 | 1,064                 | 4,447 | 1   | 1,646 | 70,800 | 1,745 |

<sup>1</sup>After subtracting rail-highway crossing casualties.

<sup>2</sup>Contractor employees have been treated as "nontrespassers" in other Tables.

K: Killed  
I: Injured  
NFI: Nonfatal illness

## 1.4 Property Damage

In 1978, accidents accounted for a total of \$304,951,427 reportable property damage. (See Appendix C for definition of property damage for reporting purposes.)

Total reported 1978 property damage is 9.1% higher than the corresponding figure reported for 1977. This is due at least in part to inflationary increase in value and to the adjustment of the reporting threshold on an alternate year basis.

Reported damage tends to be concentrated in the lower speed ranges and the lower FRA track classes. This is somewhat similar to the effect of reportable accidents as shown in Section 1.2.1.

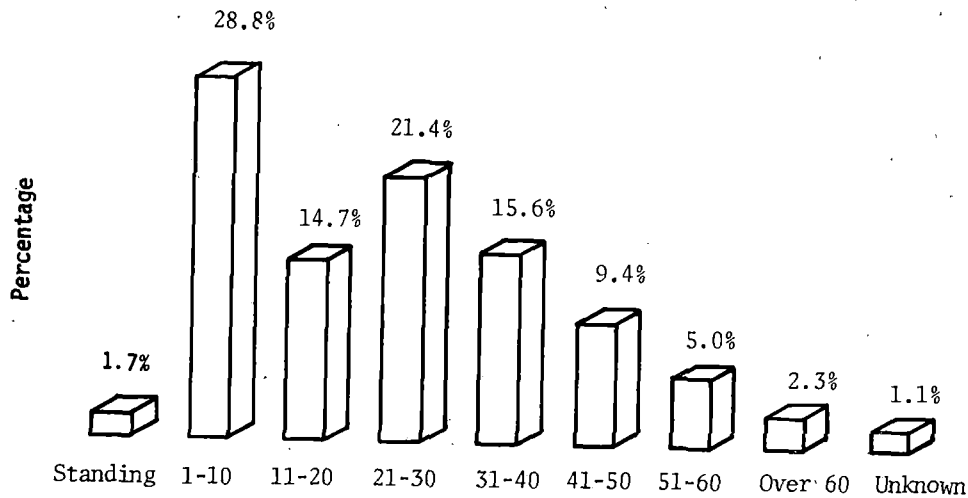


FIGURE F. DISTRIBUTION OF REPORTED DAMAGE BY SPEED (mph), 1978

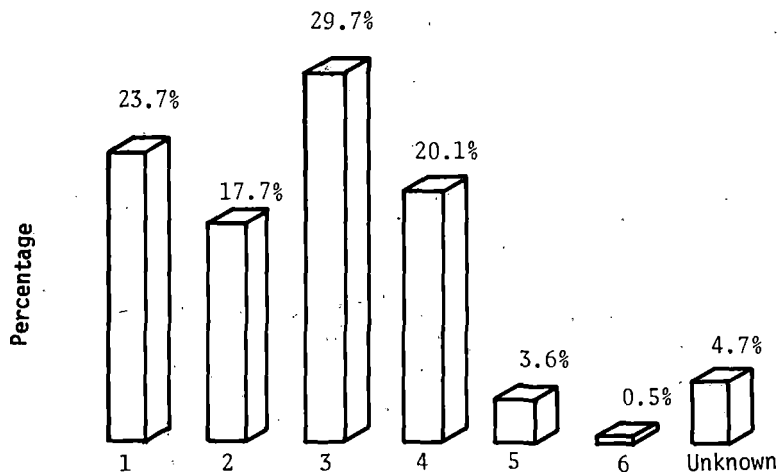


FIGURE G. DISTRIBUTION OF REPORTED DAMAGE BY CLASS OF TRACK, 1978

## 1.5 Hazardous Material Accidents

Because of the attention focused on accidents involving trains which contain one or more cars carrying hazardous materials, a summary is presented for the calendar years 1977 and 1978. Considerably more detail is contained in the tables in later sections. (See Appendix D for references to hazardous materials.)

### TRAIN ACCIDENTS IN WHICH THE PRESENCE OF HAZARDOUS MATERIAL WAS INDICATED<sup>1</sup>

|   | <u>1978</u> | <u>1977</u> |
|---|-------------|-------------|
| CONSISTS<br>CARRYING                          | 1,035       | 864         |
| TOTAL CARS<br>IN CONSISTS                     | 73,324      | 60,838      |
| CARS<br>CARRYING                              | 4,944       | 3,848       |
| CARS<br>RELEASING                             | 232         | 173         |
| ESTIMATED<br>NUMBER OF<br>PEOPLE<br>EVACUATED | 26,000      | 14,000      |

<sup>1</sup>The presence or release of hazardous materials is not a basis for reporting. These accidents were reported based on a dollar damage threshold.

## 1.6 Societal Impact

It is useful to have a single measure which combines the effects of fatality, injury and property damage plus the additional costs of damage to lading and clearing the wreck.

By adapting the methodology of the National Highway Traffic Safety Administration (NHTSA) to the FRA Railroad Accident/Incident Reporting System (RAIRS), a formula has been developed for estimating the total societal cost of railroad accidents/incidents:

$$\begin{aligned}
\text{Societal cost} = & (\text{number of employee fatalities}) \times \$262,000 \\
& + (\text{number of non-employee fatalities}) \times \$198,000 \\
& + (\text{number of employee days lost}) \times \$114 \\
& + (\text{average days lost per employee injury}) \times \\
& (\text{number of non-employee injuries}) \times \$96 \\
& + (\text{railroad reported property damage}) \times 2 \times \\
& \text{inflation adjustment factor}
\end{aligned}$$

The quantities in parenthesis are available from the RAIRS Data Base. The estimated unit costs of non-employee casualties (\$198,000 and \$96) were taken from the NHTSA study<sup>1</sup>, and the estimated unit cost of employee casualties (\$262,000 and \$114) were computed by replacing national average salaries by railroad average salaries<sup>2</sup>. The factor of two in the last item, to include the damage to lading and cost of clearing the wreck, was developed from a study by CONSAD<sup>3</sup>; the associated inflation adjustment factor to 1975 dollars is obtained from AAR wage and price indices<sup>2</sup>.

Applying this formula to 1978 railroad accidents/incidents, the overall importance to society was found to be distributed as shown below.

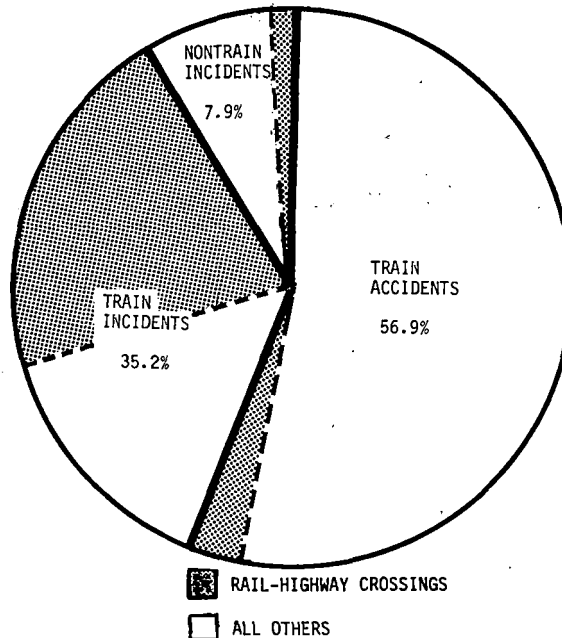


FIGURE H. SOCIETAL IMPACT BY CATEGORY OF ACCIDENTS/INCIDENTS, 1978

1. The Societal Costs of Motor Vehicle Accidents-1975, NHTSA, USDOT, Washington, D.C., December, 1976
2. Yearbook of Railroad Facts, Economics and Finance Dept., Association of American Railroads, Washington, D.C. 20036; published annually
3. A Methodology for Evaluating the Economic Impacts of Applying Railroad Safety Standards, CONSAD Research Corporation, Contract DOT-FR-20047, USDOT, Washington, D.C., October 1974

## **2.0 HISTORICAL TRENDS, 1976-1978**

TABLE H1. RAILROAD OPERATIONAL PROFILE, 1976-1978

| Year | Man Hours<br>a<br>(000,000) | Motor Train Miles<br>b<br>(000) | Yard Switching Miles<br>c<br>(000) | Locomotive Miles<br>d<br>(000) | Total Train Miles<br>(b+c+d)<br>(000) |
|------|-----------------------------|---------------------------------|------------------------------------|--------------------------------|---------------------------------------|
| 1976 | 1,046                       | 65,989                          | 217,363                            | 491,411                        | 744,763                               |
| 1977 | 1,053                       | 32,419                          | 218,544                            | 499,079                        | 750,042                               |
| 1978 | 1,056                       | 32,279                          | 214,498                            | 505,187                        | 751,964                               |

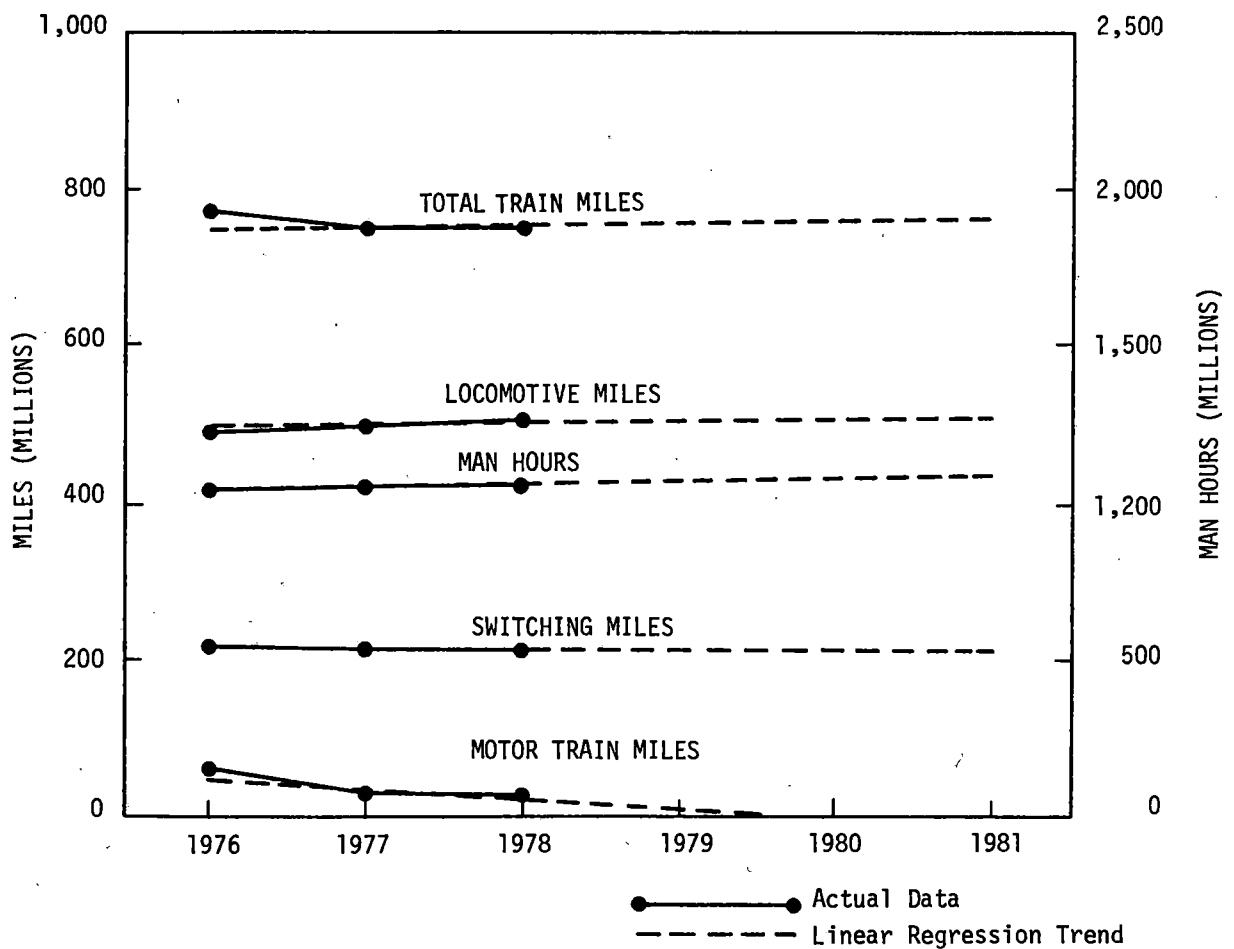


FIGURE I. RAILROAD OPERATIONAL PROFILE, 1976-1978

TABLE H2. RAILROAD ACCIDENTS/INCIDENTS, 1976-1978

| Year | Train Accidents | Train Incidents | Nontrain Incidents | Total  |
|------|-----------------|-----------------|--------------------|--------|
| 1976 | 10,248          | 12,303          | 50,532             | 73,083 |
| 1977 | 10,362          | 14,611          | 51,601             | 76,574 |
| 1978 | 11,277          | 14,918          | 55,391             | 81,586 |

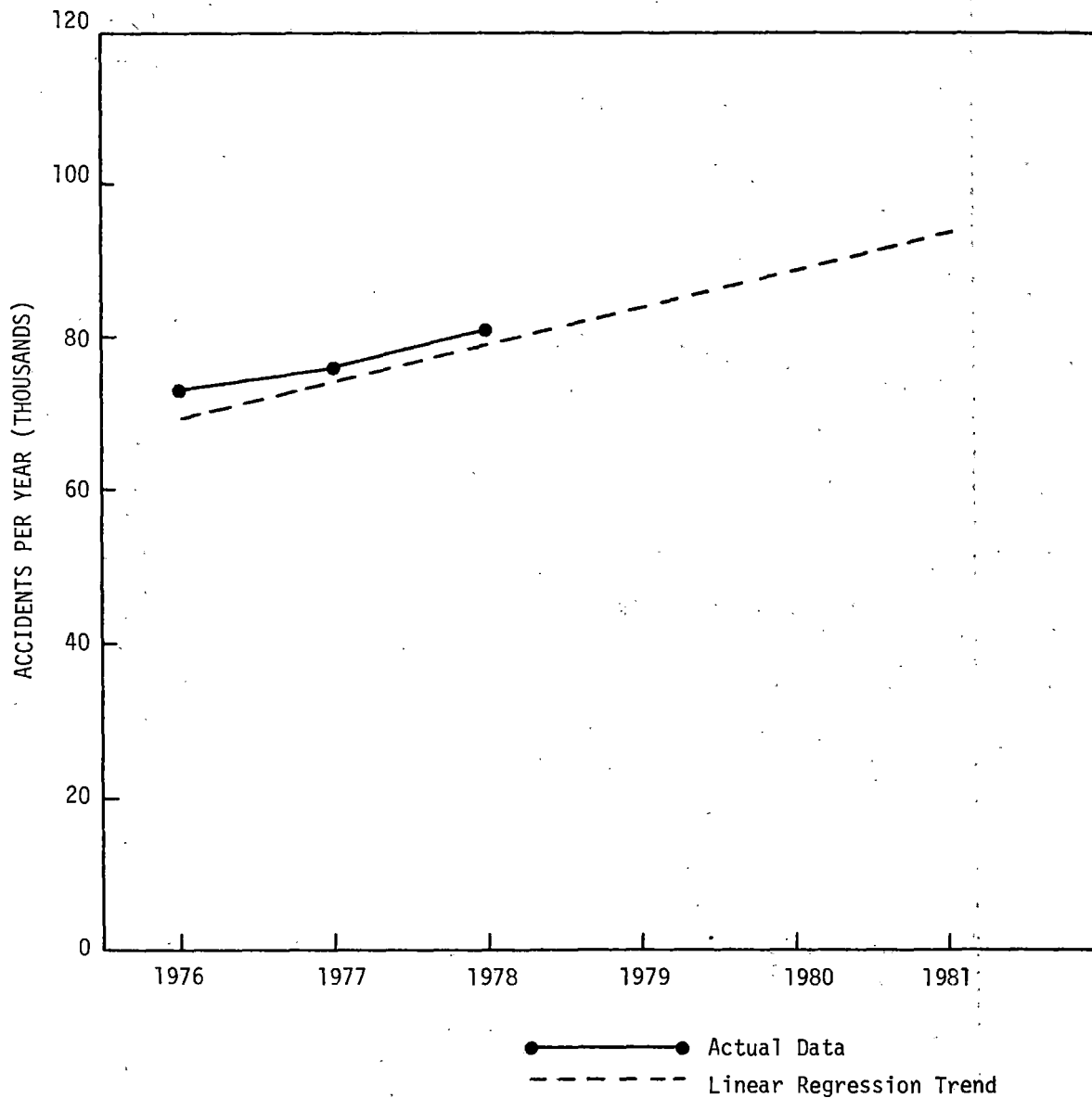


FIGURE J. RAILROAD ACCIDENTS/INCIDENTS, 1976-1978



TABLE H3. TRAIN ACCIDENTS BY CAUSE, 1976-1978

| Year | Total Accidents | Operating Practices | Equipment Failures | Track Defects | All Other Causes |
|------|-----------------|---------------------|--------------------|---------------|------------------|
| 1976 | 10,248          | 2,360               | 2,174              | 4,260         | 1,454            |
| 1977 | 10,362          | 2,559               | 2,064              | 4,337         | 1,402            |
| 1978 | 11,277          | 2,845               | 2,170              | 4,797         | 1,465            |

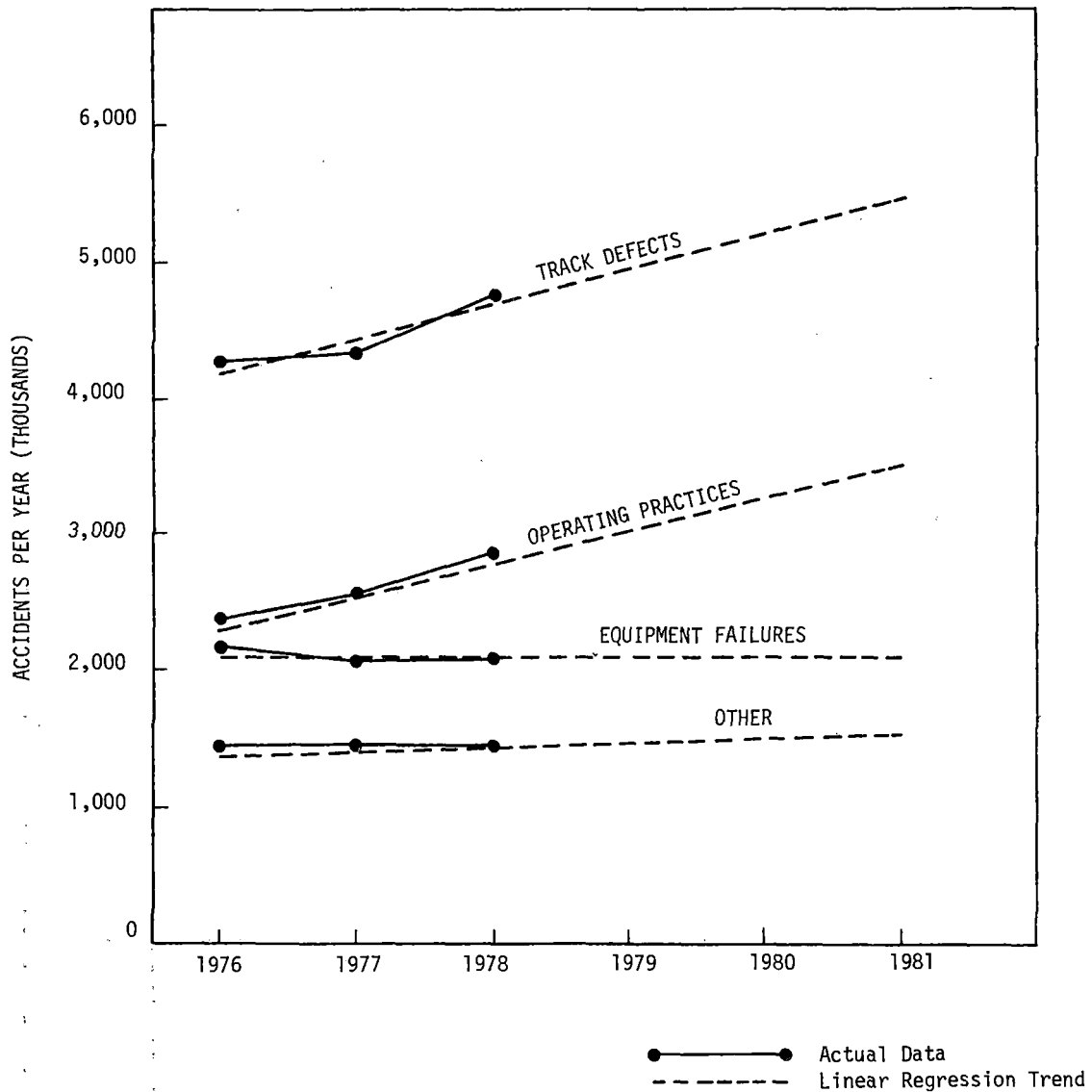


FIGURE K. TRAIN ACCIDENTS BY CAUSE, 1976-1978

TABLE H4. CASUALTIES BY ACCIDENT/INCIDENT, 1976-1978

| Class of Acc/Inc<br>by Year | Total<br>Fatal | Total<br>Non<br>Fatal | Total<br>Casualties | Total<br>Accidents | Casualties<br>per Million<br>Train Miles |
|-----------------------------|----------------|-----------------------|---------------------|--------------------|--|
| <b>Train Accidents</b>      |                |                       |                     |                    |  |
| 1976                        | 152            | 1,279                 | 1,431               | 10,248             | 1.85                                     |
| 1977                        | 108            | 985                   | 1,093               | 10,362             | 1.46                                     |
| 1978                        | 139            | 1,911*                | 2,050               | 11,277             | 2.73                                     |
| <b>Train Incidents</b>      |                |                       |                     |                    |  |
| 1976                        | 1,259          | 12,648                | 13,907              | 12,368             | 17.94                                    |
| 1977                        | 1,340          | 14,876                | 16,216              | 14,611             | 21.62                                    |
| 1978                        | 1,427          | 15,014                | 16,441              | 14,918             | 21.86                                    |
| <b>Non-Train Accidents</b>  |                |                       |                     |                    |  |
| 1976                        | 219            | 51,404                | 51,623              | 50,535             | 66.63                                    |
| 1977                        | 82             | 52,006                | 52,088              | 51,601             | 69.45                                    |
| 1978                        | 80             | 55,620                | 55,700              | 55,391             | 74.07                                    |
| <b>All Accidents</b>        |                |                       |                     |                    |  |
| 1976                        | 1,630          | 65,331                | 66,961              | 73,151             | 86.43                                    |
| 1977                        | 1,530          | 67,867                | 69,397              | 76,574             | 92.52                                    |
| 1978                        | 1,646          | 72,545                | 74,191              | 81,856             | 98.66                                    |

\*Included is an ICG railroad commuter train on January 26, 1978 which resulted in 558 non-fatal casualties.

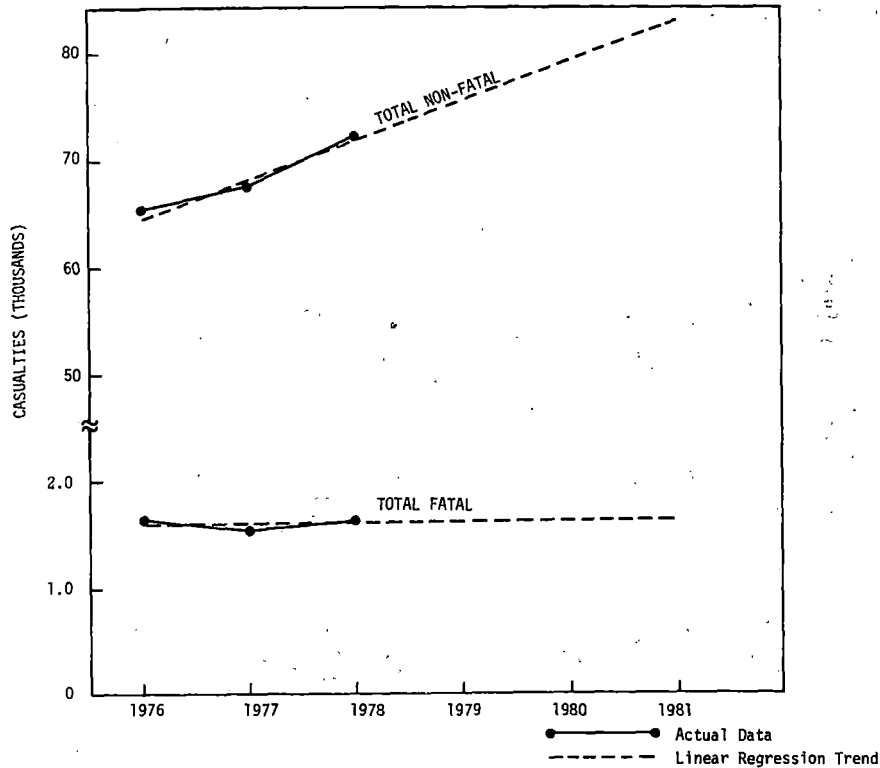


FIGURE L. FATAL AND NON-FATAL CASUALTIES BY ACCIDENT/INCIDENT, 1976-1978

TABLE H5. CASUALTIES BY TYPE OF PERSON, 1976-1978

| <u>Year</u> | <u>Employees on Duty</u> |                 | <u>Employees Not on Duty</u> |                 | <u>Passengers</u> |                 |
|-------------|--------------------------|-----------------|------------------------------|-----------------|-------------------|-----------------|
|             | <u>Fatal</u>             | <u>Nonfatal</u> | <u>Fatal</u>                 | <u>Nonfatal</u> | <u>Fatal</u>      | <u>Nonfatal</u> |
| 1976        | 100                      | 57,889          | 9                            | 588             | 5                 | 998             |
| 1977        | 114                      | 61,028          | 2                            | 615             | 4                 | 503             |
| 1978        | 122                      | 65,071          | 9                            | 723             | 13                | 1,252           |

| <u>Year</u> | <u>Non Trespassers</u> |                 | <u>Trespassers</u> |                 | <u>Total</u> |                 |
|-------------|------------------------|-----------------|--------------------|-----------------|--------------|-----------------|
|             | <u>Fatal</u>           | <u>Nonfatal</u> | <u>Fatal</u>       | <u>Nonfatal</u> | <u>Fatal</u> | <u>Nonfatal</u> |
| 1976        | 1,059                  | 5,090           | 457                | 766             | 1,630        | 65,331          |
| 1977        | 952                    | 5,032           | 458                | 689             | 1,530        | 67,867          |
| 1978        | 1,010                  | 4,753           | 492                | 746             | 1,646        | 72,545          |

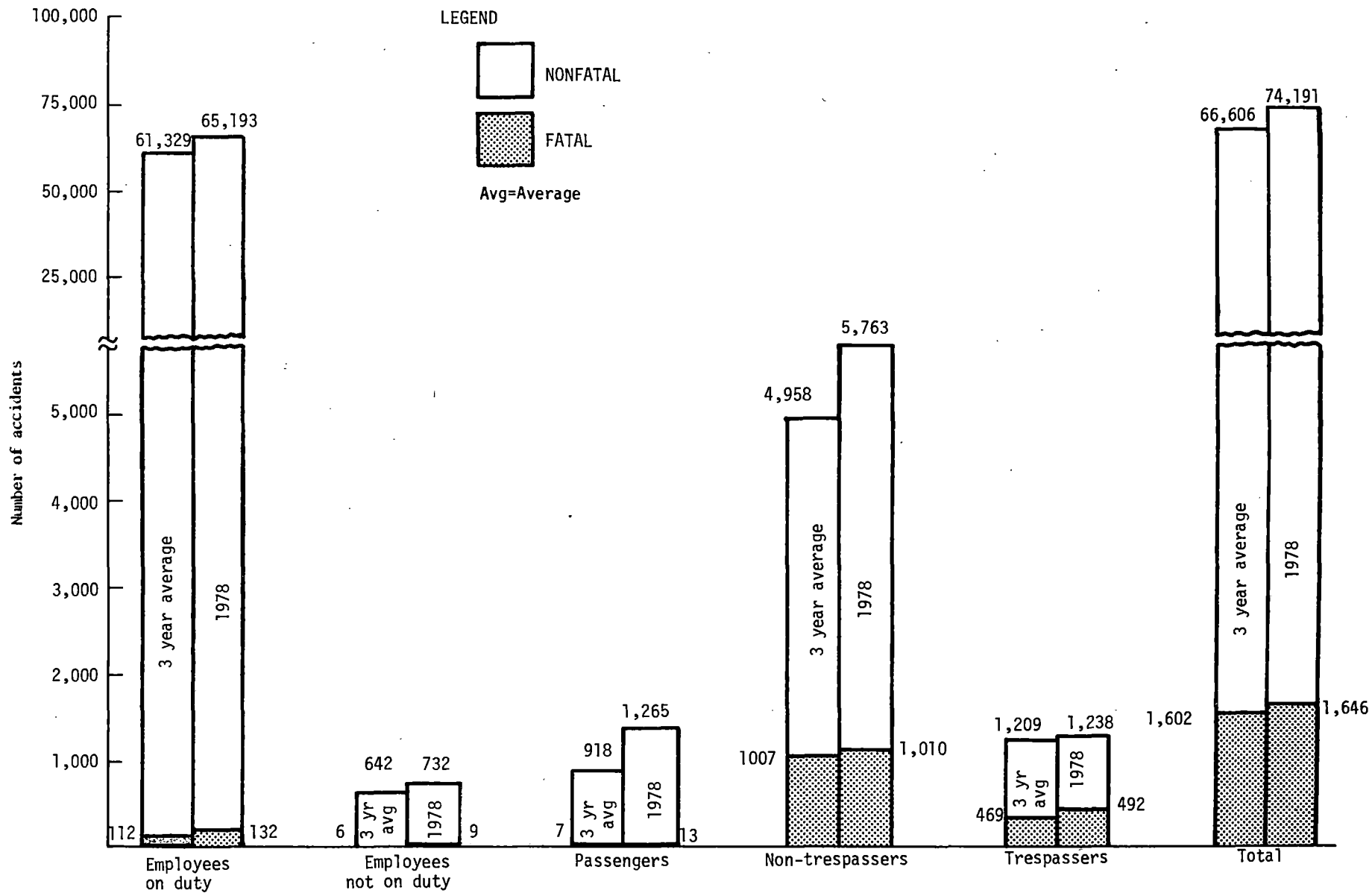


FIGURE M. CASUALTIES BY TYPE OF PERSON, 1976-1978

TABLE H6. TRAIN ACCIDENTS AND REPORTABLE DAMAGE BY TRAIN MILES, 1976-1978

| Year | Total Accidents | Total Damage (\$) | Average Damage (\$) | Damage/Million Train Miles (\$) | Accidents Million Train Miles |
|------|-----------------|-------------------|---------------------|---------------------------------|-------------------------------|
| 1976 | 10,248          | 266,990,697       | 22,150              | 292,980                         | 13.23                         |
| 1977 | 10,362          | 279,450,336       | 26,969              | 372,579                         | 13.82                         |
| 1978 | 11,277          | 304,951,427       | 27,033              | 405,540                         | 15.00                         |

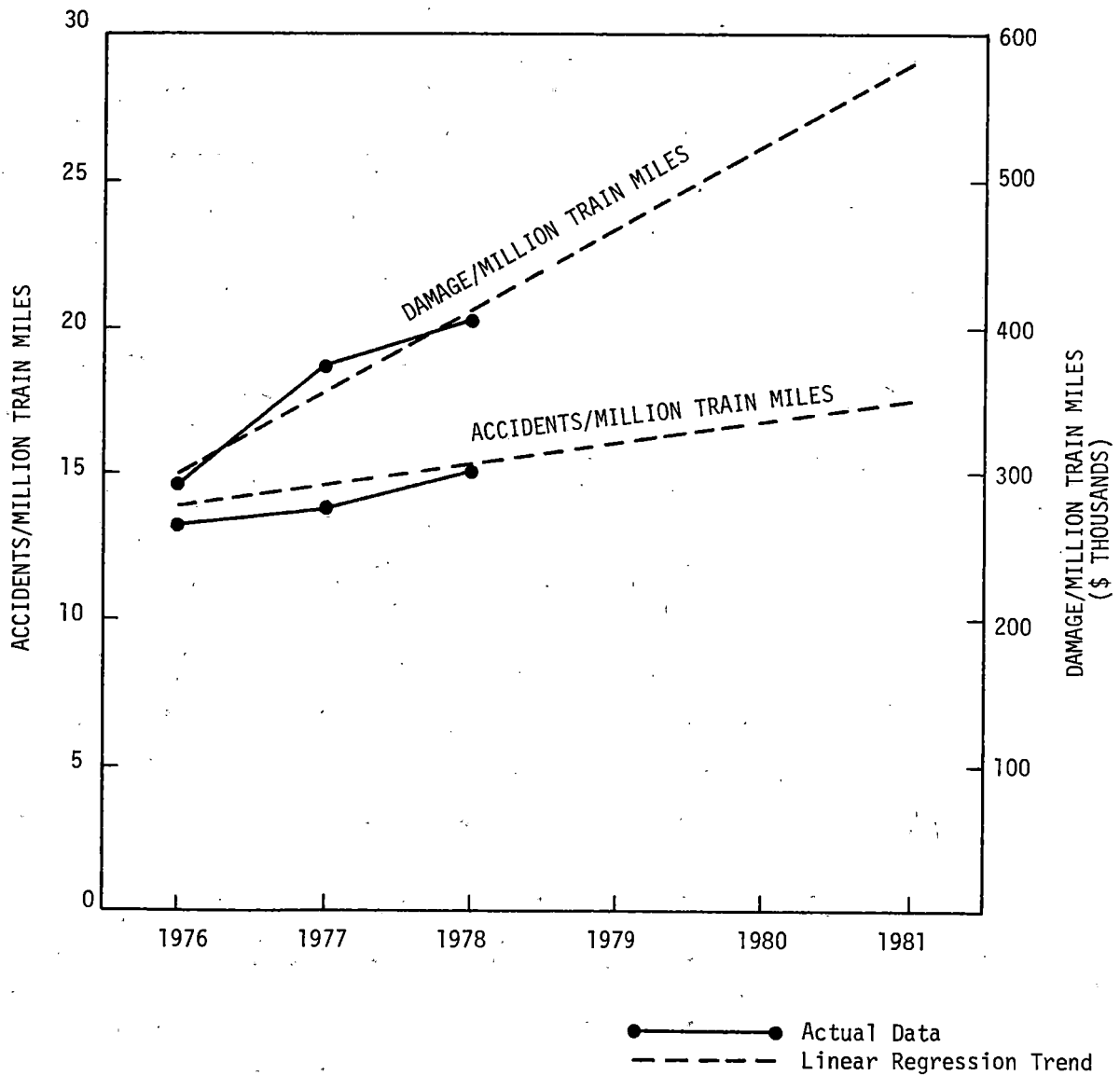


FIGURE N. TRAIN ACCIDENTS AND REPORTABLE DAMAGE PER MILLION TRAIN MILES, 1976-1978

TABLE H7. TRAIN ACCIDENTS AND REPORTABLE DAMAGE BY TYPE, 1976-1978

|                    | <u>Total<br/>Accidents</u> | <u>Total<br/>Damage<br/>(\$)</u> | <u>Average<br/>Damage<br/>(\$)</u> | <u>Damage/Million<br/>Train Miles<br/>(\$)</u> | <u>Accidents/<br/>Million<br/>Train Miles</u> |
|--------------------|----------------------------|----------------------------------|------------------------------------|--|---|
| <b>COLLISIONS</b>  |                            |                                  |                                    |  |   |
| 1976               | 1,370                      | 24,749,012                       | 18,065                             | 31,944   | 1.77  |
| 1977               | 1,363                      | 34,101,836                       | 25,020                             | 45,467   | 1.82  |
| 1978               | 1,476                      | 33,630,565                       | 22,772                             | 44,724   | 1.96  |
| <b>DERAILMENTS</b> |                            |                                  |                                    |  |   |
| 1976               | 7,934                      | 184,273,761                      | 23,226                             | 237,845  | 10.24   |
| 1977               | 8,073                      | 223,123,541                      | 27,638                             | 297,481  | 10.76   |
| 1978               | 8,763                      | 250,266,525                      | 28,551                             | 332,819  | 11.66   |
| <b>OTHER</b>       |                            |                                  |                                    |  |   |
| 1976               | 944                        | 17,967,924                       | 19,034                             | 23,191   | 1.22  |
| 1977               | 926                        | 22,224,959                       | 24,001                             | 29,632   | 1.23  |
| 1978               | 1,038                      | 21,054,337                       | 20,278                             | 27,999   | 1.38  |

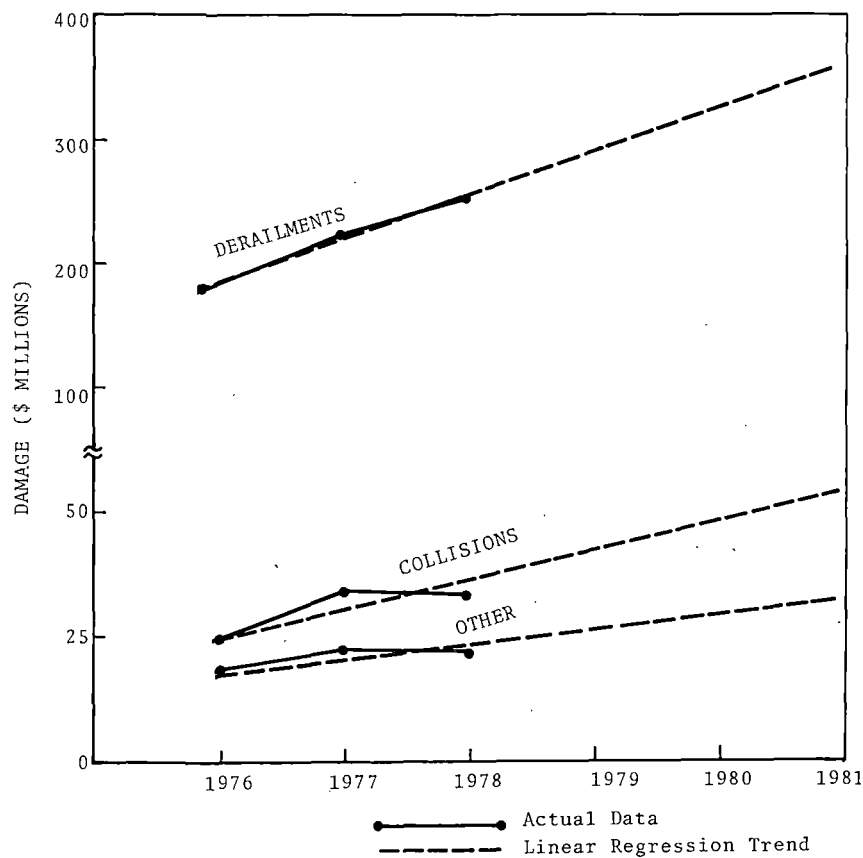


FIGURE O. TRAIN ACCIDENTS AND REPORTABLE DAMAGE BY TYPE, 1976-1978

TABLE H8. TRAIN ACCIDENTS AND REPORTABLE DAMAGE BY CAUSE, 1976-1978

| Contributing Cause and Year | Total Accidents | Total Damage (\$) | Average Damage (\$) | Damage/Million Train Miles (\$) | Accidents/Million Train Miles |
|-----------------------------|-----------------|-------------------|---------------------|---------------------------------|-------------------------------|
| <b>OPERATING PRACTICES</b>  |                 |                   |                     |                                 |                               |
| 1976                        | 2,360           | 31,939,411        | 13,534              | 41,225                          | 3.05                          |
| 1977                        | 2,559           | 65,679,391        | 25,666              | 87,568                          | 3.41                          |
| 1978                        | 2,845           | 56,007,609        | 19,675              | 74,514                          | 3.79                          |
| <b>EQUIPMENT FAILURES</b>   |                 |                   |                     |                                 |                               |
| 1976                        | 2,174           | 68,572,507        | 31,542              | 88,508                          | 2.81                          |
| 1977                        | 2,064           | 70,662,940        | 34,236              | 94,212                          | 2.75                          |
| 1978                        | 2,170           | 79,266,281        | 36,528              | 105,458                         | 2.89                          |
| <b>TRACK DEFECTS</b>        |                 |                   |                     |                                 |                               |
| 1976                        | 4,260           | 85,537,356        | 20,079              | 110,404                         | 5.50                          |
| 1977                        | 4,337           | 96,377,004        | 22,222              | 128,495                         | 5.78                          |
| 1978                        | 4,797           | 117,145,701       | 24,412              | 155,853                         | 6.38                          |
| <b>OTHER</b>                |                 |                   |                     |                                 |                               |
| 1976                        | 1,454           | 40,941,423        | 28,158              | 52,844                          | 1.88                          |
| 1977                        | 1,402           | 46,731,001        | 33,332              | 62,304                          | 1.87                          |
| 1978                        | 1,465           | 52,531,836        | 35,851              | 69,890                          | 1.95                          |

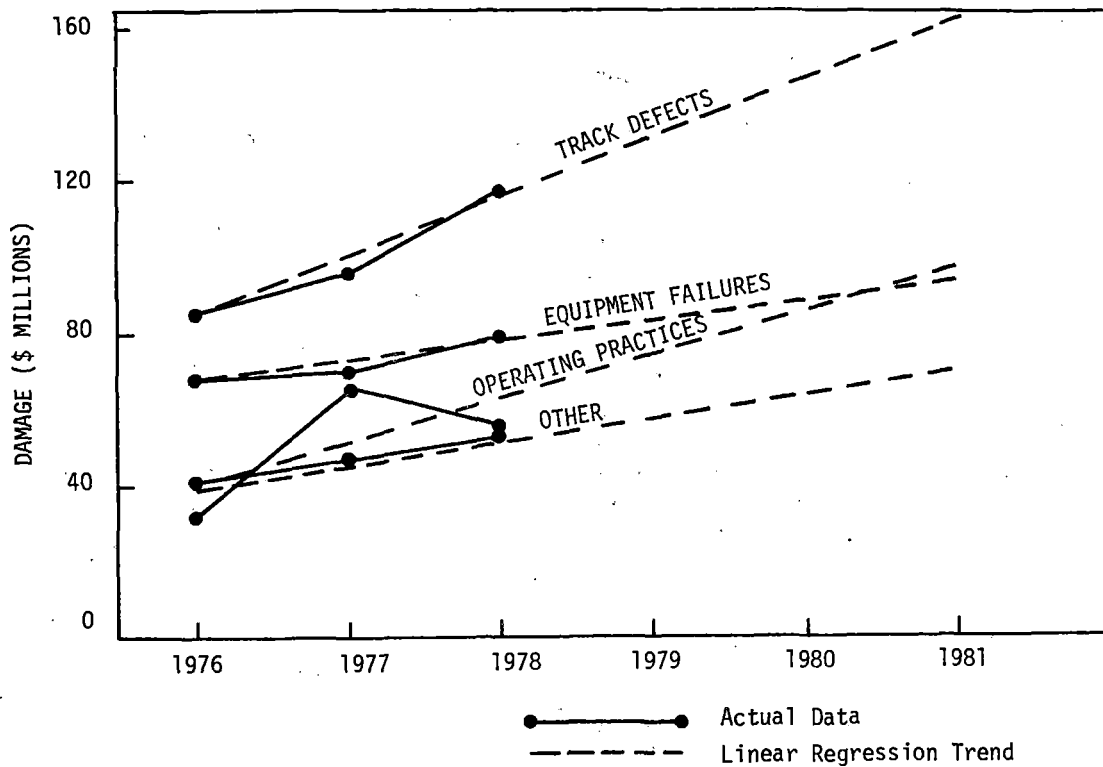


FIGURE P. TRAIN ACCIDENTS AND REPORTABLE DAMAGE BY CAUSE, 1976-1978

### **3.0 SUMMARY TABLES, 1978**



TABLE S1. SUMMARY OF OPERATIONAL MILES, 1978

| Class Railroad                             | Locomotive Train Miles | Motor Train Miles | Yard Switching Miles | Total Train Miles |
|--|------------------------|-------------------|----------------------|-------------------|
| CLASS I RAILROADS (LINE-HAUL)              | 485,107,239            | 30,738,182        | 186,272,436          | 702,117,857       |
| CLASS I RAILROADS (SWITCHING AND TERMINAL) | ---                    | ---               | 2,525,862            | 2,525,862         |
| CLASS II AND III RAILROADS                 | 20,080,143             | 1,540,833         | 25,699,580           | 47,320,556        |
| GRAND TOTAL.....                           | 505,187,382            | 32,279,015        | 214,497,878          | 751,964,275       |

TABLE S2. TRAIN ACCIDENTS BY MONTH, 1978

| Month       | Total Train Accidents | Number Of Miles..... |                   |                      | Total Miles | Accidents Per Mill Miles |
|-------------|-----------------------|----------------------|-------------------|----------------------|-------------|--------------------------|
|             |                       | Loco-Motive Miles    | Motor Train Miles | Yard Switching Miles |             |                          |
| January     | 1,026                 | 37,755,758           | 2,695,267         | 17,466,043           | 57,919,068  | 17.71                    |
| February    | 962                   | 35,542,184           | 2,430,354         | 16,834,415           | 54,806,953  | 17.55                    |
| March       | 1,038                 | 43,425,083           | 2,793,161         | 18,924,158           | 65,142,402  | 15.93                    |
| April       | 925                   | 42,840,486           | 2,608,952         | 18,033,051           | 63,482,489  | 14.57                    |
| May         | 990                   | 44,068,257           | 2,717,160         | 19,059,058           | 65,844,515  | 15.04                    |
| June        | 931                   | 43,912,051           | 2,738,458         | 18,926,948           | 65,577,457  | 14.20                    |
| July        | 920                   | 42,548,494           | 2,751,399         | 17,553,362           | 62,853,255  | 14.64                    |
| August      | 876                   | 43,740,320           | 2,832,016         | 17,902,700           | 64,475,036  | 13.58                    |
| September   | 777                   | 39,681,297           | 2,597,825         | 16,246,072           | 58,525,194  | 13.27                    |
| October     | 863                   | 44,780,770           | 2,776,871         | 18,531,763           | 66,089,404  | 13.06                    |
| November    | 933                   | 43,571,358           | 2,664,523         | 17,500,352           | 63,736,233  | 14.64                    |
| December    | 1,036                 | 43,321,324           | 2,673,029         | 17,517,916           | 63,512,269  | 16.31                    |
| GRAND TOTAL | 11,277                | 505,187,382          | 32,279,015        | 214,497,878          | 751,964,275 | 15.00                    |

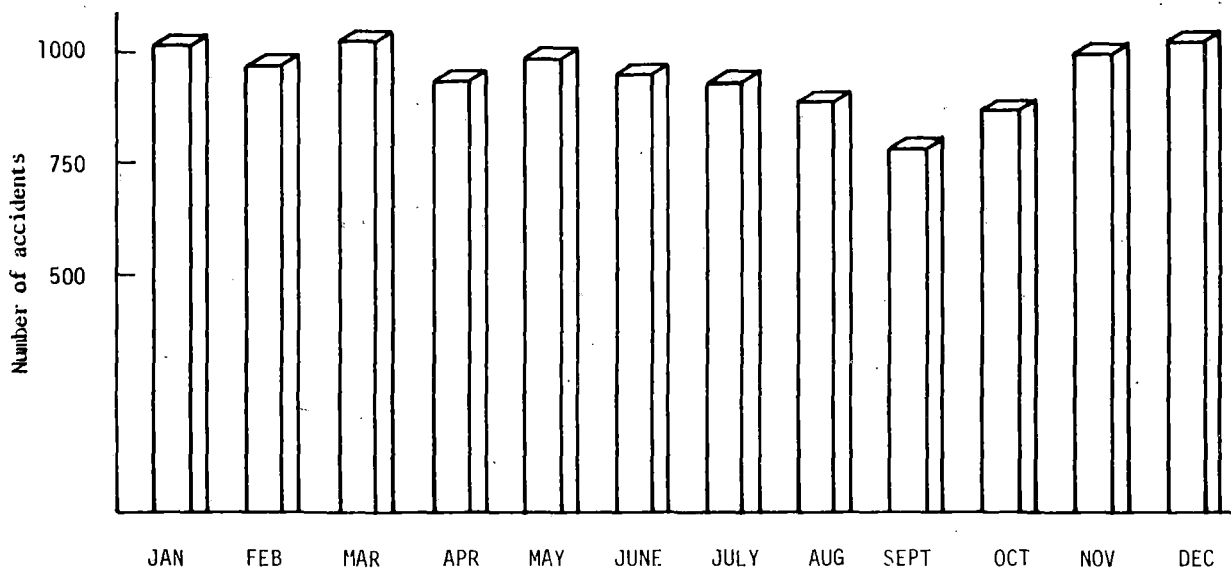


FIGURE Q. TRAIN ACCIDENTS BY MONTH, 1978

TABLE S3. TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NONTRAIN INCIDENTS BY STATE, 1978

| State                | .....Train Accidents..... |                  |       |        | Train<br>Incidents | Non-<br>Train<br>Incidents | Total  |
|----------------------|---------------------------|------------------|-------|--------|--------------------|----------------------------|--------|
|                      | Coll-<br>isions           | Derail-<br>ments | Other | Total  |                    |                            |        |
| Alabama              | 40                        | 244              | 22    | 306    | 316                | 716                        | 1,338  |
| Alaska               | 3                         | 14               | ---   | 17     | 21                 | 119                        | 157    |
| Arizona              | 6                         | 36               | 11    | 53     | 122                | 215                        | 390    |
| Arkansas             | 19                        | 141              | 11    | 171    | 232                | 693                        | 1,096  |
| California           | 101                       | 249              | 49    | 399    | 950                | 2,479                      | 3,828  |
| Colorado             | 28                        | 79               | 12    | 119    | 179                | 662                        | 960    |
| Connecticut          | ---                       | 13               | 7     | 20     | 28                 | 378                        | 426    |
| Delaware             | 3                         | 17               | 6     | 26     | 47                 | 355                        | 428    |
| District of Columbia | ---                       | 8                | 2     | 10     | 28                 | 299                        | 337    |
| Florida              | 20                        | 162              | 18    | 200    | 396                | 760                        | 1,356  |
| Georgia              | 41                        | 213              | 32    | 286    | 547                | 1,173                      | 2,006  |
| Hawaii               | ---                       | ---              | ---   | ---    | ---                | ---                        | ---    |
| Idaho                | 18                        | 71               | 11    | 100    | 107                | 447                        | 654    |
| Illinois             | 161                       | 841              | 100   | 1,102  | 1,108              | 5,604                      | 7,814  |
| Indiana              | 40                        | 305              | 28    | 373    | 577                | 1,703                      | 2,653  |
| Iowa                 | 39                        | 493              | 17    | 549    | 280                | 1,348                      | 2,177  |
| Kansas               | 24                        | 187              | 19    | 230    | 285                | 768                        | 1,283  |
| Kentucky             | 42                        | 378              | 20    | 440    | 258                | 1,766                      | 2,464  |
| Louisiana            | 35                        | 197              | 13    | 245    | 407                | 858                        | 1,510  |
| Maine                | 11                        | 35               | 13    | 59     | 60                 | 304                        | 423    |
| Maryland             | 19                        | 85               | 14    | 118    | 252                | 1,069                      | 1,439  |
| Massachusetts        | 7                         | 47               | 14    | 68     | 126                | 611                        | 805    |
| Michigan             | 54                        | 254              | 38    | 346    | 736                | 2,421                      | 3,503  |
| Minnesota            | 41                        | 249              | 22    | 312    | 280                | 1,264                      | 1,856  |
| Mississippi          | 9                         | 194              | 21    | 224    | 188                | 424                        | 836    |
| Missouri             | 58                        | 232              | 21    | 311    | 414                | 1,480                      | 2,205  |
| Montana              | 25                        | 109              | 9     | 143    | 104                | 780                        | 1,027  |
| Nebraska             | 36                        | 161              | 11    | 228    | 278                | 1,876                      | 2,382  |
| Nevada               | 4                         | 32               | 7     | 43     | 41                 | 124                        | 208    |
| New Hampshire        | 2                         | 3                | 4     | 9      | 10                 | 28                         | 47     |
| New Jersey           | 9                         | 56               | 20    | 85     | 220                | 1,238                      | 1,543  |
| New Mexico           | 5                         | 20               | 9     | 34     | 60                 | 145                        | 239    |
| New York             | 51                        | 253              | 70    | 374    | 555                | 3,411                      | 4,340  |
| North Carolina       | 29                        | 162              | 31    | 222    | 322                | 454                        | 998    |
| North Dakota         | 15                        | 66               | 11    | 92     | 90                 | 375                        | 557    |
| Ohio                 | 58                        | 418              | 54    | 530    | 978                | 3,500                      | 5,008  |
| Oklahoma             | 19                        | 161              | 15    | 195    | 200                | 442                        | 837    |
| Oregon               | 31                        | 102              | 9     | 142    | 257                | 782                        | 1,161  |
| Pennsylvania         | 61                        | 596              | 74    | 731    | 661                | 4,719                      | 6,111  |
| Rhode Island         | ---                       | 2                | 6     | 8      | 9                  | 151                        | 168    |
| South Carolina       | 12                        | 86               | 21    | 119    | 163                | 291                        | 573    |
| South Dakota         | 5                         | 82               | 1     | 88     | 33                 | 195                        | 316    |
| Tennessee            | 46                        | 266              | 14    | 326    | 280                | 902                        | 1,508  |
| Texas                | 89                        | 506              | 73    | 670    | 1,286              | 2,932                      | 4,888  |
| Utah                 | 15                        | 26               | 6     | 47     | 156                | 408                        | 611    |
| Vermont              | 1                         | 7                | 3     | 11     | 14                 | 63                         | 88     |
| Virginia             | 12                        | 143              | 12    | 167    | 316                | 1,036                      | 1,519  |
| Washington           | 49                        | 208              | 20    | 277    | 314                | 948                        | 1,539  |
| West Virginia        | 25                        | 165              | 6     | 196    | 185                | 628                        | 1,009  |
| Wisconsin            | 38                        | 272              | 24    | 334    | 301                | 1,360                      | 1,995  |
| Wyoming              | 20                        | 95               | 7     | 122    | 141                | 686                        | 949    |
| outside U.S.         | ---                       | ---              | ---   | ---    | ---                | 1                          | 1      |
| Total.....           | 1,476                     | 6,763            | 1,038 | 11,277 | 14,918             | 55,391                     | 81,586 |

TABLE S4. TRAIN ACCIDENTS

| State                | Jan   | Feb | Mar   | Apr |
|----------------------|-------|-----|-------|-----|
| Alabama              | 41    | 27  | 29    | 24  |
| Alaska               | 1     | --- | 1     | --- |
| Arizona              | 4     | 5   | 6     | 4   |
| Arkansas             | 16    | 22  | 19    | 15  |
| California           | 28    | 29  | 32    | 38  |
| Colorado             | 5     | 5   | 11    | 6   |
| Connecticut          | 2     | --- | 1     | 3   |
| Delaware             | 1     | 4   | 7     | 2   |
| District of Columbia | 2     | 2   | ---   | --- |
| Florida              | 27    | 35  | 16    | 14  |
| Georgia              | 24    | 25  | 36    | 24  |
| Hawaii               | ---   | --- | ---   | --- |
| Idaho                | 7     | 7   | 9     | 9   |
| Illinois             | 111   | 96  | 114   | 118 |
| Indiana              | 42    | 37  | 27    | 35  |
| Iowa                 | 41    | 50  | 57    | 48  |
| Kansas               | 18    | 16  | 22    | 23  |
| Kentucky             | 47    | 31  | 38    | 41  |
| Louisiana            | 20    | 21  | 16    | 24  |
| Maine                | 3     | 4   | 8     | 4   |
| Maryland             | 7     | 11  | 14    | 4   |
| Massachusetts        | 6     | 5   | 6     | 6   |
| Michigan             | 29    | 33  | 37    | 29  |
| Minnesota            | 23    | 22  | 18    | 30  |
| Mississippi          | 28    | 20  | 18    | 12  |
| Missouri             | 22    | 29  | 29    | 25  |
| Montana              | 18    | 8   | 14    | 6   |
| Nebraska             | 10    | 19  | 17    | 22  |
| Nevada               | 7     | 3   | 2     | 4   |
| New Hampshire        | ---   | --- | 2     | 1   |
| New Jersey           | 12    | 5   | 9     | 6   |
| New Mexico           | 1     | 1   | 5     | 2   |
| New York             | 39    | 31  | 44    | 21  |
| North Carolina       | 16    | 31  | 24    | 21  |
| North Dakota         | 6     | 6   | 7     | 6   |
| Ohio                 | 56    | 46  | 44    | 36  |
| Oklahoma             | 17    | 16  | 20    | 16  |
| Oregon               | 14    | 12  | 12    | 4   |
| Pennsylvania         | 63    | 57  | 76    | 50  |
| Rhode Island         | 1     | --- | 1     | --- |
| South Carolina       | 19    | 8   | 19    | 7   |
| South Dakota         | 11    | 6   | 8     | 9   |
| Tennessee            | 33    | 29  | 26    | 28  |
| Texas                | 53    | 63  | 48    | 36  |
| Utah                 | 4     | 2   | 5     | 3   |
| Vermont              | 2     | 3   | ---   | 1   |
| Virginia             | 20    | 19  | 4     | 11  |
| Washington           | 25    | 22  | 29    | 28  |
| West Virginia        | 11    | 5   | 10    | 21  |
| Wisconsin            | 23    | 26  | 28    | 35  |
| Wyoming              | 10    | 8   | 13    | 13  |
| Total.....           | 1,026 | 962 | 1,038 | 925 |

BY STATE AND MONTH, 1978

| May | Jun | Jul | Aug | Sep | Oct | Nov | Dec   | Total  |
|-----|-----|-----|-----|-----|-----|-----|-------|--------|
| 25  | 30  | 20  | 25  | 12  | 21  | 21  | 31    | 306    |
| --- | 3   | 3   | --- | 4   | 2   | 3   | ---   | 17     |
| 2   | 4   | 3   | 3   | 4   | 4   | 4   | 10    | 53     |
| 16  | 15  | 13  | 5   | 3   | 20  | 10  | 17    | 171    |
| 33  | 39  | 34  | 35  | 30  | 32  | 36  | 33    | 399    |
| 10  | 13  | 17  | 6   | 7   | 12  | 14  | 13    | 119    |
| 1   | 2   | 4   | --- | 2   | --- | 3   | 2     | 20     |
| 3   | 4   | 1   | 3   | --- | --- | 1   | ---   | 26     |
| -1  | --- | --- | 1   | 2   | --- | --- | 2     | 10     |
| 17  | 13  | 13  | 21  | 12  | 14  | 8   | 10    | 200    |
| 33  | 30  | 9   | 22  | 11  | 28  | 21  | 23    | 286    |
| --- | --- | --- | --- | --- | --- | --- | ---   | ---    |
| 7   | 9   | 8   | 10  | 7   | 10  | 9   | 8     | 100    |
| 100 | 72  | 97  | 81  | 68  | 71  | 62  | 112   | 1,102  |
| 47  | 28  | 20  | 32  | 18  | 33  | 29  | 25    | 373    |
| 42  | 43  | 56  | 43  | 39  | 39  | 51  | 40    | 549    |
| 20  | 20  | 26  | 22  | 13  | 20  | 14  | 16    | 230    |
| 39  | 36  | 28  | 35  | 23  | 45  | 35  | 42    | 440    |
| 25  | 24  | 23  | 19  | 14  | 20  | 20  | 19    | 245    |
| 8   | 5   | 3   | 2   | 6   | 5   | 7   | 4     | 59     |
| 9   | 17  | 9   | 6   | 10  | 12  | 5   | 14    | 116    |
| 8   | 11  | 1   | 4   | 4   | 4   | 6   | 7     | 68     |
| 30  | 28  | 27  | 26  | 24  | 27  | 23  | 33    | 346    |
| 26  | 38  | 30  | 31  | 27  | 21  | 19  | 27    | 312    |
| 24  | 15  | 27  | 14  | 14  | 15  | 12  | 25    | 224    |
| 28  | 22  | 23  | 25  | 23  | 24  | 30  | 31    | 311    |
| 9   | 3   | 15  | 7   | 14  | 17  | 19  | 13    | 143    |
| 17  | 23  | 22  | 17  | 18  | 24  | 23  | 16    | 228    |
| 3   | --- | 5   | 6   | 2   | 4   | 1   | 6     | 43     |
| 1   | --- | 1   | 1   | 1   | 1   | 1   | ---   | 9      |
| 11  | 9   | 8   | 4   | 8   | 5   | 2   | 6     | 85     |
| 3   | 2   | 5   | 4   | 1   | 1   | 3   | 6     | 34     |
| 29  | 32  | 24  | 15  | 27  | 25  | 41  | 46    | 374    |
| 30  | 12  | 13  | 15  | 12  | 11  | 15  | 22    | 222    |
| 5   | 7   | 13  | 4   | 16  | 2   | 12  | 8     | 92     |
| 42  | 43  | 36  | 37  | 34  | 44  | 55  | 57    | 530    |
| 15  | 16  | 14  | 16  | 12  | 13  | 21  | 15    | 195    |
| 9   | 17  | 12  | 17  | 9   | 9   | 14  | 13    | 142    |
| 59  | 57  | 58  | 68  | 59  | 58  | 59  | 67    | 731    |
| 2   | --- | 1   | 1   | --- | 1   | --- | 1     | 8      |
| 8   | 7   | 6   | 12  | 6   | 14  | 4   | 9     | 119    |
| 9   | 6   | 9   | 9   | 7   | 5   | 7   | 2     | 88     |
| 25  | 24  | 22  | 22  | 27  | 21  | 42  | 27    | 326    |
| 51  | 57  | 55  | 51  | 67  | 54  | 68  | 67    | 670    |
| 4   | 6   | 3   | 5   | 7   | 3   | 4   | 1     | 47     |
| --- | --- | 2   | --- | 1   | --- | --- | 2     | 11     |
| 11  | 16  | 15  | 16  | 5   | 15  | 20  | 15    | 167    |
| 22  | 19  | 18  | 24  | 23  | 15  | 19  | 33    | 277    |
| 24  | 21  | 20  | 16  | 17  | 12  | 16  | 23    | 196    |
| 26  | 21  | 39  | 27  | 25  | 26  | 34  | 24    | 334    |
| 17  | 12  | 9   | 11  | 2   | 4   | 10  | 13    | 122    |
| --- | --- | --- | --- | --- | --- | --- | ---   | ---    |
| 990 | 931 | 920 | 876 | 777 | 863 | 933 | 1,036 | 11,277 |

TABLE S5. TRAIN ACCIDENTS RESULTING FROM OPERATING PRACTICES  
BY SPECIFIC CAUSE, 1978

| Cause No.                               | Causes  | Collis-<br>ions | Derail-<br>ments | Other | Total |
|---|---|-----------------|------------------|-------|-------|
| BRAKES, USE OF                          |   |                 |                  |       |       |
| 500                                     | Automatic brake, improper use   | 4               | 20               | 1     | 25    |
| 501                                     | Dynamic brake, improper use   | ---             | 6                | ---   | 6     |
| 502                                     | Failure to properly secure engine(s) (railroad employee)                    | 14              | 5                | 2     | 21    |
| 503                                     | Failure to properly secure hand brake on car(s) (railroad employee)         | 65              | 35               | 13    | 113   |
| 504                                     | Failure to apply sufficient number of hand brakes on car(s) (R.R. employee) | 44              | 19               | 3     | 66    |
| 505                                     | Failure to apply hand brakes on car(s) (railroad employee)                  | 24              | 8                | 7     | 39    |
| 506                                     | Failure to properly secure engine(s) or car(s) (non-railroad employee)      | 11              | 3                | 1     | 15    |
| 507                                     | Independent (engine) brake, improper use                                    | 4               | 18               | ---   | 22    |
| 508                                     | Failure to control speed of car using hand brake (railroad employee)        | 5               | 5                | 1     | 11    |
| 509                                     | Use of brakes (cause code not listed)                                       | 13              | 18               | 5     | 36    |
| SUBTOTAL.....                           |   | 184             | 137              | 33    | 354   |
| EMPLOYEE PHYSICAL CONDITION             |   |                 |                  |       |       |
| 510                                     | Impairment of efficiency and judgement due to drugs or alcohol              | 1               | ---              | ---   | 1     |
| 511                                     | Incapacitation due to injury or illness                                     | 1               | ---              | ---   | 1     |
| 513                                     | Employee falling asleep   | 1               | 2                | 1     | 4     |
| SUBTOTAL.....                           |   | 3               | 2                | 1     | 6     |
| FLAGGING, FIXED, HAND AND RADIO SIGNALS |   |                 |                  |       |       |
| 519                                     | Fixed signal improperly displayed   | 1               | 2                | ---   | 3     |
| 520                                     | Fixed signal, failure to comply   | 26              | 3                | 3     | 32    |
| 521                                     | Flagging, improper or failure to flag                                       | 6               | 1                | ---   | 7     |
| 522                                     | Flagging signal, failure to comply  | 1               | 1                | ---   | 2     |
| 523                                     | Hand signal, failure to comply  | 8               | 1                | ---   | 9     |
| 524                                     | Hand signal improper  | 3               | ---              | ---   | 3     |
| 525                                     | Hand signal, failure to give/receive  | 7               | 4                | 1     | 12    |
| 526                                     | Radio communication, failure to comply                                      | 2               | 5                | ---   | 7     |
| 527                                     | Radio communication, improper   | 4               | ---              | ---   | 4     |
| 528                                     | Radio communication, failure to give/receive                                | 6               | 3                | 3     | 12    |
| 529                                     | Flagging, fixed, hand and radio signals (cause code not listed)             | 4               | 1                | 1     | 6     |
| SUBTOTAL.....                           |   | 66              | 21               | 8     | 97    |
| OTHER RULES AND INSTRUCTIONS            |   |                 |                  |       |       |
| 530                                     | Car(s) shoved out and left out of clear                                     | 57              | 9                | ---   | 66    |
| 531                                     | Cars left foul  | 77              | 7                | 8     | 92    |
| 532                                     | Derail, failure to apply or remove  | 3               | 23               | ---   | 26    |
| 533                                     | Failure to stop train in clear  | 110             | 8                | 3     | 121   |
| 535                                     | Instruction to train/yard crew improper                                     | 28              | 8                | 1     | 37    |
| 536                                     | Motor car or on-track equipment rules, failure to comply                    | 26              | 7                | 6     | 39    |
| 537                                     | Movement of engine(s) or car(s) without authority (railroad employee)       | 30              | 13               | 3     | 46    |
| 538                                     | Shoving movement, absence of man on or at leading end of movement           | 162             | 46               | 14    | 222   |
| 539                                     | Shoving movement, man on or at leading end of movement, failure to control  | 73              | 18               | 10    | 101   |
| 540                                     | Skate, failure to remove or place   | 4               | 3                | ---   | 7     |
| 541                                     | Special operating instruction, failure to comply                            | 32              | 17               | 1     | 50    |
| 542                                     | Train order or timetable authority, failure to comply                       | 4               | 7                | ---   | 11    |
| 543                                     | Train orders, radio, error in preparation, transmission or delivery         | 1               | 1                | ---   | 2     |
| SUBTOTAL.....                           |   | 607             | 167              | 46    | 820   |
| SPEED                                   |   |                 |                  |       |       |
| 550                                     | Coupling speed excessive  | 28              | 32               | 25    | 85    |
| 553                                     | Switch movement, excessive speed  | 26              | 19               | 13    | 60    |
| 554                                     | Train inside yard limits, excessive speed                                   | 29              | 27               | ---   | 56    |
| 555                                     | Train outside yard limits under clear block, excessive speed                | ---             | 37               | ---   | 37    |
| 559                                     | Speed (cause code not listed)   | 14              | 22               | 2     | 38    |
| SUBTOTAL.....                           |   | 99              | 137              | 40    | 276   |
| SWITCHES, USE OF                        |   |                 |                  |       |       |
| 560                                     | Spring switch not cleared before reversing                                  | ---             | 25               | 2     | 27    |
| 561                                     | Switch improperly lined   | 131             | 155              | 14    | 300   |
| 562                                     | Switch not latched or locked  | 3               | 29               | ---   | 32    |
| 563                                     | Switch previously run through   | 3               | 103              | 2     | 108   |
| SUBTOTAL.....                           |   | 137             | 312              | 18    | 467   |
| MISCELLANEOUS                           |   |                 |                  |       |       |
| 570                                     | Buffing or slack action excessive   | 8               | 393              | ---   | 401   |
| 571                                     | Failure to couple   | 12              | 6                | 4     | 22    |
| 572                                     | Lateral drawbar force on curve excessive                                    | 1               | 125              | ---   | 126   |
| 573                                     | Moving cars while loading ramp or bridge plate not in proper position       | 1               | 2                | 1     | 4     |
| 574                                     | Passed couplers   | 9               | 126              | 10    | 145   |
| 575                                     | Retarder, improper manual operation   | 12              | 6                | 4     | 22    |
| 576                                     | Retarder, yard skate improperly applied                                     | 1               | 1                | ---   | 2     |
| 599                                     | Other train operation - human factors                                       | 37              | 53               | 13    | 103   |
| SUBTOTAL.....                           |   | 81              | 712              | 32    | 825   |
| GRAND TOTAL.....                        |   | 1,179           | 1,488            | 178   | 2,845 |

TABLE S6. TRAIN ACCIDENTS RESULTING FROM MECHANICAL AND ELECTRICAL FAILURES BY SPECIFIC CAUSE, 1978

| Cause No.                               | Causes   | Collisions | Derailments | Other | Total |
|---|--|------------|-------------|-------|-------|
| <b>BRAKES</b>                           |  |            |             |       |       |
| 400                                     | Air hose uncoupled or burst  | 4          | 45          | 1     | 50    |
| 400L                                    | Air hose uncoupled or burst - locomotive                                   | 1          | 1           | ---   | 2     |
| 402                                     | Broken brake pipe or connections   | ---        | 6           | ---   | 6     |
| 403                                     | Obstructed brake pipe (closed angle cock, ice, etc.)                       | ---        | 1           | ---   | 1     |
| 404                                     | Other brake components damaged, worn, broken, or disconnected              | 5          | 13          | 1     | 19    |
| 404L                                    | Other brake components damaged, worn, broken, or disconnected - locomotive | ---        | 2           | ---   | 2     |
| 405                                     | Brake valve malfunction, undesired emergency                               | ---        | 13          | ---   | 13    |
| 406                                     | Brake valve malfunction, stuck brake, etc.                                 | ---        | 10          | 12    | 22    |
| 406L                                    | Brake valve malfunction, stuck brake, etc. - locomotive                    | ---        | 2           | 1     | 3     |
| 407                                     | Rigging down or dragging   | ---        | 70          | 8     | 78    |
| 407L                                    | Rigging down or dragging - locomotive                                      | ---        | 2           | ---   | 2     |
| 408                                     | Hand brake (including gear) broken or defective                            | 13         | 2           | ---   | 15    |
| 409                                     | Hand brake linkage and/or connections broken or defective                  | 7          | 4           | ---   | 11    |
| 410                                     | Other causes involving brakes  | 5          | 10          | 4     | 19    |
| 410L                                    | Other causes involving brakes - locomotive                                 | ---        | ---         | 2     | 2     |
| SUBTOTAL.....                           |  | 35         | 181         | 29    | 245   |
| <b>TRAILER OR CONTAINER ON FLAT CAR</b> |  |            |             |       |       |
| 411                                     | Broken or defective tiedown equipment                                      | 3          | 2           | 4     | 9     |
| 413                                     | Broken or defective trailer  | ---        | ---         | 1     | 1     |
| 419                                     | Other causes involving trailer or container on flat car                    | ---        | 5           | 5     | 10    |
| SUBTOTAL.....                           |  | 3          | 7           | 10    | 20    |
| <b>BODY</b>                             |  |            |             |       |       |
| 420                                     | Body bolster broken or defective   | ---        | 21          | ---   | 21    |
| 421                                     | Center sill broken or bent   | 3          | 29          | 6     | 38    |
| 422                                     | Draft sill broken or bent  | ---        | 9           | 1     | 10    |
| 423                                     | Center plate broken or defective   | ---        | 55          | ---   | 55    |
| 424                                     | Center plate disengaged from truck (car off center)                        | 1          | 64          | ---   | 65    |
| 425                                     | Center pin broken or missing   | 1          | 20          | ---   | 21    |
| 426                                     | Center plate attachment defective  | ---        | 7           | ---   | 7     |
| 429                                     | Other causes involving body  | 1          | 23          | 2     | 26    |
| SUBTOTAL.....                           |  | 6          | 228         | 9     | 243   |
| <b>COUPLER AND DRAFT SYSTEM</b>         |  |            |             |       |       |
| 430                                     | Knuckle broken or defective  | 1          | 27          | 3     | 31    |
| 430L                                    | Knuckle broken or defective - locomotive                                   | 1          | 1           | ---   | 2     |
| 431                                     | Coupler mismatch, high/low   | 3          | 26          | 1     | 30    |
| 432                                     | Coupler drawhead broken or defective                                       | 5          | 56          | 2     | 63    |
| 433                                     | Coupler retainer pin/cross key missing                                     | ---        | 23          | 2     | 25    |
| 434                                     | Draft gear/mechanism broken or defective (including yoke)                  | 3          | 34          | 3     | 40    |
| 435                                     | Coupler carrier broken or defective  | ---        | 16          | 1     | 17    |
| 436                                     | Coupler shank broken or defective  | ---        | 11          | ---   | 11    |
| 439                                     | Other causes involving coupler and draft system                            | 7          | 27          | 4     | 38    |
| 439L                                    | Other causes involving coupler and draft system - locomotive               | 1          | 2           | ---   | 3     |
| SUBTOTAL.....                           |  | 21         | 223         | 16    | 260   |
| <b>TRUCK COMPONENTS</b>                 |  |            |             |       |       |
| 440                                     | Side bearing clearance improper  | 2          | 189         | ---   | 191   |
| 441                                     | Side bearing(s) broken   | ---        | 36          | 1     | 37    |
| 442                                     | Side bearing(s) missing  | ---        | 37          | ---   | 37    |
| 443                                     | Truck bolster broken   | ---        | 27          | ---   | 27    |
| 444                                     | Side frame broken  | ---        | 10          | ---   | 10    |
| 445                                     | Track, stiff, improper lateral or improper swivelling                      | 1          | 110         | ---   | 111   |
| 445L                                    | Track, stiff, improper lateral or improper swivelling - locomotive         | ---        | 9           | ---   | 9     |
| 446                                     | Defective snubbing   | ---        | 6           | ---   | 6     |
| 447                                     | Broken, missing, or otherwise defective springs                            | ---        | 10          | ---   | 10    |
| 449                                     | Truck components (cause code not listed)                                   | ---        | 27          | ---   | 27    |
| 449L                                    | Truck components (cause code not listed) - locomotive                      | ---        | ---         | 1     | 1     |
| SUBTOTAL.....                           |  | 3          | 461         | 2     | 466   |

TABLE S6. (CONT)

| Cause No.                         | Causes   | Collis-ions | Derail-ments | Other | Total |
|-----------------------------------|--|-------------|--------------|-------|-------|
| AXLES AND JOURNAL BEARINGS        |  |             |              |       |       |
| 450                               | Broken or bent between wheel seats                                 | ---         | 16           | ---   | 16    |
| 450L                              | Broken or bent between wheel seats - locomotive                    | ---         | 4            | ---   | 4     |
| 451                               | Journal (plain) failure from overheating                           | 1           | 196          | 7     | 204   |
| 452                               | Journal (roller bearing) failure from overheating                  | 1           | 60           | 1     | 62    |
| 452L                              | Journal (roller bearing) failure from overheating - locomotive     | ---         | 1            | ---   | 1     |
| 453                               | Journal fractured, new cold break                                  | ---         | 9            | ---   | 9     |
| 454                               | Journal fractured, cold break (previously overheated)              | ---         | 1            | ---   | 1     |
| 454L                              | Journal fractured, cold break (previously overheated) - locomotive | ---         | 1            | ---   | 1     |
| 459                               | Axles and journal bearings (cause code not listed)                 | ---         | 7            | ---   | 7     |
| 459L                              | Axles and journal bearings (cause code not listed) - locomotive    | ---         | 1            | ---   | 1     |
|                                   | SUBTOTAL.....  | 2           | 296          | 8     | 306   |
| WHEELS                            |  |             |              |       |       |
| 460                               | Broken flange  | 1           | 37           | ---   | 38    |
| 460L                              | Broken flange - locomotive   | ---         | 1            | ---   | 1     |
| 461                               | Broken rim   | ---         | 53           | 2     | 55    |
| 461L                              | Broken rim - locomotive  | ---         | 2            | ---   | 2     |
| 462                               | Broken plate   | ---         | 48           | 1     | 49    |
| 462L                              | Broken plate - locomotive  | ---         | 2            | ---   | 2     |
| 463                               | Broken hub   | ---         | 14           | ---   | 14    |
| 463L                              | Broken hub - locomotive  | ---         | 2            | ---   | 2     |
| 464                               | Worn flange  | 3           | 153          | ---   | 156   |
| 464L                              | Worn flange - locomotive   | ---         | 4            | ---   | 4     |
| 465                               | Worn tread   | ---         | 1            | ---   | 1     |
| 466                               | Damaged flange or tread, thermal/flat                              | ---         | 8            | 1     | 9     |
| 466L                              | Damaged flange or tread, thermal/flat - locomotive                 | ---         | 2            | ---   | 2     |
| 467                               | Loose wheel  | 1           | 58           | ---   | 59    |
| 467L                              | Loose wheel - locomotive   | ---         | 3            | ---   | 3     |
| 469                               | Wheels (cause code not listed)                                     | 1           | 30           | 3     | 34    |
| 469L                              | Wheels (cause code not listed) - locomotive                        | ---         | 5            | ---   | 5     |
|                                   | SUBTOTAL.....  | 6           | 423          | 7     | 436   |
| LOCOMOTIVES                       |  |             |              |       |       |
| 470L                              | Pinning gear failure - locomotive                                  | ---         | 1            | 1     | 2     |
| 471L                              | Traction motor failure - locomotive                                | ---         | 3            | 12    | 15    |
| 472L                              | Crank case or air box explosion - locomotive                       | ---         | ---          | 7     | 7     |
| 473L                              | Oil fire - locomotive  | ---         | ---          | 15    | 15    |
| 474L                              | Electrically caused fire - locomotive                              | ---         | 1            | 55    | 56    |
| 475L                              | Current collector system - locomotive                              | ---         | ---          | 8     | 8     |
| 476L                              | Remote control equipment inoperative - locomotive                  | ---         | 1            | ---   | 1     |
| 479L                              | Locomotives (cause code not listed) - locomotive                   | 3           | 8            | 17    | 28    |
|                                   | SUBTOTAL.....  | 3           | 14           | 115   | 132   |
| DOORS                             |  |             |              |       |       |
| 480                               | Box car plug door open   | 3           | ---          | ---   | 3     |
| 481                               | Box car plug door, attachment defective                            | ---         | 2            | 1     | 3     |
| 483                               | Box car door, other than plug, open                                | ---         | ---          | 1     | 1     |
| 484                               | Box car door, other than plug, attachment defective                | ---         | 1            | 1     | 2     |
| 485                               | Bottom outlet car door open  | ---         | 3            | 1     | 4     |
| 486                               | Bottom outlet car door attachment defective                        | ---         | 3            | ---   | 3     |
| 489                               | Doors (cause code not listed, other than locomotive)               | ---         | 3            | 2     | 5     |
|                                   | SUBTOTAL.....  | 3           | 12           | 6     | 21    |
| GENL MECH AND ELECTRICAL FAILURES |  |             |              |       |       |
| 499                               | General mechanical and electrical failures                         | 2           | 17           | 8     | 27    |
| 499L                              | General mechanical and electrical failures - locomotive            | ---         | 7            | 7     | 14    |
|                                   | SUBTOTAL.....  | 2           | 24           | 15    | 41    |
|                                   | GRAND TOTAL.....   | 84          | 1,869        | 217   | 2,170 |

TABLE S7. TRAIN ACCIDENTS RESULTING FROM TRACK, ROADBED AND STRUCTURES BY SPECIFIC CAUSE, 1978

| Cause No.                                   | Causes  | Collisions | Derailments  | Other     | Total        |
|---|---|------------|--------------|-----------|--------------|
| <b>ROADBED DEFECTS</b>                      |   |            |              |           |              |
| 101   | Roadbed settled or soft   | 2          | 149          | ---       | 151          |
| 102   | Washout/rain/slide/flood/snow/ice damage to track               | ---        | 51           | 2         | 53           |
| 109   | Other roadbed defects (cause code not listed)                   | 1          | 35           | ---       | 36           |
|   | <b>SUBTOTAL.....</b>  | <b>3</b>   | <b>235</b>   | <b>2</b>  | <b>240</b>   |
| <b>TRACK GEOMETRY DEFECTS</b>               |   |            |              |           |              |
| 110   | Wide gage (defective or missing crossties)                      | 7          | 812          | 2         | 821          |
| 111   | Wide gage (defective or missing spikes or other rail fasteners) | 2          | 98           | ---       | 100          |
| 112   | Wide gage (loose, broken, or defective gage rods)               | ---        | 10           | ---       | 10           |
| 113   | Wide gage (worn rail)   | 1          | 79           | ---       | 80           |
| 114   | Track alignment irregular                                       | ---        | 67           | 2         | 69           |
| 115   | Track alignment irregular (buckled)                             | ---        | 157          | 1         | 158          |
| 116   | Track profile improper  | ---        | 10           | ---       | 10           |
| 117   | Superelevation improper, excessive or insufficient              | ---        | 58           | ---       | 58           |
| 118   | Superelevation runoff improper                                  | ---        | 3            | ---       | 3            |
| 119   | Cross level of track irregular (at joints)                      | 6          | 588          | 2         | 596          |
| 120   | Cross level of track irregular (not at joints)                  | 1          | 239          | ---       | 240          |
| 129   | Other track geometry defects (cause code not listed)            | ---        | 62           | ---       | 62           |
|   | <b>SUBTOTAL.....</b>  | <b>17</b>  | <b>2,203</b> | <b>7</b>  | <b>2,227</b> |
| <b>RAIL AND JOINT BAR DEFECTS</b>           |   |            |              |           |              |
| 130   | Bolt hole crack or break  | 1          | 79           | ---       | 80           |
| 131   | Broken base of rail   | 2          | 271          | 2         | 275          |
| 132   | Broken weld, field  | 1          | 9            | ---       | 10           |
| 133   | Broken weld, plant  | ---        | 1            | ---       | 1            |
| 134   | Detail fracture from shelling or head check                     | ---        | 15           | ---       | 15           |
| 135   | Engine burn fracture  | ---        | 5            | ---       | 5            |
| 136   | Head and web separation (outside joint bar limits)              | 2          | 143          | ---       | 145          |
| 137   | Head and web separation (within joint bar limits)               | ---        | 63           | ---       | 63           |
| 138   | Horizontal split head   | ---        | 15           | ---       | 15           |
| 139   | Piped rail  | ---        | 2            | ---       | 2            |
| 140   | Rail defect with joint bar repair                               | ---        | 3            | ---       | 3            |
| 141   | Transverse/compound fissure                                     | ---        | 161          | ---       | 161          |
| 142   | Vertical split head   | ---        | 193          | 1         | 194          |
| 143   | Worn rail   | 1          | 76           | ---       | 77           |
| 144   | Mismatched rail-head contour                                    | ---        | 34           | ---       | 34           |
| 145   | Joint bar broken, compromise                                    | ---        | 15           | ---       | 15           |
| 146   | Joint bar broken, insulated                                     | ---        | 13           | ---       | 13           |
| 147   | Joint bar broken, noninsulated                                  | ---        | 62           | ---       | 62           |
| 148   | Joint bolts, broken or missing                                  | ---        | 23           | ---       | 23           |
| 149   | Other rail and joint bar defects (cause code not listed)        | ---        | 134          | ---       | 134          |
|   | <b>SUBTOTAL.....</b>  | <b>7</b>   | <b>1,317</b> | <b>3</b>  | <b>1,327</b> |
| <b>FROGS, SWITCHES AND TRACK APPLIANCES</b> |   |            |              |           |              |
| 160   | Guard rail loose/broken, or mislocated                          | ---        | 24           | ---       | 24           |
| 161   | Switch damaged or out of adjustment                             | 4          | 176          | 3         | 185          |
| 162   | Switch, hand operated, stand mechanism broken, loose or worn    | ---        | 24           | ---       | 24           |
| 163   | Switch connecting or operating rod, broken or defective         | ---        | 17           | ---       | 17           |
| 164   | Stock rail worn, broken or disconnected                         | ---        | 24           | ---       | 24           |
| 165   | Switch point worn or broken                                     | 4          | 436          | ---       | 442          |
| 166   | Switch rod worn, bent, broken or disconnected                   | ---        | 15           | ---       | 15           |
| 167   | Frog, rigid, worn or broken                                     | ---        | 22           | ---       | 22           |
| 168   | Frog, spring, worn or broken                                    | ---        | 8            | ---       | 8            |
| 169   | Frog, self guarded, worn or broken                              | ---        | 4            | ---       | 4            |
| 171   | Derail, defective   | 1          | ---          | ---       | 1            |
| 172   | Expansion joint failed or malfunctioned                         | ---        | 1            | ---       | 1            |
| 173   | Retarder worn, broken or malfunctioning                         | 27         | 14           | 11        | 52           |
| 174   | Spring/power switch mechanism malfunction                       | 1          | 24           | ---       | 25           |
| 175   | Retarder yard skate defective                                   | 8          | 2            | 3         | 13           |
| 176   | Switch out of adjustment due to insufficient rail anchoring     | 2          | 11           | ---       | 13           |
| 179   | Other frog, switch or track appliance causes                    | 9          | 77           | 5         | 91           |
|   | <b>SUBTOTAL.....</b>  | <b>56</b>  | <b>863</b>   | <b>22</b> | <b>961</b>   |
| <b>OTHER WAY AND STRUCTURE</b>              |   |            |              |           |              |
| 180   | Bridge misalignment or failure                                  | ---        | 4            | 2         | 6            |
| 181   | Flangeway clogged   | ---        | 6            | ---       | 6            |
| 189   | Other way and structure (cause code not listed)                 | ---        | 6            | 7         | 13           |
|   | <b>SUBTOTAL.....</b>  | <b>---</b> | <b>16</b>    | <b>9</b>  | <b>25</b>    |
| <b>SIGNAL AND COMMUNICATION FAILURES</b>    |   |            |              |           |              |
| 200   | Fixed signal improperly displayed (defective)                   | 2          | 2            | ---       | 4            |
| 201   | Radio communication equipment failure                           | 5          | 4            | ---       | 9            |
| 209   | Signal and communication failure (cause code not listed)        | 1          | 2            | 1         | 4            |
|   | <b>SUBTOTAL.....</b>  | <b>8</b>   | <b>6</b>     | <b>1</b>  | <b>17</b>    |
| <b>GRAND TOTAL.....</b>                     |   | <b>91</b>  | <b>4,662</b> | <b>44</b> | <b>4,797</b> |



TABLE S8. TRAIN ACCIDENTS RESULTING FROM MISCELLANEOUS CAUSES BY SPECIFIC CAUSE, 1978

| <u>Cause No.</u> | <u>Causes</u>  | <u>Collis-<br/>ions</u> | <u>Derail-<br/>ments</u> | <u>Other</u> | <u>Total</u> |
|------------------|--|-------------------------|--------------------------|--------------|--------------|
| 700              | Collision with highway user at grade crossing                              | --                      | --                       | 282          | 282          |
| 701              | Emergency brake application to avoid accident                              | --                      | 11                       | --           | 11           |
| 702              | Vandalism  | 20                      | 82                       | 70           | 172          |
| 703              | Interference with P.R. operations by nonrailroad employees (not vandalism) | 6                       | 22                       | 6            | 34           |
| 704              | Load shifted   | 18                      | 61                       | 9            | 88           |
| 705              | Load fell from car   | 4                       | 16                       | 13           | 33           |
| 706              | Overloaded car   | --                      | 11                       | 2            | 13           |
| 707              | Improperly loaded car  | 1                       | 44                       | 2            | 47           |
| 708              | Oversized load, misrouted  | 3                       | --                       | 6            | 9            |
| 709              | Object on or fouling track   | 2                       | 57                       | 17           | 76           |
| 710              | Equipment on or fouling track  | 16                      | 4                        | 14           | 34           |
| 711              | Trailer or container tiedown equipment improperly applied                  | 6                       | 1                        | 18           | 25           |
| 712              | Overloaded or improperly loaded container or trailer on flat car           | --                      | 3                        | 2            | 5            |
| 713              | Interaction of lateral/vertical forces                                     | 1                       | 146                      | --           | 147          |
| 714              | Failure to control speed of car using hand brake (non-railroad employee)   | 1                       | 2                        | --           | 3            |
| 715              | Snow, ice, or mud on track   | 4                       | 78                       | 1            | 83           |
| 716              | Other acts of God  | 1                       | 10                       | 9            | 20           |
| 799              | Miscellaneous causes not otherwise listed                                  | 39                      | 196                      | 148          | 383          |
|                  | TOTAL:   | 122                     | 744                      | 599          | 1,465        |

TABLE S9. TRAIN ACCIDENTS INVOLVING CONSISTS TRANSPORTING HAZARDOUS MATERIALS BY STATE, 1978

| State                | Consists In hazmat Accidents | Total Cars in Consist | Total cars Containing Hazmat | Total cars Damaged W/hazmat | Total cars Releasing Hazmat | People Evacuated | Equipment Dollar Damages |
|----------------------|------------------------------|-----------------------|------------------------------|-----------------------------|-----------------------------|------------------|--------------------------|
| Alabama              | 34                           | 2,484                 | 248                          | 51                          | 7                           | 2,050            | 1,243,680                |
| Alaska               | 5                            | 277                   | 83                           | 16                          | 6                           | ---              | 220,130                  |
| Arizona              | 9                            | 576                   | 49                           | 9                           | ---                         | ---              | 126,450                  |
| Arkansas             | 24                           | 2,342                 | 110                          | 51                          | 27                          | 2,850            | 3,832,957                |
| California           | 24                           | 1,710                 | 74                           | 12                          | 4                           | 200              | 2,876,200                |
| Colorado             | 7                            | 493                   | 19                           | 4                           | ---                         | ---              | 282,016                  |
| Connecticut          | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Delaware             | 3                            | 222                   | 14                           | ---                         | ---                         | ---              | 9,200                    |
| District of Columbia | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Florida              | 14                           | 1,315                 | 196                          | 43                          | 7                           | 2,900            | 1,139,260                |
| Georgia              | 19                           | 1,409                 | 66                           | 25                          | 9                           | 157              | 845,015                  |
| Hawaii               | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Idaho                | 24                           | 1,535                 | 94                           | 9                           | 2                           | ---              | 432,988                  |
| Illinois             | 65                           | 4,334                 | 264                          | 72                          | 12                          | 540              | 2,562,317                |
| Indiana              | 28                           | 2,403                 | 122                          | 27                          | 8                           | 2,629            | 872,825                  |
| Iowa                 | 16                           | 847                   | 41                           | 16                          | 3                           | 2,000            | 319,010                  |
| Kansas               | 20                           | 1,053                 | 52                           | 14                          | 3                           | ---              | 146,252                  |
| Kentucky             | 46                           | 3,004                 | 386                          | 101                         | 23                          | 695              | 2,867,261                |
| Louisiana            | 55                           | 4,574                 | 483                          | 56                          | 2                           | 420              | 1,427,765                |
| Maine                | 14                           | 1,075                 | 69                           | 8                           | 2                           | ---              | 209,060                  |
| Maryland             | 11                           | 478                   | 24                           | 3                           | 1                           | ---              | 125,770                  |
| Massachusetts        | 5                            | 455                   | 19                           | 4                           | ---                         | ---              | 268,000                  |
| Michigan             | 23                           | 1,273                 | 114                          | 42                          | 5                           | 125              | 901,180                  |
| Minnesota            | 42                           | 2,400                 | 122                          | 56                          | 4                           | ---              | 1,920,664                |
| Mississippi          | 28                           | 2,055                 | 133                          | 32                          | 3                           | 50               | 320,745                  |
| Missouri             | 31                           | 2,241                 | 70                           | 10                          | 3                           | ---              | 1,305,665                |
| Montana              | 11                           | 596                   | 30                           | 13                          | 3                           | ---              | 1,296,900                |
| Nebraska             | 10                           | 605                   | 13                           | 7                           | 1                           | 1,600            | 787,103                  |
| Nevada               | 4                            | 333                   | 7                            | 4                           | 1                           | ---              | 394,500                  |
| New Hampshire        | 2                            | 120                   | 5                            | ---                         | ---                         | ---              | 25,450                   |
| New Jersey           | 4                            | 221                   | 20                           | 5                           | 3                           | 60               | 18,975                   |
| New Mexico           | 6                            | 426                   | 25                           | 3                           | ---                         | ---              | 31,700                   |
| New York             | 16                           | 943                   | 62                           | 13                          | 3                           | 40               | 546,763                  |
| North Carolina       | 34                           | 3,016                 | 221                          | 33                          | 6                           | 200              | 1,293,206                |
| North Dakota         | 10                           | 441                   | 114                          | 23                          | 1                           | 14               | 512,305                  |
| Ohio                 | 42                           | 3,515                 | 207                          | 36                          | 6                           | 86               | 1,280,757                |
| Oklahoma             | 31                           | 2,082                 | 105                          | 28                          | 5                           | 50               | 1,065,469                |
| Oregon               | 19                           | 1,405                 | 50                           | 10                          | 1                           | ---              | 299,530                  |
| Pennsylvania         | 31                           | 2,227                 | 120                          | 42                          | 10                          | 450              | 1,560,770                |
| Rhode Island         | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| South Carolina       | 7                            | 564                   | 42                           | 7                           | 1                           | ---              | 510,625                  |
| South Dakota         | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Tennessee            | 45                           | 3,091                 | 285                          | 93                          | 9                           | 1,520            | 1,351,238                |
| Texas                | 107                          | 7,347                 | 452                          | 142                         | 38                          | 7,320            | 3,761,242                |
| Utah                 | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Vermont              | 3                            | 148                   | 7                            | 6                           | ---                         | 45               | 321,417                  |
| Virginia             | 18                           | 1,743                 | 63                           | 11                          | ---                         | ---              | 585,094                  |
| Washington           | 7                            | 259                   | 40                           | 10                          | 1                           | ---              | 15,875                   |
| West Virginia        | 27                           | 2,319                 | 139                          | 56                          | 6                           | 19               | 1,279,350                |
| Wisconsin            | 35                           | 2,834                 | 61                           | 18                          | 2                           | 11               | 559,008                  |
| Wyoming              | 7                            | 514                   | 24                           | 6                           | 4                           | 150              | 461,367                  |
| Total.....           | 1,035                        | 73,324                | 4,944                        | 1,229                       | 232                         | 26,381           | 42,213,056               |

TABLE S10. TRAIN ACCIDENTS INVOLVING CONSISTS TRANSPORTING HAZARDOUS MATERIALS BY TYPE OF ACCIDENT, 1978

| Type of Accident        | Consists In hazmat Accidents | Total Cars in Consist | Total cars Containing Hazmat | Total cars Damaged W/hazmat | Total cars Releasing Hazmat | People Evacuated | Equipment Dollar Damages |
|-------------------------|------------------------------|-----------------------|------------------------------|-----------------------------|-----------------------------|------------------|--------------------------|
| Derailement             | 815                          | 60,920                | 4,090                        | 1,097                       | 205                         | 22,821           | 37,988,915               |
| Head on collision       | 12                           | 698                   | 55                           | 3                           | 1                           | 1,000            | 1,077,025                |
| Rear end collision      | 24                           | 1,057                 | 93                           | 12                          | 2                           | 100              | 472,409                  |
| Side collision          | 94                           | 4,611                 | 327                          | 62                          | 7                           | 2,020            | 939,052                  |
| Raking collision        | 18                           | 1,071                 | 50                           | 10                          | 2                           | ---              | 336,125                  |
| Broken train collision  | 6                            | 468                   | 43                           | 5                           | 3                           | ---              | 56,140                   |
| Pail-hwy crossing       | 21                           | 1,327                 | 135                          | 24                          | 4                           | 400              | 761,644                  |
| FR Grade crossing       | 2                            | 6                     | 3                            | 1                           | ---                         | ---              | 5,600                    |
| Obstruction             | 3                            | 297                   | 11                           | ---                         | ---                         | ---              | 104,150                  |
| Explosion-detonation    | ---                          | ---                   | ---                          | ---                         | ---                         | ---              | ---                      |
| Fire or violent rupture | 13                           | 1,057                 | 43                           | 5                           | 4                           | ---              | 207,347                  |
| Other                   | 27                           | 1,812                 | 94                           | 10                          | 4                           | 40               | 264,649                  |
| Total                   | 1,035                        | 73,324                | 4,944                        | 1,229                       | 232                         | 26,381           | 42,213,056               |

TABLE S11. ACCIDENT/INCIDENT FATALITIES BY TYPE OF PERSON,  
1978

|                                    | Total<br>Acci-<br>dents | Fatal<br>Acci-<br>dents | ....Employees on duty.... |       |       | Empl not<br>on duty | Passen-<br>gers | Non tres-<br>passers | Tres-<br>passers | Total<br>Killed |
|------------------------------------|-------------------------|-------------------------|---------------------------|-------|-------|---------------------|-----------------|----------------------|------------------|-----------------|
|                                    |                         |                         | Trainmen                  | Other | Total |                     |                 |                      |                  |                 |
| TRAIN ACCIDENTS                    |                         |                         |                           |       |       |                     |                 |                      |                  |                 |
| Collisions                         | 1,476                   | 12                      | 12                        | 3     | 15    | 1                   | ---             | ---                  | ---              | 16              |
| Deraillments                       | 8,763                   | 10                      | 4                         | 6     | 10    | ---                 | 4               | 23                   | 4                | 41              |
| Grade crossing                     | 286                     | 61                      | 1                         | ---   | 1     | ---                 | ---             | 73                   | 4                | 78              |
| Other train accidents              | 752                     | 4                       | ---                       | 2     | 2     | ---                 | ---             | 1                    | 1                | 4               |
| TOTAL.....                         | 11,277                  | 87                      | 17                        | 11    | 28    | 1                   | 4               | 97                   | 9                | 139             |
| TRAIN INCIDENTS                    |                         |                         |                           |       |       |                     |                 |                      |                  |                 |
| Coupling incidents                 | 716                     | 5                       | 5                         | ---   | 5     | ---                 | ---             | ---                  | ---              | 5               |
| Operating locomotives              | 827                     | 7                       | ---                       | ---   | ---   | ---                 | ---             | ---                  | 7                | 7               |
| Operating rail motor car           | 315                     | 3                       | ---                       | 2     | 2     | ---                 | ---             | 1                    | ---              | 3               |
| Operating handbrakes               | 366                     | 2                       | 2                         | ---   | 2     | ---                 | ---             | ---                  | ---              | 2               |
| Operating switches                 | 111                     | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Striking fixed structures          | 288                     | 3                       | 1                         | ---   | 1     | ---                 | ---             | ---                  | 2                | 3               |
| Getting on or off trains           | 2,598                   | 22                      | 4                         | ---   | 4     | ---                 | 6               | ---                  | 12               | 22              |
| Highway grade accidents            | 3,528                   | 752                     | ---                       | 1     | 1     | 2                   | ---             | 640                  | 81               | 924             |
| Struck or run over                 | 1,008                   | 408                     | 12                        | 9     | 21    | 2                   | ---             | 45                   | 351              | 419             |
| Flying or falling objects          | 1,694                   | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Assaults                           | 290                     | 1                       | 1                         | ---   | 1     | ---                 | ---             | ---                  | ---              | 1               |
| Miscellaneous                      | 3,177                   | 41                      | 9                         | 6     | 15    | ---                 | 3               | 7                    | 16               | 41              |
| TOTAL.....                         | 14,918                  | 1,244                   | 34                        | 18    | 52    | 4                   | 9               | 893                  | 469              | 1,427           |
| NONTRAIN INCIDENTS                 |                         |                         |                           |       |       |                     |                 |                      |                  |                 |
| Coupling incidents                 | 1,963                   | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Operating switches                 | 2,293                   | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Getting on/off locos or cars       | 2,656                   | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Servicing or maintenance of equip  | 15,288                  | 7                       | ---                       | 7     | 7     | ---                 | ---             | ---                  | ---              | 7               |
| Maintenance of way and structures  | 19,400                  | 15                      | ---                       | 12    | 12    | ---                 | ---             | 2                    | 1                | 15              |
| Involving freight, baggage, etc.   | 239                     | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Involving windows, doors, etc.     | 905                     | 1                       | ---                       | 1     | 1     | ---                 | ---             | ---                  | ---              | 1               |
| Involving passenger car doors      | 26                      | ---                     | ---                       | ---   | ---   | ---                 | ---             | ---                  | ---              | ---             |
| Stumbling, falling not on car/loco | 5,617                   | 6                       | 1                         | 2     | 3     | ---                 | ---             | 1                    | 2                | 6               |
| Flying/falling obj's, burns, etc.  | 1,859                   | 8                       | ---                       | 1     | 1     | 1                   | ---             | 1                    | 5                | 8               |
| Assaults to persons                | 303                     | 6                       | ---                       | 3     | 3     | 3                   | ---             | ---                  | ---              | 6               |
| Miscellaneous                      | 4,850                   | 34                      | 3                         | 12    | 15    | ---                 | ---             | 16                   | 6                | 37              |
| TOTAL.....                         | 55,391                  | 77                      | 4                         | 38    | 42    | 4                   | ---             | 20                   | 14               | 80              |
| GRAND TOTAL                        | 81,586                  | 1,408                   | 55                        | 67    | 122   | 9                   | 13              | 1,010                | 492              | 1,646           |

TABLE S12. ACCIDENT/INCIDENT  
PERSON, 1978

|                                    | Total<br>acci-<br>dents | Nonfatal<br>acci-<br>dents |
|------------------------------------|-------------------------|----------------------------|
| <b>TRAIN ACCIDENTS</b>             |                         |                            |
| Collisions                         | 1,476                   | 1,464                      |
| Derailements                       | 8,763                   | 8,753                      |
| Grade crossing                     | 286                     | 225                        |
| Other train accidents              | 752                     | 748                        |
| TOTAL.....                         | 11,277                  | 11,190                     |
| <b>TRAIN INCIDENTS</b>             |                         |                            |
| Coupling accidents                 | 716                     | 711                        |
| Operating locomotives              | 827                     | 820                        |
| Operating rail motor car           | 315                     | 312                        |
| Operating handbrakes               | 366                     | 364                        |
| Operating switches                 | 111                     | 111                        |
| Striking fixed structures          | 288                     | 285                        |
| Getting on or off trains           | 2,598                   | 2,576                      |
| Highway grade accidents            | 3,528                   | 2,776                      |
| Struck or run over                 | 1,008                   | 600                        |
| Flying or falling objects          | 1,694                   | 1,694                      |
| Assaults                           | 290                     | 289                        |
| Miscellaneous                      | 3,177                   | 3,136                      |
| TOTAL.....                         | 14,918                  | 13,674                     |
| <b>NONTRAIN INCIDENTS</b>          |                         |                            |
| Coupling incidents                 | 1,963                   | 1,963                      |
| Operating switches                 | 2,293                   | 2,293                      |
| Getting on/off locos or cars       | 2,656                   | 2,656                      |
| Servicing or maintenance of equip  | 15,280                  | 15,273                     |
| Maintenance of way and structures  | 19,400                  | 19,385                     |
| Involving freight, baggage, etc.   | 239                     | 239                        |
| Involving windows, doors, etc.     | 905                     | 904                        |
| Involving passenger car doors      | 26                      | 26                         |
| Stumbling, falling not on car/loco | 5,617                   | 5,611                      |
| Flying/falling objs, burns, etc.   | 1,859                   | 1,851                      |
| Assaults to persons                | 303                     | 297                        |
| Miscellaneous                      | 4,850                   | 4,816                      |
| TOTAL.....                         | 55,391                  | 55,314                     |
| <b>GRAND TOTAL</b>                 | <b>81,586</b>           | <b>80,178</b>              |

# NONFATAL CASUALTIES BY TYPE OF

| ....Employees on duty... |        |        | Empl not<br>on duty | Passen-<br>gers | Non Tres-<br>passers | Tres-<br>passers | Total<br>Non-Fatal<br>Casualties |
|--------------------------|--------|--------|---------------------|-----------------|----------------------|------------------|----------------------------------|
| Trainmen                 | Other  | Total  |                     |                 |                      |                  |                                  |
| 231                      | 30     | 261    | 3                   | 702             | 4                    | ---              | 970                              |
| 269                      | 72     | 341    | 1                   | 98              | 178                  | 7                | 625                              |
| 75                       | 13     | 88     | 1                   | 16              | 123                  | 7                | 235                              |
| 36                       | 9      | 45     | ---                 | 25              | 11                   | ---              | 81                               |
| 611                      | 124    | 735    | 5                   | 841             | 316                  | 14               | 1,911                            |
| 685                      | 29     | 714    | ---                 | ---             | 1                    | 2                | 717                              |
| 798                      | 28     | 826    | 1                   | ---             | 1                    | 3                | 831                              |
| 23                       | 326    | 349    | ---                 | ---             | 1                    | ---              | 350                              |
| 356                      | 8      | 364    | ---                 | ---             | ---                  | ---              | 364                              |
| 106                      | 4      | 110    | ---                 | ---             | ---                  | 1                | 111                              |
| 270                      | 13     | 283    | ---                 | ---             | ---                  | 2                | 285                              |
| 2,364                    | 82     | 2,446  | 3                   | 46              | 6                    | 93               | 2,594                            |
| 69                       | 22     | 91     | 2                   | 2               | 3,584                | 201              | 3,880                            |
| 85                       | 40     | 125    | 3                   | 2               | 201                  | 317              | 648                              |
| 1,566                    | 124    | 1,690  | 2                   | 20              | 7                    | 2                | 1,721                            |
| 283                      | 6      | 289    | ---                 | 4               | ---                  | ---              | 293                              |
| 2,261                    | 787    | 3,048  | 4                   | 103             | 33                   | 32               | 3,220                            |
| 8,866                    | 1,469  | 10,335 | 15                  | 177             | 3,834                | 653              | 15,014                           |
| 1,797                    | 169    | 1,966  | 1                   | ---             | ---                  | ---              | 1,967                            |
| 2,086                    | 204    | 2,290  | 4                   | ---             | 1                    | ---              | 2,295                            |
| 1,972                    | 534    | 2,506  | 12                  | 119             | 20                   | 5                | 2,662                            |
| 119                      | 15,077 | 15,196 | 96                  | ---             | 15                   | ---              | 15,307                           |
| 43                       | 19,293 | 19,336 | 63                  | ---             | 54                   | ---              | 19,453                           |
| 17                       | 219    | 236    | ---                 | 2               | 1                    | ---              | 239                              |
| 303                      | 553    | 856    | 11                  | 15              | 26                   | ---              | 908                              |
| 5                        | 10     | 15     | ---                 | 12              | ---                  | ---              | 27                               |
| 2,445                    | 2,502  | 4,947  | 343                 | 72              | 244                  | 17               | 5,623                            |
| 1,012                    | 769    | 1,781  | 35                  | 3               | 34                   | 33               | 1,886                            |
| 101                      | 165    | 266    | 17                  | 3               | 10                   | 1                | 297                              |
| 1,951                    | 2,655  | 4,606  | 121                 | 8               | 198                  | 23               | 4,956                            |
| 11,851                   | 42,150 | 54,001 | 703                 | 234             | 603                  | 79               | 55,620                           |
| 21,328                   | 43,743 | 65,071 | 723                 | 1,252           | 4,753                | 746              | 72,545                           |

TABLE S13. FATALITIES IN TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NONTRAIN INCIDENTS BY TYPE OF PERSON, 1978

| Class of Railroad              | Fatal<br>Accidents | Total<br>Accidents | ...Employees on Duty... |       |       | Empl<br>not on<br>Duty | Pass<br>on<br>Train | Non-<br>Tresp | Tresp | Total |
|--------------------------------|--------------------|--------------------|-------------------------|-------|-------|------------------------|---------------------|---------------|-------|-------|
|                                |                    |                    | Train<br>Men            | Other | Total |                        |                     |               |       |       |
| TRAIN ACCIDENTS                |                    |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 84                 | 10,470             | 17                      | 10    | 27    | 1                      | 4                   | 86            | 9     | 127   |
| Class I Switching and Terminal | ---                | 25                 | ---                     | ---   | ---   | ---                    | ---                 | ---           | ---   | ---   |
| Class II & III Railroads       | 3                  | 762                | ---                     | 1     | 1     | ---                    | ---                 | 11            | ---   | 12    |
| TOTAL.....                     | 87                 | 11,277             | 17                      | 11    | 28    | 1                      | 4                   | 97            | 9     | 139   |
| TRAIN INCIDENTS                |                    |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 1,203              | 13,616             | 33                      | 18    | 51    | 4                      | 9                   | 860           | 456   | 1,380 |
| Class I Switching and Terminal | ---                | 29                 | ---                     | ---   | ---   | ---                    | ---                 | ---           | ---   | ---   |
| Class II & III Railroads       | 41                 | 1,273              | 1                       | ---   | 1     | ---                    | ---                 | 33            | 13    | 47    |
| TOTAL.....                     | 1,244              | 14,918             | 34                      | 18    | 52    | 4                      | 9                   | 893           | 469   | 1,427 |
| NON-TRAIN INCIDENTS            |                    |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 71                 | 50,252             | 3                       | 36    | 39    | 4                      | ---                 | 18            | 13    | 74    |
| Class I Switching and Terminal | ---                | 146                | ---                     | ---   | ---   | ---                    | ---                 | ---           | ---   | ---   |
| Class II & III Railroads       | 6                  | 4,993              | 1                       | 2     | 3     | ---                    | ---                 | 2             | 1     | 6     |
| TOTAL.....                     | 77                 | 55,391             | 4                       | 38    | 42    | 4                      | ---                 | 20            | 14    | 80    |

TABLE S14. INJURIES IN TRAIN ACCIDENTS, TRAIN INCIDENTS AND NONTRAIN INCIDENTS BY TYPE OF PERSON, 1978

| Class of Railroad              | Injurious<br>Accidents | Total<br>Accidents | ...Employees on Duty... |        |        | Empl<br>not on<br>Duty | Pass<br>on<br>Train | Non-<br>Tresp | Tresp | Total  |
|--------------------------------|------------------------|--------------------|-------------------------|--------|--------|------------------------|---------------------|---------------|-------|--------|
|                                |                        |                    | Train<br>Men            | Other  | Total  |                        |                     |               |       |        |
| TRAIN ACCIDENTS                |                        |                    |                         |        |        |                        |                     |               |       |        |
| Class I Line-Haul              | 454                    | 10,470             | 565                     | 112    | 677    | 5                      | 816                 | 168           | 14    | 1,680  |
| Class Switching and Terminal   | ---                    | 25                 | ---                     | ---    | ---    | ---                    | ---                 | ---           | ---   | ---    |
| Class II & III Railroads       | 38                     | 782                | 32                      | 10     | 42     | ---                    | 25                  | 148           | ---   | 215    |
| TOTAL.....                     | 492                    | 11,277             | 597                     | 122    | 719    | 5                      | 841                 | 316           | 14    | 1,895  |
| TRAIN INCIDENTS                |                        |                    |                         |        |        |                        |                     |               |       |        |
| Class I Line-Haul              | 12,219                 | 13,616             | 7,800                   | 1,287  | 9,087  | 15                     | 134                 | 3,621         | 618   | 13,475 |
| Class I Switching and Terminal | 29                     | 29                 | 27                      | 2      | 29     | ---                    | ---                 | ---           | ---   | 29     |
| Class II & III Railroads       | 1,225                  | 1,273              | 862                     | 141    | 1,003  | ---                    | 43                  | 213           | 35    | 1,294  |
| TOTAL.....                     | 13,473                 | 14,918             | 8,689                   | 1,430  | 10,119 | 15                     | 177                 | 3,834         | 653   | 14,796 |
| NON-TRAIN INCIDENTS            |                        |                    |                         |        |        |                        |                     |               |       |        |
| Class I Line-Haul              | 48,761                 | 50,252             | 10,343                  | 37,158 | 47,501 | 673                    | 211                 | 557           | 74    | 49,016 |
| Class I Switching and Terminal | 145                    | 146                | 59                      | 79     | 138    | 8                      | ---                 | ---           | ---   | 146    |
| Class II & III Railroads       | 4,925                  | 4,993              | 1,277                   | 3,576  | 4,853  | 18                     | 23                  | 46            | 5     | 4,945  |
| TOTAL.....                     | 53,831                 | 55,391             | 11,679                  | 40,813 | 52,492 | 699                    | 234                 | 603           | 79    | 54,107 |



TABLE S15. ILLNESSES IN TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NON-TRAIN INCIDENTS BY TYPE OF PERSON, 1978

| Class of Railroad              | Illness<br>Accidents | Total<br>Accidents | ...Employees on Duty... |       |       | Empl<br>not on<br>Duty | Pass<br>on<br>Train | Non-<br>Tresp | Tresp | Total |
|--------------------------------|----------------------|--------------------|-------------------------|-------|-------|------------------------|---------------------|---------------|-------|-------|
|                                |                      |                    | Train<br>Men            | Other | Total |                        |                     |               |       |       |
| TRAIN ACCIDENTS                |                      |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 11                   | 10,470             | 13                      | 2     | 15    | ---                    | ---                 | ---           | ---   | 15    |
| Class I Switching and Terminal | ---                  | 25                 | ---                     | ---   | ---   | ---                    | ---                 | ---           | ---   | ---   |
| Class II & III Railroads       | 1                    | 782                | 1                       | ---   | 1     | ---                    | ---                 | ---           | ---   | 1     |
| TOTAL.....                     | 12                   | 11,277             | 14                      | 2     | 16    | ---                    | ---                 | ---           | ---   | 16    |
| TRAIN INCIDENTS                |                      |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 194                  | 13,616             | 171                     | 38    | 209   | ---                    | ---                 | ---           | ---   | 209   |
| Class I Switching and Terminal | ---                  | 29                 | ---                     | ---   | ---   | ---                    | ---                 | ---           | ---   | ---   |
| Class II & III Railroads       | 7                    | 1,273              | 6                       | 1     | 7     | ---                    | ---                 | ---           | ---   | 7     |
| TOTAL.....                     | 201                  | 14,918             | 177                     | 39    | 216   | ---                    | ---                 | ---           | ---   | 216   |
| NON-TRAIN INCIDENTS            |                      |                    |                         |       |       |                        |                     |               |       |       |
| Class I Line-Haul              | 1,420                | 50,252             | 161                     | 1,281 | 1,442 | 4                      | ---                 | ---           | ---   | 1,446 |
| Class I Switching and Terminal | 1                    | 146                | ---                     | 1     | 1     | ---                    | ---                 | ---           | ---   | 1     |
| Class II & III Railroads       | 62                   | 4,993              | 11                      | 55    | 66    | ---                    | ---                 | ---           | ---   | 66    |
| TOTAL.....                     | 1,483                | 55,391             | 172                     | 1,337 | 1,509 | 4                      | ---                 | ---           | ---   | 1,513 |

Empl = Employees  
 Pass = Passengers  
 Tresp = Trespassers

TABLE S16. TRAIN ACCIDENT AND TRAIN INCIDENT FATALITIES TO TRESPASSERS AND NON-TRESPASSERS BY STATE, 1978

| State                | Trespassers |       |         |       | Non-Trespassers |       |         |       | Total |       |         |       |
|----------------------|-------------|-------|---------|-------|-----------------|-------|---------|-------|-------|-------|---------|-------|
|                      | Child       | Adult | Unknown | Total | Child           | Adult | Unknown | Total | Child | Adult | Unknown | Total |
| Alabama              | ---         | 11    | 1       | 12    | 2               | 21    | 1       | 24    | 2     | 32    | 2       | 36    |
| Alaska               | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| Arizona              | 1           | 9     | 2       | 12    | 2               | 9     | ---     | 11    | 3     | 18    | 2       | 23    |
| Arkansas             | ---         | 5     | ---     | 5     | ---             | 15    | 2       | 17    | ---   | 20    | 2       | 22    |
| California           | 5           | 36    | 5       | 46    | 1               | 39    | 4       | 44    | 6     | 75    | 9       | 90    |
| Colorado             | ---         | 3     | ---     | 3     | ---             | 12    | 1       | 13    | ---   | 15    | 1       | 16    |
| Connecticut          | ---         | 5     | ---     | 5     | ---             | ---   | ---     | ---   | ---   | 5     | ---     | 5     |
| Delaware             | ---         | 2     | ---     | 2     | ---             | 1     | ---     | 1     | ---   | 3     | ---     | 3     |
| District of Columbia | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| Florida              | ---         | 27    | ---     | 27    | 4               | 33    | ---     | 37    | 4     | 60    | ---     | 64    |
| Georgia              | 1           | 14    | ---     | 15    | 2               | 33    | ---     | 35    | 3     | 47    | ---     | 50    |
| Hawaii               | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| Idaho                | ---         | 1     | ---     | 1     | 1               | 8     | ---     | 9     | 1     | 9     | ---     | 10    |
| Illinois             | 5           | 30    | 11      | 46    | 3               | 52    | 14      | 69    | 8     | 82    | 25      | 115   |
| Indiana              | 1           | 8     | 1       | 10    | 8               | 51    | 3       | 62    | 9     | 59    | 4       | 72    |
| Iowa                 | ---         | 2     | 1       | 3     | 3               | 6     | 11      | 20    | 3     | 8     | 12      | 23    |
| Kansas               | ---         | 4     | ---     | 4     | 1               | 21    | 4       | 26    | 1     | 25    | 4       | 30    |
| Kentucky             | ---         | 5     | ---     | 5     | 1               | 9     | ---     | 10    | 1     | 14    | ---     | 15    |
| Louisiana            | 2           | 5     | 2       | 9     | ---             | 24    | 5       | 29    | 2     | 29    | 7       | 38    |
| Maine                | ---         | ---   | ---     | ---   | ---             | 3     | ---     | 3     | ---   | 3     | ---     | 3     |
| Maryland             | ---         | 6     | ---     | 6     | ---             | 3     | ---     | 3     | ---   | 9     | ---     | 9     |
| Massachusetts        | 2           | 9     | 1       | 12    | 1               | ---   | ---     | 1     | 3     | 9     | 1       | 13    |
| Michigan             | ---         | 11    | 3       | 14    | 3               | 25    | ---     | 28    | 3     | 36    | 3       | 42    |
| Minnesota            | ---         | 6     | 2       | 8     | 2               | 24    | 7       | 33    | 2     | 30    | 9       | 41    |
| Mississippi          | ---         | 4     | ---     | 4     | ---             | 15    | 3       | 18    | ---   | 19    | 3       | 22    |
| Missouri             | 2           | 14    | 1       | 17    | 3               | 29    | 2       | 34    | 5     | 43    | 3       | 51    |
| Montana              | ---         | 3     | ---     | 3     | ---             | 3     | ---     | 3     | ---   | 6     | ---     | 6     |
| Nebraska             | 2           | 2     | ---     | 4     | 1               | 14    | 2       | 17    | 3     | 16    | 2       | 21    |
| Nevada               | ---         | ---   | ---     | ---   | ---             | 3     | ---     | 3     | ---   | 3     | ---     | 3     |
| New Hampshire        | ---         | ---   | ---     | ---   | ---             | 1     | ---     | 1     | ---   | 1     | ---     | 1     |
| New Jersey           | 2           | 18    | ---     | 20    | ---             | ---   | 1       | 1     | 2     | 18    | 1       | 21    |
| New Mexico           | ---         | 2     | ---     | 2     | 1               | 6     | 1       | 8     | 1     | 8     | 1       | 10    |
| New York             | 6           | 32    | 1       | 39    | 2               | 10    | 3       | 15    | 8     | 42    | 4       | 54    |
| North Carolina       | ---         | 19    | ---     | 19    | 7               | 34    | ---     | 41    | 7     | 53    | ---     | 60    |
| North Dakota         | ---         | ---   | 1       | 1     | 2               | 10    | 1       | 13    | 2     | 10    | 2       | 14    |
| Ohio                 | 3           | 21    | 2       | 26    | 6               | 67    | 3       | 76    | 9     | 68    | 5       | 102   |
| Oklahoma             | ---         | 5     | ---     | 5     | 4               | 16    | 9       | 29    | 4     | 21    | 9       | 34    |
| Oregon               | 1           | 4     | ---     | 5     | ---             | 11    | ---     | 11    | 1     | 15    | ---     | 16    |
| Pennsylvania         | 1           | 21    | 2       | 24    | ---             | 16    | 2       | 18    | 1     | 37    | 4       | 42    |
| Rhode Island         | ---         | ---   | ---     | ---   | ---             | 3     | ---     | 3     | ---   | 3     | ---     | 3     |
| South Carolina       | ---         | 3     | ---     | 3     | 4               | 13    | ---     | 17    | 4     | 16    | ---     | 20    |
| South Dakota         | ---         | ---   | 1       | 1     | ---             | ---   | 1       | 1     | ---   | ---   | 2       | 2     |
| Tennessee            | ---         | 8     | ---     | 8     | 3               | 37    | 5       | 45    | 3     | 45    | 5       | 53    |
| Texas                | ---         | 13    | 1       | 14    | 11              | 64    | 12      | 87    | 11    | 77    | 13      | 101   |
| Utah                 | ---         | 1     | ---     | 1     | 1               | 6     | ---     | 7     | 1     | 7     | ---     | 8     |
| Vermont              | ---         | 1     | ---     | 1     | 1               | 4     | ---     | 5     | 1     | 5     | ---     | 6     |
| Virginia             | 1           | 14    | ---     | 15    | ---             | 8     | 1       | 9     | 1     | 22    | 1       | 24    |
| Washington           | 3           | 4     | 1       | 8     | 1               | 11    | 1       | 13    | 4     | 15    | 2       | 21    |
| West Virginia        | 1           | 4     | 2       | 7     | ---             | 7     | 3       | 10    | 1     | 11    | 5       | 17    |
| Wisconsin            | ---         | 2     | 3       | 5     | 3               | 19    | 6       | 28    | 3     | 21    | 9       | 33    |
| Wyoming              | ---         | 1     | ---     | 1     | ---             | 2     | ---     | 2     | ---   | 3     | ---     | 3     |
| Total.....           | 39          | 395   | 44      | 478   | 84              | 798   | 108     | 990   | 123   | 1193  | 152     | 1468  |

TABLE S17. TRAIN ACCIDENT AND TRAIN INCIDENT INJURIES TO TRESPASSERS  
AND NON-TRESPASSERS BY STATE, 1978

| State                | Trespassers |       |         |       | Non-Trespassers |       |         |       | Total |       |         |       |
|----------------------|-------------|-------|---------|-------|-----------------|-------|---------|-------|-------|-------|---------|-------|
|                      | Child       | Adult | Unknown | Total | Child           | Adult | Unknown | Total | Child | Adult | Unknown | Total |
| Alabama              | 3           | 7     | ---     | 10    | 9               | 92    | 5       | 106   | 12    | 99    | 5       | 116   |
| Alaska               | ---         | ---   | ---     | ---   | 2               | 8     | 1       | 11    | 2     | 8     | 1       | 11    |
| Arizona              | 1           | 9     | ---     | 10    | 2               | 21    | 2       | 25    | 3     | 30    | 2       | 35    |
| Arkansas             | 6           | 11    | ---     | 17    | 16              | 80    | 29      | 125   | 22    | 91    | 29      | 142   |
| California           | 16          | 56    | 9       | 81    | 7               | 95    | 55      | 157   | 23    | 151   | 64      | 238   |
| Colorado             | ---         | 5     | ---     | 5     | 7               | 41    | 14      | 62    | 7     | 46    | 14      | 67    |
| Connecticut          | ---         | 1     | ---     | 1     | ---             | 3     | 2       | 5     | ---   | 4     | 2       | 6     |
| Delaware             | ---         | ---   | 2       | 2     | ---             | 2     | ---     | 2     | ---   | 2     | 2       | 4     |
| District of Columbia | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| Florida              | 7           | 32    | ---     | 39    | 7               | 82    | 134     | 223   | 14    | 114   | 134     | 262   |
| Georgia              | ---         | 9     | ---     | 9     | 12              | 115   | 11      | 138   | 12    | 124   | 11      | 147   |
| Hawaii               | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| Idaho                | 1           | ---   | ---     | 1     | 4               | 34    | ---     | 38    | 5     | 34    | ---     | 39    |
| Illinois             | 16          | 41    | 22      | 79    | 18              | 121   | 106     | 245   | 34    | 162   | 128     | 324   |
| Indiana              | 5           | 21    | 8       | 34    | 31              | 176   | 18      | 225   | 36    | 197   | 26      | 259   |
| Iowa                 | 3           | 3     | 1       | 7     | 3               | 37    | 46      | 86    | 6     | 40    | 47      | 93    |
| Kansas               | ---         | 4     | 2       | 6     | 8               | 74    | 29      | 111   | 8     | 78    | 31      | 117   |
| Kentucky             | 1           | 8     | 2       | 11    | 4               | 29    | 17      | 50    | 5     | 37    | 19      | 61    |
| Louisiana            | 2           | 16    | ---     | 18    | 16              | 88    | 52      | 156   | 18    | 104   | 52      | 174   |
| Maine                | ---         | 1     | ---     | 1     | 2               | 8     | ---     | 10    | 2     | 9     | ---     | 11    |
| Maryland             | 4           | 9     | ---     | 13    | ---             | 14    | 1       | 15    | 4     | 23    | 1       | 28    |
| Massachusetts        | 3           | 10    | 1       | 14    | ---             | 15    | 1       | 16    | 3     | 25    | 2       | 30    |
| Michigan             | 7           | 21    | 3       | 31    | 16              | 151   | 12      | 179   | 23    | 172   | 15      | 210   |
| Minnesota            | 2           | ---   | 2       | 4     | 6               | 62    | 29      | 97    | 8     | 62    | 31      | 101   |
| Mississippi          | 1           | 5     | 1       | 7     | 2               | 45    | 60      | 107   | 3     | 50    | 61      | 114   |
| Missouri             | 1           | 5     | 3       | 9     | 11              | 98    | 20      | 129   | 12    | 103   | 23      | 138   |
| Montana              | 1           | 1     | ---     | 2     | 2               | 8     | 7       | 17    | 3     | 9     | 7       | 19    |
| Nebraska             | 1           | 1     | ---     | 2     | 11              | 36    | 15      | 62    | 12    | 37    | 15      | 64    |
| Nevada               | ---         | 2     | 1       | 3     | ---             | 5     | 1       | 6     | ---   | 7     | 2       | 9     |
| New Hampshire        | ---         | 1     | ---     | 1     | ---             | 6     | ---     | 6     | ---   | 7     | ---     | 7     |
| New Jersey           | 1           | 11    | 2       | 14    | 1               | 10    | ---     | 11    | 2     | 21    | 2       | 25    |
| New Mexico           | ---         | 5     | 1       | 6     | ---             | 13    | 4       | 17    | ---   | 18    | 5       | 23    |
| New York             | 4           | 26    | 2       | 32    | 3               | 26    | 8       | 37    | 7     | 52    | 10      | 69    |
| North Carolina       | 2           | 9     | ---     | 11    | 23              | 143   | ---     | 166   | 25    | 152   | ---     | 177   |
| North Dakota         | 1           | ---   | ---     | 1     | 1               | 12    | 3       | 16    | 2     | 12    | 3       | 17    |
| Ohio                 | 10          | 19    | 2       | 31    | 28              | 189   | 61      | 278   | 38    | 208   | 63      | 309   |
| Oklahoma             | 2           | 7     | 3       | 12    | 2               | 61    | 31      | 94    | 4     | 68    | 34      | 106   |
| Oregon               | ---         | 8     | 1       | 9     | 1               | 42    | 3       | 46    | 1     | 50    | 4       | 55    |
| Pennsylvania         | 4           | 26    | ---     | 30    | 3               | 45    | 19      | 67    | 7     | 71    | 19      | 97    |
| Rhode Island         | ---         | ---   | ---     | ---   | ---             | ---   | ---     | ---   | ---   | ---   | ---     | ---   |
| South Carolina       | ---         | 7     | ---     | 7     | 9               | 68    | ---     | 77    | 9     | 75    | ---     | 84    |
| South Dakota         | ---         | 1     | ---     | 1     | ---             | 1     | 8       | 9     | ---   | 2     | 8       | 10    |
| Tennessee            | 1           | 12    | ---     | 13    | 5               | 104   | 14      | 123   | 6     | 116   | 14      | 136   |
| Texas                | 6           | 28    | 3       | 37    | 46              | 314   | 128     | 488   | 52    | 342   | 131     | 525   |
| Utah                 | 2           | 3     | ---     | 5     | ---             | 26    | ---     | 26    | 2     | 29    | ---     | 31    |
| Vermont              | ---         | ---   | ---     | ---   | 2               | 8     | 1       | 11    | 2     | 8     | 1       | 11    |
| Virginia             | ---         | 7     | ---     | 7     | 7               | 51    | 3       | 61    | 7     | 58    | 3       | 68    |
| Washington           | 1           | 7     | 2       | 10    | 6               | 28    | 16      | 52    | 7     | 35    | 20      | 62    |
| West Virginia        | 2           | 5     | 1       | 8     | 1               | 22    | 30      | 53    | 3     | 27    | 31      | 61    |
| Wisconsin            | ---         | 9     | 6       | 15    | 7               | 58    | 42      | 107   | 7     | 67    | 48      | 122   |
| Wyoming              | ---         | 1     | ---     | 1     | ---             | 2     | ---     | 2     | ---   | 3     | ---     | 3     |
| Total.....           | 117         | 470   | 80      | 667   | 341             | 2769  | 1040    | 4150  | 458   | 3239  | 1120    | 4817  |

TABLE S18. CASUALTIES BY STATE AND CLASS OF ACCIDENT/INCIDENT,  
1978

| State                | Train<br>Accidents |              |           | Train<br>Incidents |               |            | Non-<br>Train<br>Incidents |               |              | .....Total..... |               |              |
|----------------------|--------------------|--------------|-----------|--------------------|---------------|------------|----------------------------|---------------|--------------|-----------------|---------------|--------------|
|                      | Killed             | Injured      | Illness   | Killed             | Injured       | Illness    | Killed                     | Injured       | Illness      | Killed          | Injured       | Illness      |
| Alabama              | 8                  | 24           | ---       | 32                 | 311           | 2          | 1                          | 707           | 9            | 41              | 1,042         | 11           |
| Alaska               | ---                | ---          | ---       | ---                | 25            | ---        | ---                        | 119           | ---          | ---             | 144           | ---          |
| Arizona              | 1                  | 9            | ---       | 23                 | 119           | 1          | ---                        | 212           | 7            | 24              | 340           | 8            |
| Arkansas             | 1                  | 22           | ---       | 22                 | 262           | ---        | 1                          | 688           | 10           | 24              | 972           | 10           |
| California           | 10                 | 58           | 1         | 83                 | 932           | 6          | 7                          | 2,443         | 64           | 100             | 3,433         | 73           |
| Colorado             | 2                  | 12           | ---       | 14                 | 189           | 1          | ---                        | 652           | 11           | 16              | 853           | 12           |
| Connecticut          | ---                | 2            | ---       | 5                  | 23            | ---        | ---                        | 363           | 15           | 5               | 388           | 15           |
| Delaware             | ---                | ---          | ---       | 3                  | 44            | 2          | 1                          | 333           | 25           | 4               | 377           | 27           |
| District of Columbia | ---                | ---          | ---       | ---                | 27            | 2          | 1                          | 293           | 5            | 1               | 320           | 7            |
| Florida              | 9                  | 158          | ---       | 56                 | 357           | 21         | 1                          | 755           | 10           | 66              | 1,270         | 31           |
| Georgia              | 4                  | 16           | ---       | 47                 | 537           | 2          | 2                          | 1,160         | 19           | 53              | 1,713         | 21           |
| Hawaii               | ---                | ---          | ---       | ---                | ---           | ---        | ---                        | ---           | ---          | ---             | ---           | ---          |
| Idaho                | 2                  | 16           | ---       | 8                  | 111           | ---        | 1                          | 445           | 7            | 11              | 572           | 7            |
| Illinois             | 8                  | 638          | ---       | 117                | 1,085         | 15         | 6                          | 5,487         | 133          | 131             | 7,210         | 148          |
| Indiana              | 3                  | 37           | 1         | 73                 | 594           | 4          | 2                          | 1,646         | 59           | 78              | 2,277         | 64           |
| Iowa                 | 2                  | 20           | ---       | 23                 | 285           | 4          | 2                          | 1,300         | 49           | 27              | 1,605         | 53           |
| Kansas               | 1                  | 7            | ---       | 29                 | 304           | 1          | 1                          | 761           | 9            | 31              | 1,072         | 10           |
| Kentucky             | ---                | 24           | ---       | 16                 | 255           | 5          | 1                          | 1,746         | 24           | 17              | 2,025         | 29           |
| Louisiana            | 5                  | 18           | ---       | 35                 | 413           | 6          | 2                          | 842           | 22           | 42              | 1,273         | 28           |
| Maine                | 1                  | 4            | ---       | 3                  | 60            | ---        | ---                        | 299           | 12           | 4               | 363           | 12           |
| Maryland             | 1                  | 190          | ---       | 9                  | 247           | 4          | 1                          | 1,037         | 43           | 11              | 1,474         | 47           |
| Massachusetts        | ---                | 3            | ---       | 16                 | 115           | ---        | 1                          | 594           | 17           | 17              | 712           | 17           |
| Michigan             | 1                  | 24           | 2         | 43                 | 752           | 5          | 5                          | 2,375         | 50           | 49              | 3,151         | 57           |
| Minnesota            | 2                  | 29           | ---       | 41                 | 279           | ---        | 1                          | 1,237         | 54           | 44              | 1,545         | 54           |
| Mississippi          | 2                  | 10           | ---       | 20                 | 204           | 1          | 3                          | 417           | 9            | 25              | 631           | 10           |
| Missouri             | 1                  | 18           | ---       | 51                 | 406           | 3          | ---                        | 1,434         | 52           | 52              | 1,858         | 55           |
| Montana              | 1                  | 20           | 1         | 6                  | 105           | ---        | ---                        | 764           | 20           | 7               | 889           | 21           |
| Nebraska             | 1                  | 10           | ---       | 21                 | 288           | 2          | 7                          | 1,825         | 57           | 29              | 2,123         | 59           |
| Nevada               | 1                  | 4            | ---       | 3                  | 41            | ---        | ---                        | 129           | 2            | 4               | 174           | 2            |
| New Hampshire        | ---                | 2            | ---       | 1                  | 11            | ---        | ---                        | 28            | ---          | 1               | 41            | ---          |
| New Jersey           | ---                | 22           | ---       | 24                 | 193           | 5          | 3                          | 1,159         | 78           | 27              | 1,374         | 83           |
| New Mexico           | 4                  | 6            | ---       | 10                 | 56            | 1          | 1                          | 139           | 5            | 15              | 201           | 6            |
| New York             | 4                  | 42           | ---       | 55                 | 486           | 36         | 5                          | 3,270         | 144          | 64              | 3,798         | 180          |
| North Carolina       | 4                  | 16           | ---       | 59                 | 319           | 2          | 1                          | 446           | 10           | 64              | 781           | 12           |
| North Dakota         | 5                  | 7            | ---       | 12                 | 83            | ---        | ---                        | 358           | 19           | 17              | 448           | 19           |
| Ohio                 | 8                  | 56           | 2         | 97                 | 967           | 17         | 3                          | 3,428         | 77           | 108             | 4,451         | 96           |
| Oklahoma             | 1                  | 8            | ---       | 34                 | 197           | 2          | 1                          | 426           | 16           | 36              | 631           | 16           |
| Oregon               | 1                  | 5            | ---       | 16                 | 249           | 4          | 1                          | 776           | 14           | 18              | 1,030         | 18           |
| Pennsylvania         | 3                  | 42           | 5         | 45                 | 623           | 14         | 4                          | 4,579         | 146          | 52              | 5,244         | 165          |
| Rhode Island         | 2                  | ---          | ---       | 1                  | 8             | ---        | ---                        | 148           | 3            | 3               | 156           | 3            |
| South Carolina       | 1                  | 49           | ---       | 20                 | 171           | 1          | ---                        | 287           | 6            | 21              | 507           | 7            |
| South Dakota         | ---                | ---          | ---       | 2                  | 34            | ---        | 1                          | 195           | 5            | 3               | 229           | 5            |
| Tennessee            | 18                 | 68           | ---       | 43                 | 268           | 2          | 1                          | 887           | 17           | 62              | 1,223         | 19           |
| Texas                | 4                  | 72           | ---       | 98                 | 1,333         | 25         | 5                          | 2,876         | 67           | 107             | 4,281         | 92           |
| Utah                 | ---                | 10           | 1         | 8                  | 155           | 1          | ---                        | 405           | 3            | 8               | 570           | 5            |
| Vermont              | 3                  | 5            | ---       | 3                  | 14            | 1          | ---                        | 62            | 1            | 6               | 81            | 2            |
| Virginia             | 8                  | 55           | ---       | 23                 | 313           | 3          | 1                          | 1,032         | 7            | 32              | 1,400         | 10           |
| Washington           | ---                | 13           | 1         | 23                 | 309           | 4          | 2                          | 928           | 21           | 25              | 1,250         | 26           |
| West Virginia        | 1                  | 14           | ---       | 17                 | 177           | 3          | ---                        | 615           | 17           | 18              | 806           | 20           |
| Wisconsin            | 3                  | 17           | 2         | 31                 | 318           | 3          | 2                          | 1,325         | 50           | 36              | 1,660         | 55           |
| Wyoming              | 2                  | 13           | ---       | 6                  | 144           | 3          | 2                          | 674           | 13           | 10              | 831           | 16           |
| Outside U.S.         | ---                | ---          | ---       | ---                | ---           | ---        | ---                        | 1             | ---          | ---             | 1             | ---          |
| <b>Tot al.....</b>   | <b>139</b>         | <b>1,895</b> | <b>16</b> | <b>1,427</b>       | <b>14,798</b> | <b>216</b> | <b>80</b>                  | <b>54,107</b> | <b>1,513</b> | <b>1,646</b>    | <b>70,800</b> | <b>1,745</b> |

TABLE S19. CASUALTIES BY TYPE OF ACCIDENT/INCIDENT  
AND PERSON, 1978

| Type of Person        | Total<br>Class I and II |       | ..... Total All Class I Railroads ..... |       |                       |       |                       |       |                 |       |
|-----------------------|-------------------------|-------|---|-------|-----------------------|-------|-----------------------|-------|-----------------|-------|
|                       | Kld                     | Inj   | Total<br>Kld                            | Inj   | Train-Accident<br>Kld | Inj   | Train-Incident<br>Kld | Inj   | NonTrain<br>Kld | Inj   |
| EMPLOYEES NOT ON DUTY | 9                       | 723   | 9                                       | 705   | 1                     | 5     | 4                     | 685   | 4               | 15    |
| PASSENGERS ON TRAINS  | 13                      | 1,252 | 13                                      | 1,161 | 4                     | 816   | ---                   | 211   | 9               | 134   |
| NONTRESPASSERS        | 1,010                   | 4,753 | 964                                     | 4,346 | 86                    | 168   | 18                    | 557   | 860             | 3,621 |
| TRESPASSERS           | 492                     | 746   | 478                                     | 706   | 9                     | 14    | 13                    | 74    | 456             | 618   |
| TOTAL.....            | 1,524                   | 7,474 | 1,464                                   | 6,918 | 100                   | 1,003 | 35                    | 1,527 | 1,329           | 4,388 |

Kld = Killed; Inj = Injured

TABLE S20. NATURE OF TRAIN ACCIDENT AND TRAIN INCIDENT FATALITIES BY TYPE OF PERSON, 1978

| Type of Person                               | ..... Train Accidents ..... |        |       |           | ..... Train Incidents ..... |                     |     |     |              |                |                 |                 |      |           | Total |
|--|-----------------------------|--------|-------|-----------|-----------------------------|---------------------|-----|-----|--------------|----------------|-----------------|-----------------|------|-----------|-------|
|  | Coll                        | Derail | Other | Sub-Total | Coupling                    | .....Operating..... |     |     | Fixed object | Getting on/off | Grade crossings | Struck/run over | Misc | Sub-Total |       |
| <b>EMPLOYEES</b>                             |                             |        |       |           |                             |                     |     |     |              |                |                 |                 |      |           |       |
| Groups I-V                                   | 3                           | 6      | 2     | 11        | ---                         | ---                 | --- | --- | ---          | ---            | 1               | 9               | 8    | 18        | 29    |
| VI.--- (b) Transportation (train and engine) |                             |        |       |           |                             |                     |     |     |              |                |                 |                 |      |           |       |
| Rd frt cond (Thru)                           | 1                           | ---    | ---   | 1         | 1                           | ---                 | --- | --- | ---          | ---            | ---             | ---             | 2    | 3         | 4     |
| Rd frt cond (Local)                          | ---                         | ---    | ---   | ---       | ---                         | ---                 | 1   | --- | ---          | 1              | ---             | 2               | ---  | 4         | 4     |
| Rd pass brakemen                             | ---                         | 1      | ---   | 1         | 1                           | ---                 | --- | --- | ---          | ---            | ---             | ---             | ---  | 1         | 2     |
| Rd frt brakemen (T)                          | 4                           | 3      | ---   | 7         | ---                         | ---                 | --- | --- | ---          | ---            | 3               | 1               | 4    | 11        |       |
| Rd frt brakemen (L)                          | 1                           | ---    | ---   | 1         | ---                         | ---                 | --- | --- | ---          | 2              | ---             | 3               | 5    | 6         |       |
| Yard conductors                              | 2                           | ---    | ---   | 2         | ---                         | ---                 | --- | --- | ---          | ---            | 2               | ---             | 2    | 4         |       |
| Yard brakemen                                | 1                           | ---    | ---   | 1         | 3                           | ---                 | 1   | --- | 1            | 1              | 3               | 4               | 13   | 14        |       |
| Rd pass engineers                            | ---                         | ---    | ---   | ---       | ---                         | ---                 | --- | --- | ---          | ---            | 1               | ---             | 1    | 1         |       |
| Rd frt engineers (T)                         | 2                           | ---    | 1     | 3         | ---                         | ---                 | --- | --- | ---          | ---            | ---             | ---             | ---  | 3         |       |
| Rd frt engineers (L)                         | 1                           | ---    | ---   | 1         | ---                         | ---                 | --- | --- | ---          | ---            | ---             | ---             | ---  | 1         |       |
| Rd pass firemen                              | ---                         | ---    | ---   | ---       | ---                         | ---                 | --- | --- | ---          | ---            | 1               | ---             | 1    | 1         |       |
| SUBTOTAL VI. (b).                            | 12                          | 4      | 1     | 17        | 5                           | ---                 | 2   | --- | 1            | 4              | ---             | 12              | 10   | 34        | 51    |
| 46 Employees not on duty                     | 1                           | ---    | ---   | 1         | ---                         | ---                 | --- | --- | ---          | ---            | 2               | 2               | ---  | 4         | 5     |
| TOTAL EMPLOYEES                              | 16                          | 10     | 3     | 29        | 5                           | ---                 | 2   | --- | 1            | 4              | 3               | 23              | 18   | 56        | 85    |
| Non-employees                                |                             |        |       |           |                             |                     |     |     |              |                |                 |                 |      |           |       |
| Passengers                                   | ---                         | 4      | ---   | 4         | ---                         | ---                 | --- | --- | ---          | 6              | ---             | ---             | 3    | 9         | 13    |
| Nontrespassers                               | ---                         | 23     | 74    | 97        | ---                         | ---                 | --- | --- | ---          | ---            | 840             | 45              | 8    | 893       | 990   |
| Trespassers                                  | ---                         | 4      | 5     | 9         | ---                         | 7                   | --- | --- | 2            | 12             | 81              | 351             | 16   | 469       | 478   |
| TOTAL NON-EMPLOYEES                          | ---                         | 31     | 79    | 110       | ---                         | 7                   | --- | --- | 2            | 18             | 921             | 396             | 27   | 1371      | 1481  |
| GRAND TOTAL...                               | 16                          | 41     | 82    | 139       | 5                           | 7                   | 2   | --- | 3            | 22             | 924             | 419             | 45   | 1427      | 1566  |

TABLE S21. NATURE OF TRAIN ACCIDENT AND TRAIN INCIDENT INJURIES,  
BY TYPE OF PERSON, 1978

| Type of Person   | ..... Train Accidents ..... |        |       |               | ..... Train Incidents ..... |                              |     |      |      |                 |                   |              |                 |       | Sub-<br>Total | Total |
|--|-----------------------------|--------|-------|---------------|-----------------------------|------------------------------|-----|------|------|-----------------|-------------------|--------------|-----------------|-------|---------------|-------|
|  | Coll                        | Derail | Other | Sub-<br>Total | Coup-<br>ling               | .....Operating.....<br>Locos | H   | Brks | Swch | Fixed<br>object | Getting<br>on/off | Grade<br>run | Struck/<br>over | Misc  |               |       |
| <b>EMPLOYEES</b>   |                             |        |       |               |                             |                              |     |      |      |                 |                   |              |                 |       |               |       |
| GROUPS I-V   | 28                          | 70     | 20    | 118           | 22                          | 15                           | 7   | 1    | 10   | 69              | 22                | 38           | 1176            | 1360  | 1478          |       |
| <b>VI.--- (a) Transportation (Yardmasters, switch tenders, and hostlers)</b> |                             |        |       |               |                             |                              |     |      |      |                 |                   |              |                 |       |               |       |
| Yardmasters  | ---                         | ---    | ---   | ---           | ---                         | ---                          | --- | ---  | 1    | 3               | ---               | 1            | 6               | 11    | 11            |       |
| Asst yardmasters   | 1                           | ---    | ---   | 1             | ---                         | ---                          | --- | ---  | ---  | ---             | ---               | 1            | 1               | 2     | 3             |       |
| Switch tenders   | ---                         | 1      | ---   | 1             | 1                           | 3                            | --- | 2    | ---  | 2               | ---               | ---          | 3               | 11    | 12            |       |
| Outside hostlers   | ---                         | ---    | 1     | 1             | 5                           | 9                            | --- | ---  | ---  | 6               | ---               | ---          | 9               | 29    | 30            |       |
| Inside hostlers  | ---                         | ---    | ---   | ---           | ---                         | ---                          | --- | ---  | ---  | ---             | ---               | ---          | 4               | 4     | 4             |       |
| Hostler helpers  | 1                           | ---    | ---   | 1             | 1                           | 1                            | 1   | 1    | 2    | 2               | ---               | ---          | 5               | 13    | 14            |       |
| SUBTOTAL VI. (a)   | 2                           | 1      | 1     | 4             | 7                           | 13                           | 1   | 3    | 3    | 13              | ---               | 2            | 28              | 70    | 74            |       |
| <b>VI.--- (b) Transportation (train and engine)</b>                          |                             |        |       |               |                             |                              |     |      |      |                 |                   |              |                 |       |               |       |
| Road pass conductor  | 8                           | 2      | 4     | 14            | ---                         | 1                            | --- | ---  | 1    | 1               | 1                 | ---          | 69              | 73    | 87            |       |
| Asst road pass cond  | 7                           | ---    | 2     | 9             | ---                         | ---                          | 1   | ---  | 2    | ---             | 2                 | ---          | 58              | 63    | 72            |       |
| Rd frt cond (Thru)   | 17                          | 72     | 7     | 96            | 6                           | 9                            | 3   | 1    | 7    | 96              | 5                 | 2            | 487             | 616   | 712           |       |
| Rd frt cond (Local)  | 6                           | 21     | 6     | 35            | 17                          | 9                            | 16  | 1    | 12   | 113             | 4                 | 7            | 219             | 398   | 433           |       |
| Rd pass baggagemen   | 1                           | 1      | ---   | 2             | ---                         | ---                          | --- | ---  | ---  | 1               | ---               | ---          | 4               | 5     | 7             |       |
| Rd pass brakemen   | 9                           | ---    | 2     | 11            | 2                           | ---                          | --- | ---  | ---  | 11              | ---               | ---          | 57              | 70    | 81            |       |
| Rd frt brakemen (T)  | 42                          | 78     | 24    | 144           | 31                          | 25                           | 29  | 10   | 29   | 370             | 14                | 7            | 709             | 1224  | 1368          |       |
| Rd frt brakemen (L)  | 14                          | 33     | 14    | 61            | 77                          | 26                           | 58  | 19   | 52   | 443             | 12                | 12           | 512             | 1211  | 1272          |       |
| Yard conductors  | 8                           | 5      | ---   | 13            | 89                          | 11                           | 45  | 13   | 36   | 225             | 3                 | 14           | 298             | 734   | 747           |       |
| Yard brakemen  | 34                          | 12     | 4     | 50            | 447                         | 60                           | 201 | 59   | 125  | 1051            | 8                 | 38           | 1181            | 3170  | 3220          |       |
| Rd pass engineers  | 5                           | 1      | 5     | 15            | ---                         | 15                           | --- | 1    | ---  | ---             | ---               | ---          | 36              | 52    | 67            |       |
| Rd frt engineers (T)   | 28                          | 18     | 17    | 63            | 3                           | 165                          | 2   | ---  | 3    | 19              | 10                | 1            | 118             | 321   | 384           |       |
| Rd frt engineers (L)   | 12                          | 10     | 7     | 29            | 1                           | 122                          | 1   | ---  | 3    | 16              | 2                 | 1            | 79              | 225   | 254           |       |
| Yard engineers   | 25                          | 6      | 3     | 34            | 5                           | 238                          | --- | 2    | ---  | 8               | 3                 | 2            | 121             | 379   | 413           |       |
| Rd pass firemen  | 1                           | ---    | 3     | 4             | ---                         | 8                            | --- | ---  | ---  | ---             | ---               | 1            | 11              | 20    | 24            |       |
| Rd frt firemen (T)   | 4                           | 2      | 3     | 9             | 1                           | 24                           | --- | ---  | ---  | 5               | 5                 | ---          | 22              | 57    | 66            |       |
| Rd frt firemen (L)   | 1                           | 2      | ---   | 3             | ---                         | 8                            | --- | ---  | ---  | 1               | ---               | ---          | 11              | 20    | 23            |       |
| Yard firemen   | 3                           | 1      | 1     | 5             | 2                           | 25                           | --- | ---  | ---  | 1               | ---               | ---          | 23              | 51    | 56            |       |
| SUBTOTAL VI. (b)   | 231                         | 264    | 102   | 597           | 681                         | 746                          | 356 | 106  | 270  | 2361            | 69                | 85           | 4015            | 8689  | 9286          |       |
| Employees not on duty  | 3                           | 1      | 1     | 5             | ---                         | 1                            | --- | ---  | ---  | 3               | 2                 | 3            | 6               | 15    | 20            |       |
| TOTAL EMPLOYEES  | 264                         | 336    | 124   | 724           | 710                         | 775                          | 364 | 110  | 283  | 2446            | 93                | 128          | 5225            | 10134 | 10858         |       |
| <b>Non-employees</b>   |                             |        |       |               |                             |                              |     |      |      |                 |                   |              |                 |       |               |       |
| Passengers   | 702                         | 98     | 41    | 841           | ---                         | ---                          | --- | ---  | ---  | 46              | 2                 | 2            | 127             | 177   | 1018          |       |
| Non trespassers  | 4                           | 178    | 134   | 316           | 1                           | 1                            | --- | ---  | ---  | 6               | 3584              | 201          | 41              | 3834  | 4150          |       |
| Trespassers  | ---                         | 7      | 7     | 14            | 2                           | 3                            | --- | 1    | 2    | 93              | 201               | 317          | 34              | 653   | 667           |       |
| TOTAL NON-EMPLOYEES  | 706                         | 283    | 182   | 1171          | 3                           | 4                            | --- | 1    | 2    | 145             | 3787              | 520          | 202             | 4664  | 5835          |       |
| GRAND TOTAL...   | 970                         | 619    | 306   | 1895          | 713                         | 779                          | 364 | 111  | 285  | 2591            | 3880              | 648          | 5427            | 14798 | 16693         |       |

TABLE S22. NATURE OF TRAIN ACCIDENT AND TRAIN INCIDENT ILLNESSES  
BY TYPE OF PERSON, 1978

| Type of Person  | ..... Train Accidents ..... |        |       | ..... Train Incidents ..... |               |       |                     |        |                 |                   |                |                     |      | Sub-<br>Total | Total |
|---|-----------------------------|--------|-------|-----------------------------|---------------|-------|---------------------|--------|-----------------|-------------------|----------------|---------------------|------|---------------|-------|
|   | Coll                        | Derail | Other | Sub-<br>Total               | Coup-<br>ling | Locos | Operating<br>H Brks | Switch | Fixed<br>object | Getting<br>on/off | Grade<br>xings | Struck/<br>run over | Misc |               |       |
| EMPLOYEES<br>Groups I-V   | ---                         | 1      | ---   | 1                           | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 38   | 38            | 39    |
| VI.--- (a) Transportation (Yardmasters, switch tenders, and hostlers) |                             |        |       |                             |               |       |                     |        |                 |                   |                |                     |      |               |       |
| Yardmasters   | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 1    | 1             | 1     |
| Outside hostlers  | ---                         | ---    | 1     | 1                           | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | ---  | ---           | 1     |
| SUBTOTAL VI.(a)   | ---                         | ---    | 1     | 1                           | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 1    | 1             | 2     |
| VI.--- (b) Transportation (train and engine)                          |                             |        |       |                             |               |       |                     |        |                 |                   |                |                     |      |               |       |
| Road pass conductor   | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 3    | 3             | 3     |
| Asst road pass cond   | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 3    | 3             | 3     |
| Rd frt cond (Thru)  | ---                         | 1      | ---   | 1                           | ---           | 1     | ---                 | ---    | ---             | ---               | ---            | ---                 | 12   | 13            | 14    |
| Rd frt cond (Local)   | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | 1                 | ---            | ---                 | 10   | 11            | 11    |
| Rd pass brakemen  | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 1    | 1             | 1     |
| Rd frt brakemen (T)   | ---                         | 3      | 4     | 7                           | 2             | ---   | ---                 | ---    | ---             | 1                 | ---            | ---                 | 20   | 23            | 30    |
| Rd frt brakemen (L)   | ---                         | ---    | ---   | ---                         | 1             | 1     | ---                 | ---    | ---             | ---               | ---            | ---                 | 21   | 23            | 23    |
| Yard conductors   | ---                         | ---    | ---   | ---                         | 1             | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 14   | 15            | 15    |
| Yard brakemen   | ---                         | ---    | ---   | ---                         | ---           | 1     | ---                 | ---    | ---             | 1                 | ---            | ---                 | 16   | 18            | 18    |
| Rd pass engineers   | ---                         | ---    | ---   | ---                         | ---           | 7     | ---                 | ---    | ---             | ---               | ---            | ---                 | 3    | 10            | 10    |
| Rd frt engineers (T)  | ---                         | 1      | 3     | 4                           | ---           | 9     | ---                 | ---    | ---             | ---               | ---            | ---                 | 2    | 11            | 15    |
| Rd frt engineers (L)  | ---                         | ---    | 1     | 1                           | ---           | 10    | ---                 | ---    | ---             | ---               | ---            | ---                 | 5    | 15            | 16    |
| Yard engineers  | ---                         | ---    | ---   | ---                         | ---           | 13    | ---                 | ---    | ---             | ---               | ---            | ---                 | 4    | 17            | 17    |
| Rd pass firemen   | ---                         | ---    | ---   | ---                         | ---           | 3     | ---                 | ---    | ---             | ---               | ---            | ---                 | ---  | 3             | 3     |
| Rd frt firemen (T)  | ---                         | ---    | ---   | ---                         | ---           | ---   | ---                 | ---    | ---             | ---               | ---            | ---                 | 4    | 4             | 4     |
| Rd frt firemen (L)  | ---                         | ---    | ---   | ---                         | ---           | 3     | ---                 | ---    | ---             | ---               | ---            | ---                 | ---  | 3             | 3     |
| Yard firemen  | ---                         | ---    | 1     | 1                           | ---           | 4     | ---                 | ---    | ---             | ---               | ---            | ---                 | ---  | 4             | 5     |
| SUBTOTAL VI.(b)   | ---                         | 5      | 9     | 14                          | 4             | 52    | ---                 | ---    | ---             | 3                 | ---            | ---                 | 118  | 177           | 191   |
| GRAND TOTAL....   | ---                         | 6      | 10    | 16                          | 4             | 52    | ---                 | ---    | ---             | 3                 | ---            | ---                 | 157  | 216           | 232   |



TABLE S23. NATURE OF INJURIES BY TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NONTRAIN INCIDENTS, 1978

| Class of Accident                          | .....Amputations..... |        |                   |     |               |               | .....Fractures..... |        |                   |     |                          |       |       |               |
|--|-----------------------|--------|-------------------|-----|---------------|---------------|---------------------|--------|-------------------|-----|--------------------------|-------|-------|---------------|
|  | Arm<br>or<br>Hand     | Finger | Leg<br>or<br>Foot | Toe | Other<br>Part | Sub-<br>Total | Arm<br>or<br>Hand   | Finger | Leg<br>or<br>Foot | Toe | Head or<br>Face<br>Bones | Torso | Other | Sub-<br>Total |
| TRAIN ACCIDENTS                            |                       |        |                   |     |               |               |                     |        |                   |     |                          |       |       |               |
| Collisions.....                            | ---                   | ---    | ---               | --- | ---           | ---           | 8                   | 1      | 7                 | --- | 6                        | 12    | 2     | 36            |
| Derailements.....                          | ---                   | ---    | ---               | --- | ---           | ---           | 4                   | 1      | 9                 | --- | 4                        | 26    | 1     | 45            |
| Other Train Accidents.....                 | ---                   | ---    | ---               | --- | ---           | ---           | 5                   | 2      | 11                | --- | 9                        | 18    | 4     | 49            |
| Total.....                                 | ---                   | ---    | ---               | --- | ---           | ---           | 17                  | 4      | 27                | --- | 19                       | 56    | 7     | 130           |
| TRAIN INCIDENTS                            |                       |        |                   |     |               |               |                     |        |                   |     |                          |       |       |               |
| Coupling or uncoupling.....                | 3                     | 6      | 6                 | 1   | ---           | 16            | 23                  | 20     | 6                 | 4   | 2                        | 4     | 1     | 60            |
| Operating locomotives.....                 | ---                   | ---    | 1                 | --- | ---           | 1             | 3                   | 2      | 4                 | --- | 1                        | 3     | ---   | 13            |
| Operating rail motor car...                | ---                   | 1      | 1                 | --- | ---           | 2             | 6                   | 5      | 30                | 4   | 5                        | 6     | ---   | 56            |
| Operating hand brakes.....                 | ---                   | ---    | 2                 | 2   | 1             | 5             | 6                   | 4      | 10                | 1   | 6                        | 8     | 2     | 37            |
| Operating switches.....                    | ---                   | ---    | 4                 | --- | ---           | 4             | 2                   | 1      | ---               | --- | ---                      | 1     | ---   | 4             |
| Coming in contact w/fixd<br>obj.....       | 1                     | 1      | 1                 | --- | ---           | 3             | 4                   | 2      | 12                | 1   | 1                        | 7     | ---   | 27            |
| Getting on/off loco or<br>cars.....        | 4                     | 4      | 38                | 7   | ---           | 53            | 43                  | 17     | 84                | 11  | 4                        | 25    | 10    | 194           |
| Accidents at Highway<br>Grades.....        | 1                     | 1      | 4                 | 2   | ---           | 8             | 84                  | 6      | 174               | --- | 77                       | 141   | 57    | 539           |
| Other struck or run over...                | 13                    | 3      | 83                | 12  | 1             | 112           | 33                  | 1      | 28                | 1   | 14                       | 24    | 9     | 110           |
| Flying or falling objects..                | ---                   | 1      | ---               | --- | ---           | 1             | 2                   | ---    | 2                 | 1   | 4                        | 2     | ---   | 11            |
| Assaults.....                              | ---                   | ---    | ---               | --- | ---           | ---           | 1                   | 1      | ---               | --- | 10                       | ---   | ---   | 12            |
| Miscellaneous.....                         | 5                     | 15     | 20                | 2   | ---           | 42            | 44                  | 69     | 70                | 28  | 28                       | 74    | 20    | 333           |
| Total.....                                 | 27                    | 32     | 160               | 26  | 2             | 247           | 251                 | 128    | 420               | 51  | 152                      | 295   | 99    | 1,396         |
| NONTRAIN INCIDENTS                         |                       |        |                   |     |               |               |                     |        |                   |     |                          |       |       |               |
| Coupling incidents.....                    | 1                     | 1      | ---               | --- | ---           | 2             | 28                  | 44     | 15                | 27  | 7                        | 5     | 1     | 127           |
| Operating switches.....                    | ---                   | 3      | ---               | --- | ---           | 3             | 28                  | 43     | 9                 | 28  | 3                        | 10    | 2     | 123           |
| Getting on/off locos or<br>cars.....       | ---                   | 3      | 1                 | --- | ---           | 4             | 41                  | 16     | 99                | 3   | 3                        | 24    | 4     | 190           |
| Servicing or maintenance<br>of equip.....  | ---                   | 46     | ---               | 8   | ---           | 54            | 141                 | 509    | 205               | 183 | 69                       | 74    | 25    | 1,206         |
| Maintenance of way and<br>structures.....  | 6                     | 46     | 2                 | 1   | ---           | 55            | 209                 | 766    | 405               | 266 | 105                      | 94    | 47    | 1,892         |
| Involving freight,<br>baggage, etc.....    | ---                   | 1      | ---               | --- | ---           | 1             | 3                   | 5      | 1                 | 2   | ---                      | 2     | ---   | 13            |
| Involving windows, doors,<br>etc.....      | ---                   | 12     | ---               | --- | ---           | 12            | 23                  | 109    | 12                | 9   | 8                        | 11    | 9     | 181           |
| Involving passenger car<br>doors.....      | ---                   | 1      | ---               | --- | ---           | 1             | 1                   | 4      | ---               | --- | ---                      | ---   | ---   | 5             |
| Stumbling, falling not on<br>car/loco..... | ---                   | 2      | ---               | --- | ---           | 2             | 157                 | 52     | 241               | 40  | 19                       | 83    | 23    | 615           |
| Flying/falling objs,<br>burns, etc.....    | 1                     | 1      | ---               | --- | ---           | 2             | 2                   | 16     | 11                | 26  | 5                        | ---   | 1     | 61            |
| Assaults to persons.....                   | ---                   | ---    | ---               | --- | ---           | ---           | 3                   | 2      | 5                 | 1   | 14                       | 1     | 3     | 29            |
| Miscellaneous.....                         | ---                   | 13     | 1                 | 2   | ---           | 16            | 66                  | 116    | 89                | 25  | 22                       | 51    | 13    | 384           |
| TOTAL.....                                 | 6                     | 129    | 4                 | 11  | ---           | 152           | 704                 | 1,682  | 1,092             | 610 | 255                      | 355   | 128   | 4,826         |
| GRAND TOTAL.....                           | 35                    | 161    | 164               | 37  | 2             | 399           | 972                 | 1,814  | 1,539             | 661 | 426                      | 706   | 234   | 6,352         |

TABLE S23 (CONT)

| Class of Accident                          | .....Other Injuries..... |                        |                           |                                 |                |                  |                          |              | Sub-<br>Total | Total<br>Injuries | Total<br>Injury<br>Fatalities |
|--|--------------------------|------------------------|---------------------------|---------------------------------|----------------|------------------|--------------------------|--------------|---------------|-------------------|-------------------------------|
|  | Bruise                   | Sprain<br>or<br>Strain | Cut or<br>Lacer-<br>ation | Electric<br>Shock<br>or<br>Burn | Other<br>Burns | Dislo-<br>cation | Cinder,<br>etc<br>in Eye | Other        |               |                   |                               |
| <b>TRAIN ACCIDENTS</b>                     |                          |                        |                           |                                 |                |                  |                          |              |               |                   |                               |
| Collisions.....                            | 312                      | 186                    | 69                        | ---                             | ---            | 3                | 2                        | 362          | 934           | 970               | 16                            |
| Deraillments.....                          | 179                      | 133                    | 29                        | ---                             | 51             | 4                | 3                        | 175          | 574           | 619               | 41                            |
| Other Train Accidents.....                 | 96                       | 61                     | 51                        | ---                             | 6              | 2                | 2                        | 39           | 257           | 306               | 82                            |
| Total.....                                 | 587                      | 380                    | 149                       | ---                             | 57             | 9                | 7                        | 576          | 1,765         | 1,895             | 139                           |
| <b>TRAIN INCIDENTS</b>                     |                          |                        |                           |                                 |                |                  |                          |              |               |                   |                               |
| Coupling or uncoupling.....                | 228                      | 274                    | 97                        | ---                             | 4              | 4                | 23                       | 7            | 637           | 713               | 5                             |
| Operating locomotives.....                 | 151                      | 155                    | 84                        | 1                               | 11             | ---              | 332                      | 31           | 765           | 779               | 7                             |
| Operating rail motor car...                | 110                      | 99                     | 65                        | 1                               | ---            | 4                | 7                        | 5            | 291           | 349               | 3                             |
| Operating hand brakes.....                 | 114                      | 156                    | 44                        | ---                             | ---            | 2                | ---                      | 6            | 322           | 364               | 2                             |
| Operating switches.....                    | 18                       | 61                     | 14                        | ---                             | ---            | ---              | 9                        | 1            | 103           | 111               | ---                           |
| Coming in contact w/fixd<br>obj.....       | 139                      | 39                     | 68                        | ---                             | ---            | ---              | 2                        | 7            | 255           | 285               | 3                             |
| Getting on/off loco or<br>cars.....        | 670                      | 1,389                  | 225                       | ---                             | 2              | 18               | 4                        | 36           | 2,344         | 2,591             | 22                            |
| Accidents at Highway<br>Grades.....        | 1,219                    | 343                    | 1,123                     | ---                             | 3              | 16               | 3                        | 626          | 3,333         | 3,880             | 924                           |
| Other struck or run over...                | 151                      | 40                     | 149                       | 1                               | 1              | 6                | 2                        | 76           | 426           | 648               | 419                           |
| Flying or falling objects...               | 79                       | 13                     | 49                        | 8                               | 109            | ---              | 1,273                    | 47           | 1,578         | 1,590             | ---                           |
| Assaults.....                              | 89                       | 14                     | 98                        | ---                             | ---            | ---              | 64                       | 16           | 281           | 293               | 1                             |
| Miscellaneous.....                         | 1,197                    | 1,034                  | 441                       | 1                               | 14             | 27               | 19                       | 87           | 2,820         | 3,195             | 41                            |
| Total.....                                 | 4,165                    | 3,617                  | 2,457                     | 12                              | 144            | 77               | 1,738                    | 945          | 13,155        | 14,798            | 1,427                         |
| <b>NONTRAIN INCIDENTS</b>                  |                          |                        |                           |                                 |                |                  |                          |              |               |                   |                               |
| Coupling incidents.....                    | 541                      | 883                    | 290                       | 1                               | 18             | 11               | 37                       | 50           | 1,831         | 1,960             | ---                           |
| Operating switches.....                    | 365                      | 1,630                  | 88                        | 1                               | 1              | 10               | 15                       | 51           | 2,161         | 2,287             | ---                           |
| Getting on/off locos or<br>cars.....       | 604                      | 1,540                  | 260                       | 1                               | 3              | 15               | 10                       | 31           | 2,464         | 2,658             | ---                           |
| Servicing or maintenance<br>of equip.....  | 2,883                    | 4,641                  | 2,871                     | 145                             | 910            | 60               | 1,695                    | 422          | 13,627        | 14,887            | 7                             |
| Maintenance of way and<br>structures.....  | 4,174                    | 6,645                  | 3,811                     | 63                              | 381            | 87               | 1,111                    | 484          | 16,756        | 18,703            | 14                            |
| Involving freight,<br>baggage, etc.....    | 50                       | 135                    | 27                        | ---                             | 1              | ---              | 1                        | 11           | 225           | 239               | ---                           |
| Involving windows, doors,<br>etc.....      | 252                      | 194                    | 239                       | ---                             | ---            | 6                | 9                        | 15           | 715           | 908               | 1                             |
| Involving passenger car<br>doors.....      | 9                        | 1                      | 11                        | ---                             | ---            | ---              | ---                      | ---          | 21            | 27                | ---                           |
| Stumbling, falling not on<br>car/loco..... | 1,362                    | 2,812                  | 667                       | 2                               | 3              | 46               | 9                        | 91           | 4,992         | 5,609             | 6                             |
| Flying/falling objs,<br>burns, etc.....    | 156                      | 41                     | 148                       | 48                              | 154            | 3                | 1,074                    | 56           | 1,680         | 1,743             | 8                             |
| Assaults to persons.....                   | 111                      | 37                     | 85                        | ---                             | 2              | 2                | 12                       | 19           | 268           | 297               | 6                             |
| Miscellaneous.....                         | 946                      | 1,770                  | 831                       | 6                               | 56             | 32               | 127                      | 621          | 4,389         | 4,789             | 37                            |
| TOTAL.....                                 | 11,453                   | 20,329                 | 9,328                     | 267                             | 1,529          | 272              | 4,100                    | 1,851        | 49,129        | 54,107            | 79                            |
| <b>GRAND TOTAL.....</b>                    | <b>16,205</b>            | <b>24,326</b>          | <b>11,934</b>             | <b>279</b>                      | <b>1,730</b>   | <b>358</b>       | <b>5,845</b>             | <b>3,372</b> | <b>64,049</b> | <b>70,800</b>     | <b>1,645</b>                  |

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TABLE S24. NATURE OF INJURIES BY TYPE OF PERSON, 1978

| Type of Person            | .....Amputations..... |        |                   |     |               |               | .....Fractures..... |        |                   |     |                    |       |               |       |
|---------------------------|-----------------------|--------|-------------------|-----|---------------|---------------|---------------------|--------|-------------------|-----|--------------------|-------|---------------|-------|
|                           | Arm<br>or<br>Hand     | Finger | Leg<br>or<br>Foot | Toe | Other<br>Part | Sub-<br>Total | Arm<br>or<br>Hand   | Finger | Leg<br>or<br>Foot | Toe | Head<br>or<br>Face | Torso | Sub-<br>total | Total |
| <b>EMPLOYEES ON DUTY</b>  |                       |        |                   |     |               |               |                     |        |                   |     |                    |       |               |       |
| <b>YARD SERVICE:</b>      |                       |        |                   |     |               |               |                     |        |                   |     |                    |       |               |       |
| Engineers and Motormen.   | ---                   | 2      | ---               | --- | ---           | 2             | 16                  | 9      | 12                | 2   | 3                  | 7     | 3             | 52    |
| Firemen and Helpers....   | ---                   | ---    | ---               | --- | ---           | ---           | 1                   | 3      | 2                 | --- | ---                | 1     | ---           | 7     |
| Conductors and Foremen.   | 1                     | 2      | 4                 | 1   | ---           | 8             | 29                  | 19     | 36                | 10  | 6                  | 30    | 6             | 136   |
| Brakemen and Helpers...   | 4                     | 9      | 14                | 3   | 1             | 31            | 100                 | 129    | 112               | 49  | 20                 | 40    | 12            | 462   |
| <b>FREIGHT SERVICE:</b>   |                       |        |                   |     |               |               |                     |        |                   |     |                    |       |               |       |
| Engineers and Motormen.   | ---                   | 2      | ---               | --- | ---           | 2             | 13                  | 16     | 27                | 8   | 5                  | 20    | 2             | 91    |
| Firemen and Helpers....   | ---                   | ---    | ---               | --- | ---           | ---           | 2                   | 3      | 3                 | 2   | ---                | 1     | 1             | 12    |
| Conductors.....           | 1                     | 2      | 2                 | 1   | ---           | 6             | 34                  | 33     | 30                | 10  | 11                 | 33    | 15            | 166   |
| Brakemen and Flagmen...   | ---                   | 7      | 6                 | 1   | ---           | 14            | 68                  | 61     | 92                | 32  | 25                 | 53    | 13            | 364   |
| <b>PASSENGER SERVICE:</b> |                       |        |                   |     |               |               |                     |        |                   |     |                    |       |               |       |
| Engineers and Motormen.   | ---                   | ---    | ---               | --- | ---           | ---           | 1                   | 1      | 2                 | --- | ---                | 1     | 1             | 6     |
| Firemen and Helpers....   | ---                   | ---    | ---               | --- | ---           | ---           | 1                   | 2      | 1                 | --- | ---                | 2     | ---           | 6     |
| Conductors.....           | ---                   | 3      | ---               | --- | ---           | 3             | 3                   | 5      | 3                 | 4   | 2                  | 2     | ---           | 19    |
| Baggagemen.....           | ---                   | ---    | ---               | --- | ---           | ---           | 1                   | 2      | ---               | --- | ---                | 1     | ---           | 4     |
| Brakemen and Flagmen...   | ---                   | 2      | ---               | --- | ---           | 2             | 6                   | 10     | 1                 | 1   | 3                  | 2     | 1             | 24    |
| HOSTILERS.....            | ---                   | 1      | ---               | --- | ---           | 1             | 1                   | 2      | 5                 | 2   | ---                | 1     | ---           | 11    |
| OTHER EMPLOYEES.....      | 7                     | 121    | 14                | 11  | ---           | 153           | 466                 | 1,465  | 672               | 522 | 224                | 264   | 101           | 3,956 |
| <b>SUMMARY</b>            |                       |        |                   |     |               |               |                     |        |                   |     |                    |       |               |       |
| Total employees on duty.. | 13                    | 151    | 40                | 17  | 1             | 222           | 764                 | 1,780  | 1,198             | 642 | 299                | 478   | 155           | 5,316 |
| Employees not on duty.... | 1                     | ---    | 1                 | 1   | ---           | 3             | 27                  | 11     | 36                | 9   | 4                  | 17    | 1             | 105   |
| Passengers.....           | 1                     | ---    | 1                 | --- | ---           | 2             | 26                  | 6      | 23                | 3   | 11                 | 15    | 5             | 89    |
| Nontrespassers.....       | 2                     | 4      | 6                 | 3   | ---           | 15            | 122                 | 17     | 230               | 4   | 99                 | 178   | 65            | 715   |
| Trespassers.....          | 18                    | 6      | 116               | 16  | 1             | 157           | 33                  | ---    | 52                | 3   | 13                 | 18    | 8             | 127   |
| GRAND TOTAL.....          | 35                    | 161    | 164               | 37  | 2             | 399           | 972                 | 1,814  | 1,539             | 661 | 426                | 706   | 234           | 6,352 |

TABLE S24 (CONT)

| Type of Person            | Bruise | Sprain<br>or<br>Strain | Cut or<br>Lacer-<br>ation | Electric<br>Shock<br>or Burn | Other<br>Injuries<br>Other<br>Burns |
|---------------------------|--------|------------------------|---------------------------|------------------------------|-------------------------------------|
| <b>EMPLOYEES ON DUTY</b>  |        |                        |                           |                              |                                     |
| <b>YARD SERVICE:</b>      |        |                        |                           |                              |                                     |
| Engineers and Motormen.   | 186    | 303                    | 98                        | 4                            | 18                                  |
| Firemen and Helpers....   | 23     | 45                     | 20                        | 1                            | 2                                   |
| Conductors and Foremen.   | 506    | 876                    | 221                       | ---                          | 22                                  |
| Brakemen and Helpers...   | 1,912  | 3,573                  | 763                       | 4                            | 98                                  |
| <b>FREIGHT SERVICE:</b>   |        |                        |                           |                              |                                     |
| Engineers and Motormen.   | 267    | 471                    | 139                       | 3                            | 23                                  |
| Firemen and Helpers....   | 38     | 69                     | 24                        | 1                            | 5                                   |
| Conductors.....           | 524    | 757                    | 221                       | ---                          | 22                                  |
| Brakemen and Flagmen...   | 1,303  | 2,507                  | 615                       | 2                            | 59                                  |
| <b>PASSENGER SERVICE:</b> |        |                        |                           |                              |                                     |
| Engineers and Motormen.   | 39     | 52                     | 23                        | ---                          | 1                                   |
| Firemen and Helpers....   | 14     | 15                     | 6                         | 1                            | ---                                 |
| Conductors.....           | 48     | 72                     | 27                        | ---                          | 1                                   |
| Baggagemen.....           | 5      | 7                      | 4                         | ---                          | ---                                 |
| Brakemen and Flagmen...   | 44     | 73                     | 26                        | 2                            | 1                                   |
| HOSTLERS.....             | 62     | 124                    | 47                        | 1                            | 13                                  |
| OTHER EMPLOYEES.....      | 9,162  | 14,448                 | 7,984                     | 224                          | 1,405                               |
| <b>SUMMARY</b>            |        |                        |                           |                              |                                     |
| Total employees on duty.. | 14,153 | 23,392                 | 10,216                    | 243                          | 1,670                               |
| Employees not on duty.... | 146    | 266                    | 107                       | ---                          | 15                                  |
| Passengers.....           | 421    | 210                    | 136                       | ---                          | 4                                   |
| Nontrespassers.....       | 1,357  | 432                    | 1,299                     | 1                            | 39                                  |
| Trespassers.....          | 128    | 26                     | 174                       | 35                           | 2                                   |
| GRAND TOTAL.....          | 16,205 | 24,326                 | 11,934                    | 279                          | 1,730                               |

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| Dislo-<br>cation | Cinder<br>etc in<br>eye | Other | Sub-<br>Total | Total<br>Injuries | Total<br>Injury<br>Fatalities |
|------------------|-------------------------|-------|---------------|-------------------|-------------------------------|
|------------------|-------------------------|-------|---------------|-------------------|-------------------------------|

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|     |       |       |        |               |       |
|-----|-------|-------|--------|---------------|-------|
| 2   | 162   | 34    | 807    | 861           | ---   |
| 2   | 36    | 4     | 133    | 140           | ---   |
| 12  | 194   | 37    | 1,868  | 2,012         | 4     |
| 39  | 871   | 187   | 7,447  | 7,940         | 16    |
| 7   | 260   | 54    | 1,244  | 1,337         | 4     |
| --- | 39    | 7     | 183    | 195           | ---   |
| 10  | 201   | 78    | 1,813  | 1,985         | 9     |
| 27  | 660   | 156   | 5,329  | 5,707         | 17    |
| 1   | 29    | 8     | 153    | 159           | 1     |
| 1   | 6     | 3     | 46     | 52            | 2     |
| --- | 24    | 8     | 180    | 202           | ---   |
| --- | ---   | 1     | 17     | 21            | ---   |
| 1   | 17    | 1     | 165    | 191           | 2     |
| 1   | 36    | 7     | 291    | 303           | ---   |
| 216 | 3,238 | 1,439 | 38,116 | 42,225        | 66    |
| 319 | 5,773 | 2,024 | 57,792 | 63,330        | 121   |
| 6   | 41    | 30    | 611    | 719           | 9     |
| 5   | 6     | 379   | 1,161  | 1,252         | 13    |
| 27  | 24    | 844   | 4,023  | 4,753         | 1,010 |
| 1   | 1     | 95    | 462    | 746           | 492   |
| 358 | 5,845 | 3,372 | 64,049 | <u>70,800</u> | 1,645 |

TABLE S25. ACCIDENT/INCIDENT CASUALTIES BY TYPE OF EMPLOYEE ON DUTY, 1978

| Type of Person  | Total  |         |         |
|---|--------|---------|---------|
|   | Killed | Injured | Illness |
| <b>I.--EXECUTIVES, OFFICIALS, AND STAFF ASSISTANTS</b>  |        |         |         |
| EXECUTIVE, GENERAL OFFICERS, AND ASSISTANTS.....        | 2      | 35      | 1       |
| DIVISION OFFICERS, ASSISTANTS, AND STAFF ASSISTANT..... | 3      | 142     | 3       |
| Subtotal.....   | 5      | 177     | 4       |
| <b>II.--PROFESSIONAL, CLERICAL, AND GENERAL</b>         |        |         |         |
| PROFESSIONAL AND SUBPROFESSIONAL ASSISTANTS.....        | 2      | 95      | 1       |
| SUPERVISORY OR CHIEF CLERKS (MAJOR DEPARTMENTS).....    | ---    | 53      | 1       |
| CHIEF CLERKS (MINOR DEPARTMENTS) AND ASSISTANTS.....    | ---    | 39      | ---     |
| CLERKS AND CLERICAL SPECIALISTS.....                    | 1      | 119     | 4       |
| CLERKS.....   | 1      | 1,052   | 14      |
| MECHANICAL DEVICE OPERATORS (OFFICE).....               | ---    | 26      | 2       |
| STENOGRAPHERS AND SECRETARIES.....                      | ---    | 16      | ---     |
| STENOGRAPHERS AND TYPISTS.....                          | ---    | 17      | ---     |
| STOREKEEPERS, SALES AGENTS, AND BUYERS.....             | ---    | 39      | 1       |
| TICKET AGENTS AND ASSISTANT TICKET AGENTS.....          | ---    | 45      | 1       |
| TRAVELING AUDITORS OR ACCOUNTANTS.....                  | ---    | 3       | ---     |
| TELEPHONE SWITCHBOARD OPERATORS AND OFFICE ASSIST.....  | ---    | 11      | ---     |
| MESSENGERS AND OFFICE BOYS.....                         | ---    | 29      | 2       |
| ELEVATOR OPERATORS AND OTHER OFFICE ATTENDANTS.....     | ---    | 4       | ---     |
| LIEUTENANTS AND SERGEANTS OF POLICE.....                | ---    | 83      | 3       |
| PATROLMEN AND WATCHMEN.....                             | ---    | 372     | 12      |
| TRAFFIC AND VARIOUS OTHER AGENTS, INSPECTORS, ETC..     | ---    | 35      | ---     |
| CLAIM AGENTS OR INVESTIGATORS.....                      | ---    | 18      | 2       |
| FREIGHT CLAIM AGENTS OR INVESTIGATORS.....              | ---    | 8       | 1       |
| CHIEF CLAIM AGENTS OR INVESTIGATORS.....                | ---    | 6       | ---     |
| MISCELLANEOUS TRADE WORKERS (OTHER THAN PLUMBERS)...    | ---    | 109     | 3       |
| MOTOR VEHICLE AND MOTOR CAR OPERATORS.....              | 1      | 467     | 7       |
| TEAMSTERS AND STABLEMEN.....                            | ---    | 1       | ---     |
| JANITORS AND CLEANERS.....                              | ---    | 134     | 3       |
| Subtotal.....   | 5      | 2,781   | 57      |
| <b>III.--MAINTENANCE OF WAY AND STRUCTURE</b>           |        |         |         |
| ROADMASTERS, GENERAL FOREMAN, AND ASSISTANTS.....       | 1      | 190     | 5       |
| MAINTENANCE OF WAY AND SCALE INSPECTORS.....            | ---    | 62      | 3       |
| BRIDGE AND BUILDING GANG FOREMEN (SKILLED LABOR)....    | ---    | 148     | 9       |
| BRIDGE AND BUILDING CARPENTERS.....                     | 3      | 972     | 41      |
| BRIDGE AND BUILDING IRONWORKERS.....                    | ---    | 147     | 11      |
| BRIDGE AND BUILDING PAINTERS.....                       | ---    | 73      | 3       |
| MASONS, BRICKLAYERS, PLASTERERS, AND PLUMBERS.....      | ---    | 407     | 17      |
| MAINTENANCE OF WAY/STRUCTURE HELPERS & ASSISTANTS..     | ---    | 570     | 22      |
| PORTABLE STEAM EQUIPMENT OPERATORS.....                 | 2      | 1,643   | 46      |
| PORTABLE STEAM EQUIPMENT OPERATOR HELPERS.....          | ---    | 65      | 1       |
| PUMPING EQUIPMENT OPERATORS.....                        | ---    | 8       | ---     |
| GANG FOREMEN (EXTRA GANG AND WORK-TRAIN LABORERS)...    | 1      | 248     | 8       |
| GANG FOREMEN (BRIDGE AND BUILDING, SIGNAL ETC).....     | ---    | 29      | 1       |
| GANG OR SECTION FOREMEN.....                            | 2      | 1,039   | 29      |
| EXTRA GANG MEN.....                                     | 5      | 4,596   | 166     |
| SECTION MEN.....  | 10     | 8,525   | 333     |
| MAINTENANCE OF WAY LABORERS (OTHER THAN TRACK/RDWAY).   | ---    | 326     | 8       |
| GENERAL & ASS'T GEN FOREMEN/INSPECTORS (SIGNAL, ETC).   | 2      | 64      | 1       |
| GANG FOREMEN (SIGNAL AND TELEGRAPH SKILLED TRADES ).    | 1      | 82      | 5       |
| SIGNALMEN AND SIGNAL MAINTAINERS.....                   | 3      | 809     | 44      |
| LINEMEN AND GROUND MEN.....                             | ---    | 307     | 27      |
| ASSISTANT SIGNALMEN AND ASSISTANT SIGNAL MAINT.....     | ---    | 336     | 30      |
| SIGNALMEN AND SIGNAL MAINTAINER HELPERS.....            | ---    | 107     | 10      |
| Subtotal.....   | 30     | 20,753  | 620     |
| <b>IV.--MAINTENANCE OF EQUIPMENT AND STORES</b>         |        |         |         |
| GENERAL, ASSISTANT GENERAL, AND DEPARTMENT FOREMEN.     | ---    | 171     | 5       |
| GENERAL AND ASSISTANT GENERAL FOREMEN (STORES).....     | ---    | 25      | ---     |
| EQUIPMENT, SHOP, ELEC, MATERIAL, & SUPPLIES INSPTR.     | ---    | 113     | 5       |
| GANG FOREMEN AND GANG LEADERS (SKILLED LABOR).....      | 2      | 215     | 6       |
| BLACKSMITHS.....  | ---    | 202     | 4       |
| BOILERMAKERS.....                                       | ---    | 306     | 7       |
| CARMEN (A AND B).....                                   | 7      | 4,156   | 54      |
| CARMEN (C AND D).....                                   | 9      | 3,371   | 70      |
| ELECTRICAL WORKERS (A).....                             | ---    | 1,206   | 31      |
| ELECTRICAL WORKERS (B).....                             | ---    | 61      | 3       |
| ELECTRICAL WORKERS (C).....                             | ---    | 31      | ---     |
| MACHINISTS.....   | 2      | 2,952   | 114     |
| HOLDERS.....  | ---    | 10      | ---     |
| SHEET-METAL WORKERS.....                                | ---    | 588     | 22      |
| SKILLED TRADES HELPERS (M OF E AND STORES).....         | 1      | 529     | 10      |
| HELPER APPRENTICES (M OF E AND STORES).....             | ---    | 95      | 3       |
| REGULAR APPRENTICES (M OF E AND STORES).....            | 1      | 469     | 17      |
| COACH CLEANERS.....                                     | ---    | 308     | 10      |
| GANG FOREMEN (SHOPS, ENGINE HOUSES, & POWER PLANTS).    | ---    | 58      | ---     |
| GANG FOREMEN (STORES AND ICE, RECLAMATION, ETC)....     | ---    | 17      | ---     |
| CLASSIFIED LABORERS (SHOPS, ENGINE HOUSES, ETC)....     | ---    | 615     | 34      |
| GENERAL LABORERS (SHOP, ENGINE HOUSES, ETC).....        | 2      | 968     | 28      |
| GENERAL LABORERS (STORES AND ICE, RECLAMATION, ETC).    | ---    | 388     | 11      |
| STATIONARY ENGINEERS (STEAM).....                       | ---    | 19      | 1       |
| STATIONARY FIREMEN, OILERS, COAL PASSERS, AND ETC..     | ---    | 28      | 2       |
| Subtotal.....   | 24     | 16,901  | 437     |

TABLE S25. (CONT)

| Type of Person   | Total  |         |         |
|--|--------|---------|---------|
|  | Killed | Injured | Illness |
| <b>V.--TRANSPORTATION</b>                              |        |         |         |
| CHIEF TRAIN DISPATCHERS.....                           | ---    | 4       | ---     |
| TRAIN DISPATCHERS.....                                 | ---    | 9       | 1       |
| TRAIN DIRECTORS.....                                   | ---    | 12      | ---     |
| STATION AGENTS (SUPERVISORY, MAJOR STATIONS).....      | ---    | 9       | ---     |
| STATION AGENTS (SMALLER STATIONS, NONTELEGRAPHERS) ..  | ---    | 18      | 1       |
| STATION AGENTS (TELEGRAPHERS AND TELEPHONERS).....     | ---    | 37      | 1       |
| CHIEF TELEGRAPHERS AND TELEPHONERS OR WIRE CHIEFS..    | ---    | 4       | ---     |
| CLERK-TELEGRAPHERS AND CLERK-TELEPHONERS.....          | ---    | 45      | 1       |
| TELEGRAPHERS, TELEPHONERS, AND TOWERMEN.....           | 1      | 148     | 4       |
| STATIONMASTERS AND ASSISTANTS.....                     | ---    | 7       | ---     |
| SUPERVISING BAGGAGE AGENTS.....                        | ---    | ---     | ---     |
| BAGGAGE AGENTS AND ASSISTANTS.....                     | ---    | 11      | ---     |
| BAGGAGE, PARCEL ROOM, AND STATION ATTENDANTS.....      | ---    | 79      | ---     |
| GENERAL FOREMEN (FREIGHT STATIONS, WAREHOUSES, ETC) .. | ---    | 1       | ---     |
| ASST. GENERAL FOREMAN (FRT STATIONS, WAREHOUSES)....   | ---    | 1       | ---     |
| GANG FOREMEN (FREIGHT STATION, WAREHOUSE, ETC).....    | ---    | 8       | ---     |
| CALLERS, LOADERS, SEALERS, SCALERS, ETC.....           | ---    | 25      | ---     |
| TRUCKERS (STATIONS, WAREHOUSES, AND PLATFORMS).....    | ---    | 63      | ---     |
| LABORERS (COAL AND ORE DOCKS AND GRAIN ELEVATORS)....  | ---    | 57      | ---     |
| COMMON LABORERS (STATIONS, WAREHOUSES, PLATFORMS)...   | ---    | 142     | ---     |
| STEWARDS, RESTAURANT & LODGING-HOUSE MANAGERS, ETC.    | ---    | 12      | 3       |
| CHEFS AND COOKS (RESTAURANTS OR DINING CARS).....      | 1      | 88      | 23      |
| WAITERS, CAMP COOKS, KITCHEN HELPERS, ETC.....         | ---    | 102     | 1       |
| OFFICERS, WORKERS, ATT'ANTS ON BARGES, LAUNCHES....    | ---    | 69      | ---     |
| TRANSPORTATION AND DINING-SERVICE INSPECTORS.....      | ---    | 4       | ---     |
| PARLOR AND SLEEPING CARD CONDUCTORS.....               | ---    | ---     | ---     |
| TRAIN ATTENDANTS.....                                  | ---    | 284     | 16      |
| BRIDGE OPERATORS AND HELPERS.....                      | 1      | 21      | ---     |
| CROSSING AND BRIDGE FLAGMEN AND GATEMEN.....           | ---    | 9       | ---     |
| FOREMEN (LAUNDRY) AND LAUNDRY WORKERS.....             | ---    | ---     | ---     |
| Subtotal.....  | 3      | 1,269   | 51      |
| <b>VI.-- (a) TRANSPORTATION</b>                        |        |         |         |
| YARDMASTERS.....                                       | ---    | 117     | 3       |
| ASSISTANT YARDMASTERS.....                             | ---    | 6       | ---     |
| SWITCH TENDERS.....                                    | ---    | 58      | ---     |
| OUTSIDE HOSTLERS.....                                  | ---    | 170     | 3       |
| INSIDE HOSTLERS.....                                   | ---    | 50      | 1       |
| OUTSIDE HOSTLERS HELPERS.....                          | ---    | 83      | 2       |
| Subtotal.....  | ---    | 484     | 9       |
| <b>VI.-- (b) TRANSPORTATION (train and engine)</b>     |        |         |         |
| ROAD PASSENGER CONDUCTORS.....                         | ---    | 202     | 10      |
| ASSIST ROAD PASSENGER CONDUCTORS & TICKET COLLECTO.    | ---    | 163     | 6       |
| ROAD FREIGHT CONDUCTORS (THROUGH FREIGHT).....         | 4      | 1,129   | 28      |
| ROAD FREIGHT CONDUCTORS (LOCAL AND WAY FREIGHT).....   | 5      | 856     | 18      |
| ROAD PASSENGER BAGGAGEMEN.....                         | ---    | 21      | ---     |
| ROAD PASSENGER BRAKEMEN AND FLAGMEN.....               | 2      | 191     | 1       |
| ROAD FREIGHT BRAKEMEN AND FLAGMEN (THROUGH FREIGHT)..  | 11     | 2,829   | 57      |
| ROAD FREIGHT BRAKEMEN AND FLAGMEN (LOCAL & WAY FRGH.   | 6      | 2,878   | 51      |
| YARD CONDUCTORS AND YARD FOREMEN.....                  | 4      | 2,012   | 26      |
| YARD BRAKEMEN AND YARD HELPERS.....                    | 16     | 7,940   | 56      |
| ROAD PASSENGER ENGINEERS AND MOTORMEN.....             | 1      | 159     | 14      |
| ROAD FREIGHT ENGINEERS AND MOTORMEN (THROUGH FRGHT)..  | 3      | 817     | 24      |
| ROAD FREIGHT ENGINEERS & MOTORMEN (LOCAL & WAY FRGH.   | 1      | 520     | 20      |
| YARD ENGINEERS AND MOTORMEN.....                       | ---    | 861     | 30      |
| ROAD PASSENGER FIREMEN AND HELPERS.....                | 2      | 52      | 6       |
| ROAD FREIGHT FIREMEN AND HELPERS (THROUGH FREIGHT) ..  | ---    | 133     | 6       |
| ROAD FREIGHT FIREMEN & HELPERS (LOCAL & WAY FRGHT)..   | ---    | 62      | 3       |
| YARD FIREMEN AND HELPERS.....                          | ---    | 140     | 7       |
| Subtotal.....  | 55     | 20,965  | 363     |
| TOTAL.....   | 122    | 63,330  | 1,741   |

TABLE S26. ACCIDENT/INCIDENT CASUALTIES BY TYPE OF EMPLOYEE ON DUTY, CLASS I LINE HAUL RAILROADS ONLY, 1978

| Type of Person  | Class I Railroads (Line-Haul) |        |     |                 |                             |        |       |                 |     |     |                     |     |     |     |        |     |
|---|-------------------------------|--------|-----|-----------------|-----------------------------|--------|-------|-----------------|-----|-----|---------------------|-----|-----|-----|--------|-----|
|   | Total                         |        |     | Man Hours (000) | Casualties per mill man-hrs |        |       | Train Accidents |     |     | Hot-train Incidents |     |     |     |        |     |
|   | Kld                           | Inj    | Ill |                 | Kld                         | Inj    | Ill   | Kld             | Inj | Ill | Kld                 | Inj | Ill |     |        |     |
| <b>I. EXECUTIVES, OFFICIALS, AND STAFF ASSISTANTS</b>                                     |                               |        |     |                 |                             |        |       |                 |     |     |                     |     |     |     |        |     |
| EXECUTIVE, GENERAL OFFICERS, AND ASSISTANTS.....  | 2                             | 26     | --- | 12,176          | .16                         | 2.14   | ---   | ---             | 1   | --- | 1                   | 3   | --- | 1   | 22     | --- |
| DIVISION OFFICERS, ASSISTANTS, AND STAFF ASSISTANT.....                                   | 3                             | 134    | 3   | 23,067          | .13                         | 5.81   | -.13  | 1               | --- | 1   | 20                  | --- | 1   | 111 | 3      | --- |
| Subtotal.....   | 5                             | 160    | 3   | 35,243          | .14                         | 4.54   | -.09  | 1               | --- | 4   | 23                  | --- | 2   | 133 | 3      | --- |
| <b>II. PROFESSIONAL, CLERICAL, AND GENERAL SUPERVISORY AND SUBPROFESSIONAL ASSISTANTS</b> |                               |        |     |                 |                             |        |       |                 |     |     |                     |     |     |     |        |     |
| SUPERVISOR OF CHIEF CLERKS (MAJOR DEPARTMENTS).....                                       | ---                           | 43     | 1   | 19,756          | .10                         | 4.61   | .05   | ---             | --- | --- | 2                   | 12  | --- | --- | 79     | 1   |
| CHIEF CLERKS (MINOR DEPARTMENTS) AND ASSISTANTS.....                                      | ---                           | 35     | --- | 4,314           | ---                         | 9.97   | .23   | ---             | --- | --- | ---                 | 3   | --- | --- | 40     | 1   |
| CLERKS AND CLERICAL SPECIALISTS.....  | ---                           | 114    | 4   | 14,804          | ---                         | 2.36   | ---   | ---             | --- | --- | ---                 | 7   | --- | --- | 35     | --- |
| CLERKS.....   | 1                             | 114    | 4   | 14,804          | .07                         | 7.77   | -.27  | ---             | --- | --- | ---                 | 7   | --- | 1   | 107    | 4   |
| MECHANICAL DEVICE OPERATORS (OFFICE).....   | ---                           | 25     | 2   | 8,173           | ---                         | 3.06   | .24   | ---             | --- | --- | ---                 | 1   | --- | --- | 24     | 2   |
| STENOGRAPHERS AND SECRETARIES.....  | ---                           | 16     | --- | 5,659           | ---                         | 2.83   | ---   | ---             | --- | --- | ---                 | --- | --- | --- | 16     | --- |
| STENOGRAPHERS AND TYPISTS.....  | ---                           | 15     | --- | 8,120           | ---                         | 1.85   | ---   | ---             | --- | --- | ---                 | --- | --- | --- | 15     | --- |
| STOREKEEPERS, SALES AGENTS, AND ETERS.....  | ---                           | 36     | --- | 2,966           | ---                         | 12.14  | ---   | ---             | --- | --- | ---                 | 5   | --- | --- | 31     | --- |
| TICKET AGENTS AND ASSISTANT TICKET AGENTS.....  | ---                           | 45     | 1   | 1,99            | ---                         | 226.13 | 5.03  | ---             | --- | --- | ---                 | 1   | --- | --- | 44     | 1   |
| TRAVELING AUDITORS OR ACCOUNTANTS.....  | ---                           | 11     | --- | 1,245           | ---                         | 1.61   | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 11     | --- |
| TELEPHONE SWITCHBOARD OPERATORS AND OFFICE ASSISTANTS.....                                | ---                           | 11     | --- | 1,339           | ---                         | 8.22   | ---   | ---             | --- | --- | ---                 | --- | --- | --- | 11     | --- |
| MESSENGERS AND OFFICE BOYS.....   | ---                           | 22     | 2   | 996             | ---                         | 22.09  | 2.01  | ---             | --- | --- | ---                 | --- | --- | --- | 22     | 2   |
| ELEVATOR OPERATORS AND OTHER OFFICE ATTENDANTS.....                                       | ---                           | 4      | --- | 192             | ---                         | 20.83  | ---   | ---             | --- | --- | ---                 | 2   | --- | --- | 4      | --- |
| LIEUTENANTS AND SERGEANTS OF POLICE.....  | ---                           | 79     | 3   | 2,557           | ---                         | 30.90  | 1.17  | ---             | 1   | --- | ---                 | 2   | --- | --- | 76     | 3   |
| PATROLMEN AND WATCHMEN.....   | ---                           | 345    | 12  | 4,425           | ---                         | 77.97  | 2.71  | ---             | --- | --- | ---                 | 9   | 1   | --- | 336    | 11  |
| TRAFFIC AND VARIOUS OTHER AGENTS, INSPECTORS, ETC.....                                    | ---                           | 35     | --- | 9,715           | ---                         | 3.60   | ---   | ---             | --- | --- | ---                 | 8   | --- | --- | 27     | --- |
| CLAIM AGENTS OR INVESTIGATORS.....  | ---                           | 17     | 2   | 1,241           | ---                         | 13.70  | 1.61  | ---             | 2   | --- | ---                 | --- | --- | --- | 15     | 2   |
| FREIGHT CLAIM AGENTS OR INVESTIGATORS.....  | ---                           | 8      | 1   | 757             | ---                         | 10.57  | 1.32  | ---             | --- | --- | ---                 | --- | --- | --- | 8      | 1   |
| CHIEF CLAIM AGENTS OR INVESTIGATORS.....  | ---                           | 4      | --- | 341             | ---                         | 11.73  | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 3      | --- |
| MISCELLANEOUS TRADE WORKERS (OTHER THAN PLUMBERS).....                                    | ---                           | 79     | 2   | 187             | ---                         | 422.46 | 10.70 | ---             | --- | --- | ---                 | 1   | --- | --- | 78     | 2   |
| MOTOR VEHICLE AND MOTOR CAR OPERATORS.....  | 1                             | 426    | 5   | 10,678          | .09                         | 39.90  | .47   | ---             | 2   | 1   | 1                   | 4   | --- | --- | 420    | 4   |
| TRANSERS AND STABLEMEN.....   | ---                           | 1      | --- | 260             | ---                         | 3.57   | ---   | ---             | --- | --- | ---                 | --- | --- | --- | 1      | --- |
| JANITORS AND CLEANERS.....  | ---                           | 122    | 3   | 3,525           | ---                         | 34.61  | .65   | ---             | --- | --- | ---                 | 1   | --- | --- | 121    | 3   |
| Subtotal.....   | 5                             | 2,540  | 53  | 195,647         | .03                         | 12.98  | -.27  | ---             | 7   | 1   | 3                   | 78  | 1   | 2   | 2,455  | 51  |
| <b>III. MAINTENANCE OF WAY AND STRUCTURE</b>  |                               |        |     |                 |                             |        |       |                 |     |     |                     |     |     |     |        |     |
| ROADMASTERS, GENERAL FOREMAN, AND ASSISTANTS.....   | 1                             | 175    | 5   | 6,851           | .15                         | 25.54  | .73   | ---             | 4   | --- | ---                 | 14  | --- | 1   | 157    | 5   |
| MAINTENANCE OF WAY AND SCALE INSPECTORS.....  | ---                           | 61     | 3   | 2,394           | ---                         | 25.48  | 1.25  | ---             | --- | --- | ---                 | 9   | --- | --- | 52     | 3   |
| BRIDGE AND BUILDING GANG FOREMEN (SKILLED LABOR).....                                     | ---                           | 137    | 8   | 3,799           | ---                         | 36.06  | 2.11  | ---             | --- | --- | ---                 | 8   | --- | --- | 134    | 8   |
| BRIDGE AND BUILDING CARPENTERS.....   | 2                             | 896    | 37  | 7,916           | .25                         | 113.19 | 4.67  | ---             | --- | --- | 1                   | 6   | --- | 1   | 866    | 37  |
| BRIDGE AND BUILDING IRONWORKERS.....  | ---                           | 133    | 10  | 858             | ---                         | 155.01 | 17.66 | ---             | --- | --- | ---                 | 1   | --- | --- | 132    | 10  |
| BRIDGE AND BUILDING PAINTERS.....   | ---                           | 63     | 3   | 737             | ---                         | 85.48  | 4.07  | ---             | --- | --- | ---                 | 1   | --- | --- | 62     | 3   |
| MAJORS, BRICKLAYERS, PLASTERERS, AND PLUMBERS.....  | ---                           | 396    | 16  | 5,823           | ---                         | 66.01  | 2.75  | ---             | --- | --- | ---                 | 5   | --- | --- | 391    | 16  |
| MAINTENANCE OF WAY/STRUCTURE HELPERS & ASSISTANTS.....                                    | ---                           | 526    | 19  | 4,886           | ---                         | 108.06 | 3.89  | ---             | --- | --- | ---                 | 10  | --- | --- | 517    | 19  |
| PORTABLE STEAM EQUIPMENT OPERATORS.....   | 2                             | 1,597  | 46  | 27,183          | .07                         | 58.75  | 1.69  | 1               | 6   | --- | 1                   | 122 | 1   | --- | 1,469  | 45  |
| PORTABLE STEAM EQUIPMENT OPERATOR HELPERS.....  | ---                           | 65     | 1   | 426             | ---                         | 152.58 | 2.35  | ---             | 1   | --- | ---                 | 5   | --- | --- | 59     | 1   |
| PUMPING EQUIPMENT OPERATORS.....  | ---                           | 8      | --- | 75              | ---                         | 106.67 | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 7      | --- |
| GANG FOREMEN (EXTRA GANG AND WORK-TRAIN LABORERS).....                                    | 1                             | 242    | 8   | 8,517           | .12                         | 28.08  | .93   | ---             | 1   | --- | ---                 | 10  | --- | 1   | 231    | 8   |
| GANG FOREMEN (BRIDGE AND BUILDING, SIGNAL ETC).....                                       | ---                           | 26     | 1   | 148             | ---                         | 175.68 | 6.76  | ---             | --- | --- | ---                 | 3   | --- | --- | 23     | 1   |
| GANG OR SECTION FOREMEN.....  | 2                             | 903    | 28  | 15,443          | .13                         | 56.47  | 1.81  | ---             | 4   | --- | 1                   | 44  | --- | 1   | 855    | 28  |
| EXTRA GANG MEN.....   | 5                             | 4,421  | 165 | 27,498          | .18                         | 160.78 | 6.00  | 1               | 5   | --- | 2                   | 153 | --- | 2   | 4,263  | 165 |
| SECTION MEN.....  | 8                             | 7,298  | 307 | 42,426          | .19                         | 172.01 | 7.24  | 2               | 5   | --- | 2                   | 217 | 1   | --- | 7,076  | 306 |
| MAINTENANCE OF WAY LABORERS (OTHER THAN BRAC/RDM).....                                    | ---                           | 282    | 8   | 4,90            | ---                         | 575.51 | 16.33 | ---             | 1   | --- | ---                 | 3   | --- | --- | 278    | 8   |
| GENERAL & ASS'T GEN FOREMEN/INSPECTORS (SIGNAL, ETC).....                                 | 2                             | 61     | 1   | 3,405           | .59                         | 171.91 | .29   | ---             | --- | --- | ---                 | 3   | --- | --- | 56     | 1   |
| GANG FOREMEN (SIGNAL AND TELEGRAPH SKILLED TRADES).....                                   | 1                             | 77     | 5   | 3,373           | .30                         | 22.83  | 1.48  | ---             | --- | --- | ---                 | 1   | --- | --- | 76     | 5   |
| SIGNALMEN AND SIGNAL MAINTAINERS.....   | 3                             | 761    | 42  | 14,278          | .21                         | 53.30  | 2.94  | 1               | --- | --- | 1                   | 16  | --- | 1   | 745    | 42  |
| LINEMEN AND GROUND MEN.....   | ---                           | 300    | 27  | 4,395           | ---                         | 68.26  | 6.14  | ---             | 1   | --- | ---                 | 6   | --- | --- | 292    | 27  |
| ASSISTANT SIGNALMEN AND ASSISTANT SIGNAL MAINTAINERS.....                                 | ---                           | 327    | 30  | 3,551           | ---                         | 92.09  | 8.45  | ---             | --- | --- | ---                 | 5   | --- | --- | 322    | 30  |
| SIGNALMEN AND SIGNAL MAINTAINER HELPERS.....  | ---                           | 100    | 10  | 693             | ---                         | 144.30 | 14.43 | ---             | 1   | --- | ---                 | 1   | --- | --- | 98     | 10  |
| Subtotal.....   | 27                            | 18,857 | 780 | 185,267         | .15                         | 101.78 | 4.21  | 5               | 32  | --- | 9                   | 642 | 2   | 13  | 18,183 | 778 |
| <b>IV. MAINTENANCE OF EQUIPMENT AND STORES</b>  |                               |        |     |                 |                             |        |       |                 |     |     |                     |     |     |     |        |     |
| GENERAL, ASSISTANT GENERAL, AND DEPARTMENT FOREMEN.....                                   | ---                           | 133    | 5   | 11,053          | ---                         | 12.03  | .45   | ---             | 3   | --- | ---                 | 6   | --- | --- | 124    | 5   |
| GENERAL AND ASSISTANT GENERAL FOREMEN (STORES).....                                       | ---                           | 24     | --- | 285             | ---                         | 84.21  | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 23     | --- |
| EQUIPMENT, SHOP, ELEC. MATERIAL, & SUPPLIES INSPECTOR.....                                | ---                           | 103    | 5   | 867             | ---                         | 118.80 | 5.77  | ---             | --- | --- | ---                 | 3   | --- | --- | 100    | 5   |
| GANG FOREMEN AND GANG LEADERS (SKILLED LABOR).....  | 2                             | 201    | 6   | 12,921          | .15                         | 15.56  | .46   | 1               | --- | --- | ---                 | 6   | --- | 1   | 195    | 6   |
| BLACKSMITHS.....  | ---                           | 195    | 4   | 1,934           | ---                         | 100.83 | 2.07  | ---             | --- | --- | ---                 | 2   | --- | --- | 193    | 4   |
| BOILERMAKERS.....   | ---                           | 291    | 6   | 3,165           | ---                         | 81.94  | 1.90  | ---             | --- | --- | ---                 | --- | --- | --- | 291    | 6   |
| CARMEN (A AND B).....   | 7                             | 3,659  | 51  | 19,282          | .36                         | 189.74 | 2.44  | 4               | --- | --- | 3                   | 71  | --- | 4   | 3,584  | 51  |
| CARMEN (C AND D).....   | 9                             | 3,189  | 70  | 57,615          | .16                         | 55.35  | 1.21  | 1               | 7   | --- | ---                 | 76  | --- | 8   | 3,106  | 70  |
| ELECTRICAL WORKERS (A).....   | ---                           | 1,129  | 30  | 21,610          | ---                         | 52.24  | 1.39  | ---             | 3   | --- | ---                 | 23  | --- | --- | 1,103  | 30  |
| ELECTRICAL WORKERS (B).....   | ---                           | 60     | 3   | 1,757           | ---                         | 34.15  | 1.71  | ---             | --- | --- | ---                 | 3   | --- | --- | 59     | 3   |
| ELECTRICAL WORKERS (C).....   | ---                           | 29     | --- | 227             | ---                         | 127.75 | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 28     | --- |
| MACHINISTS.....   | 2                             | 2,770  | 110 | 34,893          | .06                         | 79.39  | 3.15  | ---             | 1   | --- | ---                 | 41  | --- | 2   | 2,728  | 110 |
| MOLDERS.....  | ---                           | 4      | --- | 4               | ---                         | 307.69 | ---   | ---             | --- | --- | ---                 | --- | --- | --- | 4      | --- |
| SHEET-METAL WORKERS.....  | ---                           | 566    | 22  | 9,717           | ---                         | 58.25  | 2.26  | ---             | --- | --- | ---                 | 4   | --- | --- | 562    | 22  |
| SKILLED TRADES HELPERS (M OF E AND STORES).....   | 1                             | 444    | 10  | 5,670           | .18                         | 78.31  | 1.76  | ---             | --- | --- | 1                   | 4   | --- | --- | 440    | 10  |
| HELPER APPRENTICES (M OF E AND STORES).....   | ---                           | 65     | 3   | 566             | ---                         | 114.64 | 5.30  | ---             | --- | --- | ---                 | 3   | --- | --- | 62     | 3   |
| REGULAR APPRENTICES (M OF E AND STORES).....  | 1                             | 458    | 17  | 6,161           | .16                         | 74.10  | 2.75  | ---             | --- | --- | ---                 | 4   | --- | 1   | 454    | 17  |
| COACH CLEANERS.....   | ---                           | 228    | 10  | 4,244           | ---                         | 53.72  | 2.36  | ---             | --- | --- | ---                 | 6   | --- | --- | 222    | 10  |
| GANG FOREMEN (SHOPS, ENGINE HOUSES, & POWER PLANTS).....                                  | ---                           | 52     | --- | 570             | ---                         | 91.23  | ---   | ---             | --- | --- | ---                 | 1   | --- | --- | 51     | --- |
| GANG FOREMEN (SHOPS, ENGINE HOUSES, & POWER PLANTS).....                                  | ---                           | 16     | --- | 726             | ---                         | 22.04  | ---   | ---             | --- | --- | ---                 | 2   | --- | --- | 14     | --- |
| CLASSIFIED LABORERS (SHOPS, ENGINE HOUSES, ETC).....                                      | ---                           | 560    | 33  | 8,403           | ---                         | 66.64  | 3.93  | ---             | --- | --- | ---                 | 22  | --- | --- | 538    | 33  |
| GENERAL LABORERS (SHOP, ENGINE HOUSES, ETC).....  | 2                             | 863    | 28  | 8,129           | .25                         | 106.16 | 3.44  | 1               | --- | --- | ---                 | 21  | --- | 1   | 842    | 28  |
| GENERAL LABORERS (STORES AND ICE, RECLAMATION, ETC).....                                  | ---                           | 367    | 11  | 4,991           | ---                         | 81.72  | 2.45  | ---             | --- | --- | ---                 | 9   | 1   | --- | 358    | 10  |
| STATIONARY ENGINEERS (STEAM).....   | ---                           | 19     | 1   | 717             | ---                         | 26.50  | 1.39  | ---             | --- | --- | ---                 | 1   | --- | --- | 18     | 1   |
| STATIONARY FIREMEN, OILERS, COAL PASSERS, AND ETC.....                                    | ---                           | 26     | 2   | 426             | ---                         | 61.03  | 4.89  | ---             | --- | --- | ---                 | --- | --- | --- | 26     | 2   |
| Subtotal.....   | 24                            | 15,451 | 427 | 215,465         | .11                         | 71.71  | 1.98  | 3               | 18  | --- | 4                   | 308 | 1   | 17  | 15,125 | 426 |

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Kld = Killed; Inj = Injured; Ill = Illness





TABLE S27. ACCIDENT/INCIDENT CASUALTIES TO EMPLOYEES ON DUTY, 1978

| Nature of injury                                | Number of injuries | Number of lost workdays | Average days per injury |
|---|--------------------|-------------------------|-------------------------|
| Bruise - Contusion.....                         | 14,153             | 84,569                  | 5.97                    |
| Sprain - Strain.....                            | 23,392             | 214,985                 | 9.19                    |
| Cut or laceration - abrasion.....               | 10,218             | 33,211                  | 3.25                    |
| Electrical burn or shock.....                   | 243                | 1,591                   | 6.54                    |
| Other burns.....                                | 1,670              | 7,865                   | 4.70                    |
| Dislocation.....                                | 319                | 6,386                   | 20.01                   |
| Fracture---arm or hand.....                     | 764                | 19,094                  | 24.99                   |
| fingers.....                                    | 1,780              | 15,049                  | 8.45                    |
| leg or foot.....                                | 1,198              | 42,244                  | 35.26                   |
| toes.....                                       | 642                | 7,483                   | 11.65                   |
| head or face.....                               | 299                | 4,018                   | 13.43                   |
| torso.....                                      | 478                | 12,915                  | 27.01                   |
| other parts.....                                | 155                | 3,142                   | 20.27                   |
| Amputation---arm or hand.....                   | 13                 | 1,178                   | 90.61                   |
| fingers.....                                    | 151                | 3,543                   | 23.46                   |
| leg or foot.....                                | 40                 | 8,199                   | 204.97                  |
| toes.....                                       | 17                 | 611                     | 35.94                   |
| other parts.....                                | 1                  | 250                     | 250.00                  |
| Cinder or other foreign particle in eye.....    | 5,773              | 7,448                   | 1.29                    |
| Hernia.....                                     | 351                | 11,812                  | 33.65                   |
| Concussion.....                                 | 151                | 2,270                   | 15.03                   |
| Nervous shock.....                              | 36                 | 508                     | 14.11                   |
| Internal injuries.....                          | 55                 | 2,499                   | 45.43                   |
| Loss of eye.....                                | 7                  | 755                     | 107.85                  |
| Not otherwise classified.....                   | 1,423              | 7,169                   | 5.03                    |
| TOTAL.....                                      | 63,329             | 498,794                 | 7.87                    |
| Occupational skin diseases or disorders.....    | 753                | 1,391                   | 1.84                    |
| Dust diseases of the lungs.....                 | 12                 | 81                      | 6.75                    |
| Respiratory conditions due to toxic agents..... | 319                | 1,903                   | 5.96                    |
| Poisoning.....                                  | 84                 | 198                     | 2.35                    |
| Disorders due to physical agents.....           | 315                | 627                     | 1.99                    |
| Disorders due to repeated trauma.....           | 124                | 808                     | 6.51                    |
| All other occupational illnesses.....           | 134                | 818                     | 6.10                    |
| TOTAL.....                                      | 1,741              | 5,826                   | 3.34                    |
| Nonfatal Injuries.....                          | 63,329             | 498,794                 | 7.87                    |
| Nonfatal Illnesses.....                         | 1,741              | 5,826                   | 3.34                    |
| Fatalities.....                                 | 122                | ---                     | N/A                     |
| TOTAL.....                                      | 65,193             | 504,620                 | 7.74                    |

TABLE S28. FATALITIES IN TRAIN ACCIDENTS RESULTING FROM OPERATING PRACTICES, BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.                               | Causes                                 | Total Accidents | ....Employees on duty.... Trainmen | Other | Total | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Killed |
|---|--|-----------------|------------------------------------|-------|-------|-----------------|--------------|-------------------|---------------|--------------|
| BRAKES, USE OF                          |  |                 |                                    |       |       |                 |              |                   |               |              |
| 500                                     | Automatic brake, improper use          | 25              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 501                                     | Dynamic brake, improper use            | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 502                                     | Failure to secure engine (R.R. emp.)   | 21              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 503                                     | Failure to secure hnd brk (R.R. emp)   | 113             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 504                                     | Failure to apply sufficient hand brake | 66              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 505                                     | Failure to apply hnd brk on car (emp.) | 39              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 506                                     | Fail. to secure eng/Car (Non R.R. emp) | 15              | ---                                | 1     | 1     | ---             | ---          | ---               | ---           | 1            |
| 507                                     | Independent (eng.) brake, improper use | 22              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 508                                     | Fail. to control spd,hnd brk (R.R.emp) | 11              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 509                                     | Other causes involving use of brakes   | 36              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 354             | ---                                | 1     | 1     | ---             | ---          | ---               | ---           | 1            |
| EMPLOYEE PHYSICAL CONDITION             |  |                 |                                    |       |       |                 |              |                   |               |              |
| 510                                     | Impairment due to alcohol or drugs     | 1               | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2            |
| 511                                     | Incapacitation due to injury/illness   | 1               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 513                                     | Employee falling asleep                | 4               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 6               | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2            |
| FLAGGING, FIXED, HAND AND RADIO SIGNALS |  |                 |                                    |       |       |                 |              |                   |               |              |
| 519                                     | Fixed signal improperly displayed      | 3               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 520                                     | Fixed signal, failure to comply        | 32              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1            |
| 521                                     | Flagging, improper or failure to flag  | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 522                                     | Flagging signal, failure to comply     | 2               | ---                                | 2     | 2     | ---             | ---          | ---               | ---           | 2            |
| 523                                     | Hand signal, failure to comply         | 9               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 524                                     | Hand signal improper                   | 3               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 525                                     | Hand signal, failure to give/receive   | 12              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 526                                     | Radio communicatio, failure to comply  | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 527                                     | Radio communication, improper          | 4               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 528                                     | Radio comm., failure to give/receive   | 12              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 529                                     | Flagging, fixed, hand & radio (other)  | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 97              | 1                                  | 2     | 3     | ---             | ---          | ---               | ---           | 3            |
| OTHER RULES AND INSTRUCTIONS            |  |                 |                                    |       |       |                 |              |                   |               |              |
| 530                                     | Car(s) shoved out & left out of clear  | 66              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 531                                     | Cars left foul                         | 92              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 532                                     | Deraill, failure to apply or remove    | 26              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 533                                     | Failure to stop train in clear         | 121             | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1            |
| 535                                     | Instruction to trn/yard crew improper  | 37              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 536                                     | Mtr car/on-trk eqp rules,fail to cmply | 39              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 537                                     | Equip move without authority (RR emp)  | 46              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 538                                     | Shoving move, missing man at lead      | 222             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 539                                     | Shoving movement, fail to control      | 101             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 540                                     | Skate, failure to remove or place      | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 541                                     | Special op. instr., failure to comply  | 50              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 542                                     | Trn ord/timetable auth, fail to comply | 11              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1            |
| 543                                     | Trn ord (radio)err in prep/trans/deliv | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 820             | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2            |
| SPEED                                   |  |                 |                                    |       |       |                 |              |                   |               |              |
| 550                                     | Coupling speed excessive               | 85              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1            |
| 553                                     | Switch movement, excessive speed       | 60              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 554                                     | Trn inside yrd limit, excess speed     | 56              | 5                                  | ---   | 5     | ---             | ---          | ---               | ---           | 5            |
| 555                                     | Trn out yrd limit,clear blk,excess spd | 37              | 1                                  | 1     | 2     | ---             | 4            | ---               | ---           | 6            |
| 559                                     | Other Causes involving excessive speed | 38              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 276             | 7                                  | 1     | 8     | ---             | 4            | ---               | ---           | 12           |
| SWITCHES, USE OF                        |  |                 |                                    |       |       |                 |              |                   |               |              |
| 560                                     | Spring switch not clear before reverse | 27              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 561                                     | Switch improperly lined                | 300             | ---                                | ---   | ---   | 1               | ---          | ---               | ---           | 1            |
| 562                                     | Switch not latched or locked           | 32              | ---                                | ---   | ---   | ---             | 32           | ---               | ---           | ---          |
| 563                                     | Switch previously run through          | 108             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
|   | SUBTOTAL.....                          | 467             | ---                                | ---   | ---   | 1               | ---          | ---               | ---           | 1            |
| MISCELLANEOUS                           |  |                 |                                    |       |       |                 |              |                   |               |              |
| 570                                     | Buffing or slack action excessive      | 401             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 571                                     | Failure to couple                      | 22              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 572                                     | Lateral drawbar force on curve excess  | 126             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 573                                     | Moving car,loading ramp not positioned | 4               | ---                                | ---   | ---   | ---             | 4            | ---               | ---           | ---          |
| 574                                     | Passed couplers                        | 145             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 575                                     | Retarder, improper manual operation    | 22              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 576                                     | Retarder yard skate improperly applied | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---          |
| 599                                     | Other train operation/human factors    | 103             | ---                                | ---   | ---   | ---             | ---          | 2                 | ---           | 2            |
|   | SUBTOTAL.....                          | 825             | ---                                | ---   | ---   | ---             | ---          | 2                 | ---           | 2            |
| GRAND TOTAL.....                        |  | 2645            | 12                                 | 4     | 16    | 1               | 4            | 2                 | ---           | 23           |

TABLE S29. NONFATAL CASUALTIES IN TRAIN ACCIDENTS RESULTING FROM OPERATING PRACTICES BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.                               | Causes                                 | Total Accidents | ....Employees on duty.... Trainmen | Other | Total | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Injured |
|---|--|-----------------|------------------------------------|-------|-------|-----------------|--------------|-------------------|---------------|---------------|
| BRAKES, USE OF                          |  |                 |                                    |       |       |                 |              |                   |               |               |
| 500                                     | Automatic brake, improper use          | 25              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 501                                     | Dynamic brake, improper use            | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 502                                     | Failure to secure engine (R.R. emp.)   | 21              | 5                                  | ---   | 5     | ---             | ---          | ---               | ---           | 5             |
| 503                                     | Failure to secure hnd brk (R.R. emp)   | 113             | 3                                  | 3     | 6     | ---             | ---          | ---               | ---           | 6             |
| 504                                     | Failure to apply sufficient hand brake | 66              | 3                                  | ---   | 3     | ---             | ---          | ---               | ---           | 3             |
| 505                                     | Failure to apply hnd brk on car (emp.) | 39              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 506                                     | Fail. to secure eng/car (hon R.R. emp) | 15              | 1                                  | 1     | 2     | ---             | ---          | ---               | ---           | 2             |
| 507                                     | Independent (eng.) brake, improper use | 22              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 508                                     | Fail. to control spd,hnd brk (R.R.emp) | 11              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 509                                     | Other causes involving use of brakes   | 36              | 6                                  | ---   | 6     | ---             | 1            | ---               | ---           | 9             |
|   | SUBTOTAL.....                          | 354             | 24                                 | 4     | 28    | ---             | 1            | ---               | ---           | 29            |
| EMPLOYEE PHYSICAL CONDITION             |  |                 |                                    |       |       |                 |              |                   |               |               |
| 510                                     | Impairment due to alcohol or drugs     | 1               | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 511                                     | Incapacitation due to injury/illness   | 1               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 513                                     | Employee falling asleep                | 4               | 3                                  | 1     | 4     | ---             | ---          | ---               | ---           | 4             |
|   | SUBTOTAL.....                          | 6               | 5                                  | 1     | 6     | ---             | ---          | ---               | ---           | 6             |
| FLAGGING, FIXED, HAND AND RADIO SIGNALS |  |                 |                                    |       |       |                 |              |                   |               |               |
| 519                                     | Fixed signal improperly displayed      | 3               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 520                                     | Fixed signal, failure to comply        | 32              | 20                                 | 1     | 21    | ---             | ---          | ---               | ---           | 21            |
| 521                                     | Flagging, improper or failure to flag  | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 522                                     | Flagging signal, failure to comply     | 2               | ---                                | 1     | 1     | ---             | ---          | ---               | ---           | 1             |
| 523                                     | Hand signal, failure to comply         | 9               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 524                                     | Hand signal improper                   | 3               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 525                                     | Hand signal, failure to give/receive   | 12              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 526                                     | Radio communication, failure to comply | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 527                                     | Radio communication, improper          | 4               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 528                                     | Radio comm., failure to give/receive   | 12              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 529                                     | Flagging, fixed, hand & radio (other)  | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|   | SUBTOTAL.....                          | 97              | 21                                 | 2     | 23    | ---             | ---          | ---               | ---           | 23            |
| OTHER RULES AND INSTRUCTIONS            |  |                 |                                    |       |       |                 |              |                   |               |               |
| 530                                     | Car(s) shoved out & left out of clear  | 66              | 7                                  | 1     | 8     | ---             | 3            | ---               | ---           | 11            |
| 531                                     | Cars left foul                         | 92              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 532                                     | Derail, failure to apply or remove     | 26              | 3                                  | ---   | 3     | ---             | ---          | ---               | ---           | 3             |
| 533                                     | Failure to stop train in clear         | 121             | 15                                 | ---   | 15    | ---             | ---          | ---               | ---           | 15            |
| 535                                     | Instruction to trn/yard crew improper  | 37              | 11                                 | ---   | 11    | ---             | ---          | ---               | ---           | 11            |
| 536                                     | Mtr car/on-trk eqp rules,fail to cmpl  | 39              | ---                                | 13    | 13    | ---             | ---          | 2                 | ---           | 15            |
| 537                                     | Equip move without authority (RR emp)  | 46              | 4                                  | 1     | 5     | ---             | ---          | ---               | ---           | 5             |
| 538                                     | Shoving move, missing man at lead      | 222             | 14                                 | 1     | 15    | 1               | 3            | ---               | ---           | 19            |
| 539                                     | Shoving movement, fail to control      | 101             | 9                                  | 1     | 10    | ---             | ---          | ---               | ---           | 10            |
| 540                                     | Skate, failure to remove or place      | 7               | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 541                                     | Special op. instr., failure to comply  | 50              | 3                                  | ---   | 3     | ---             | ---          | ---               | ---           | 3             |
| 542                                     | Trn ord/tisetable auth, fail to comply | 11              | 6                                  | ---   | 6     | ---             | ---          | ---               | ---           | 6             |
| 543                                     | Trn ord(radio)err in prep/trans/deliv  | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|   | SUBTOTAL.....                          | 820             | 76                                 | 17    | 93    | 1               | 6            | 2                 | ---           | 102           |
| SPEED                                   |  |                 |                                    |       |       |                 |              |                   |               |               |
| 550                                     | Compling speed excessive               | 65              | 7                                  | ---   | 7     | ---             | ---          | ---               | ---           | 7             |
| 553                                     | Switch movement, excessive speed       | 60              | 10                                 | 1     | 11    | ---             | ---          | ---               | ---           | 11            |
| 554                                     | Trn inside yrd limit, excess speed     | 56              | 11                                 | 1     | 12    | ---             | ---          | ---               | ---           | 12            |
| 555                                     | Trn out yrd limit,clear blk,excess spd | 37              | 3                                  | 19    | 22    | 1               | 35           | ---               | ---           | 58            |
| 559                                     | Other Causes involving excessive speed | 38              | 6                                  | ---   | 6     | ---             | 3            | ---               | ---           | 9             |
|   | SUBTOTAL.....                          | 276             | 37                                 | 21    | 58    | 1               | 38           | ---               | ---           | 97            |
| SWITCHES, USE OF                        |  |                 |                                    |       |       |                 |              |                   |               |               |
| 560                                     | Spring switch not clear before reverse | 27              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 561                                     | Switch improperly lined                | 300             | 17                                 | 1     | 18    | 2               | ---          | ---               | ---           | 20            |
| 562                                     | Switch not latched or locked           | 32              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 563                                     | Switch previously run through          | 108             | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
|   | SUBTOTAL.....                          | 467             | 20                                 | 1     | 21    | 2               | ---          | ---               | ---           | 23            |
| MISCELLANEOUS                           |  |                 |                                    |       |       |                 |              |                   |               |               |
| 570                                     | Buffing or slack action excessive      | 401             | 11                                 | ---   | 11    | ---             | ---          | 2                 | ---           | 13            |
| 571                                     | Failure to couple                      | 22              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 572                                     | Lateral drawbar force on curve excess  | 126             | ---                                | ---   | ---   | ---             | ---          | 3                 | ---           | 3             |
| 573                                     | Moving car,loading ramp not positioned | 4               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 574                                     | Passed couplers                        | 145             | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 575                                     | Retarder, improper manual operation    | 22              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 576                                     | Retarder yard skate improperly applied | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 599                                     | Other train operation/human factors    | 103             | 18                                 | 7     | 25    | ---             | 130          | ---               | ---           | 155           |
|   | SUBTOTAL.....                          | 825             | 29                                 | 7     | 36    | ---             | 130          | 2                 | 3             | 171           |
|   | GRAND TOTAL.....                       | 2845            | 212                                | 53    | 265   | 4               | 175          | 4                 | 3             | 451           |

TABLE S30. FATALITIES IN TRAIN ACCIDENTS RESULTING FROM MECHANICAL AND ELECTRICAL FAILURES BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.                               | Causes                                  | Total Accidents | ....Employees on duty.... Trainmen | Other      | Emp not on duty Total | Passen- gers | Non tres- passers | Tres- passers | Total Killed |
|---|---|-----------------|------------------------------------|------------|-----------------------|--------------|-------------------|---------------|--------------|
| <b>BRAKES</b>                           |   |                 |                                    |            |                       |              |                   |               |              |
| 400                                     | Air hose uncoupled or burst             | 50              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 400L                                    | Air hose uncoupled or burst - loco      | 2               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 402                                     | Broken brake pipe or connections        | 6               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 403                                     | Obstructed brake pipe                   | 1               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 404                                     | Other brake component failure, etc.     | 19              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 404L                                    | Other brake component failure - loco    | 2               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 405                                     | Brk valve malf. (undesired emergency)   | 13              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 406                                     | Brake valve malfunction/stuck brake/etc | 22              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 406L                                    | Brk valve malf./stuck brake/etc - loco  | 3               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 407                                     | Rigging down or dragging                | 78              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 407L                                    | Rigging down or dragging - loco         | 2               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 408                                     | Hard brake/gear broken or defective     | 15              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 409                                     | Hard brk linkage/connections failure    | 11              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 410                                     | Other brake failure(not on locomotive)  | 19              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 410L                                    | Other brake failure - locomotive        | 2               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>245</b>      | <b>---</b>                         | <b>---</b> | <b>---</b>            | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>TRAILER OR CONTAINER ON FLAT CAR</b> |   |                 |                                    |            |                       |              |                   |               |              |
| 411                                     | Broken or defective tiedown equipment   | 9               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 413                                     | Broken or defective trailer             | 1               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 419                                     | oth trailer/container on flat car fail  | 10              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>20</b>       | <b>---</b>                         | <b>---</b> | <b>---</b>            | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>BODY</b>                             |   |                 |                                    |            |                       |              |                   |               |              |
| 420                                     | Body bolster broken or defective        | 21              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 421                                     | Center sill broken or bent              | 38              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 422                                     | Draft sill broken or bent               | 10              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 423                                     | Center plate broken or defective        | 55              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 424                                     | Center plate disengaged from truck      | 65              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 425                                     | Center pin broken or missing            | 21              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 426                                     | Center plate attachment defective       | 7               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 429                                     | Other causes due to body (not loco)     | 26              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>243</b>      | <b>---</b>                         | <b>---</b> | <b>---</b>            | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>COUPLER AND DRAFT SYSTEM</b>         |   |                 |                                    |            |                       |              |                   |               |              |
| 430                                     | Knuckle broken or defective             | 31              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 430L                                    | Knuckle broken or defective - loco      | 2               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 431                                     | Coupler mismatch, high/low              | 30              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 432                                     | Coupler drawhead broken or defective    | 63              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 433                                     | Coupler retainer pin/cross key missing  | 25              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 434                                     | Draft gear/mechanism broken/defective   | 40              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 435                                     | Coupler carrier broken or defective     | 17              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 436                                     | Coupler shank broken or defective       | 11              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 439                                     | Other coupler and draft system causes   | 38              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 439L                                    | Other coupler/draft system causes-loco  | 3               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>260</b>      | <b>---</b>                         | <b>---</b> | <b>---</b>            | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>TRUCK COMPONENTS</b>                 |   |                 |                                    |            |                       |              |                   |               |              |
| 440                                     | Side bearing clearance improper         | 191             | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 441                                     | Side bearing(s) broken                  | 37              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 442                                     | Side bearing(s) missing                 | 37              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 443                                     | Truck bolster broken                    | 27              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 444                                     | Side frame broken                       | 10              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 445                                     | Truck (stiff/improper lateral)          | 111             | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 445L                                    | Truck (stiff/improper lateral) - loco   | 9               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 446                                     | Defective snubbing                      | 6               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 447                                     | Broken/missing/defective springs        | 10              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 449                                     | Other truck component causes            | 27              | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
| 449L                                    | Other truck component causes - loco     | 1               | ---                                | ---        | ---                   | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>466</b>      | <b>---</b>                         | <b>---</b> | <b>---</b>            | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |

TABLE S30. (CONT)

| Cause<br>No.                      | Causes                                    | Total<br>Accidents | ....Employees on duty....<br>Trainmen | Other | Total | Emp not<br>on duty | Passen-<br>gers | Non tres-<br>passers | Tres-<br>passers | Total<br>Killed |
|-----------------------------------|---|--------------------|---------------------------------------|-------|-------|--------------------|-----------------|----------------------|------------------|-----------------|
| AXLES AND JOURNAL BEARINGS        |   |                    |                                       |       |       |                    |                 |                      |                  |                 |
| 450                               | Broken or bent between wheel seats        | 16                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 450L                              | Broken/bent between wheel seats-loco      | 4                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 451                               | Journal (plain) failure - overheating     | 204                | ---                                   | ---   | ---   | ---                | ---             | 3                    | ---              | 3               |
| 452                               | Journal (R. B.) failure - overheat        | 62                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 452L                              | Journal (P. B.) failure-overheat (loco)   | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 453                               | Journal fractured, new cold break         | 9                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 454                               | Journal fract., cold brk (prev. O.heat)   | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 454L                              | Jour. fract., cold brk (prev C.heat) loco | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 459                               | Axles and journal bearings (other)        | 7                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 459L                              | Axles/journal bearings (other) - loco     | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
|                                   | SUBTOTAL.....                             | 306                | ---                                   | ---   | ---   | ---                | ---             | 3                    | ---              | 3               |
| WHEELS                            |   |                    |                                       |       |       |                    |                 |                      |                  |                 |
| 460                               | Broken flange                             | 38                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 460L                              | Broken flange - locomotive                | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 461                               | Broken rim                                | 55                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 461L                              | Broken rim - locomotive                   | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 462                               | Broken plate                              | 49                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 462L                              | Broken plate - locomotive                 | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 463                               | Broken hub                                | 14                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 463L                              | Broken hub - locomotive                   | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 464                               | Worn flange                               | 156                | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 464L                              | Worn flange - locomotive                  | 4                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 465                               | Worn thread                               | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 466                               | Damaged flange/thread, thermal/flat       | 9                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 466L                              | Emg flange/thread, thermal/flat - loco    | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 467                               | Loose wheel                               | 59                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 467L                              | Loose wheel - locomotive                  | 3                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 469                               | Other causes involving wheels-not loco    | 34                 | ---                                   | 4     | 4     | ---                | ---             | 12                   | ---              | 16              |
| 469L                              | Other causes involving wheel - loco       | 5                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
|                                   | SUBTOTAL.....                             | 436                | ---                                   | 4     | 4     | ---                | ---             | 12                   | ---              | 16              |
| LOCOMOTIVES                       |   |                    |                                       |       |       |                    |                 |                      |                  |                 |
| 470L                              | Running gear failure - locomotive         | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 471L                              | Traction motor failure - locomotive       | 15                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 472L                              | Crank case/air box explosion - loco       | 7                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 473L                              | Oil fire - locomotive                     | 15                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 474L                              | Electrically caused fire - locomotive     | 56                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 475L                              | Current collector system - loco           | 8                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 476L                              | Remote control eq. inoperative-loco       | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 479L                              | Other causes involving locomotives        | 28                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
|                                   | SUBTOTAL.....                             | 132                | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| DOORS                             |   |                    |                                       |       |       |                    |                 |                      |                  |                 |
| 480                               | Box car plug door open                    | 3                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 481                               | Box car plug door, attachment defective   | 3                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 483                               | Box car door, other than plug, open       | 1                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 484                               | Box car door (not plug) attach defect.    | 2                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 485                               | Bottom outlet car door open               | 4                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 486                               | Bottom outlet car door attach defect.     | 3                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| 489                               | Other causes involving doors              | 5                  | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
|                                   | SUBTOTAL.....                             | 21                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
| GENL MECH AND ELECTRICAL FAILURES |   |                    |                                       |       |       |                    |                 |                      |                  |                 |
| 499                               | General mech/elect failures-not loco      | 27                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | 2                | 2               |
| 499L                              | General mech/elect failures - loco        | 14                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | ---              | ---             |
|                                   | SUBTOTAL.....                             | 41                 | ---                                   | ---   | ---   | ---                | ---             | ---                  | 2                | 2               |
| GRAND TOTAL.....                  |   | 2170               | ---                                   | 4     | 4     | ---                | ---             | 15                   | 2                | 21              |

TABLE S31. NONFATAL CASUALTIES IN TRAIN ACCIDENTS RESULTING FROM MECHANICAL AND ELECTRICAL FAILURES, BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.                        | Causes                                  | Total Accidents | ....Employees on duty.... Trainmen | Other | Total | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Injured |
|----------------------------------|---|-----------------|------------------------------------|-------|-------|-----------------|--------------|-------------------|---------------|---------------|
| BRAKES                           |   |                 |                                    |       |       |                 |              |                   |               |               |
| 400                              | Air hose uncoupled or burst             | 50              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 400L                             | Air hose uncoupled or burst - loco      | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 402                              | Broken brake pipe or connections        | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 403                              | Obstructed brake pipe                   | 1               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 404                              | Other brake component failure, etc.     | 19              | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 404L                             | Other brake component failure - loco    | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 405                              | Brk valve malf. (undesired emergency)   | 13              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 406                              | Brake valve malfunction/stuck brake/etc | 22              | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 406L                             | Brk valve malf./stuck brake/etc - loco  | 3               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 407                              | Rigging down or dragging                | 78              | 1                                  | 1     | 2     | ---             | ---          | ---               | ---           | 2             |
| 407L                             | Rigging down or dragging - loco         | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 408                              | Hand brake/gear broken or defective     | 15              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 409                              | Hand brk linkage/connections failure    | 11              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 410                              | Other brake failure(not on locomotive)  | 19              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 410L                             | Other brake failure - locomotive        | 2               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                  | SUBTOTAL.....                           | 245             | 6                                  | 1     | 7     | ---             | ---          | ---               | ---           | 7             |
| TRAILER OR CONTAINER ON FLAT CAR |   |                 |                                    |       |       |                 |              |                   |               |               |
| 411                              | Broken or defective tiedown equipment   | 9               | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 413                              | Broken or defective trailer             | 1               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 419                              | Oth trailer/container on flat car fail  | 10              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                  | SUBTOTAL.....                           | 20              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| BODY                             |   |                 |                                    |       |       |                 |              |                   |               |               |
| 420                              | Body bolster broken or defective        | 21              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 421                              | Center sill broken or bent              | 38              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 422                              | Draft sill broken or bent               | 10              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 423                              | Center plate broken or defective        | 55              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 424                              | Center plate disengaged from truck      | 65              | 3                                  | ---   | 3     | ---             | ---          | ---               | ---           | 3             |
| 425                              | Center pin broken or missing            | 21              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 426                              | Center plate attachment defective       | 7               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 429                              | Other causes due to body (not loco)     | 26              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                  | SUBTOTAL.....                           | 243             | 5                                  | ---   | 5     | ---             | ---          | ---               | ---           | 5             |
| COUPLER AND DRAFT SYSTEM         |   |                 |                                    |       |       |                 |              |                   |               |               |
| 430                              | Knuckle broken or defective             | 31              | 5                                  | ---   | 5     | ---             | ---          | ---               | ---           | 5             |
| 430L                             | Knuckle broken or defective - loco      | 2               | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 431                              | Coupler mismatch, high/low              | 30              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 432                              | Coupler drawhead broken or defective    | 63              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 433                              | Coupler retainer pin/cross key missing  | 25              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 434                              | Draft gear/mechanism broken/defective   | 40              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 435                              | Coupler carrier broken or defective     | 17              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 436                              | Coupler shank broken or defective       | 11              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 439                              | Other coupler and draft system causes   | 38              | 1                                  | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 439L                             | Other coupler/draft system causes-loco  | 3               | ---                                | 1     | 1     | ---             | ---          | ---               | ---           | 1             |
|                                  | SUBTOTAL.....                           | 260             | 12                                 | 1     | 13    | ---             | ---          | ---               | ---           | 13            |
| TRUCK COMPONENTS                 |   |                 |                                    |       |       |                 |              |                   |               |               |
| 440                              | Side bearing clearance improper         | 191             | 7                                  | ---   | 7     | ---             | ---          | ---               | ---           | 7             |
| 441                              | Side bearing(s) broken                  | 37              | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 442                              | Side bearing(s) missing                 | 37              | 3                                  | 1     | 4     | ---             | ---          | ---               | ---           | 4             |
| 443                              | Truck bolster broken                    | 27              | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 444                              | Side frame broken                       | 10              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 445                              | Truck (stiff/improper lateral)          | 111             | 2                                  | ---   | 2     | ---             | ---          | ---               | ---           | 2             |
| 445L                             | Truck (stiff/improper lateral) - loco   | 9               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 446                              | Defective snubbing                      | 6               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 447                              | Broken/missing/defective springs        | 10              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 449                              | Other truck component causes            | 27              | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 449L                             | Other truck component causes - loco     | 1               | ---                                | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                  | SUBTOTAL.....                           | 466             | 16                                 | 1     | 17    | ---             | ---          | ---               | ---           | 17            |

TABLE S31. (CONT)

| Cause No.                         | Causes                                    | Total Accidents | ....Employees on duty....<br>Trainmen | Other | Total | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Injured |
|-----------------------------------|---|-----------------|---------------------------------------|-------|-------|-----------------|--------------|-------------------|---------------|---------------|
| AXLES AND JOURNAL BEARINGS        |   |                 |                                       |       |       |                 |              |                   |               |               |
| 450                               | Broken or bent between wheel seats        | 16              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 450L                              | Broken/bent between wheel seats-loco      | 4               | ---                                   | 1     | 1     | ---             | 25           | ---               | ---           | 26            |
| 451                               | Journal (plain) failure - overheating     | 204             | 3                                     | 1     | 4     | ---             | ---          | ---               | ---           | 4             |
| 452                               | Journal (R. E.) failure - overheat        | 62              | 1                                     | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 452L                              | Journal (R. E.) failure-overheat(loco)    | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 453                               | Journal fractured, new cold break         | 9               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 454                               | Journal fract., cold brk (prev. O.heat)   | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 454L                              | Jour. fract., cold brk (prev O.heat) loco | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 459                               | Axles and journal bearings (other)        | 7               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 459L                              | Axles/journal bearings (other) - loco     | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                   | SUBTOTAL.....                             | 306             | 4                                     | 2     | 6     | ---             | 25           | ---               | ---           | 31            |
| WHEELS                            |   |                 |                                       |       |       |                 |              |                   |               |               |
| 460                               | Broken flange                             | 36              | 1                                     | 3     | 4     | ---             | ---          | ---               | ---           | 4             |
| 460L                              | Broken flange - locomotive                | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 461                               | Broken rim                                | 55              | 1                                     | ---   | 1     | ---             | ---          | 10                | ---           | 11            |
| 461L                              | Broken rim - locomotive                   | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 462                               | Broken plate                              | 49              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 462L                              | Broken plate - locomotive                 | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 463                               | Broken hub                                | 14              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 463L                              | Broken hub - locomotive                   | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 464                               | Worn flange                               | 156             | 3                                     | 1     | 4     | ---             | ---          | ---               | ---           | 4             |
| 464L                              | Worn flange - locomotive                  | 4               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 465                               | Worn thread                               | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 466                               | Damaged flange/thread, thermal/flat       | 9               | 1                                     | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 466L                              | Dmg flange/thread, thermal/flat - loco    | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 467                               | Loose wheel                               | 59              | 4                                     | 1     | 5     | ---             | ---          | ---               | ---           | 5             |
| 467L                              | Loose wheel - locomotive                  | 3               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 469                               | Other causes involving wheels-not loco    | 34              | ---                                   | 15    | 15    | ---             | ---          | 29                | ---           | 44            |
| 469L                              | Other causes involving wheel - loco       | 5               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                   | SUBTOTAL.....                             | 436             | 10                                    | 20    | 30    | ---             | ---          | 39                | ---           | 69            |
| LOCOMOTIVES                       |   |                 |                                       |       |       |                 |              |                   |               |               |
| 470L                              | Running gear failure - locomotive         | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 471L                              | Traction motor failure - locomotive       | 15              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 472L                              | Crank case/air box explosion - loco       | 7               | 1                                     | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 473L                              | Oil fire - locomotive                     | 15              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 474L                              | Electrically caused fire - locomotive     | 56              | 7                                     | 1     | 8     | ---             | ---          | ---               | ---           | 6             |
| 475L                              | Current collector system - loco           | 8               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 476L                              | Remote control eqp. inoperative-loco      | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 479L                              | Other causes involving locomotives        | 26              | 5                                     | 1     | 6     | ---             | ---          | ---               | ---           | 6             |
|                                   | SUBTOTAL.....                             | 132             | 13                                    | 2     | 15    | ---             | ---          | ---               | ---           | 15            |
| DOORS                             |   |                 |                                       |       |       |                 |              |                   |               |               |
| 480                               | Box car plug door open                    | 3               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 481                               | Box car plug door, attachment defective   | 3               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 483                               | Box car door, other than plug, open       | 1               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 484                               | Box car door(not plug) attach defect.     | 2               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 485                               | Bottom outlet car door open               | 4               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 486                               | Bottom outlet car door attach defect.     | 3               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| 489                               | Other causes involving doors              | 5               | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
|                                   | SUBTOTAL.....                             | 21              | ---                                   | ---   | ---   | ---             | ---          | ---               | ---           | ---           |
| GENL MECH AND ELECTRICAL FAILURES |   |                 |                                       |       |       |                 |              |                   |               |               |
| 499                               | General mech/elect failures-not loco      | 27              | 1                                     | ---   | 1     | ---             | ---          | ---               | ---           | 1             |
| 499L                              | General mech/elect failures - loco        | 14              | 2                                     | ---   | 2     | ---             | ---          | 1                 | ---           | 3             |
|                                   | SUBTOTAL.....                             | 41              | 3                                     | ---   | 3     | ---             | ---          | 1                 | ---           | 4             |
| GRAND TOTAL.....                  |   | 2170            | 70                                    | 27    | 97    | ---             | 25           | 40                | ---           | 162           |



TABLE S32. FATALITIES IN TRAIN ACCIDENTS RESULTING FROM TRACK, ROADBED AND STRUCTURES, BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.                                   | Causes                                  | Total Accidents | ....Employees on duty....<br>Trainmen Other | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Killed |
|---|---|-----------------|---|-----------------|--------------|-------------------|---------------|--------------|
| <b>ROADBED DEFECTS</b>                      |   |                 |   |                 |              |                   |               |              |
| 101   | Roadbed settled or soft                 | 151             | ---   | ---             | ---          | ---               | ---           | ---          |
| 102   | Washout/rain/slide/ice,etc. dmg to trk  | 53              | 2   | ---             | ---          | ---               | ---           | 2            |
| 109   | Other roadbed defects                   | 36              | ---   | ---             | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>240</b>      | <b>2</b>                                    | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>2</b>     |
| <b>TRACK GEOMETRY DEFECTS</b>               |   |                 |   |                 |              |                   |               |              |
| 110   | Wide gage (defect/missing crossties)    | 821             | ---   | ---             | ---          | ---               | ---           | ---          |
| 111   | Wide gage (def/missing rail fasteners)  | 100             | ---   | ---             | ---          | ---               | ---           | ---          |
| 112   | Wide gage (involving gage rods)         | 10              | ---   | ---             | ---          | ---               | ---           | ---          |
| 113   | Wide gage due to worn rail              | 80              | ---   | ---             | ---          | ---               | ---           | ---          |
| 114   | Track alignment irregular               | 89              | ---   | ---             | ---          | ---               | ---           | ---          |
| 115   | Track alignment irregular (buckled)     | 158             | ---   | ---             | ---          | ---               | ---           | ---          |
| 116   | Track profile improper                  | 10              | ---   | ---             | ---          | ---               | ---           | ---          |
| 117   | Superelevation incorrect                | 58              | ---   | ---             | ---          | ---               | ---           | ---          |
| 118   | Superelevation runoff improper          | 3               | ---   | ---             | ---          | ---               | ---           | ---          |
| 119   | Cross level irregular at joints         | 596             | ---   | ---             | ---          | ---               | ---           | ---          |
| 120   | Cross level irregular not at joints     | 240             | ---   | ---             | ---          | ---               | ---           | ---          |
| 129   | Other track geometry defects            | 62              | ---   | ---             | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>2227</b>     | <b>---</b>                                  | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>RAIL AND JOINT BAR DEFECTS</b>           |   |                 |   |                 |              |                   |               |              |
| 130   | Bolt hole crack or break                | 80              | ---   | ---             | ---          | ---               | ---           | ---          |
| 131   | Broken base of rail                     | 275             | ---   | ---             | ---          | ---               | ---           | ---          |
| 132   | Broken weld, field                      | 10              | ---   | ---             | ---          | ---               | ---           | ---          |
| 133   | Broken weld, plant                      | 1               | ---   | ---             | ---          | ---               | ---           | ---          |
| 134   | Detail fracture fm shelling/head check  | 15              | ---   | ---             | ---          | ---               | ---           | ---          |
| 135   | Engine burn fracture                    | 5               | ---   | ---             | ---          | ---               | ---           | ---          |
| 136   | Head/web sep. (outside joint bar limit) | 145             | ---   | ---             | ---          | ---               | ---           | ---          |
| 137   | Head/web sep. (within joint bar limits) | 63              | ---   | ---             | ---          | ---               | ---           | ---          |
| 138   | Horizontal split head                   | 15              | ---   | ---             | ---          | ---               | ---           | ---          |
| 139   | Piped rail                              | 2               | ---   | ---             | ---          | ---               | ---           | ---          |
| 140   | Rail defect with joint bar, repair      | 3               | ---   | ---             | ---          | ---               | ---           | ---          |
| 141   | Transverse/compound fissure             | 161             | ---   | ---             | ---          | ---               | ---           | ---          |
| 142   | Vertical split head                     | 194             | ---   | ---             | ---          | ---               | ---           | ---          |
| 143   | Worn rail                               | 77              | ---   | ---             | ---          | ---               | ---           | ---          |
| 144   | Mismatched rail-head contour            | 34              | ---   | ---             | ---          | ---               | ---           | ---          |
| 145   | Joint bar broken, compromise            | 15              | ---   | ---             | ---          | ---               | ---           | ---          |
| 146   | Joint bar broken, insulated             | 13              | ---   | ---             | ---          | ---               | ---           | ---          |
| 147   | Joint bar broken, noninsulated          | 62              | ---   | ---             | ---          | ---               | ---           | ---          |
| 148   | Joint bolts, broken or missing          | 23              | ---   | ---             | ---          | ---               | ---           | ---          |
| 149   | Other rail and joint bar defects        | 134             | ---   | ---             | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>1327</b>     | <b>---</b>                                  | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>FROGS, SWITCHES AND TRACK APPLIANCES</b> |   |                 |   |                 |              |                   |               |              |
| 160   | Guard rail loose/broken/etc.            | 24              | ---   | ---             | ---          | ---               | ---           | ---          |
| 161   | Switch damaged/out of adjustment        | 185             | ---   | ---             | ---          | ---               | ---           | ---          |
| 162   | Switch stand failure (hand oper.)       | 24              | ---   | ---             | ---          | ---               | ---           | ---          |
| 163   | Switch connecting/oper. rod fail.       | 17              | ---   | ---             | ---          | ---               | ---           | ---          |
| 164   | Stock rail worn/broken/disconnect       | 24              | ---   | ---             | ---          | ---               | ---           | ---          |
| 165   | Switch point worn or broken             | 442             | ---   | ---             | ---          | ---               | ---           | ---          |
| 166   | Switch rod worn/bent/broken/etc.        | 15              | ---   | ---             | ---          | ---               | ---           | ---          |
| 167   | Frog, rigid, worn or broken             | 22              | ---   | ---             | ---          | ---               | ---           | ---          |
| 168   | Frog, spring, worn or broken            | 8               | ---   | ---             | ---          | ---               | ---           | ---          |
| 169   | Frog, self guarded, worn/broken         | 4               | ---   | ---             | ---          | ---               | ---           | ---          |
| 171   | Derail, defective                       | 1               | ---   | ---             | ---          | ---               | ---           | ---          |
| 172   | Expansion joint failure/malfunction     | 1               | ---   | ---             | ---          | ---               | ---           | ---          |
| 173   | Retarder worn/broken/malfunction        | 52              | ---   | ---             | ---          | ---               | ---           | ---          |
| 174   | Spring/power switch mech. malfunction   | 25              | ---   | ---             | ---          | ---               | ---           | ---          |
| 175   | Retarder yard skate defective           | 13              | ---   | ---             | ---          | ---               | ---           | ---          |
| 176   | Switch out of adjust. (insuf rail anch) | 13              | ---   | ---             | ---          | ---               | ---           | ---          |
| 179   | Other frog/switches/track appl. causes  | 91              | 1   | ---             | ---          | ---               | ---           | 1            |
|   | <b>SUBTOTAL.....</b>                    | <b>961</b>      | <b>1</b>                                    | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>1</b>     |
| <b>OTHER WAY AND STRUCTURE</b>              |   |                 |   |                 |              |                   |               |              |
| 180   | Bridge misalignment or failure          | 6               | ---   | ---             | ---          | ---               | ---           | ---          |
| 181   | Flangeway clogged                       | 6               | ---   | ---             | ---          | ---               | ---           | ---          |
| 189   | Other way and structure causes          | 13              | ---   | ---             | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>25</b>       | <b>---</b>                                  | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>SIGNAL AND COMMUNICATION FAILURES</b>    |   |                 |   |                 |              |                   |               |              |
| 200   | Fix sig. improperly displayed (defect)  | 4               | ---   | ---             | ---          | ---               | ---           | ---          |
| 201   | Radio communication equipment failure   | 9               | ---   | ---             | ---          | ---               | ---           | ---          |
| 209   | Signal & communication failure B.O.C.   | 4               | ---   | ---             | ---          | ---               | ---           | ---          |
|   | <b>SUBTOTAL.....</b>                    | <b>17</b>       | <b>---</b>                                  | <b>---</b>      | <b>---</b>   | <b>---</b>        | <b>---</b>    | <b>---</b>   |
| <b>GRAND TOTAL.....</b>                     |   | <b>4797</b>     | <b>3</b>                                    | <b>---</b>      | <b>3</b>     | <b>---</b>        | <b>---</b>    | <b>3</b>     |

TABLE S33. NONFATAL CASUALTIES IN TRAIN ACCIDENTS RESULTING FROM TRACK, ROADBED AND STRUCTURES BY SPECIFIC CAUSE, AND TYPE OF PERSON, 1978

| Cause No.                            | Causes                                 | Total Accidents | Employees on duty Trainmen | Other | Emp not on duty Total | Passengers | Non trespassers | Trespassers | Total Injured |
|--------------------------------------|--|-----------------|----------------------------|-------|-----------------------|------------|-----------------|-------------|---------------|
| ROADBED DEFECTS                      |  |                 |                            |       |                       |            |                 |             |               |
| 101                                  | Roadbed settled or soft                | 151             | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 102                                  | Washout/rain/slide/ice,etc. dmg to trk | 53              | 15                         | ---   | 15                    | ---        | ---             | ---         | 15            |
| 109                                  | Other roadbed defects                  | 36              | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
|                                      | SUBTOTAL.....                          | 240             | 18                         | ---   | 16                    | ---        | ---             | ---         | 18            |
| TRACK GEOMETRY DEFECTS               |  |                 |                            |       |                       |            |                 |             |               |
| 110                                  | Wide gage (defect/missing crossties)   | 821             | 4                          | 3     | 7                     | ---        | ---             | ---         | 7             |
| 111                                  | Wide gage (def/missing rail fasteners) | 100             | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 112                                  | Wide gage (involving gage rods)        | 10              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 113                                  | Wide gage due to worn rail             | 60              | ---                        | 1     | 1                     | ---        | 2               | ---         | 3             |
| 114                                  | Track alignment irregular              | 89              | 5                          | ---   | 5                     | ---        | ---             | ---         | 5             |
| 115                                  | Track alignment irregular (buckled)    | 158             | 10                         | ---   | 10                    | ---        | ---             | ---         | 10            |
| 116                                  | Track profile improper                 | 10              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 117                                  | Superelevation incorrect               | 58              | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 118                                  | Superelevation runoff improper         | 3               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 119                                  | Cross level irregular at joints        | 596             | 24                         | 2     | 26                    | ---        | ---             | ---         | 26            |
| 120                                  | Cross level irregular not at joints    | 240             | 3                          | 2     | 5                     | ---        | 2               | ---         | 7             |
| 129                                  | Other track geometry defects           | 62              | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
|                                      | SUBTOTAL.....                          | 2227            | 51                         | 8     | 59                    | ---        | 2               | 2           | 63            |
| RAIL AND JOINT BAR DEFECTS           |  |                 |                            |       |                       |            |                 |             |               |
| 130                                  | Bolt hole crack or break               | 80              | 3                          | ---   | 3                     | ---        | ---             | ---         | 3             |
| 131                                  | Broken base of rail                    | 275             | 15                         | ---   | 15                    | ---        | ---             | ---         | 15            |
| 132                                  | Broken weld, field                     | 10              | 5                          | ---   | 5                     | ---        | 1               | ---         | 6             |
| 133                                  | Broken weld, plant                     | 1               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 134                                  | Detail fracture fm shelling/head check | 15              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 135                                  | Engine burn fracture                   | 5               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 136                                  | Head/web sep.(outside joint bar limit) | 145             | 4                          | ---   | 4                     | ---        | ---             | ---         | 4             |
| 137                                  | head/web sep.(within joint bar limits) | 63              | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
| 138                                  | Horizontal split head                  | 15              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 139                                  | Piped rail                             | 2               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 140                                  | Rail defect with joint bar repair      | 3               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 141                                  | Transverse/compound fissure            | 161             | 7                          | 1     | 8                     | ---        | ---             | ---         | 8             |
| 142                                  | Vertical split head                    | 194             | 6                          | 2     | 8                     | ---        | 2               | ---         | 10            |
| 143                                  | Worn rail                              | 77              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 144                                  | Mismatched rail-head contour           | 34              | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
| 145                                  | Joint bar broken, compromise           | 15              | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 146                                  | Joint bar broken, insulated            | 13              | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 147                                  | Joint bar broken, noninsulated         | 62              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 148                                  | Joint bolts, broken or missing         | 23              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 149                                  | Other rail and joint bar defects       | 134             | 9                          | ---   | 9                     | ---        | ---             | ---         | 9             |
|                                      | SUBTOTAL.....                          | 1327            | 55                         | 3     | 58                    | ---        | 2               | 1           | 61            |
| FROGS, SWITCHES AND TRACK APPLIANCES |  |                 |                            |       |                       |            |                 |             |               |
| 160                                  | Guard rail loose/broken/etc.           | 24              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 161                                  | Switch damaged/out of adjustment       | 165             | 3                          | ---   | 3                     | ---        | ---             | ---         | 3             |
| 162                                  | Switch stand failure (hand oper.)      | 24              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 163                                  | Switch connecting/oper. rod fail.      | 17              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 164                                  | Stock rail worn/broken/disconnect      | 24              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 165                                  | Switch point worn or broken            | 442             | 4                          | 2     | 6                     | ---        | 1               | ---         | 7             |
| 166                                  | Switch rod worn/bent/broken/etc.       | 15              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 167                                  | Frog, rigid, worn or broken            | 22              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 168                                  | Frog, spring, worn or broken           | 8               | ---                        | ---   | ---                   | ---        | ---             | 2           | 2             |
| 169                                  | Frog, self guarded, worn/broken        | 4               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 171                                  | Derail, defective                      | 1               | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
| 172                                  | Expansion joint failure/malfunction    | 1               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 173                                  | Retarder worn/broken/malfunction       | 52              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 174                                  | Spring/power switch mech. malfunction  | 25              | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
| 175                                  | Retarder yard skate defective          | 13              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 176                                  | Switch out of adjust.(insuf rail anch) | 13              | ---                        | 1     | 1                     | ---        | ---             | ---         | 1             |
| 179                                  | Other frog/switches/track appl. causes | 91              | 6                          | ---   | 6                     | ---        | ---             | ---         | 6             |
|                                      | SUBTOTAL.....                          | 961             | 15                         | 3     | 18                    | ---        | 1               | 2           | 21            |
| OTHER WAY AND STRUCTURE              |  |                 |                            |       |                       |            |                 |             |               |
| 180                                  | Bridge misalignment or failure         | 6               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
| 181                                  | Flangeway clogged                      | 6               | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| 189                                  | Other way and structure causes         | 13              | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
|                                      | SUBTOTAL.....                          | 25              | 2                          | ---   | 2                     | ---        | ---             | ---         | 2             |
| SIGNAL AND COMMUNICATION FAILURES    |  |                 |                            |       |                       |            |                 |             |               |
| 200                                  | Fix sig. improperly displayed (defect) | 4               | 10                         | 1     | 11                    | ---        | 10              | ---         | 21            |
| 201                                  | Radio communication equipment failure  | 9               | 1                          | ---   | 1                     | ---        | ---             | ---         | 1             |
| 209                                  | Signal & communication failure N.O.C.  | 4               | ---                        | ---   | ---                   | ---        | ---             | ---         | ---           |
|                                      | SUBTOTAL.....                          | 17              | 11                         | 1     | 12                    | ---        | 10              | ---         | 22            |
| GRAND TOTAL.....                     |  | 4797            | 152                        | 15    | 167                   | ---        | 15              | 3           | 187           |

TABLE S34. FATALITIES IN TRAIN ACCIDENTS RESULTING FROM MISCELLANEOUS CAUSES BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.        | Causes                                 | Total Accidents | ....Employees on duty....<br>Trainmen | Other | ....<br>Total | Emp not on duty | Passen- gers | Non tres- passers | Tres- passers | Total Killed |
|------------------|--|-----------------|---------------------------------------|-------|---------------|-----------------|--------------|-------------------|---------------|--------------|
| 700              | Collision with hwy user at grade xing  | 282             | 1                                     | ---   | 1             | ---             | ---          | 71                | 4             | 76           |
| 701              | Emergency brk appl to avoid accident   | 11              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 702              | Vandalism                              | 172             | ---                                   | ---   | ---           | ---             | ---          | 8                 | ---           | 8            |
| 703              | Interference with RR oper.-not vandals | 34              | ---                                   | ---   | ---           | ---             | ---          | ---               | 1             | 1            |
| 704              | Load shifted                           | 88              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 705              | Load fell from car                     | 33              | ---                                   | 1     | 1             | ---             | ---          | ---               | ---           | 1            |
| 706              | Overloaded car                         | 13              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 707              | Improperly loaded car                  | 47              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 708              | Oversized load, misrouted              | 9               | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 709              | Object on or fouling track             | 76              | ---                                   | ---   | ---           | ---             | ---          | ---               | 1             | 1            |
| 710              | Equipment on or fouling track          | 34              | 1                                     | 1     | 2             | ---             | ---          | 1                 | 1             | 4            |
| 711              | Trail/contain tiedown eqp-impr applied | 25              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 712              | Overload/improper loaded container etc | 5               | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 713              | Ineraction of lateral/vertical forces  | 147             | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 714              | Failure to control spd with hand brake | 3               | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 715              | Snow, ice, or mud on track             | 83              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 716              | Other acts of God                      | 20              | ---                                   | ---   | ---           | ---             | ---          | ---               | ---           | ---          |
| 799              | Other miscellaneous causes             | 383             | ---                                   | 1     | 1             | ---             | ---          | ---               | ---           | 1            |
| GRAND TOTAL..... |  | 1465            | 2                                     | 3     | 5             | ---             | ---          | 80                | 7             | 92           |

TABLE S35. NONFATAL CASUALTIES IN TRAIN ACCIDENTS RESULTING FROM MISCELLANEOUS CAUSES, BY SPECIFIC CAUSE AND TYPE OF PERSON, 1978

| Cause No.        | Causes                                 | Total Accidents | ....Employees on duty....<br>Trainmen | Other | Emp not<br>Total<br>on duty | Emp not<br>on duty | Passen-<br>gers | Non tres-<br>passers | Tres-<br>passers | Total<br>Injured |
|------------------|--|-----------------|---------------------------------------|-------|-----------------------------|--------------------|-----------------|----------------------|------------------|------------------|
| 700              | Collision with hwy user at grade xing  | 262             | 82                                    | 13    | 95                          | 1                  | 16              | 128                  | 7                | 247              |
| 701              | Emergency brk appl to avoid accident   | 11              | ---                                   | ---   | ---                         | ---                | ---             | ---                  | ---              | ---              |
| 702              | Vandalism                              | 172             | 24                                    | ---   | 24                          | ---                | 1               | 134                  | 2                | 161              |
| 703              | Interference with RR oper.-nct vandals | 34              | 2                                     | ---   | 2                           | ---                | ---             | 1                    | ---              | 3                |
| 704              | Load shifted                           | 88              | 5                                     | ---   | 5                           | ---                | 5               | ---                  | ---              | 10               |
| 705              | Load fell from car                     | 33              | ---                                   | 1     | 1                           | ---                | ---             | ---                  | ---              | 1                |
| 706              | Overloaded car                         | 13              | ---                                   | ---   | ---                         | ---                | ---             | ---                  | ---              | ---              |
| 707              | Improperly loaded car                  | 47              | ---                                   | ---   | ---                         | ---                | ---             | ---                  | ---              | ---              |
| 708              | Oversized load, misrouted              | 9               | ---                                   | ---   | ---                         | ---                | ---             | ---                  | ---              | ---              |
| 709              | Object on or fouling track             | 76              | 5                                     | 1     | 6                           | ---                | 1               | 1                    | ---              | 8                |
| 710              | Equipment on or fouling track          | 34              | 12                                    | 1     | 13                          | ---                | ---             | 2                    | ---              | 15               |
| 711              | Trail/contain tiedown egp-impr applied | 25              | 4                                     | ---   | 4                           | ---                | ---             | ---                  | ---              | 4                |
| 712              | Overload/improper loaded container etc | 5               | 5                                     | ---   | 5                           | ---                | ---             | ---                  | ---              | 5                |
| 713              | Ineraction of lateral/vertical forces  | 147             | 4                                     | ---   | 4                           | ---                | ---             | ---                  | ---              | 4                |
| 714              | Failure to control spd with hand brake | 3               | ---                                   | ---   | ---                         | ---                | ---             | ---                  | ---              | ---              |
| 715              | Snow, ice, or mud on track             | 83              | 3                                     | ---   | 3                           | ---                | ---             | ---                  | ---              | 3                |
| 716              | Other acts of God                      | 20              | 2                                     | ---   | 2                           | ---                | ---             | ---                  | ---              | 2                |
| 799              | Other miscellaneous causes             | 383             | 29                                    | 13    | 42                          | ---                | 603             | 3                    | ---              | 648              |
| GRAND TOTAL..... |  | 1465            | 177                                   | 29    | 206                         | 1                  | 626             | 269                  | 9                | 1111             |

TABLE S36. FATALITIES IN TRAIN INCIDENTS BY SPECIFIC OCCURRENCE AND TYPE OF PERSON, 1978

| Occurrence No.   | Occurrences   | Employees on Duty |     |     |     |         |     |     |     |     |           |     |     |     |     |     | Other Persons         |     |         |     |     | Total Killed All Classes |     |     |     |     |
|--|---|-------------------|-----|-----|-----|---------|-----|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-----------------------|-----|---------|-----|-----|--------------------------|-----|-----|-----|-----|
|  |   | Yard Service      |     |     |     | Freight |     |     |     |     | Passenger |     |     |     |     |     | Employees not on duty |     |         |     |     |                          |     |     |     |     |
|  |   | Eng               | Fmn | Cnd | Brk | Eng     | Fmn | Cnd | Brk | Eng | Fmn       | Cnd | Brk | Eng | Fmn | Cnd | Brk                   | Hos | All Oth | Tot | Trn | Oth                      | Pas | Non | Trs |     |
| COUPLING AND UNCOUPLING LOCOMOTIVES OR CARS                          |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 001T   | Adjusting coupler, equipment moving unexpectedly                      |                   |     |     | 1   |         |     |     |     |     |           |     |     |     |     |     | 1                     |     |         | 2   |     |                          |     |     |     | 2   |
| 002T   | Adjusting coupler - equipment moving                                  |                   |     |     | 1   |         |     |     |     |     |           |     |     |     |     |     | 1                     |     |         | 1   |     |                          |     |     |     | 1   |
| 009T   | Other acc/inc while coupling/uncoupling cars or locos - equip moving  |                   |     |     | 1   |         |     |     |     |     |           |     |     |     |     |     |                       |     | 1       |     |     |                          |     |     |     | 1   |
|  | SUBTOTAL  |                   |     |     | 3   |         |     |     |     |     |           |     |     |     |     |     | 1                     |     |         | 4   |     |                          |     |     |     | 4   |
| COUPLING/UNCOUPLING AIR OR STEAM HOSE, SAFETY CHAINS ETC.            |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 059T   | Oth A/I while coupl/uncoupl air/steam hose or turn angl cock-egp mov  |                   |     |     |     |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 1   |
|  | SUBTOTAL  |                   |     |     |     |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 1   |
| OPERATING LOCOMOTIVES  |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 119T   | Other accidents/incidents while operating locomotives - eqp moving    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 7   |
|  | SUBTOTAL  |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 7   |
| OPERATING RAIL MOTORCARS   |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 159T   | Other accidents/incidents while operating rail motorcars - eqp mov    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     | 1       | 1   |     |                          |     |     |     | 1   |
|  | SUBTOTAL  |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     | 1       | 1   |     |                          |     |     |     | 1   |
| OPERATING HAND BRAKES  |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 207T   | Losing hold, slipping, or falling - equipment moving                  |                   |     |     | 1   |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 2   |     |                          |     |     |     | 2   |
|  | SUBTOTAL  |                   |     |     | 1   |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 2   |     |                          |     |     |     | 2   |
| CONTACTING FIXED OBJECTS WHILE ON LOCOMOTIVES OR CARS                |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 401T   | Persons on top locos/cars contacting fixed objects - equipment mov    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     | 2   | 2   |
| 402T   | Persons on side/end of locos/cars contacting fixed objects - eqp mov  |                   |     |     |     |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 1   |
|  | SUBTOTAL  |                   |     |     |     |         |     | 1   |     |     |           |     |     |     |     |     |                       |     |         | 1   |     |                          |     |     | 2   | 3   |
| GETTING ON OR OFF CARS OR LOCOMOTIVES                                |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 501T   | Slip/fell due to lost/misssed hold of grabiron,handhold,etc.-egp mov  |                   |     |     |     |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 1   |
| 502T   | Slip/fell due to losing/missing footing on step,stirrup,etc.-egp mov  |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 1   |
| 503T   | Stepping or tripping on parts of track in place - equipment moving    |                   |     |     | 1   |         |     |     |     |     |           |     |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 1   |
| 507T   | Falling, slipping, tripping, not elsewhere classified - eqp moving    |                   |     |     |     |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 1   |     |                          |     |     |     | 3   |
| 508T   | Slipping/falling while boarding/alighting fm passenger eqp (moving)   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 4   |
| 512T   | Striking or being struck by bridges or trestles - equipment moving    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          | 1   |     |     | 1   |
| 513T   | Jumping from equipment - equipment moving                             |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          | 3   |     |     | 2   |
| 519T   | Other acc/inc while getting on or off cars or locos - equipment mov   |                   |     |     |     |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 1   |     |                          |     | 1   |     | 5   |
|  | SUBTOTAL  |                   |     |     | 1   |         |     | 1   |     |     | 2         |     |     |     |     |     |                       |     |         | 4   |     |                          | 6   |     |     | 12  |
| COLLISIONS, DERAILMENTS, PUBLIC RAIL-HWY CROSSING, ETC. (<= \$2,300) |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 601T   | Casualty resulting fm a collision which did not satisfy \$ threshold  |                   |     |     | 1   |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 2   |     |                          |     | 2   | 2   | 6   |
| 602T   | Casualty resulting fm a derailment which did not satisfy \$ threshold |                   |     |     |     |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 1   |     |                          |     | 2   |     | 3   |
| 603T   | Casualty resulting fm oth than Rail Equip A/I (not at rail-hwy X-ing) |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     | 1   | 3   | 4   |
| 609T   | Casualty at public rail-hwy X-ing (not rptd on form 6180-54)-egp mov  |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     | 1       | 1   | 1   | 1                        |     |     | 640 | 81  |
|  | SUBTOTAL  |                   |     |     | 1   |         |     |     |     |     | 2         |     |     |     |     |     |                       |     | 1       | 4   | 1   | 1                        |     |     | 845 | 86  |
| STRUCK BY OR RAN INTO LOCOMOTIVES OR CARS. (NOT AT PUBLIC X-INGS)    |   |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     |     |
| 701T   | Standing, walking or running on or along track - equipment moving     |                   |     | 2   | 1   |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 3   | 8   |                          |     |     |     | 113 |
| 702T   | Crossing track at private rail-highway crossing - equipment moving    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         | 1   | 1   | 1                        |     |     |     | 42  |
| 703T   | Crossing track not at a crossing - equipment moving                   |                   |     |     |     |         |     |     |     |     |           | 1   |     |     |     |     |                       |     |         | 1   | 2   |                          |     |     |     | 1   |
| 704T   | While on public thoroughfare - equipment moving                       |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     | 2   | 1   | 3   |
| 705T   | On bridges or trestles - equipment moving                             |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 15  |
| 706T   | Sitting or lying on track or near track, not in clear - eqp moving    |                   |     |     |     |         |     |     |     |     |           |     |     |     |     |     |                       |     |         |     |     |                          |     |     |     | 134 |

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TABLE S36. (CONT.)

| Occurrence No.   | Occurrences   | Employees on Duty..... |           |           |           |           |              |     |           |           |           |                   |           |     |     |     | All Oth | Tot | Employees not on duty |     | Other Persons..... |     |     | Total Killed All Classes |     |     |     |
|--|---|------------------------|-----------|-----------|-----------|-----------|--------------|-----|-----------|-----------|-----------|-------------------|-----------|-----|-----|-----|---------|-----|-----------------------|-----|--------------------|-----|-----|--------------------------|-----|-----|-----|
|  |   | Yard Service.....      |           |           |           |           | Freight..... |     |           |           |           | Road Service..... |           |     |     |     |         |     | Trn                   | Oth | Pas                | Non | Trs |                          |     |     |     |
|  |   | Eng + Mtr              | Pan + Hlp | Cnd + For | Brk + Hip | Eng + Mtr | Pan + Hlp    | Cnd | Brk + Flg | Eng + Mtr | Pan + Hlp | Cnd               | Brk + Flg | Hos | Trn | Oth |         |     |                       |     |                    |     |     |                          | Pas | Non | Trs |
| STRUCK BY OR RAN INTO LOCOMOTIVES OR CARS (NOT AT PUBLIC X-INGS) (CONT.) |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 707T   | While working on or along track - equipment moving.....                   |                        |           |           | 2         |           |              | 1   | 1         | 1         |           |                   |           |     |     | 4   | 9       |     |                       |     |                    |     |     |                          | 2   | 11  |     |
| 708T   | Passing over, through, or under cars - equipment moving.....              |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         | 1   |                       |     |                    |     |     |                          | 13  | 14  |     |
| 709T   | Struck by or ran into locos/cars (not at public X-ing), misc-egp mov..... |                        |           |           |           |           |              |     |           |           |           | 1                 |           |     |     |     | 1       |     |                       |     |                    |     |     |                          | 36  | 37  |     |
|  | SUBTOTAL.....   |                        |           | 2         | 3         |           |              | 2   | 3         | 1         | 1         |                   |           |     |     | 9   | 21      | 2   |                       |     |                    |     |     | 45                       | 351 | 419 |     |
| SERVICING OR MAINTENANCE OF EQUIPMENT                                    |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 603T   | Striking or being struck by eqp, structures, or material-egp mov.....     |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     | 1   | 1       |     |                       |     |                    |     |     |                          |     | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     | 1   | 1       |     |                       |     |                    |     |     |                          |     | 1   |     |
| MAINTENANCE OF WAY AND STRUCTURES  |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 653T   | Striking or being struck by eqp, structures, or material-egp mov.....     |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     | 3   | 3       |     |                       |     |                    |     |     |                          |     | 3   |     |
| 874T   | Stumbling, slipping, falling, caught, N.O.C. - equipment moving.....      |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     | 1   | 1       |     |                       |     |                    |     |     |                          |     | 1   |     |
| 889T   | Other acc/inc while maintaining way and structures-egp moving.....        |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     | 1                        |     | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     | 4   | 4       |     |                       |     |                    |     |     | 1                        |     | 5   |     |
| FREIGHT, BAGGAGE, EXPRESS OR MAIL  |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 901T   | Handling freight, baggage, express or mail-egp moving.....                |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     | 1   | 1   |
| PASSENGER CAR DOORS  |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 922T   | Dragged by train while caught in side doors, entering coach.....          |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
| STUMBLING, SLIPPING, FALLING, CAUGHT, NOT ELSEWHERE CLASSIFIED           |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 930T   | Stumbling/slipping, etc. on snow or ice - equipment moving.....           |                        |           |           | 1         |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     | 1   |     |
| 934T   | Slip/fall, etc. between loco/car and other cars and struct-egp mov.....   |                        |           |           | 1         |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 2   |     |
| 935T   | From bridges of trestles-equipment moving.....                            |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
| 938T   | While on locomotive or car-equipment moving.....                          |                        |           |           |           |           |              |     |           |           | 1         |                   |           |     |     |     |         |     |                       |     |                    |     |     | 2                        |     | 3   |     |
| 939T   | Other, stumbling, slipping, falling, caught, etc. - equipment moving..... |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     | 1       | 2   |                       |     |                    |     |     |                          |     | 7   |     |
|  | SUBTOTAL.....   |                        |           |           | 2         |           |              |     |           |           | 1         |                   |           |     |     |     | 1       | 4   |                       |     |                    |     |     | 2                        | 1   | 5   | 12  |
| OPERATION OF ON-TRACK WORK EQUIPMENT                                     |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 950T   | Collision with train or car.....  |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     | 1       | 1   |                       |     |                    |     |     |                          |     | 1   |     |
| 959T   | Other A/I involving on-track work equipment - equipment moving.....       |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     | 1       | 1   |                       |     |                    |     |     |                          | 1   | 2   |     |
| ASSAULT  |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 964T   | Other assaults to persons on trains-equipment moving.....                 |                        |           |           |           |           |              |     |           |           | 1         |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     | 1   |     |
|  | SUBTOTAL.....   |                        |           |           |           |           |              |     |           |           | 1         |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     | 1   |     |
| OTHER OCCURRENCES  |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
| 975T   | Slack action, other.....  |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     | 1       |     |                       |     |                    |     |     |                          |     | 1   |     |
| 977T   | Emergency or severe application of air brakes not due to def eqp....      |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 1   | 1   |     |
| 989T   | Other accidents/incidents-equipment moving.....                           |                        |           |           | 1         |           |              |     |           |           | 1         |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 4   | 6   |     |
|  | SUBTOTAL.....   |                        |           |           | 1         |           |              |     |           |           | 1         |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          | 5   | 8   |     |
| GRAND TOTAL.....   |   |                        |           |           |           |           |              |     |           |           |           |                   |           |     |     |     |         |     |                       |     |                    |     |     |                          |     |     |     |
|  |   |                        |           | 2         | 13        |           |              | 7   | 9         | 1         | 1         |                   |           |     | 1   |     | 18      | 52  | 3                     | 1   | 9                  | 893 | 469 | 1427                     |     |     |     |

TABLE S37. INJURIES IN TRAIN INCIDENTS BY SPECIFIC OCCURRENCE AND TYPE OF PERSON, 1978

| Occurrence No.  | Occurrences   | Employees on Duty |     |     |     |         |     |     |     |              |     |     |     |     | Employees not on duty |     |     |     | Total Injured + Classes |         |     |     |     |     |     |     |
|---|---|-------------------|-----|-----|-----|---------|-----|-----|-----|--------------|-----|-----|-----|-----|-----------------------|-----|-----|-----|-------------------------|---------|-----|-----|-----|-----|-----|-----|
|   |   | Yard Service      |     |     |     | Freight |     |     |     | Road Service |     |     |     |     | Passenger             |     |     |     |                         |         |     |     |     |     |     |     |
|   |   | Eng               | Flg | Cnd | Brk | Eng     | Flg | Cnd | Brk | Eng          | Flg | Cnd | Brk | Eng | Flg                   | Cnd | Brk | Hos |                         | All Oth | Tot | Trn | Oth | Pas | Non | Trs |
|   |   | Mtr               | Hlp | For | Hlp | Mtr     | Hlp | For | Hlp | Mtr          | Hlp | Flg | Mtr | Hlp | Cnd                   | Bag | Flg | Hos |                         |         |     |     |     |     |     |     |
| COUPLING AND UNCOUPLING LOCOMOTIVES OR CARS               |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 004T  | Adjusting coupler, equipment moving unexpectedly                        |                   |     | 4   | 23  |         |     |     |     |              |     | 2   |     |     |                       |     |     |     |                         |         |     |     |     |     |     | 29  |
| 002T  | Adjusting coupler - equipment moving                                    |                   |     | 3   | 27  |         |     |     |     | 1            | 10  |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     | 41  |
| 004T  | Adjusting coupler, part of coupler fell striking person - eqp moving    |                   |     |     | 5   |         |     |     |     |              | 4   |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     | 9   |
| 005T  | Use of uncoupling lever - equipment moving                              |                   |     | 21  | 103 |         |     |     |     | 2            | 8   |     |     |     |                       | 1   | 1   | 4   | 140                     |         |     |     |     |     |     | 140 |
| 006T  | Use of uncoupling lever - equipment moving unexpectedly                 |                   |     | 4   | 7   |         |     |     |     |              | 2   |     |     |     |                       |     |     |     | 13                      |         |     |     |     |     |     | 13  |
| 007T  | Striking parts of body against equipment - equipment moving             | 2                 |     | 11  | 62  | 1       | 1   | 4   | 19  |              |     |     |     |     |                       | 1   | 2   | 2   | 105                     |         |     |     |     |     |     | 105 |
| 008T  | Stumbled, slipped, fell, etc. on foreign obj/irreg surface - eqp moving |                   | 1   | 23  | 82  |         |     |     | 4   | 15           |     |     |     |     |                       |     |     | 2   | 127                     |         |     |     |     |     |     | 127 |
| 009T  | Other acc/inc while coupling/uncoupling cars or locos - equip moving    | 2                 | 1   | 11  | 64  | 1       |     | 7   | 15  |              |     |     |     |     |                       |     |     | 1   | 5                       | 127     |     |     |     | 1   | 2   | 130 |
|   | SUBTOTAL  | 4                 | 2   | 77  | 353 | 2       | 1   | 18  | 75  |              |     |     |     |     |                       | 2   | 4   | 13  | 591                     |         |     |     |     | 1   | 2   | 594 |
| COUPLING/UNCOUPLING AIR OR STEAM HOSE, SAFETY CHAINS ETC. |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 052T  | Uncoupl air hose, struck by hose due to sudden release of air - eqp mov |                   |     | 2   | 10  |         |     |     | 8   |              |     |     |     |     |                       |     |     | 2   | 22                      |         |     |     |     |     |     | 22  |
| 053T  | Coupling air hose, stk by hose due to sudden release of air - eqp mov   |                   |     | 1   | 4   |         |     |     | 1   |              |     |     |     |     |                       |     |     |     | 6                       |         |     |     |     |     |     | 6   |
| 054T  | Stumbled, slipped, fell, or stepped on foreign obj, etc., eqp moving    |                   |     | 4   | 7   | 1       |     |     | 3   |              |     |     |     |     |                       |     |     | 3   | 18                      |         |     |     |     |     |     | 18  |
| 055T  | Defective equipment - equipment moving                                  |                   |     |     | 2   |         |     |     | 1   |              |     |     |     |     |                       |     |     |     | 3                       |         |     |     |     |     |     | 3   |
| 057T  | Opening or closing angle cocks - equipment moving                       |                   |     |     | 10  | 1       |     | 2   | 7   |              |     |     |     |     |                       |     |     | 2   | 24                      |         |     |     |     |     |     | 24  |
| 059T  | Oth A/I while coupl/uncoupl air/steam hose or turn angl cock - eqp mov  | 1                 |     | 5   | 21  |         |     | 3   | 13  |              |     |     |     |     |                       |     |     | 3   | 46                      |         |     |     |     |     |     | 46  |
|   | SUBTOTAL  | 1                 |     | 12  | 54  | 2       |     | 5   | 33  |              |     |     |     |     |                       |     | 2   | 10  | 119                     |         |     |     |     |     |     | 119 |
| OPERATING LOCOMOTIVES                                     |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 101T  | Burn or electrical shock - equipment moving                             |                   |     |     |     | 1       | 1   |     |     |              |     |     |     |     |                       |     |     |     | 2                       |         |     |     |     |     |     | 2   |
| 102T  | Striking parts of body against equipment, moving about loco - eqp mov   | 8                 | 2   | 1   | 1   | 13      | 3   |     | 4   | 1            | 3   |     |     |     |                       |     | 1   | 3   | 40                      |         |     |     | 1   |     |     | 41  |
| 103T  | Struck by tools or other objects falling - equipment moving             | 4                 |     |     |     | 5       | 2   |     |     | 2            |     |     |     |     |                       |     |     | 1   | 14                      |         |     |     |     |     |     | 14  |
| 104T  | Stumbled, slipped, fell, stepped on foreign obj, etc., - eqp moving     | 1                 |     | 2   | 7   | 5       | 2   |     | 7   |              |     |     |     |     |                       |     |     | 2   | 26                      |         |     |     |     |     |     | 26  |
| 105T  | Checking, oiling, servicing locomotive, etc. - equipment moving         |                   | 1   |     | 1   | 6       | 1   |     | 1   |              |     |     |     |     |                       |     |     | 1   | 11                      |         |     |     |     |     |     | 11  |
| 106T  | Unexpected movement of locomotive, other than slack action              | 40                | 4   | 2   | 6   | 36      | 4   | 2   | 6   | 1            |     |     |     |     |                       |     |     | 1   | 103                     |         |     |     |     |     |     | 103 |
| 107T  | Slack action in locomotive  | 19                | 1   | 1   |     | 15      | 1   | 2   | 2   |              |     |     |     |     |                       |     |     |     | 41                      |         |     | 1   |     |     |     | 42  |
| 108T  | Striking parts of body against equipment due to sudden stop of loco     | 26                | 2   |     | 11  | 22      |     | 5   | 5   |              |     |     |     |     |                       |     |     | 1   | 72                      |         |     |     |     |     |     | 72  |
| 109T  | Inhalation of or contact with fumes or gases - equipment moving         | 3                 |     |     |     | 2       |     |     | 1   |              |     |     |     |     |                       |     |     |     | 6                       |         |     |     |     |     |     | 6   |
| 110T  | Defective locomotive seat - equipment moving                            | 5                 |     |     | 1   | 2       |     | 1   |     | 1            |     |     |     |     |                       |     |     |     | 10                      |         |     |     |     |     |     | 10  |
| 111T  | Adjusting locomotive seat - equipment moving                            | 4                 | 2   |     | 1   | 5       |     |     | 3   |              |     |     |     |     |                       |     |     |     | 15                      |         |     |     |     |     |     | 15  |
| 112T  | Foreign object in eye - equipment moving                                | 92                | 6   | 5   | 28  | 142     | 13  | 5   | 19  | 7            | 2   | 1   |     |     |                       |     | 3   | 328 |                         |         |     |     |     | 1   | 329 |     |
| 119T  | Other accidents/incidents while operating locomotives - eqp moving      | 36                | 7   |     | 4   | 33      | 5   | 3   | 3   | 3            | 3   |     |     |     |                       |     | 4   | 5   | 106                     |         |     |     |     | 2   | 108 |     |
|   | SUBTOTAL  | 238               | 25  | 11  | 60  | 267     | 32  | 18  | 51  | 15           | 8   | 1   |     |     |                       | 10  | 18  | 774 |                         |         | 1   |     | 1   | 3   | 779 |     |
| OPERATING RAIL MOTORCARS                                  |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 151T  | Striking parts of body against equipment - equipment moving             |                   |     |     | 2   |         |     | 1   |     |              |     |     |     |     |                       |     |     | 6   | 9                       |         |     |     |     |     |     | 9   |
| 152T  | Struck by tools or other objects falling - equipment moving             |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     | 10  | 10                      |         |     |     |     |     |     | 10  |
| 153T  | Stumbled, slipped, fell or stepped on foreign obj, etc., - eqp mov      |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     | 6   | 6                       |         |     |     |     |     |     | 6   |
| 154T  | Unexpected movement of rail motorcar                                    |                   |     |     | 1   |         |     |     |     |              |     |     |     |     |                       |     |     | 8   | 9                       |         |     |     |     |     |     | 9   |
| 159T  | Other accidents/incidents while operating rail motorcars - eqp mov      |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     | 26  | 26                      |         |     |     |     |     |     | 26  |
|   | SUBTOTAL  |                   |     |     | 3   |         |     | 1   |     |              |     |     |     |     |                       |     |     | 56  | 60                      |         |     |     |     |     |     | 60  |
| OPERATING HAND BRAKES                                     |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 201T  | Defective equipment - equipment moving                                  |                   |     | 2   | 20  | 2       |     | 3   | 7   |              |     |     |     |     |                       |     |     | 1   | 1                       | 36      |     |     |     |     |     | 36  |
| 202T  | Pawl slipping or accidentally knocked out of ratchet - eqp moving       |                   |     |     |     |         |     |     | 1   |              |     |     |     |     |                       |     |     |     | 1                       |         |     |     |     |     |     | 1   |
| 203T  | Striking body due to movement of equipment                              |                   |     | 10  | 46  |         |     | 4   | 16  |              |     |     |     |     |                       |     |     | 1   | 77                      |         |     |     |     |     |     | 77  |
| 205T  | Caught between parts of equipment or lading - equipment moving          |                   |     | 5   | 6   |         |     | 1   | 4   |              |     |     |     |     |                       |     |     | 1   | 17                      |         |     |     |     |     |     | 17  |
| 206T  | Brake chains or bolts, breaking or giving way - equipment moving        |                   |     | 2   | 11  |         |     |     | 2   |              |     |     |     |     |                       |     |     |     | 15                      |         |     |     |     |     |     | 15  |
| 207T  | Losing hold, slipping, or falling - equipment moving                    |                   |     | 7   | 36  |         |     | 2   | 26  |              |     |     |     |     |                       |     |     |     | 71                      |         |     |     |     |     |     | 71  |
| 208T  | Caught hand or fingers in spinning brake wheel - equipment moving       |                   |     |     | 2   |         |     | 1   | 2   |              |     |     |     |     |                       |     |     |     | 5                       |         |     |     |     |     |     | 5   |
| 209T  | Other accidents/incidents while operating hand brakes - eqp moving      |                   |     | 19  | 80  | 1       |     | 8   | 29  |              |     |     |     |     |                       | 1   |     | 4   | 142                     |         |     |     |     |     |     | 142 |
|   | SUBTOTAL  |                   |     | 45  | 201 | 3       |     | 19  | 67  |              |     |     |     |     |                       | 1   |     | 7   | 364                     |         |     |     |     |     |     | 364 |
| OPERATING SWITCHES  |   |                   |     |     |     |         |     |     |     |              |     |     |     |     |                       |     |     |     |                         |         |     |     |     |     |     |     |
| 304T  | Struck by moving on-track equipment                                     |                   |     | 3   | 15  |         |     |     | 4   |              |     |     |     |     |                       |     |     | 1   | 1                       | 24      |     |     |     |     |     | 24  |
| 306T  | Lining switches, no defects, eqp moving                                 |                   |     | 1   | 3   |         |     |     | 2   |              |     |     |     |     |                       |     |     |     | 6                       |         |     |     |     | 1   |     | 7   |
| 309T  | Other accidents/incidents while operating switches - equipment mov      | 2                 |     | 9   | 41  |         |     | 2   | 23  | 1            |     |     |     |     |                       |     |     | 2   | 60                      |         |     |     |     |     |     | 60  |
|   | SUBTOTAL  | 2                 |     | 13  | 59  |         |     | 2   | 29  | 1            |     |     |     |     |                       |     |     | 1   | 3                       | 110     |     |     |     |     | 1   | 111 |

TABLE S37.

| Occurrence No.   | Occurrences   | Yard Service |           |           |           |           |
|--|---|--------------|-----------|-----------|-----------|-----------|
|  |   | Eng + Mtr    | Pan + Hlp | Cnd + For | Brk + Hlp | Eng + Mtr |
| CONTACTING FIXED OBJECTS WHILE ON LOCOMOTIVES OR CARS                |   |              |           |           |           |           |
| 401T   | Persons on top locos/cars contacting fixed objects - equipment mov.   | ---          | ---       | 1         | 4         | ---       |
| 402T   | Persons on side/end of locos/cars contacting fixed objects - eqp mov  | ---          | ---       | 26        | 92        | 1         |
| 409T   | Persons on loco/car coming in contact with fixed obj(other)-eqp mov   | ---          | ---       | 9         | 29        | 5         |
| SUBTOTAL   |   | ---          | ---       | 36        | 125       | 6         |
| GETTING ON OR OFF CARS OR LOCOMOTIVES                                |   |              |           |           |           |           |
| 501T   | Slip/fell due to lost/missed hold of grabiron,handhold,etc.-eqp mov   | ---          | ---       | 13        | 44        | 2         |
| 502T   | Slip/fell due to losing/missing footing on step,stirrup,etc.-eqp mov  | 1            | ---       | 27        | 161       | 4         |
| 503T   | Stepping or tripping on parts of track in place - equipment moving.   | ---          | ---       | 4         | 54        | 1         |
| 504T   | Stepping or tripping on foreign material or irrecg surface - eqp mov  | 4            | ---       | 75        | 325       | 6         |
| 505T   | Slipping on ice or snow on ground - equipment moving                  | ---          | ---       | 16        | 59        | ---       |
| 506T   | Slipping on ice/snow on cars or locomotives - equipment moving        | ---          | ---       | 4         | 9         | 1         |
| 507T   | Falling, slipping, tripping, not elsewhere classified - eqp moving    | ---          | 1         | 13        | 69        | 2         |
| 508T   | Slipping/falling while boarding/alighting fm passenger eqp (moving)   | 1            | ---       | 1         | 2         | ---       |
| 510T   | Striking body or falling due to sudden movement of equipment          | 1            | ---       | 7         | 26        | 3         |
| 511T   | Strike/struck by eqp/structures (not bridge/trestle), or rat -eqp mov | ---          | ---       | 16        | 56        | 3         |
| 512T   | Striking or being struck by bridges or trestles - equipment moving    | ---          | ---       | ---       | 1         | ---       |
| 513T   | Jumping from equipment - equipment moving                             | 1            | ---       | 15        | 50        | 10        |
| 514T   | Defective equipment - equipment moving                                | ---          | ---       | 7         | 27        | ---       |
| 519T   | Other acc/inc while getting on or off cars or locos - equipment mov   | ---          | ---       | 27        | 166       | 3         |
| SUBTOTAL   |   | 6            | 1         | 225       | 1051      | 35        |
| COLLISIONS, DERAILMENTS, PUBLIC RAIL-HWY CROSSING, ETC. (<= \$2,300) |   |              |           |           |           |           |
| 601T   | Casualty resulting fm a collision which did not satisfy \$ threshold  | 35           | ---       | 9         | 37        | 16        |
| 602T   | Casualty resulting fm a derailment which did not satisfy \$ threshold | 5            | ---       | 10        | 28        | 1         |
| 603T   | Casualty resulting fm oth than Rail Equip A/I (not at rail-hwy X-ing) | 1            | ---       | 2         | 1         | 1         |
| 609T   | Casualty at public rail-hwy X-ing (not rptd on form 6180-54)-eqp mov  | 3            | ---       | 3         | 8         | 12        |
| SUBTOTAL   |   | 44           | ---       | 24        | 74        | 30        |
| STRUCK BY OR RAN INTO LOCOMOTIVES OR CARS (NOT AT PUBLIC X-INGS)     |   |              |           |           |           |           |
| 701T   | Standing, walking or running on or along track - equipment moving     | ---          | ---       | 8         | 19        | 1         |
| 702T   | Crossing track at private rail-highway crossing - equipment moving    | ---          | ---       | ---       | 1         | ---       |
| 703T   | Crossing track not at a crossing - equipment moving                   | 2            | ---       | ---       | ---       | ---       |
| 704T   | While on public thoroughfare - equipment moving                       | ---          | ---       | ---       | ---       | ---       |
| 705T   | On bridges or trestles - equipment moving                             | ---          | ---       | ---       | ---       | ---       |
| 706T   | Sitting or lying on track or near track, not in clear - eqp moving    | ---          | ---       | ---       | ---       | ---       |
| 707T   | While working on or along track - equipment moving                    | ---          | ---       | 5         | 16        | ---       |
| 708T   | Passing over, through, or under cars - equipment moving               | ---          | ---       | ---       | ---       | 1         |
| 709T   | Struck by or ran into locos/cars (not at public X-ing),misc-eqp mov   | ---          | ---       | 1         | 2         | ---       |
| SUBTOTAL   |   | 2            | ---       | 14        | 36        | 2         |
| SERVICING OR MAINTENANCE OF EQUIPMENT                                |   |              |           |           |           |           |
| 802T   | Crossing over, under, or between locos or cars - equipment moving     | ---          | ---       | ---       | 1         | 1         |
| 803T   | Striking or being struck by eqp, structures, or material-eqp mov      | 1            | ---       | ---       | 4         | ---       |
| 804T   | Use of hand tools, eqp moving   | ---          | ---       | ---       | ---       | ---       |
| 813T   | Loading and unloading materials - equipment moving                    | ---          | ---       | ---       | ---       | ---       |
| 814T   | Handling material by hand - equipment moving                          | ---          | ---       | ---       | ---       | ---       |
| 815T   | Moving equipment for repairs  | ---          | ---       | ---       | ---       | 1         |
| 817T   | Foreign object in eye, using eye protection, eqp mov                  | ---          | ---       | ---       | ---       | ---       |
| 823T   | Burned or irritated by hot,corrosive, or toxic sub, eqp mov           | ---          | ---       | ---       | ---       | ---       |
| 825T   | Other acc/inc while servicing or maintaining eqp-eqp moving           | ---          | ---       | 1         | ---       | ---       |
| SUBTOTAL   |   | 1            | ---       | ---       | 6         | 2         |
| MAINTENANCE OF WAY AND STRUCTURES                                    |   |              |           |           |           |           |
| 852T   | Crossing over, under, or between locos or cars-eqp moving             | ---          | ---       | ---       | ---       | ---       |
| 853T   | Striking or being struck by eqp, structures, or material-eqp mov      | ---          | ---       | ---       | 2         | ---       |



(CONT.)

| Employees on Duty |     |           |           |           |     |           |     |     |         |     | Employees not on duty |     | Other Persons |      |      | Total Injured All Classes |      |
|-------------------|-----|-----------|-----------|-----------|-----|-----------|-----|-----|---------|-----|-----------------------|-----|---------------|------|------|---------------------------|------|
| Freight           |     | Road      |           | Service   |     | Passenger |     |     | All Oth | Tot | Trn                   | Oth | Pas           | Non  | Trs  |                           |      |
| Fan + Hlp         | Cnd | brk + Flg | Eng + Mtr | Fan + Hlp | Cnd | Bag       | Flg | Hos |         |     |                       |     |               |      |      |                           |      |
| ---               | 3   | 4         | ---       | ---       | --- | ---       | --- | --- | ---     | 12  | ---                   | --- | ---           | ---  | 1    | 13                        |      |
| ---               | 6   | 65        | ---       | ---       | --- | ---       | --- | 2   | 8       | 202 | ---                   | --- | ---           | ---  | 1    | 203                       |      |
| ---               | 6   | 12        | ---       | ---       | 3   | ---       | --- | --- | 3       | 69  | ---                   | --- | ---           | ---  | ---  | 69                        |      |
| ---               | 15  | 81        | ---       | ---       | 3   | ---       | --- | 2   | 11      | 283 | ---                   | --- | ---           | ---  | 2    | 285                       |      |
| ---               | 1   | 16        | 54        | ---       | --- | 1         | --- | 1   | 1       | 135 | ---                   | --- | ---           | 2    | 13   | 150                       |      |
| ---               | 1   | 34        | 96        | ---       | --- | ---       | 4   | 2   | 12      | 342 | 1                     | --- | ---           | ---  | 11   | 354                       |      |
| ---               | 8   | 45        | ---       | ---       | --- | ---       | --- | --- | 2       | 114 | ---                   | --- | ---           | ---  | ---  | 114                       |      |
| ---               | 1   | 42        | 264       | ---       | --- | 1         | --- | 2   | 3       | 17  | 740                   | --- | ---           | ---  | ---  | 740                       |      |
| ---               | 15  | 34        | ---       | ---       | --- | ---       | 1   | --- | 1       | 126 | ---                   | --- | ---           | ---  | ---  | 126                       |      |
| ---               | 3   | 11        | ---       | ---       | --- | ---       | --- | --- | ---     | 28  | ---                   | --- | ---           | ---  | ---  | 28                        |      |
| ---               | 18  | 68        | ---       | ---       | --- | ---       | --- | --- | 12      | 183 | ---                   | 1   | 15            | 1    | 36   | 236                       |      |
| ---               | 2   | 2         | ---       | ---       | --- | ---       | 1   | --- | ---     | 9   | ---                   | --- | 16            | 1    | ---  | 26                        |      |
| ---               | 15  | 35        | ---       | ---       | --- | ---       | 2   | --- | 11      | 100 | 1                     | --- | 2             | ---  | ---  | 103                       |      |
| ---               | 6   | 29        | ---       | ---       | --- | ---       | 1   | --- | 2       | 115 | ---                   | --- | 1             | ---  | 1    | 117                       |      |
| ---               | --- | 1         | ---       | ---       | --- | ---       | --- | --- | ---     | 2   | ---                   | --- | ---           | ---  | ---  | 2                         |      |
| ---               | 3   | 7         | 33        | ---       | --- | ---       | --- | --- | 10      | 129 | ---                   | --- | 10            | 1    | 20   | 160                       |      |
| ---               | 1   | 14        | ---       | ---       | --- | ---       | --- | --- | ---     | 49  | ---                   | --- | ---           | ---  | ---  | 49                        |      |
| ---               | 40  | 127       | ---       | ---       | --- | ---       | --- | 2   | 6       | 371 | ---                   | --- | 2             | 1    | 12   | 386                       |      |
| ---               | 6   | 209       | 813       | ---       | --- | 1         | 1   | 11  | 8       | 74  | 2843                  | 2   | 1             | 46   | 6    | 93                        | 2591 |
| ---               | 15  | 27        | 1         | ---       | 2   | ---       | --- | 4   | 16      | 162 | 1                     | --- | ---           | 3    | ---  | 166                       |      |
| ---               | 1   | 15        | 26        | ---       | --- | ---       | 2   | --- | 8       | 96  | ---                   | --- | 1             | 1    | ---  | 98                        |      |
| ---               | 1   | ---       | ---       | ---       | --- | ---       | 1   | --- | 1       | 8   | ---                   | --- | ---           | 2    | 5    | 15                        |      |
| ---               | 5   | 9         | 26        | ---       | 3   | ---       | --- | --- | 22      | 91  | 1                     | 1   | 2             | 3584 | 201  | 3880                      |      |
| ---               | 6   | 40        | 79        | 1         | --- | 5         | --- | 3   | 4       | 47  | 357                   | 2   | 1             | 3    | 3590 | 206                       | 4159 |
| ---               | 2   | 12        | ---       | ---       | --- | ---       | --- | --- | 7       | 49  | ---                   | --- | 2             | 10   | 118  | 179                       |      |
| ---               | 1   | 1         | ---       | ---       | --- | ---       | --- | --- | 5       | 12  | 2                     | --- | 162           | 1    | 177  | ---                       |      |
| ---               | 1   | ---       | ---       | ---       | --- | ---       | --- | --- | 2       | 5   | ---                   | --- | 6             | 34   | 45   | ---                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | ---     | --- | ---                   | --- | 4             | 1    | 5    | ---                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | ---     | --- | ---                   | --- | ---           | 16   | 16   | ---                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | ---     | --- | ---                   | --- | ---           | 2    | 74   | 76                        |      |
| ---               | 4   | 4         | ---       | 1         | --- | ---       | --- | --- | 16      | 46  | ---                   | --- | 3             | 4    | 53   | ---                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | ---     | 1   | 1                     | --- | 1             | 40   | 43   | ---                       |      |
| ---               | 1   | 2         | ---       | ---       | --- | ---       | --- | --- | 6       | 12  | ---                   | --- | ---           | 13   | 29   | 54                        |      |
| ---               | 9   | 19        | ---       | 1         | --- | ---       | --- | --- | 40      | 125 | 3                     | --- | 2             | 201  | 317  | 648                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 1       | 3   | ---                   | --- | ---           | ---  | ---  | 3                         |      |
| ---               | --- | 1         | ---       | ---       | --- | ---       | --- | --- | 1       | 96  | 103                   | --- | ---           | ---  | ---  | 103                       |      |
| ---               | 1   | ---       | ---       | ---       | --- | ---       | --- | --- | 2       | 2   | ---                   | --- | ---           | ---  | ---  | 2                         |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 1       | 1   | ---                   | --- | ---           | ---  | ---  | 1                         |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 1       | 1   | ---                   | --- | ---           | ---  | ---  | 1                         |      |
| ---               | --- | 1         | ---       | ---       | --- | ---       | --- | --- | 68      | 69  | ---                   | --- | ---           | 1    | ---  | 70                        |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 1       | 2   | ---                   | --- | ---           | ---  | ---  | 2                         |      |
| ---               | --- | 1         | ---       | ---       | --- | ---       | --- | --- | 1       | 1   | ---                   | --- | ---           | ---  | ---  | 1                         |      |
| ---               | --- | 1         | ---       | ---       | --- | ---       | --- | --- | 2       | 46  | 50                    | --- | ---           | 1    | ---  | 51                        |      |
| ---               | 1   | ---       | 3         | ---       | --- | ---       | --- | --- | 4       | 215 | 232                   | --- | ---           | 2    | ---  | 234                       |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 7       | 7   | ---                   | --- | ---           | ---  | 1    | 8                         |      |
| ---               | --- | ---       | ---       | ---       | --- | ---       | --- | --- | 209     | 211 | 1                     | --- | ---           | ---  | ---  | 212                       |      |





TABLE S38. ILLNESSES IN TRAIN INCIDENTS BY SPECIFIC OCCURRENCE AND TYPE OF PERSON, 1978

| Occurrence No.   | Occurrences  | Employees on Duty |     |     |     |     |         |     |     |     |     |              |     |     |     |     | Employees not on duty |     |   | Total Illnesses All Classes |     |     |     |     |     |  |     |
|--|--|-------------------|-----|-----|-----|-----|---------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----------------------|-----|---|-----------------------------|-----|-----|-----|-----|-----|--|-----|
|  |  | Yard Service      |     |     |     |     | Freight |     |     |     |     | Road Service |     |     |     |     | Passenger             |     |   |                             | Trn | Oth | Pas | Non | Trs |  |     |
| Eng  | Fmn  | Cnd               | Brk | Eng | Fmn | Cnd | Brk     | Eng | Fmn | Cnd | Brk | Eng          | Fmn | Cnd | Brk | Hos | All Oth               | Tot |   |                             |     |     |     |     |     |  |     |
| +  | +  | +                 | +   | +   | +   | +   | +       | +   | +   | +   | +   | +            | +   | +   | +   |     |                       |     |   |                             |     |     |     |     |     |  |     |
| Htr  | Hlp  | For               | Hlp | Htr | Hlp | Cnd | Flg     | Htr | Hlp | Cnd | Flg | Htr          | Hlp | Cnd | Flg |     |                       |     |   |                             |     |     |     |     |     |  |     |
| COUPLING AND UNCOUPLING LOCOMOTIVES OR CARS                      |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 009T   | Other acc/inc while coupling/uncoupling cars or locos - equip moving |                   |     | 1   |     |     |         | 3   |     |     |     |              |     |     |     |     |                       | 4   |   |                             |     |     |     |     |     |  | 4   |
|  | SUBTOTAL   |                   |     | 1   |     |     |         | 3   |     |     |     |              |     |     |     |     |                       | 4   |   |                             |     |     |     |     |     |  | 4   |
| OPERATING LOCOMOTIVES  |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 109T   | Inhalation of or contact with fumes or gases - equipment moving      | 13                | 4   |     | 1   | 16  | 3       | 1   | 7   | 3   |     |              |     |     |     |     |                       | 49  |   |                             |     |     |     |     |     |  | 49  |
| 119T   | Other accidents/incidents while operating locomotives - eqp moving   |                   |     |     |     | 3   |         |     |     |     |     |              |     |     |     |     |                       | 3   |   |                             |     |     |     |     |     |  | 3   |
|  | SUBTOTAL   | 13                | 4   |     | 1   | 19  | 3       | 1   | 7   | 3   |     |              |     |     |     |     |                       | 52  |   |                             |     |     |     |     |     |  | 52  |
| GETTING ON OR OFF CARS OR LOCOMOTIVES                            |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 507T   | Falling, slipping, tripping, not elsewhere classified - eqp moving   |                   |     |     |     |     | 1       |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| 513T   | Jumping from equipment - equipment moving                            |                   |     |     | 1   |     |         |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| 519T   | Other acc/inc while getting on or off cars or locos - equipment mov  |                   |     |     |     |     |         | 1   |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
|  | SUBTOTAL   |                   |     |     | 1   |     |         | 1   |     |     |     |              |     |     |     |     |                       | 3   |   |                             |     |     |     |     |     |  | 3   |
| WINDOWS, DOORS, ETC.   |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 909T   | Clo/opn frt/bag car doors, exc plug type car doors, no def-eqp mov.  |                   |     |     |     |     |         |     |     |     |     |              |     | 1   |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
|  | SUBTOTAL   |                   |     |     |     |     |         |     |     |     |     |              |     | 1   |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| STUBBLING, SLIPPING, FALLING, CAUGHT, NOT ELSEWHERE CLASSIFIED   |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 939T   | Other, stumbling, slipping, falling, caught, etc. - equipment moving |                   |     | 1   |     |     |         |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
|  | SUBTOTAL   |                   |     | 1   |     |     |         |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| FLYING OR FALLING OBJECTS, BURNS AND SIMILAR OCCURRENCES, N.O.C. |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 940T   | Foreign object in eye-equipment moving                               |                   |     |     | 1   |     |         |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| 943T   | Fire or explosion of fuses or torpedoes-equipment moving             |                   |     |     |     |     | 1       |     |     |     |     |              |     |     |     |     |                       | 1   | 2 |                             |     |     |     |     |     |  | 2   |
| 944T   | Other fire or explosion-equipment moving                             |                   |     |     |     | 1   |         |     |     |     | 2   |              |     |     |     |     |                       | 1   | 4 |                             |     |     |     |     |     |  | 4   |
| 945T   | Burned by hot or corrosive substances-equipment moving               |                   |     | 1   | 2   |     |         |     |     | 1   |     |              |     |     |     |     |                       | 4   |   |                             |     |     |     |     |     |  | 4   |
| 946T   | Inhalation of or contact with fumes or gases-equipment moving        | 4                 |     | 12  | 7   | 5   | 1       | 17  | 30  | 3   |     |              | 4   |     |     |     | 33                    | 116 |   |                             |     |     |     |     |     |  | 116 |
| 949T   | Other A/I resulting from flying/falling objs, burns, etc. - eqp mov  |                   |     |     | 2   |     |         | 1   | 1   |     |     |              |     |     |     |     |                       | 4   |   |                             |     |     |     |     |     |  | 4   |
|  | SUBTOTAL   | 4                 |     | 13  | 12  | 6   | 2       | 19  | 33  | 3   |     | 4            |     |     |     |     | 35                    | 131 |   |                             |     |     |     |     |     |  | 131 |
| OPERATION OF ON-TRACK WORK EQUIPMENT                             |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 959T   | Other A/I involving on-track work equipment - equipment moving       |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       | 1   | 1 |                             |     |     |     |     |     |  | 1   |
|  | SUBTOTAL   |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       | 1   | 1 |                             |     |     |     |     |     |  | 1   |
| OTHER OCCURRENCES  |  |                   |     |     |     |     |         |     |     |     |     |              |     |     |     |     |                       |     |   |                             |     |     |     |     |     |  |     |
| 972T   | Sudden movement of car, not otherwise classified                     |                   |     |     |     |     |         | 1   | 1   |     |     |              |     |     |     |     |                       | 2   |   |                             |     |     |     |     |     |  | 2   |
| 974T   | Slack action in caboose  |                   |     |     |     |     |         |     | 1   |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| 975T   | Slack action, other  |                   |     |     |     | 1   |         |     |     |     |     |              |     |     |     |     |                       | 1   |   |                             |     |     |     |     |     |  | 1   |
| 989T   | Other accidents/incidents-equipment moving                           |                   |     |     | 4   |     |         | 2   | 2   | 6   |     |              | 1   |     | 1   |     | 3                     | 19  |   |                             |     |     |     |     |     |  | 19  |
|  | SUBTOTAL   |                   |     |     | 4   | 1   | 2       | 3   | 8   |     |     | 1            |     | 1   |     | 3   | 23                    |     |   |                             |     |     |     |     |     |  | 23  |
| GRAND TOTAL  |  | 17                | 4   | 15  | 16  | 26  | 7       | 24  | 46  | 10  | 3   | 6            |     | 1   |     | 39  | 216                   |     |   |                             |     |     |     |     |     |  | 216 |

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TABLE S39. CASUALTIES IN NONTRAIN INCIDENTS BY SPECIFIC OCCURRENCE, 1978

| Occurrence no   | Occurrence  | Class I Line-haul |       | Class I Switching + Terminal |     | Class II and III |     | Totals for All Carriers |       | Total Nonfatal Illnesses | Total Accidents/Incidents |
|---|---|-------------------|-------|------------------------------|-----|------------------|-----|-------------------------|-------|--------------------------|---------------------------|
|   |   | Kld               | Inj   | Kld                          | Inj | Kld              | Inj | Kld                     | Inj   |                          |                           |
| <b>A. COUPLING AND UNCOUPLING LOCOMOTIVES OF CARS</b> |   |                   |       |                              |     |                  |     |                         |       |                          |                           |
| 002   | Adjusting coupler - equipment standing.....                                 | ---               | 441   | ---                          | 1   | ---              | 73  | ---                     | 515   | ---                      | 514                       |
| 004   | Adjusting coupler, part of coupler fell striking person-eqp standing.....   | ---               | 130   | ---                          | --- | ---              | 17  | ---                     | 147   | ---                      | 147                       |
| 005   | Use of uncoupling lever - equipment standing.....                           | ---               | 166   | ---                          | 1   | ---              | 33  | ---                     | 200   | ---                      | 199                       |
| 007   | Striking parts of body against equipment - equipment standing.....          | ---               | 68    | ---                          | --- | ---              | 19  | ---                     | 67    | 1                        | 68                        |
| 008   | Stumbled, slipped, fell, stepped on foreign obj/irreg surface-eqp std.....  | ---               | 145   | ---                          | 1   | ---              | 43  | ---                     | 189   | ---                      | 188                       |
| 009   | Other acc/inc while coupling/uncoupling cars or locos - equip std.....      | ---               | 177   | ---                          | 1   | ---              | 14  | ---                     | 192   | 2                        | 194                       |
|   | SUBTOTAL.....   | ---               | 1,127 | ---                          | 4   | ---              | 199 | ---                     | 1,330 | 3                        | 1,330                     |
| <b>B. COUPLING OR UNCOUPLING AIR OR STEAM HOSE</b>    |   |                   |       |                              |     |                  |     |                         |       |                          |                           |
| 052   | Uncoupl air hose, struck by hose due to sudden release of air-eqp std.....  | ---               | 93    | ---                          | 1   | ---              | 11  | ---                     | 105   | ---                      | 105                       |
| 053   | Coupling air hose, stk by hose due to sudden release of air - eqp std.....  | ---               | 56    | ---                          | --- | ---              | 11  | ---                     | 67    | ---                      | 67                        |
| 054   | Stumbled, slipped, fell, or stepped on foreign obj, etc., eqp standing..... | ---               | 86    | ---                          | --- | ---              | 31  | ---                     | 117   | ---                      | 117                       |
| 055   | Defective equipment - equipment standing.....                               | ---               | 22    | ---                          | --- | ---              | 2   | ---                     | 24    | ---                      | 24                        |
| 056   | Burned by hot water or steam from hose - equipment standing.....            | ---               | 15    | ---                          | --- | ---              | 3   | ---                     | 18    | ---                      | 18                        |
| 057   | Opening or closing angle cocks - equipment standing....                     | ---               | 80    | ---                          | --- | ---              | 10  | ---                     | 90    | 1                        | 90                        |
| 059   | Oth A/I while coupl/uncoupl air/steam hose or turn angl cock-eqp std.....   | ---               | 165   | ---                          | 1   | ---              | 23  | ---                     | 209   | 3                        | 212                       |
|   | SUBTOTAL.....   | ---               | 537   | ---                          | 2   | ---              | 91  | ---                     | 630   | 4                        | 633                       |
| <b>C. OPERATING LOCOMOTIVES</b>                       |   |                   |       |                              |     |                  |     |                         |       |                          |                           |
| 101   | Burn or electrical shock - equipment standing.....                          | ---               | 14    | ---                          | --- | ---              | 2   | ---                     | 16    | 1                        | 17                        |
| 102   | Striking parts of body against equipment, moving about loco-eqp std.....    | ---               | 59    | ---                          | --- | ---              | 8   | ---                     | 67    | ---                      | 67                        |
| 103   | Struck by tools or other objects falling - equipment standing.....          | ---               | 15    | ---                          | --- | ---              | 2   | ---                     | 17    | ---                      | 17                        |
| 104   | Stumbled, slipped, fell, stepped on foreign obj, etc., - eqp std.....       | ---               | 99    | ---                          | --- | ---              | 20  | ---                     | 119   | ---                      | 119                       |
| 105   | Checking, oiling, servicing locomotive, etc. - equipment standing.....      | ---               | 47    | ---                          | --- | ---              | 6   | ---                     | 53    | 1                        | 54                        |
| 109   | Inhalation of or contact with fumes or gases - equipment standing.....      | ---               | 11    | ---                          | --- | ---              | --- | ---                     | 11    | 17                       | 26                        |
| 110   | Defective locomotive seat - equipment standing.....                         | ---               | 20    | ---                          | --- | ---              | 2   | ---                     | 22    | ---                      | 22                        |
| 111   | Adjusting locomotive seat - equipment standing.....                         | ---               | 29    | ---                          | --- | ---              | 1   | ---                     | 30    | ---                      | 30                        |
| 112   | Foreign object in eye - equipment standing.....                             | ---               | 69    | ---                          | --- | ---              | 8   | ---                     | 77    | ---                      | 77                        |
| 119   | Other accidents/incidents while operating locomotives - eqp standing.....   | ---               | 95    | ---                          | 1   | ---              | 11  | ---                     | 107   | 2                        | 108                       |
|   | SUBTOTAL.....   | ---               | 458   | ---                          | 1   | ---              | 60  | ---                     | 519   | 21                       | 537                       |

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TABLE S39 (CONT)

| Occurrence no   | Occurrence  | Class I       |       | Class II                 |     | Totals for All Carriers |     | Total Nonfatal Illnesses | Total Accidents/Incidents |     |       |
|---|---|---------------|-------|--------------------------|-----|-------------------------|-----|--------------------------|---------------------------|-----|-------|
|   |   | Line-haul Kld | Inj   | Switching + Terminal Kld | Inj | and III Kld             | Inj |                          |                           | Kld | Inj   |
| D. OPERATING RAIL MOTORCARS                                   |   |               |       |                          |     |                         |     |                          |                           |     |       |
| 151   | Striking parts of body against equipment - equipment standing.....        | ---           | 2     | ---                      | --- | ---                     | 3   | ---                      | 5                         | --- | 5     |
| 152   | Struck by tools or other objects falling - equipment standing.....        | ---           | 2     | ---                      | --- | ---                     | 1   | ---                      | 3                         | --- | 3     |
| 153   | Stumbled, slipped, fell or stepped on foreign obj, etc., - eqp std.....   | ---           | 8     | ---                      | --- | ---                     | 5   | ---                      | 13                        | --- | 13    |
| 155   | Placing or removing rail motorcar on or off rail.....                     | ---           | 94    | ---                      | --- | ---                     | 6   | ---                      | 102                       | --- | 102   |
| 159   | Other accidents/incidents while operating rail motorcars - eqp std.....   | ---           | 10    | ---                      | --- | ---                     | 3   | ---                      | 13                        | 1   | 14    |
|   | SUBTOTAL.....   | ---           | 116   | ---                      | --- | ---                     | 20  | ---                      | 136                       | 1   | 137   |
| E. OPERATING HAND BRAKES                                      |   |               |       |                          |     |                         |     |                          |                           |     |       |
| 201   | Defective equipment - equipment standing.....                             | ---           | 68    | ---                      | --- | ---                     | 9   | ---                      | 77                        | --- | 77    |
| 202   | Pawl slipping or accidentally knocked out of ratchet - eqp standing.....  | ---           | 10    | ---                      | --- | ---                     | 3   | ---                      | 13                        | --- | 13    |
| 203   | Striking body not due to movement of equipment.....                       | ---           | 60    | ---                      | --- | ---                     | 11  | ---                      | 71                        | --- | 70    |
| 205   | Caught between parts of equipment or lading - equipment standing.....     | ---           | 15    | ---                      | 1   | ---                     | 2   | ---                      | 18                        | --- | 18    |
| 206   | Brake chains or bolts, breaking or giving way - equipment standing.....   | ---           | 21    | ---                      | --- | ---                     | 2   | ---                      | 23                        | --- | 23    |
| 207   | Losing hold, slipping, or falling - equipment standing.....               | ---           | 124   | ---                      | 1   | ---                     | 25  | ---                      | 150                       | --- | 150   |
| 208   | Caught hand or fingers in spinning brake wheel - equipment standing.....  | ---           | 47    | ---                      | --- | ---                     | 7   | ---                      | 54                        | --- | 53    |
| 209   | Other accidents/incidents while operating hand brakes - eqp standing..... | ---           | 376   | ---                      | 3   | ---                     | 61  | ---                      | 440                       | --- | 438   |
|   | SUBTOTAL.....   | ---           | 721   | ---                      | 5   | ---                     | 120 | ---                      | 846                       | --- | 842   |
| F. OPERATING SWITCHES   |   |               |       |                          |     |                         |     |                          |                           |     |       |
| 301   | Slipped, tripped or fell due to ice or snow.....                          | ---           | 129   | ---                      | --- | ---                     | 21  | ---                      | 150                       | --- | 150   |
| 302   | Slipped, tripped or fell not due to ice or snow.....                      | ---           | 112   | ---                      | 2   | ---                     | 18  | ---                      | 132                       | --- | 132   |
| 303   | Parts of body struck or caught by mechanism of switch..                   | ---           | 190   | ---                      | --- | ---                     | 29  | ---                      | 219                       | --- | 216   |
| 305   | Lining switches, defective equipment.....                                 | ---           | 282   | ---                      | 1   | ---                     | 32  | ---                      | 315                       | --- | 314   |
| 306   | Lining switches, no defects.....  | ---           | 799   | ---                      | 3   | ---                     | 107 | ---                      | 909                       | 2   | 911   |
| 309   | Other accidents/incidents while operating switches - equipment std.....   | ---           | 516   | ---                      | 4   | ---                     | 42  | ---                      | 562                       | 6   | 568   |
|   | SUBTOTAL.....   | ---           | 2,028 | ---                      | 10  | ---                     | 249 | ---                      | 2,287                     | 8   | 2,293 |
| G. PERSONS ON LOCOS OR CAPS COMING IN CONTACT WITH FIXED OBJS |   |               |       |                          |     |                         |     |                          |                           |     |       |
| 401   | Persons on top locos/cars contacting fixed objects - equipment std.....   | ---           | 5     | ---                      | --- | ---                     | 2   | ---                      | 7                         | --- | 7     |
| 402   | Persons on side/end of locos/cars contacting fixed objects - eqp std..... | ---           | 11    | ---                      | --- | ---                     | 6   | ---                      | 17                        | --- | 17    |
| 409   | Persons on loco/car coming in contact with fixed obj(other)-eqp std.....  | ---           | 17    | ---                      | --- | ---                     | 2   | ---                      | 19                        | --- | 19    |
|   | SUBTOTAL.....   | ---           | 33    | ---                      | --- | ---                     | 10  | ---                      | 43                        | --- | 43    |

TABLE S39 (CONT)

| Occurrence<br>no   | Occurrence  | Class I<br>Line-haul |       |
|--|---|----------------------|-------|
|  |   | Kld                  | Inj   |
| <b>H. GETTING ON OR OFF CARS OR LOCOMOTIVES</b>                            |   |                      |       |
| 501  | Slip/fell due to lost/misssd hcl'd of grabiron, handhold, etc. - eqp std..... | ---                  | 114   |
| 502  | Slip/fell due to losing/missing footing on step, stirrup, etc. - eqp std..... | ---                  | 469   |
| 503  | Stepping or tripping on parts of track in place - equipment standing.....     | ---                  | 85    |
| 504  | Stepping or tripping on foreign material or irreg surface - eqp std.....      | ---                  | 671   |
| 505  | Slipping on ice or snow on ground - equipment standing.....                   | ---                  | 105   |
| 506  | Slipping on ice/snow on cars or locomotives - equipment standing.....         | ---                  | 82    |
| 507  | Falling, slipping, tripping, not elsewhere classified - eqp std.....          | ---                  | 204   |
| 508  | Slipping/falling while boarding/alighting fm passenger eqp(standing).....     | ---                  | 114   |
| 511  | Strike/struck by eqp/structures(not bridge/trestle), or mat - eqp std.....    | ---                  | 80    |
| 513  | Jumping from equipment - equipment standing.....                              | ---                  | 35    |
| 514  | Defective equipment - equipment standing.....                                 | ---                  | 33    |
| 519  | Other acc/inc while getting on or off cars or locos - equipment std.....      | ---                  | 340   |
|  | SUBTOTAL.....   | ---                  | 2,332 |
| <b>I. RAIL EQUIPMENT AND RAIL-HIGHWAY GRADE CROSSING ACCIDENT/INCIDENT</b> |   |                      |       |
| 609  | Casualty at public rail-hwy X-ing (not rptd on form 6180-54) - eqp std.....   | 15                   | 133   |
|  | SUBTOTAL.....   | 15                   | 133   |
| <b>J. STRUCK BY/RAN INTO LOCCS OR CARS NOT AT HWY GRADE CROSSING</b>       |   |                      |       |
| 701  | Standing, walking or running on or along track - equipment standing.....      | 1                    | 7     |
| 703  | Crossing track not at a crossing - equipment standing..                       | ---                  | 3     |
| 708  | Passing over, through, or under cars - equipment standing.....                | ---                  | 7     |
| 709  | Struck by or ran into locos/cars (not at public X-ing), misc-eqp std.....     | ---                  | 5     |
|  | SUBTOTAL.....   | 1                    | 22    |

Kld = Killed; Inj = Injured; Ill = Illness

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| Class I<br>Switching<br>+ Terminal |     | Class II<br>and III |     | Totals<br>for All<br>Carriers |     | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|------------------------------------|-----|---------------------|-----|-------------------------------|-----|--------------------------------|----------------------------------|
| Kld                                | Inj | Kld                 | Inj | Kld                           | Inj |                                |                                  |

|     |     |     |     |     |       |     |       |
|-----|-----|-----|-----|-----|-------|-----|-------|
| --- | --- | --- | 36  | --- | 150   | --- | 150   |
| --- | 5   | --- | 68  | --- | 542   | --- | 542   |
| --- | --- | --- | 10  | --- | 95    | --- | 95    |
| --- | 4   | --- | 79  | --- | 754   | 1   | 753   |
| --- | 2   | --- | 21  | --- | 128   | --- | 128   |
| --- | --- | --- | 8   | --- | 90    | --- | 90    |
| --- | --- | --- | 28  | --- | 232   | --- | 232   |
| --- | --- | --- | 7   | --- | 121   | --- | 117   |
| --- | --- | --- | 8   | --- | 88    | 1   | 89    |
| --- | --- | --- | 8   | --- | 43    | --- | 43    |
| --- | --- | --- | 7   | --- | 40    | --- | 40    |
| --- | 3   | --- | 32  | --- | 375   | 2   | 377   |
| --- | 14  | --- | 312 | --- | 2,658 | 4   | 2,656 |

|     |     |   |   |    |     |     |     |
|-----|-----|---|---|----|-----|-----|-----|
| --- | --- | 1 | 8 | 16 | 141 | --- | 110 |
| --- | --- | 1 | 8 | 16 | 141 | --- | 110 |

|     |     |     |     |     |    |     |    |
|-----|-----|-----|-----|-----|----|-----|----|
| --- | --- | --- | --- | 1   | 7  | --- | 8  |
| --- | --- | --- | --- | --- | 3  | --- | 3  |
| --- | --- | --- | 2   | --- | 9  | --- | 9  |
| --- | --- | --- | 1   | --- | 6  | --- | 6  |
| --- | --- | --- | 3   | 1   | 25 | --- | 26 |



TABLE S39 (CONT)

| Occurrence<br>no                                | Occurrence  | Class I<br>Line-haul |               |
|---|---|----------------------|---------------|
|   |   | Kld                  | Inj           |
| <b>K. SERVICING OR MAINTENANCE OF EQUIPMENT</b> |   |                      |               |
| 802   | Crossing over, under, or between locos or cars -<br>equipment standing..... | ---                  | 121           |
| 803   | Striking or being struck by eqp, structures, or<br>material-eqp std.....    | ---                  | 1,067         |
| 804   | Use of hand tools.....  | ---                  | 1,590         |
| 805   | Use of portable power tools.....  | ---                  | 284           |
| 806   | Use of welding equipment.....   | ---                  | 390           |
| 807   | Use of oxygen-acetylene, natural gas cutting equipment..                    | ---                  | 284           |
| 808   | Use of grinding equipment.....  | ---                  | 103           |
| 809   | Use of scaffolds, ladders, etc.....   | ---                  | 147           |
| 810   | Use of cranes, hoists, derricks, piledrivers, etc.....                      | 1                    | 300           |
| 811   | Use of lift trucks and other portable material handling<br>eqp.....         | 2                    | 237           |
| 812   | Use of shop machinery not elsewhere classified.....                         | 1                    | 235           |
| 813   | Loading and unloading materials.....  | ---                  | 405           |
| 814   | Handling material by hand.....  | ---                  | 1,574         |
| 816   | Inhalation of or contact with fumes or gases.....                           | ---                  | 17            |
| 817   | Foreign object in eye, using eye protection.....                            | ---                  | 571           |
| 818   | Foreign object in eye, not using eye protection.....                        | ---                  | 581           |
| 819   | Struck by flying or falling object.....                                     | 2                    | 645           |
| 820   | Electrical flash, shock, or burn.....                                       | ---                  | 159           |
| 821   | Fire or explosion of fuses of torpedoes.....                                | ---                  | 9             |
| 822   | Other fire or explosion.....  | ---                  | 42            |
| 823   | Burned or irritated by hot, corrosive, or toxic<br>substances.....          | ---                  | 284           |
| 824   | Stumbling, slipping, falling, caught, not elsewhere<br>classified.....      | ---                  | 2,046         |
| 825   | Other acc/inc while servicing or maintaining eqp-eqp<br>std.....            | 1                    | 2,143         |
|   | <b>SUBTOTAL.....</b>  | <b>7</b>             | <b>13,634</b> |

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| Class I<br>Switching<br>+ Terminal |     | Class II<br>and III |       | Totals<br>for All<br>Carriers |        | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|------------------------------------|-----|---------------------|-------|-------------------------------|--------|--------------------------------|----------------------------------|
| Kld                                | Inj | Kld                 | Inj   | Kld                           | Inj    |                                |                                  |
| ---                                | --- | ---                 | 6     | ---                           | 127    | ---                            | 127                              |
| ---                                | 4   | ---                 | 97    | ---                           | 1,168  | 2                              | 1,167                            |
| ---                                | 6   | ---                 | 162   | ---                           | 1,758  | 4                              | 1,761                            |
| ---                                | 1   | ---                 | 27    | ---                           | 312    | 2                              | 314                              |
| ---                                | --- | ---                 | 32    | ---                           | 422    | 52                             | 473                              |
| ---                                | --- | ---                 | 37    | ---                           | 321    | 4                              | 325                              |
| ---                                | --- | ---                 | 18    | ---                           | 121    | 1                              | 122                              |
| ---                                | --- | ---                 | 12    | ---                           | 159    | ---                            | 159                              |
| ---                                | 3   | ---                 | 10    | 1                             | 313    | 2                              | 316                              |
| ---                                | --- | ---                 | 22    | 2                             | 259    | 3                              | 264                              |
| ---                                | --- | ---                 | 22    | 1                             | 257    | 6                              | 264                              |
| ---                                | 1   | ---                 | 47    | ---                           | 453    | 2                              | 455                              |
| ---                                | 2   | ---                 | 137   | ---                           | 2,113  | 9                              | 2,112                            |
| ---                                | --- | ---                 | ---   | ---                           | 17     | 60                             | 76                               |
| ---                                | 8   | ---                 | 29    | ---                           | 608    | 1                              | 608                              |
| ---                                | 1   | ---                 | 97    | ---                           | 679    | 5                              | 680                              |
| ---                                | --- | ---                 | 56    | 2                             | 701    | 1                              | 703                              |
| ---                                | --- | ---                 | 13    | ---                           | 172    | 49                             | 221                              |
| ---                                | --- | ---                 | 2     | ---                           | 11     | 1                              | 11                               |
| ---                                | --- | ---                 | 3     | ---                           | 45     | 1                              | 46                               |
| ---                                | 1   | ---                 | 38    | ---                           | 323    | 87                             | 408                              |
| ---                                | 1   | ---                 | 154   | ---                           | 2,201  | 4                              | 2,201                            |
| ---                                | 5   | ---                 | 199   | 1                             | 2,347  | 124                            | 2,467                            |
| ---                                | 33  | ---                 | 1,220 | 7                             | 14,867 | 420                            | 15,280                           |

TABLE S39 (CONT)

| Occurrence<br>no                     | Occurrence   | Class I<br>Line-haul |        |
|--------------------------------------|--|----------------------|--------|
|                                      |  | Kld                  | Inj    |
| L. MAINTENANCE OF WAY AND STRUCTURES |  |                      |        |
| 852                                  | Crossing over, under, or between locos or cars-eqp std.                  | ---                  | 12     |
| 853                                  | Striking or being struck by eqp, structures, or material-eqp std.        | ---                  | 801    |
| 854                                  | Use of hand tools  | ---                  | 2,345  |
| 855                                  | Use of portable power tools  | ---                  | 431    |
| 856                                  | Use of welding equipment   | ---                  | 109    |
| 857                                  | Use of oxygen-acetylene, natural gas cutting equipment                   | ---                  | 49     |
| 858                                  | Use of grinding equipment  | ---                  | 111    |
| 859                                  | Use of scaffolds, ladders, etc.  | ---                  | 100    |
| 860                                  | Use of cranes, hoists, derricks, piledrivers, etc.                       | 1                    | 233    |
| 861                                  | Use of lift trucks and other portable material handling eqp.             | 1                    | 100    |
| 862                                  | Use of shop machinery not elsewhere classified                           | ---                  | 67     |
| 863                                  | Loading and unloading materials  | 1                    | 1,106  |
| 864                                  | Handling material by hand  | ---                  | 1,674  |
| 866                                  | Inhalation of or contact with fumes or gases                             | ---                  | 11     |
| 867                                  | Foreign object in eye, using eye protection                              | ---                  | 225    |
| 868                                  | Foreign object in eye, not using eye protection                          | ---                  | 453    |
| 869                                  | Struck by flying of falling object                                       | 2                    | 972    |
| 870                                  | Electrical flash, shock, or burn   | 3                    | 76     |
| 871                                  | Fire or explosion of fuses or torpedoes                                  | ---                  | 3      |
| 872                                  | Other fire or explosion  | ---                  | 45     |
| 873                                  | Burned or irritated by hot, corrosive or toxic substances                | ---                  | 137    |
| 874                                  | Stumbling, slipping, falling, caught, not elsewhere classified           | 2                    | 1,593  |
| 875                                  | Use of maintenance of way equipment not elsewhere classified             | 1                    | 324    |
| 876                                  | Insert/remov ties, switch timbers, tie plates, etc. by use of hand tools | 1                    | 2,416  |
| 877                                  | Insert/remov ties, switch tim, tie plates, etc. by use of power tools    | ---                  | 320    |
| 878                                  | Loading/unloading ties, switch timbers, tie plates and fastenings        | ---                  | 1,164  |
| 879                                  | Handling rail by use of power tools                                      | ---                  | 160    |
| 880                                  | Handling rail by use of hand tools                                       | ---                  | 667    |
| 889                                  | Other acc/inc while maintaining way and structures                       | ---                  | 725    |
|                                      | SUBTOTAL   | 12                   | 17,029 |

| Class I<br>Switching<br>+ Terminal |     | Class II<br>and III |       | Totals<br>for All<br>Carriers |        | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|------------------------------------|-----|---------------------|-------|-------------------------------|--------|--------------------------------|----------------------------------|
| Kld                                | Inj | Kld                 | Inj   | Kld                           | Inj    |                                |                                  |
| ---                                | --- | ---                 | 1     | ---                           | 13     | ---                            | 13                               |
| ---                                | 1   | ---                 | 60    | ---                           | 862    | 1                              | 858                              |
| ---                                | 6   | ---                 | 203   | ---                           | 2,556  | 31                             | 2,585                            |
| ---                                | --- | ---                 | 29    | ---                           | 460    | 7                              | 465                              |
| ---                                | 1   | 1                   | 12    | 1                             | 122    | 18                             | 139                              |
| ---                                | --- | ---                 | 13    | ---                           | 62     | 2                              | 64                               |
| ---                                | --- | ---                 | 15    | ---                           | 126    | 2                              | 127                              |
| ---                                | --- | ---                 | 11    | ---                           | 111    | ---                            | 109                              |
| ---                                | --- | 1                   | 12    | 2                             | 245    | 2                              | 243                              |
| ---                                | --- | ---                 | 21    | 1                             | 121    | ---                            | 120                              |
| ---                                | --- | ---                 | 5     | ---                           | 72     | ---                            | 72                               |
| ---                                | 2   | ---                 | 112   | 1                             | 1,220  | 16                             | 1,236                            |
| ---                                | 2   | ---                 | 180   | ---                           | 2,056  | 48                             | 2,095                            |
| ---                                | --- | ---                 | 5     | ---                           | 16     | 44                             | 58                               |
| ---                                | 4   | ---                 | 14    | ---                           | 243    | 4                              | 247                              |
| ---                                | --- | ---                 | 77    | ---                           | 530    | 3                              | 532                              |
| ---                                | 1   | 1                   | 111   | 3                             | 1,084  | ---                            | 1,081                            |
| ---                                | --- | ---                 | 2     | 3                             | 78     | 24                             | 103                              |
| ---                                | --- | ---                 | 1     | ---                           | 4      | 1                              | 5                                |
| ---                                | --- | ---                 | 3     | ---                           | 48     | 2                              | 49                               |
| ---                                | 1   | ---                 | 31    | ---                           | 169    | 150                            | 317                              |
| ---                                | 2   | ---                 | 140   | 2                             | 2,135  | 4                              | 2,138                            |
| ---                                | --- | ---                 | 45    | 1                             | 369    | 6                              | 375                              |
| ---                                | 2   | ---                 | 228   | 1                             | 2,646  | 58                             | 2,699                            |
| ---                                | --- | ---                 | 32    | ---                           | 352    | 7                              | 358                              |
| ---                                | 7   | ---                 | 103   | ---                           | 1,274  | 73                             | 1,342                            |
| ---                                | --- | ---                 | 16    | ---                           | 176    | 2                              | 178                              |
| ---                                | 2   | ---                 | 81    | ---                           | 750    | 7                              | 755                              |
| ---                                | 1   | ---                 | 77    | ---                           | 803    | 238                            | 1,037                            |
| ---                                | 34  | 3                   | 1,640 | 15                            | 18,703 | 750                            | 19,400                           |

TABLE S39 (CONT)

| Occurrence No                         | Occurrence   | Class I<br>Line-haul |     | Class II<br>Switching + Terminal |     | Class III<br>and III |     | Totals<br>for All<br>Carriers |     | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|---------------------------------------|--|----------------------|-----|----------------------------------|-----|----------------------|-----|-------------------------------|-----|--------------------------------|----------------------------------|
|                                       |  | Kld                  | Inj | Kld                              | Inj | Kld                  | Inj | Kld                           | Inj |                                |                                  |
| M. MISCELLANEOUS                      |  |                      |     |                                  |     |                      |     |                               |     |                                |                                  |
| 1. FREIGHT, BAGGAGE, EXPRESS, OF MAIL |  |                      |     |                                  |     |                      |     |                               |     |                                |                                  |
| 901                                   | Handling freight, baggage, express or mail.....                              | ---                  | 129 | ---                              | --- | ---                  | 47  | ---                           | 176 | ---                            | 176                              |
| 902                                   | Struck or caught by shifted lading.....                                      | ---                  | 9   | ---                              | --- | ---                  | 2   | ---                           | 11  | ---                            | 11                               |
| 903                                   | Tripping over, or struck by falling baggage in<br>passenger car-eqp std..... | ---                  | 6   | ---                              | --- | ---                  | 1   | ---                           | 7   | ---                            | 7                                |
| 904                                   | Other accident/incident involving freight, baggage,<br>express, or mail..... | ---                  | 30  | ---                              | --- | ---                  | 15  | ---                           | 45  | ---                            | 45                               |
|                                       | SUBTOTAL.....  | ---                  | 174 | ---                              | --- | ---                  | 65  | ---                           | 239 | ---                            | 239                              |
| 2. WINDOWS, DOORS, ETC.               |  |                      |     |                                  |     |                      |     |                               |     |                                |                                  |
| 906                                   | Clo/opn frt/bag car doors, exc plug type car doors, def<br>eqp-eqp std.....  | ---                  | 69  | ---                              | --- | ---                  | 9   | ---                           | 78  | ---                            | 76                               |
| 909                                   | Clo/opn frt/bag car doors, exc plug type car doors, no<br>def-eqp std.....   | ---                  | 93  | ---                              | --- | ---                  | 16  | ---                           | 109 | ---                            | 109                              |
| 910                                   | Closing or opening plug type car doors, defective<br>equipment-eqp std.....  | ---                  | 28  | ---                              | --- | ---                  | 12  | ---                           | 40  | ---                            | 40                               |
| 911                                   | Closing or opening plug type car doors, no<br>defects-equipment std.....     | ---                  | 53  | ---                              | --- | ---                  | 3   | ---                           | 56  | ---                            | 56                               |
| 912                                   | Closing or opening coach trap doors-equipment standing.....                  | ---                  | 75  | ---                              | --- | ---                  | 10  | ---                           | 85  | ---                            | 85                               |
| 913                                   | Interior doors-equipment standing.....                                       | ---                  | 34  | ---                              | --- | ---                  | 9   | ---                           | 43  | ---                            | 42                               |
| 914                                   | Opening or closing locomotive doors-equipment standing.....                  | ---                  | 108 | ---                              | --- | ---                  | 6   | ---                           | 114 | ---                            | 114                              |
| 915                                   | Opening or closing locomotive windows-equipment<br>standing.....             | ---                  | 44  | ---                              | --- | ---                  | 8   | ---                           | 52  | ---                            | 51                               |
| 916                                   | Opening or closing caboose doors-equipment standing.....                     | ---                  | 17  | ---                              | --- | ---                  | --- | ---                           | 17  | ---                            | 17                               |
| 917                                   | Opening or closing caboose windows-equipment standing..                      | ---                  | 4   | ---                              | --- | ---                  | 1   | ---                           | 5   | ---                            | 5                                |
| 918                                   | Opening and closing other windows.....                                       | ---                  | 22  | ---                              | --- | ---                  | 1   | ---                           | 23  | ---                            | 23                               |
| 919                                   | Other accidents/incidents involving windows or doors...                      | 1                    | 266 | ---                              | --- | ---                  | 20  | 1                             | 286 | ---                            | 287                              |
|                                       | SUBTOTAL.....  | 1                    | 813 | ---                              | --- | ---                  | 95  | 1                             | 908 | ---                            | 905                              |

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TABLE S39 (CONT)

| Occurrence No                                | Occurrence  | Class I<br>Line-haul |       | Class I<br>Switching<br>+ Terminal |     | Class II<br>and III |     | Totals<br>for All<br>Carriers |       | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|--|---|----------------------|-------|------------------------------------|-----|---------------------|-----|-------------------------------|-------|--------------------------------|----------------------------------|
|  |   | Kld                  | Inj   | Kld                                | Inj | Kld                 | Inj | Kld                           | Inj   |                                |                                  |
| 3. PASSENGER CAR DOORS                       |   |                      |       |                                    |     |                     |     |                               |       |                                |                                  |
| 920  | Caught by side doors while entering coach-equipment standing.....       | ---                  | 4     | ---                                | --- | ---                 | 2   | ---                           | 6     | ---                            | 6                                |
| 921  | Caught by side doors while exiting coach-equipment standing.....        | ---                  | 5     | ---                                | --- | ---                 | 1   | ---                           | 6     | ---                            | 6                                |
| 924  | Struck by side doors while entering coach-equipment standing.....       | ---                  | 2     | ---                                | --- | ---                 | --- | ---                           | 2     | ---                            | 2                                |
| 925  | Struck by side doors while exiting coach-equipment standing.....        | ---                  | 2     | ---                                | --- | ---                 | --- | ---                           | 2     | ---                            | 2                                |
| 926  | Striking side door while entering coach-equipment standing.....         | ---                  | 3     | ---                                | --- | ---                 | --- | ---                           | 3     | ---                            | 3                                |
| 927  | Striking side door while exiting coach-equipment standing.....          | ---                  | 8     | ---                                | --- | ---                 | --- | ---                           | 8     | ---                            | 8                                |
|  | SUBTOTAL.....   | ---                  | 24    | ---                                | --- | ---                 | 3   | ---                           | 27    | ---                            | 27                               |
| 4. STUMBLING, SLIPPING, FALLING, CAUGHT, NOC |   |                      |       |                                    |     |                     |     |                               |       |                                |                                  |
| 930  | Stumbling/slipping, etc. on snow or ice.....                            | ---                  | 1,145 | ---                                | 6   | ---                 | 96  | ---                           | 1,247 | 1                              | 1,248                            |
| 931  | Stumbling/slipping, etc. on foreign material or irregular surface.....  | ---                  | 1,579 | ---                                | 8   | ---                 | 167 | ---                           | 1,754 | 2                              | 1,752                            |
| 932  | Stumbling/slipping, etc. on parts of track in place.....                | ---                  | 363   | ---                                | 1   | ---                 | 48  | ---                           | 412   | ---                            | 411                              |
| 933  | Stumbling/slipping, etc. on stairways, ramps or platforms.....          | 1                    | 640   | ---                                | 1   | ---                 | 92  | 1                             | 733   | ---                            | 734                              |
| 934  | Slip/fall, etc. between loco/car and other cars and struct-egp std..... | ---                  | 97    | ---                                | --- | ---                 | 8   | ---                           | 105   | ---                            | 105                              |
| 935  | From bridges or trestles.....   | 5                    | 47    | ---                                | --- | ---                 | 6   | 5                             | 53    | ---                            | 58                               |
| 936  | From structures other than bridges or trestles.....                     | ---                  | 54    | ---                                | --- | ---                 | 6   | ---                           | 60    | ---                            | 60                               |
| 937  | Into depressions.....   | ---                  | 273   | ---                                | 1   | ---                 | 10  | ---                           | 284   | ---                            | 282                              |
| 938  | While on locomotive or car-equipment standing.....                      | ---                  | 257   | ---                                | 1   | ---                 | 14  | ---                           | 272   | 1                              | 270                              |
| 939  | Other, stumbling, slipping, falling, caught, etc.....                   | ---                  | 665   | ---                                | --- | ---                 | 24  | ---                           | 669   | 10                             | 697                              |
|  | SUBTOTAL.....   | 6                    | 5,120 | ---                                | 18  | ---                 | 471 | 6                             | 5,609 | 14                             | 5,617                            |

TABLE S39 (CONT)

| Occurrence<br>No  | Occurrence  | Class I<br>Line-haul |        | Class I<br>Switching<br>+ Terminal |     | Class II<br>and III |       | Totals<br>for All<br>Carriers |        | Total<br>Nonfatal<br>Illnesses | Total<br>Accidents/<br>Incidents |
|---|---|----------------------|--------|------------------------------------|-----|---------------------|-------|-------------------------------|--------|--------------------------------|----------------------------------|
|   |   | Kld                  | Inj    | Kld                                | Inj | Kld                 | Inj   | Kld                           | Inj    |                                |                                  |
| M. MISCELLANEOUS (CONT.)                                    |   |                      |        |                                    |     |                     |       |                               |        |                                |                                  |
| 5. FLYING OR FALLING OBJECTS, BURNS AND SIMILAR CAUSES, NCC |   |                      |        |                                    |     |                     |       |                               |        |                                |                                  |
| 940   | Foreign object in eye.....  | ---                  | 940    | ---                                | 18  | ---                 | 102   | ---                           | 1,060  | ---                            | 1,052                            |
| 941   | Struck by flying of falling object (except assaults)...                       | 2                    | 330    | ---                                | --- | ---                 | 34    | 2                             | 364    | ---                            | 366                              |
| 942   | Electrical flash, shock, or burn.....   | 4                    | 48     | ---                                | 1   | ---                 | 4     | 4                             | 53     | 2                              | 57                               |
| 943   | Fire or explosion of fuses or torpedoes.....                                  | ---                  | 25     | ---                                | --- | ---                 | 2     | ---                           | 27     | 1                              | 28                               |
| 944   | Other fire or explosion.....  | 1                    | 37     | ---                                | --- | ---                 | 1     | 1                             | 38     | 3                              | 39                               |
| 945   | Burned by hot or corrosive substances.....                                    | ---                  | 71     | ---                                | --- | ---                 | 11    | ---                           | 82     | 9                              | 89                               |
| 946   | Inhalation of or contact with fumes or gases.....                             | 1                    | 24     | ---                                | --- | ---                 | 6     | 1                             | 30     | 111                            | 122                              |
| 949   | Other acc/inc resulting from flying/falling objs,<br>burns, etc.....          | ---                  | 78     | ---                                | --- | ---                 | 11    | ---                           | 89     | 17                             | 106                              |
|   | SUBTOTAL.....   | 8                    | 1,553  | ---                                | 19  | ---                 | 171   | 8                             | 1,743  | 143                            | 1,859                            |
| 6. OPERATION OF ON-TRACK WORK EQUIPMENT                     |   |                      |        |                                    |     |                     |       |                               |        |                                |                                  |
| 954   | Getting on/off on-track work equipment - equipment<br>standing.....           | ---                  | 100    | ---                                | --- | ---                 | 4     | ---                           | 104    | 1                              | 105                              |
| 959   | Other A/I involving on-track work equipment - equipment<br>standing.....      | ---                  | 254    | ---                                | --- | ---                 | 2     | ---                           | 256    | 5                              | 261                              |
|   | SUBTOTAL.....   | ---                  | 354    | ---                                | --- | ---                 | 6     | ---                           | 360    | 6                              | 366                              |
| 7. ASSAULT  |   |                      |        |                                    |     |                     |       |                               |        |                                |                                  |
| 960   | Struck by thrown or otherwise propelled object, while on<br>loco-eqp std..... | ---                  | 14     | ---                                | --- | ---                 | 1     | ---                           | 15     | ---                            | 15                               |
| 961   | Struck by thrown or otherwise propelled object, while on<br>cab-eqp std.....  | ---                  | 7      | ---                                | --- | ---                 | ---   | ---                           | 7      | ---                            | 7                                |
| 962   | Struck by thrown or otherwise propelled object, while on<br>car-eqp std.....  | ---                  | 5      | ---                                | --- | ---                 | ---   | ---                           | 5      | ---                            | 5                                |
| 963   | Struck by thrown or otherwise propelled object, not on<br>on-track eqp.....   | ---                  | 25     | ---                                | --- | ---                 | 4     | ---                           | 29     | ---                            | 29                               |
| 964   | Other assaults to persons on trains - equipment<br>standing.....              | ---                  | 36     | ---                                | --- | ---                 | 2     | ---                           | 38     | ---                            | 38                               |
| 969   | Other assaults to persons not on trains.....                                  | 6                    | 194    | ---                                | --- | ---                 | 9     | 6                             | 203    | ---                            | 209                              |
|   | SUBTOTAL.....   | 6                    | 281    | ---                                | --- | ---                 | 16    | 6                             | 297    | ---                            | 303                              |
| 8. OTHER CAUSES   |   |                      |        |                                    |     |                     |       |                               |        |                                |                                  |
| 970   | Performing rerailling or other clearing operations.....                       | 5                    | 148    | ---                                | --- | ---                 | 15    | 5                             | 163    | 3                              | 164                              |
| 978   | Motor vehicle acc/inc (other than rail-highway grade<br>crossing).....        | 7                    | 950    | ---                                | 1   | 1                   | 39    | 8                             | 990    | 1                              | 923                              |
| 979   | Servicing and maintenance of highway vehicles.....                            | ---                  | 27     | ---                                | --- | ---                 | 4     | ---                           | 31     | ---                            | 31                               |
| 980   | Horseplay.....  | 1                    | 28     | ---                                | --- | ---                 | 3     | 1                             | 31     | 2                              | 34                               |
| 981   | Animal bites, including snake bites.....                                      | ---                  | 30     | ---                                | --- | ---                 | 4     | ---                           | 34     | ---                            | 34                               |
| 982   | Insect bites.....   | ---                  | 399    | ---                                | 3   | ---                 | 33    | ---                           | 435    | 33                             | 467                              |
| 989   | Other accidents/incidents.....  | 5                    | 945    | ---                                | 2   | 1                   | 88    | 6                             | 1,035  | 100                            | 1,136                            |
|   | SUBTOTAL.....   | 18                   | 2,527  | ---                                | 6   | 2                   | 186   | 20                            | 2,719  | 139                            | 2,789                            |
|   | SUBTOTAL MISCELLANEOUS.....   | 39                   | 10,846 | ---                                | 43  | 2                   | 1,013 | 41                            | 11,902 | 302                            | 12,105                           |
|   | GRAND TOTAL.....  | 74                   | 49,016 | ---                                | 146 | 6                   | 4,945 | 80                            | 54,107 | 1,513                          | 55,392                           |

Kld = Killed; Inj = Injured; Ill = Illness

TABLE S40. TRAIN ACCIDENTS AND DAMAGE BY MONTH, 1978

| Month     | ....Collisions..... |                 | ....Derailments.... |                 | .....Other..... |                 | .....Total..... |                 | .....Property Damage..... |               |
|-----------|---------------------|-----------------|---------------------|-----------------|-----------------|-----------------|-----------------|-----------------|---------------------------|---------------|
|           | Accid-<br>ents      | Damages<br>(\$) | Accid-<br>ents      | Damages<br>(\$) | Accid-<br>ents  | Damages<br>(\$) | Accid-<br>ents  | Damages<br>(\$) | Equipment<br>(\$)         | Track<br>(\$) |
| January   | 100                 | 1,404,888       | 832                 | 27,424,893      | 94              | 1,766,645       | 1,026           | 30,596,426      | 24,909,578                | 5,686,848     |
| February  | 94                  | 1,186,819       | 781                 | 29,476,194      | 87              | 1,370,606       | 962             | 32,033,619      | 21,532,471                | 10,501,148    |
| March     | 133                 | 1,886,741       | 828                 | 23,504,713      | 77              | 779,645         | 1,038           | 26,171,099      | 20,178,532                | 5,952,567     |
| April     | 106                 | 1,917,344       | 754                 | 16,730,247      | 65              | 1,565,887       | 925             | 20,233,478      | 15,426,269                | 4,807,209     |
| May       | 112                 | 2,228,137       | 772                 | 18,232,350      | 106             | 3,400,205       | 990             | 23,860,692      | 18,797,110                | 5,063,582     |
| June      | 138                 | 2,489,818       | 693                 | 17,774,819      | 100             | 1,188,282       | 931             | 21,452,919      | 15,993,341                | 5,459,578     |
| July      | 138                 | 4,136,106       | 685                 | 20,889,657      | 97              | 1,646,346       | 920             | 26,674,109      | 20,893,912                | 5,780,197     |
| August    | 138                 | 4,912,499       | 662                 | 18,227,467      | 76              | 1,298,764       | 876             | 24,438,730      | 19,546,958                | 4,891,772     |
| September | 95                  | 1,587,800       | 610                 | 16,121,780      | 72              | 1,374,918       | 777             | 19,084,498      | 14,856,575                | 4,227,923     |
| October   | 147                 | 3,337,475       | 631                 | 18,550,264      | 85              | 1,664,241       | 863             | 23,551,980      | 18,897,368                | 4,654,612     |
| November  | 137                 | 3,304,398       | 718                 | 20,230,716      | 78              | 2,737,366       | 933             | 26,272,480      | 20,822,933                | 5,449,547     |
| December  | 138                 | 5,238,540       | 797                 | 23,103,425      | 101             | 2,239,432       | 1,036           | 30,581,397      | 23,874,332                | 6,707,065     |
| TOTAL...  | 1,476               | 33,630,565      | 8,763               | 250,266,525     | 1,038           | 21,054,337      | 11,277          | 304,951,427     | 235,729,379               | 69,222,048    |



TABLE S41. NUMBER OF TRAIN ACCIDENTS AND DAMAGE BY PRINCIPAL CAUSES AND SUBCAUSES, 1978

| Cause                                       | No.           | Damage (\$)        | Average Damage per Accident (\$) |
|---|---------------|--------------------|----------------------------------|
| <b>OPERATING PRACTICES:</b>                 |               |                    |                                  |
| Use of brakes                               | 354           | 5,041,565          | 14,228                           |
| Employee physical condition                 | 6             | 527,617            | 87,916                           |
| Flag, fixed, hand/radio signals             | 97            | 3,674,194          | 37,869                           |
| Other rules and instructions                | 820           | 11,516,558         | 14,031                           |
| Speed                                       | 276           | 12,453,661         | 45,112                           |
| Use of switches                             | 467           | 6,337,561          | 13,561                           |
| Miscellaneous                               | 825           | 16,456,453         | 19,938                           |
| SUBTOTAL...                                 | 2,845         | 56,007,609         | 19,675                           |
| <b>MECHANICAL FAILURES:</b>                 |               |                    |                                  |
| Brakes                                      | 234           | 7,553,648          | 32,273                           |
| Trailer/container on flat car               | 20            | 412,800            | 20,635                           |
| Body  | 243           | 7,576,110          | 31,170                           |
| Coupler and draft system                    | 255           | 7,680,068          | 30,110                           |
| Truck components                            | 456           | 12,794,675         | 28,050                           |
| Axles and journal bearings                  | 299           | 13,521,076         | 45,214                           |
| Wheels                                      | 415           | 18,531,713         | 44,647                           |
| Doors                                       | 21            | 355,173            | 16,909                           |
| General mech failures                       | 27            | 1,001,369          | 37,081                           |
| SUBTOTAL...                                 | 1,970         | 69,426,632         | 35,234                           |
| Locomotives                                 | 132           | 5,140,385          | 38,940                           |
| Brakes-loco                                 | 11            | 215,660            | 19,600                           |
| Body-loco                                   | ---           | ---                | ---                              |
| Coupler and draft system-loco               | 5             | 70,828             | 14,160                           |
| Truck components-loco                       | 10            | 1,383,190          | 138,320                          |
| Axles and journal bearings-loco             | 7             | 814,140            | 116,300                          |
| Wheels-loco                                 | 21            | 1,356,391          | 64,585                           |
| General mech failures-loco                  | 14            | 859,055            | 61,357                           |
| SUBTOTAL...                                 | 200           | 9,839,649          | 49,196                           |
| <b>TRACK, ROADBED AND STRUCTURES:</b>       |               |                    |                                  |
| Roadbed defects                             | 240           | 9,615,676          | 40,058                           |
| Track geometry defects                      | 2,227         | 50,854,322         | 22,827                           |
| Fail and joint bar defects                  | 1,327         | 42,964,650         | 32,368                           |
| Frogs, switches and appliances              | 961           | 11,142,667         | 11,585                           |
| Other way and structures                    | 25            | 1,255,408          | 50,212                           |
| Signal and communication failures           | 17            | 1,312,978          | 77,229                           |
| SUBTOTAL...                                 | 4,797         | 117,145,701        | 24,412                           |
| <b>MISCELLANEOUS:</b>                       |               |                    |                                  |
| Collision at grade crossing                 | 282           | 8,614,130          | 30,540                           |
| Emergency brake application                 | 11            | 250,753            | 22,781                           |
| Vandalism                                   | 172           | 6,157,455          | 35,794                           |
| Interference by non-employees               | 34            | 1,284,564          | 37,770                           |
| Car overloaded/oversized-improper load      | 190           | 4,497,656          | 23,664                           |
| Obstruction on track                        | 110           | 3,633,216          | 33,017                           |
| Trailer/Container improperly loaded/applied | 30            | 440,739            | 14,680                           |
| Interaction of lateral/vertical forces      | 147           | 4,370,083          | 29,725                           |
| Failure to control speed (non-employee)     | 3             | 29,550             | 9,833                            |
| Snow, ice, or mud on track                  | 83            | 1,136,276          | 13,679                           |
| Other acts of God                           | 20            | 1,438,248          | 71,905                           |
| Miscellaneous                               | 383           | 20,679,166         | 53,987                           |
| SUBTOTAL...                                 | 1,465         | 52,531,836         | 35,851                           |
| <b>GRAND TOTAL:...</b>                      | <b>11,277</b> | <b>304,951,427</b> | <b>27,033</b>                    |

TABLE S42. NUMBER OF TRAIN ACCIDENTS AND DAMAGE BY TYPE OF ACCIDENT,  
1978

| Type of Accident                     | No.           | Damage<br>(\$)     | Average<br>Damage per<br>Accident<br>(\$) |
|--------------------------------------|---------------|--------------------|---|
| <b>COLLISIONS</b>                    |               |                    |   |
| Head-on                              | 117           | 8,048,729          | 68,786                                    |
| Rear-end                             | 235           | 6,390,955          | 27,187                                    |
| Side                                 | 939           | 13,600,679         | 14,469                                    |
| Raking                               | 148           | 4,795,531          | 32,391                                    |
| Broken train                         | 34            | 776,721            | 22,838                                    |
| Railroad Crossing                    | 3             | 17,950             | 5,933                                     |
| SUBTOTAL...                          | 1,476         | 33,630,565         | 22,772                                    |
| <b>DERAILMENTS</b>                   |               |                    |   |
| Defects in brakes, hoses, etc.       | 181           | 6,954,852          | 38,418                                    |
| Defects in couplers and draft system | 223           | 7,022,945          | 31,485                                    |
| Defects in locos, cars, etc          | 249           | 8,493,506          | 34,103                                    |
| Defects in trucks, wheels, or axles  | 1,180         | 47,095,500         | 39,904                                    |
| Defects in doors                     | 12            | 309,688            | 25,800                                    |
| Track, Roadbed and Structures        | 4,662         | 113,436,384        | 24,324                                    |
| Obstructions on track                | 61            | 1,854,133          | 30,380                                    |
| General Mech and Elec failures       | 24            | 1,432,919          | 59,695                                    |
| Human factors - employees            | 1,488         | 30,081,197         | 20,206                                    |
| Human factors - non-employees        | 22            | 1,147,722          | 52,154                                    |
| Not elsewhere classifiable           | 661           | 32,435,679         | 49,063                                    |
| SUBTOTAL...                          | 8,763         | 250,266,525        | 28,551                                    |
| <b>OTHER TRAIN ACCIDENTS</b>         |               |                    |   |
| Rail-Highway Crossing                | 286           | 8,684,617          | 30,359                                    |
| Obstruction                          | 59            | 670,576            | 11,359                                    |
| Explosion - Detonation               | 21            | 364,167            | 17,328                                    |
| Fire or violent rupture              | 301           | 7,472,338          | 24,824                                    |
| Other                                | 371           | 3,862,639          | 10,405                                    |
| SUBTOTAL...                          | 1,038         | 21,054,337         | 20,278                                    |
| <b>GRAND TOTAL</b>                   | <b>11,277</b> | <b>304,951,427</b> | <b>27,033</b>                             |

TABLE S43. REPORTABLE DAMAGES IN TRA  
1978

| Type of Train      | Main          |               | Equip<br>(\$) |
|--------------------|---------------|---------------|---------------|
|                    | Equip<br>(\$) | Track<br>(\$) |               |
| <b>Collisions</b>  |               |               |               |
| Freight.....       | 10,479,500    | 925,623       | 3,175,224     |
| Passenger.....     | 1,813,731     | 16,165        | 107,235       |
| Mixed.....         | 64,200        | 550           | 30,300        |
| Work.....          | 301,181       | 76,640        | 281,675       |
| Single Car.....    | 275,023       | 76,300        | 409,805       |
| Cut of Cars.....   | 996,615       | 13,100        | 1,834,636     |
| Yard/Switching.... | 654,525       | 108,283       | 4,652,222     |
| Light Loco(s)..... | 1,196,431     | 104,498       | 1,006,626     |
| Unknown.....       | 83,851        | 12,715        | 97,041        |
| Subtotal.....      | 16,067,057    | 1,333,874     | 11,594,966    |
| <b>Derailments</b> |               |               |               |
| Freight.....       | 152,930,723   | 48,337,771    | 7,969,698     |
| Passenger.....     | 2,730,308     | 482,282       | 291,821       |
| Mixed.....         | 815,177       | 66,362        | 85,765        |
| Work.....          | 405,457       | 66,425        | 11,400        |
| Single Car.....    | 65,950        | 2,760         | 123,839       |
| Cut of Cars.....   | 240,436       | 90,207        | 2,227,798     |
| Yard/Switching.... | 1,210,381     | 528,352       | 7,697,286     |
| Light Loco(s)..... | 135,452       | 36,429        | 656,029       |
| Unknown.....       | 2,015,035     | 1,929,074     | 178,657       |
| Subtotal.....      | 160,548,919   | 51,539,662    | 19,242,295    |
| <b>Other</b>       |               |               |               |
| Freight.....       | 7,152,461     | 1,740,302     | 372,060       |
| Passenger.....     | 4,289,204     | 115,562       | 918,700       |
| Mixed.....         | ---           | ---           | ---           |
| Work.....          | 160,598       | 19,500        | ---           |
| Single Car.....    | 89,000        | 12,544        | 980,049       |
| Cut of Cars.....   | 57,250        | 1,800         | 898,489       |
| Yard/Switching.... | 249,330       | 16,095        | 902,923       |
| Light Loco(s)..... | 264,239       | 30,246        | 510,267       |
| Unknown.....       | 48,396        | 185,274       | 54,820        |
| Subtotal.....      | 12,310,476    | 2,121,323     | 4,637,308     |
| <b>Totals</b>      |               |               |               |
| Freight.....       | 170,562,664   | 51,003,696    | 11,516,982    |
| Passenger.....     | 6,833,243     | 614,009       | 1,317,756     |
| Mixed.....         | 879,377       | 66,912        | 116,065       |
| Work.....          | 867,236       | 162,565       | 293,275       |
| Single Car.....    | 429,973       | 91,604        | 1,513,693     |
| Cut of Cars.....   | 1,294,301     | 105,107       | 4,960,923     |
| Yard/Switching.... | 2,314,236     | 652,730       | 13,252,433    |
| Light Loco(s)..... | 1,598,122     | 171,173       | 2,172,924     |
| Unknown.....       | 2,147,282     | 2,127,063     | 330,518       |
| GRAND TOTAL .....  | 188,926,454   | 54,994,859    | 35,474,569    |

IN ACCIDENTS BY TYPE OF TRAIN AND TRACK,

| Yard.....     | .....Siding..... |               | .....Industry..... |               |
|---------------|------------------|---------------|--------------------|---------------|
| Track<br>(\$) | Equip<br>(\$)    | Track<br>(\$) | Equip<br>(\$)      | Track<br>(\$) |
| 143,701       | 1,445,485        | 69,600        | 151,025            | 900           |
| 4,000         | ---              | ---           | ---                | ---           |
| 192           | ---              | ---           | ---                | ---           |
| 10,150        | 64,700           | 621,250       | 5,952              | ---           |
| 14,223        | 11,699           | 150           | 91,095             | 3,614         |
| 110,910       | 503,744          | 382           | 150,728            | 9,052         |
| 466,534       | 162,850          | 836           | 137,370            | 29,841        |
| 63,342        | 68,600           | ---           | 132,349            | 229           |
| 18,970        | 2,000            | ---           | ---                | ---           |
| 834,022       | 2,259,078        | 692,418       | 668,519            | 43,636        |
| 3,772,129     | 3,546,416        | 1,417,367     | 1,334,871          | 673,414       |
| 18,273        | ---              | ---           | ---                | ---           |
| 17,085        | ---              | ---           | 6,000              | 100           |
| 5,450         | 3,100            | 12,779        | ---                | ---           |
| 22,595        | 38,700           | 437           | 14,000             | ---           |
| 652,640       | 189,475          | 33,946        | 288,375            | 35,280        |
| 4,116,423     | 155,446          | 34,358        | 489,095            | 225,901       |
| 436,486       | 50,315           | 22,687        | 17,975             | 37,307        |
| 437,915       | 2,150            | 56,147        | 20,550             | 25,321        |
| 9,480,996     | 3,985,602        | 1,577,721     | 2,170,866          | 997,323       |
| 8,035         | 135,853          | 15,730        | 151,500            | 5,765         |
| 2,325         | ---              | ---           | ---                | ---           |
| ---           | ---              | ---           | ---                | ---           |
| ---           | ---              | ---           | ---                | ---           |
| 21,411        | 92,849           | 5,147         | 35,235             | ---           |
| 33,064        | 87,100           | ---           | 54,410             | 3,800         |
| 132,912       | 17,900           | ---           | 44,374             | 15,100        |
| 14,842        | 281,963          | 7,876         | 3,200              | 3,000         |
| 7,141         | ---              | 5,800         | ---                | ---           |
| 219,730       | 615,665          | 34,553        | 288,719            | 27,665        |
| 3,923,865     | 5,127,754        | 1,502,897     | 1,637,396          | 680,079       |
| 24,598        | ---              | ---           | ---                | ---           |
| 17,277        | ---              | ---           | 6,000              | 100           |
| 15,600        | 67,800           | 634,029       | 5,952              | ---           |
| 58,229        | 143,248          | 5,734         | 140,330            | 3,614         |
| 796,614       | 780,319          | 34,328        | 493,513            | 48,132        |
| 4,719,869     | 336,196          | 35,194        | 670,839            | 270,842       |
| 514,670       | 400,878          | 30,563        | 153,524            | 40,536        |
| 464,026       | 4,150            | 61,947        | 20,550             | 25,321        |
| 10,534,748    | 6,860,345        | 2,304,692     | 3,128,104          | 1,068,624     |

TABLE S44. TRAIN ACCIDENTS AND REPORTABLE DAMAGES BY SPEED OF TRAIN, 1978

| SPEED RANGE | TOTAL ACCIDENTS | TRACK CAUSED | EQUIPMENT CAUSED | OPERATING PRACTICES | OTHER CAUSES | EQUIPMENT DAMAGE | TRACK DAMAGE | TOTAL DAMAGE |
|-------------|-----------------|--------------|------------------|---------------------|--------------|------------------|--------------|--------------|
| UNKNOWN     | 206             | 30           | 25               | 44                  | 107          | 2,874,828        | 530,298      | 3,405,126    |
| STANDING    | 186             | 10           | 41               | 43                  | 92           | 4,859,991        | 290,424      | 5,150,415    |
| 1 - 10      | 7,469           | 3,677        | 907              | 2,301               | 584          | 62,463,461       | 25,267,904   | 87,731,365   |
| 11 - 20     | 1,209           | 440          | 328              | 262                 | 179          | 29,627,456       | 15,297,992   | 44,925,448   |
| 21 - 30     | 1,084           | 408          | 331              | 116                 | 229          | 53,005,182       | 12,156,627   | 65,161,809   |
| 31 - 40     | 561             | 158          | 249              | 40                  | 114          | 40,149,628       | 7,317,318    | 47,466,946   |
| 41 - 50     | 347             | 44           | 190              | 18                  | 95           | 23,696,338       | 4,974,277    | 28,670,615   |
| 51 - 60     | 145             | 20           | 70               | 11                  | 44           | 12,661,741       | 2,582,563    | 15,244,304   |
| 61 - 70     | 36              | 3            | 13               | 4                   | 16           | 3,031,391        | 662,487      | 3,693,878    |
| 71 - 80     | 19              | 1            | 7                | 3                   | 8            | 3,042,174        | 108,045      | 3,150,219    |
| 81 - 90     | 11              | 4            | 7                | ---                 | ---          | 144,500          | 17,813       | 162,313      |
| >= 100      | 4               | ---          | 3                | ---                 | 1            | 172,669          | 16,300       | 188,989      |
| TOTAL...    | 11,277          | 4,795        | 2,171            | 2,842               | 1,469        | 235,729,379      | 69,222,048   | 304,951,427  |

TABLE S45. TRAIN ACCIDENTS AND REPORTABLE DAMAGES BY FRA TRACK CLASSIFICATION, 1978

| TRACK CLASS | TOTAL ACCIDENTS | TRACK CAUSED | EQUIPMENT CAUSED | OPERATING PRACTICES | OTHER CAUSES | EQUIPMENT DAMAGE | TRACK DAMAGE | TOTAL DAMAGE |
|-------------|-----------------|--------------|------------------|---------------------|--------------|------------------|--------------|--------------|
| UNKNOWN     | 910             | 345          | 112              | 314                 | 139          | 10,341,054       | 4,041,504    | 14,382,598   |
| 1           | 5,676           | 2,744        | 623              | 1,773               | 536          | 55,265,268       | 17,091,822   | 72,357,090   |
| 2           | 1,840           | 646          | 356              | 396                 | 242          | 41,294,372       | 12,660,035   | 53,954,407   |
| 3           | 1,687           | 656          | 540              | 200                 | 291          | 68,499,283       | 21,990,223   | 90,489,506   |
| 4           | 981             | 185          | 439              | 137                 | 220          | 50,451,524       | 10,885,564   | 61,337,088   |
| 5           | 170             | 19           | 94               | 22                  | 35           | 8,553,038        | 2,407,750    | 10,960,788   |
| 6           | 13              | ---          | 7                | ---                 | 6            | 1,324,800        | 145,150      | 1,469,950    |
| TOTAL...    | 11,277          | 4,795        | 2,171            | 2,842               | 1,469        | 235,729,379      | 69,222,048   | 304,951,427  |

## **4.0 RAILROAD TABLES, 1978**

TABLE R1. OPERATIONAL MILES BY RAILROAD, 1978

|  | Locomotive<br>Train<br>Miles | Motor<br>Train<br>Miles | Yard<br>Switching<br>Miles | Total<br>Train<br>Miles |
|--|------------------------------|-------------------------|----------------------------|-------------------------|
| -----                                      |                              |                         |                            |                         |
| CLASS I RAILROADS (LINE-HAUL)              |                              |                         |                            |                         |
| EASTERN DISTRICT                           |                              |                         |                            |                         |
| National Railroad Psgr Corp. (Amtrak)      | 27,847,065                   | 4,350,618               | 600,063                    | 32,797,746              |
| Baltimore and Ohio Railroad                | 13,870,889                   | 224,624                 | 7,736,040                  | 21,831,553              |
| Bessemer and Lake Erie Railroad            | 755,634                      | ---                     | 247,674                    | 1,003,308               |
| Boston and Maine Corp.                     | 1,649,329                    | 1,445,025               | 1,097,436                  | 4,191,790               |
| Chesapeake and Ohio Railway                | 13,692,797                   | ---                     | 6,185,467                  | 19,878,264              |
| Consolidated Rail Corp.                    | 52,637,630                   | 12,568,097              | 32,067,972                 | 97,273,699              |
| Delaware and Hudson Railway                | 1,942,442                    | ---                     | 448,834                    | 2,391,276               |
| Detroit, Toledo and Ironton Railroad       | 1,102,917                    | ---                     | 592,921                    | 1,695,838               |
| Elgin, Joliet and Eastern Railway          | 734,449                      | ---                     | 2,327,502                  | 3,061,951               |
| Grand Trunk Western Railroad               | 2,940,350                    | ---                     | 2,782,405                  | 5,722,755               |
| Long Island Railroad                       | 1,957,545                    | 5,468,360               | 843,086                    | 8,268,991               |
| Norfolk and Western Railway                | 14,528,403                   | ---                     | 8,170,866                  | 22,699,269              |
| Pittsburg and Lake Erie Railroad           | 353,165                      | ---                     | 1,001,752                  | 1,354,917               |
| Western Maryland Railway                   | 1,105,377                    | ---                     | 466,542                    | 1,571,919               |
| SUBTOTAL, EASTERN DISTRICT:                | 135,117,992                  | 24,056,724              | 64,568,560                 | 223,743,276             |
| SOUTHERN DISTRICT                          |                              |                         |                            |                         |
| Alabama Great Southern Railroad            | 2,395,474                    | ---                     | 697,684                    | 3,093,158               |
| Central of Georgia Railroad Company        | 2,356,880                    | ---                     | 1,000,496                  | 3,357,376               |
| Cinn., N.O. & Texas Pacific Rwy            | 3,877,813                    | ---                     | 987,649                    | 4,865,462               |
| Clinchfield Railroad                       | 984,489                      | ---                     | 359,565                    | 1,344,054               |
| Florida East Coast Railway                 | 2,301,156                    | ---                     | 785,811                    | 3,086,967               |
| Illinois Central Gulf Railroad             | 17,520,643                   | 1,388,907               | 6,977,279                  | 25,886,829              |
| Louisville and Nashville Railroad          | 19,179,461                   | ---                     | 9,967,426                  | 29,146,887              |
| Seaboard Coast Line Railroad               | 21,285,994                   | ---                     | 7,133,190                  | 28,419,184              |
| Southern Railway                           | 18,849,174                   | ---                     | 6,163,854                  | 25,013,028              |
| SUBTOTAL, SOUTHERN DISTRICT:               | 88,751,084                   | 1,388,907               | 34,072,954                 | 124,212,945             |
| WESTERN DISTRICT                           |                              |                         |                            |                         |
| Atchison, Topeka and Santa Fe Railway      | 46,833,569                   | ---                     | 10,208,419                 | 57,041,988              |
| Burlington Northern Inc.                   | 47,003,572                   | 2,862,892               | 18,589,352                 | 68,455,816              |
| Chicago and Northwestern                   | 12,821,853                   | 2,429,659               | 6,559,806                  | 21,811,318              |
| Chic., Milw., St. Paul & Pac. R.R.         | 11,735,636                   | ---                     | 4,475,214                  | 16,210,850              |
| Chicago, Rock Island & Pacific Railroad    | 10,173,827                   | ---                     | 3,723,991                  | 13,897,818              |
| Colorado and Southern Railway              | 1,541,935                    | ---                     | 98,849                     | 1,640,784               |
| Denver and Rio Grande Western Railroad     | 5,232,082                    | ---                     | 1,431,564                  | 6,663,646               |
| Duluth, Missabe & Iron Range Railway       | 619,537                      | ---                     | 466,652                    | 1,086,189               |
| Fort Worth and Denver Railway              | 1,554,738                    | ---                     | 451,957                    | 2,006,695               |
| Kansas City Southern Railway               | 2,028,345                    | ---                     | 1,372,050                  | 3,400,395               |
| Louisiana & Arkansas Railway               | 985,105                      | ---                     | 643,890                    | 1,628,995               |
| Missouri-Kansas-Texas-Railroad             | 2,830,379                    | ---                     | 1,519,281                  | 4,349,660               |
| Missouri Pacific Railroad                  | 26,218,348                   | ---                     | 10,169,670                 | 36,388,018              |
| St. Louis-San Francisco Railway            | 9,794,240                    | ---                     | 3,577,019                  | 13,371,259              |
| St. Louis Southwestern Railway             | 5,062,575                    | ---                     | 1,467,481                  | 6,530,056               |
| Soo line Railroad                          | 4,828,439                    | ---                     | 2,134,100                  | 6,962,539               |
| Southern Pacific Trans. Company            | 33,213,288                   | ---                     | 12,877,686                 | 46,090,974              |
| Union Pacific Railroad                     | 35,108,556                   | ---                     | 7,006,680                  | 42,115,236              |
| Western Pacific Railroad                   | 3,652,139                    | ---                     | 857,261                    | 4,509,400               |
| SUBTOTAL, WESTERN DISTRICT:                | 261,238,163                  | 5,292,551               | 87,630,922                 | 354,161,636             |
| CLASS I RAILROADS (SWITCHING AND TERMINAL) |                              |                         |                            |                         |
| EASTERN DISTRICT                           |                              |                         |                            |                         |
| Union Railroad 'Penna.'                    | ---                          | ---                     | 2,525,862                  | 2,525,862               |
| CLASS II AND III RAILROADS                 | 20,080,143                   | 1,540,833               | 25,699,580                 | 47,320,556              |
| RECAPITULATION                             |                              |                         |                            |                         |
| CLASS I RAILROADS (LINE-HAUL)              | 485,107,239                  | 30,738,182              | 186,272,436                | 702,117,857             |
| CLASS I RAILROADS (SWITCHING AND TERMINAL) | ---                          | ---                     | 2,525,862                  | 2,525,862               |
| CLASS II AND III RAILROADS                 | 20,080,143                   | 1,540,833               | 25,699,580                 | 47,320,556              |
| GRAND TOTAL.....                           | 505,187,382                  | 32,279,015              | 214,497,878                | 751,964,275             |

TABLE R2. TRAIN INCIDENTS AND CASUALTIES BY RAILROAD AND OCCURRENCE, 1978

|   | Coupling<br>ACC | CAS | Operating<br>Locos/Mtr<br>ACC | Crs<br>CAS | Operating<br>Hand<br>ACC | Brakes<br>CAS | Operating<br>Switches<br>ACC | CAS | Contact With<br>Fixed<br>ACC | Structure<br>CAS | Get<br>On<br>ACC | Off<br>CAS |
|---|-----------------|-----|-------------------------------|------------|--------------------------|---------------|------------------------------|-----|------------------------------|------------------|------------------|------------|
| CLASS I RR (LINE-HAUL)                              |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| EASTERN DISTRICT                                    |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| National Railroad Passenger Corp.<br>(Amtrak).....  | 4               | 5   | 1                             | 1          | ---                      | ---           | ---                          | --- | ---                          | ---              | 26               | 26         |
| Baltimore and Ohio Railroad.....                    | 23              | 23  | 26                            | 26         | 14                       | 14            | 3                            | 3   | 8                            | 8                | 76               | 76         |
| Bessemer and Lake Erie Railroad.....                | 1               | 1   | 1                             | 1          | 2                        | 2             | ---                          | --- | ---                          | ---              | 3                | 3          |
| Boston and Maine Corp.....                          | 2               | 2   | 4                             | 4          | 2                        | 2             | ---                          | --- | 4                            | 4                | 17               | 17         |
| Chesapeake and Ohio Railway.....                    | 35              | 35  | 18                            | 18         | 16                       | 16            | 2                            | 2   | 21                           | 21               | 81               | 81         |
| Consolidated Rail Corp.....                         | 71              | 71  | 128                           | 128        | 34                       | 34            | 17                           | 17  | 16                           | 16               | 250              | 250        |
| Delaware and Hudson Railway.....                    | 1               | 1   | 4                             | 4          | 2                        | 2             | ---                          | --- | ---                          | ---              | 10               | 10         |
| Detroit, Toledo and Ironton Railroad...             | 1               | 1   | 2                             | 2          | 6                        | 6             | ---                          | --- | 4                            | 4                | 4                | 4          |
| Elgin, Joliet and Eastern Railway.....              | 10              | 10  | 9                             | 9          | 4                        | 4             | 2                            | 2   | ---                          | ---              | 19               | 19         |
| Grand Trunk Western Railroad.....                   | 7               | 7   | 4                             | 4          | 4                        | 4             | ---                          | --- | 3                            | 3                | 37               | 37         |
| Long Island Railroad.....                           | 1               | 1   | 10                            | 11         | 1                        | 1             | 1                            | 1   | 3                            | 3                | 16               | 16         |
| Norfolk and Western Railway.....                    | 31              | 31  | 26                            | 28         | 16                       | 16            | 1                            | 1   | 4                            | 4                | 105              | 106        |
| Pittsburg and Lake Erie Railroad.....               | ---             | --- | 1                             | 1          | 2                        | 2             | ---                          | --- | 2                            | 2                | 5                | 5          |
| Western Maryland Railway.....                       | 2               | 2   | 5                             | 5          | 2                        | 2             | ---                          | --- | ---                          | ---              | 3                | 3          |
| SUBTOTAL, EASTERN DISTRICT...                       | 189             | 190 | 239                           | 242        | 105                      | 105           | 26                           | 26  | 65                           | 65               | 652              | 653        |
| SOUTHERN DISTRICT                                   |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| Alabama Great Southern Railroad.....                | ---             | --- | ---                           | ---        | ---                      | ---           | ---                          | --- | ---                          | ---              | 4                | 5          |
| Central of Georgia Railroad.....                    | 2               | 2   | ---                           | ---        | ---                      | ---           | ---                          | --- | ---                          | ---              | 16               | 16         |
| Cinn., N.O. & Texas Pacific Railway...              | ---             | --- | ---                           | ---        | ---                      | ---           | ---                          | --- | ---                          | ---              | 6                | 6          |
| Clinchfield Railroad.....                           | 3               | 3   | 3                             | 3          | 1                        | 1             | ---                          | --- | ---                          | ---              | 5                | 5          |
| Florida East Coast Railway.....                     | 1               | 1   | ---                           | ---        | ---                      | ---           | ---                          | --- | ---                          | ---              | 2                | 2          |
| Illinois Central Gulf Railroad.....                 | 29              | 29  | 39                            | 39         | 6                        | 6             | 8                            | 8   | 20                           | 20               | 76               | 77         |
| Louisville and Nashville Railroad.....              | 16              | 16  | 31                            | 32         | 14                       | 14            | 2                            | 2   | 12                           | 12               | 105              | 105        |
| Seaboard Coast Line Railroad.....                   | 32              | 33  | 47                            | 47         | 17                       | 17            | 7                            | 7   | 9                            | 9                | 151              | 151        |
| Southern Railway.....                               | 15              | 15  | ---                           | ---        | ---                      | ---           | ---                          | --- | ---                          | ---              | 80               | 80         |
| SUBTOTAL, SOUTHERN DISTRICT..                       | 98              | 99  | 120                           | 121        | 38                       | 38            | 17                           | 17  | 41                           | 41               | 445              | 447        |
| WESTERN DISTRICT                                    |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| Atchison, Topeka and Santa Fe Railway..             | 26              | 26  | 40                            | 41         | 18                       | 18            | 3                            | 3   | 11                           | 11               | 143              | 143        |
| Burlington Northern Inc.....                        | 32              | 32  | 71                            | 74         | 29                       | 29            | 18                           | 18  | 33                           | 33               | 187              | 190        |
| Chicago and Northwestern Trans.<br>Company.....     | 4               | 4   | 16                            | 16         | 8                        | 8             | 1                            | 1   | 4                            | 4                | 44               | 44         |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 19              | 19  | 4                             | 4          | 10                       | 10            | 3                            | 3   | 5                            | 5                | 82               | 82         |
| Chicago, Rock Island & Pacific<br>Railroad.....     | 11              | 11  | 18                            | 18         | 2                        | 2             | 1                            | 1   | 4                            | 4                | 48               | 48         |
| Colorado and Southern Railway.....                  | 2               | 2   | ---                           | ---        | ---                      | ---           | ---                          | --- | 2                            | 2                | 9                | 9          |
| Denver and Rio Grande Western Railroad.             | 4               | 4   | 6                             | 6          | 6                        | 6             | ---                          | --- | 3                            | 3                | 10               | 10         |
| Duluth, Missabe and Iron Range Railway.             | 1               | 1   | 1                             | 1          | 1                        | 1             | 1                            | 1   | ---                          | ---              | 4                | 4          |
| Fort Worth and Denver Railway.....                  | ---             | --- | 3                             | 3          | ---                      | ---           | ---                          | --- | 1                            | 1                | 12               | 12         |
| Kansas City Southern Railway.....                   | 8               | 8   | ---                           | ---        | 5                        | 5             | 1                            | 1   | 2                            | 2                | 17               | 17         |
| Louisiana and Arkansas Railway.....                 | 5               | 5   | ---                           | ---        | 4                        | 4             | ---                          | --- | 1                            | 1                | 14               | 14         |
| Missouri-Kansas-Texas Railroad.....                 | 1               | 1   | 25                            | 25         | 3                        | 3             | ---                          | --- | 2                            | 2                | 27               | 27         |
| Missouri Pacific Railroad.....                      | 34              | 35  | 51                            | 53         | 10                       | 10            | 3                            | 3   | 15                           | 15               | 103              | 106        |
| St. Louis-San Francisco Railway.....                | 12              | 12  | 43                            | 43         | 5                        | 5             | ---                          | --- | 2                            | 2                | 30               | 31         |
| St. Louis Southwestern Railway.....                 | 9               | 9   | 7                             | 7          | 3                        | 3             | 1                            | 1   | 3                            | 3                | 22               | 22         |
| Soo Line Railroad.....                              | 14              | 15  | 17                            | 18         | 13                       | 13            | 2                            | 2   | 1                            | 1                | 21               | 21         |
| Southern Pacific Trans. Company.....                | 57              | 57  | 68                            | 69         | 29                       | 29            | 11                           | 11  | 18                           | 18               | 240              | 242        |
| Union Pacific Railroad.....                         | 45              | 45  | 42                            | 43         | 40                       | 40            | 11                           | 11  | 18                           | 18               | 186              | 186        |
| Western Pacific Railroad.....                       | 6               | 6   | 8                             | 8          | 3                        | 3             | ---                          | --- | 3                            | 3                | 15               | 16         |
| SUBTOTAL, WESTERN DISTRICT..                        | 290             | 292 | 420                           | 429        | 189                      | 189           | 56                           | 56  | 128                          | 128              | 1,214            | 1,226      |
| CLASS I RR (SWITCHING AND TERMINAL)                 |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| EASTERN DISTRICT                                    |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| Union Railroad (Pennsylvania).....                  | 2               | 2   | 2                             | 2          | 2                        | 2             | ---                          | --- | 5                            | 5                | 4                | 4          |
| CLASS II AND III RAILROADS.....                     | 137             | 139 | 105                           | 105        | 32                       | 32            | 12                           | 12  | 49                           | 49               | 283              | 286        |
| RECAPITULATION                                      |                 |     |                               |            |                          |               |                              |     |                              |                  |                  |            |
| Class I RR (Line-Haul).....                         | 577             | 581 | 779                           | 792        | 332                      | 332           | 99                           | 99  | 234                          | 234              | 2,311            | 2,326      |
| Class I RR (Switching and Terminal)....             | 2               | 2   | 2                             | 2          | 2                        | 2             | ---                          | --- | 5                            | 5                | 4                | 4          |
| Class II & III Railroads.....                       | 137             | 139 | 105                           | 105        | 32                       | 32            | 12                           | 12  | 49                           | 49               | 283              | 286        |
| TOTAL FOR ALL RAILROADS.....                        | 716             | 722 | 886                           | 899        | 366                      | 366           | 111                          | 111 | 288                          | 288              | 2,598            | 2,616      |



TABLE R2 (CONT)

|  | Acc At  |           | Struck Cr |          | ...Other... |       | .....TOTAL..... |         |        |                 |
|--|---------|-----------|-----------|----------|-------------|-------|-----------------|---------|--------|-----------------|
|  | Pub ACC | Kings CAS | Run ACC   | Over CAS | ACC         | CAS   | Acc             | Man Hrs | Cas    | Cas/Mil Man Hrs |
| CLASS I RR (LINE-HAUL)                           |         |           |           |          |             |       |                 |         |        |                 |
| EASTERN DISTRICT                                 |         |           |           |          |             |       |                 |         |        |                 |
| National Railroad Passenger Corp. (Amtrak).....  | 1       | 4         | 12        | 12       | 270         | 273   | 314             | 7.73    | 321    | 7.91            |
| Baltimore and Ohio Railroad.....                 | 137     | 187       | 38        | 39       | 147         | 148   | 472             | 14.89   | 524    | 16.53           |
| Bessemer and Lake Erie Railroad.....             | 6       | 11        | ---       | ---      | 10          | 10    | 23              | 8.93    | 28     | 10.87           |
| Boston and Maine Corp.....                       | 17      | 23        | 14        | 14       | 32          | 33    | 92              | 14.64   | 99     | 15.97           |
| Chesapeake and Ohio Railway.....                 | 132     | 187       | 31        | 32       | 110         | 112   | 446             | 12.24   | 504    | 13.83           |
| Consolidated Rail Corp.....                      | 284     | 398       | 167       | 169      | 988         | 988   | 1,955           | 10.74   | 2,071  | 11.38           |
| Delaware and Hudson Railway.....                 | 4       | 5         | 3         | 3        | 13          | 13    | 37              | 10.05   | 36     | 10.32           |
| Detroit, Toledo and Ironton Railroad...          | 7       | 9         | ---       | ---      | 14          | 14    | 38              | 12.95   | 40     | 13.63           |
| Elgin, Joliet and Eastern Railway.....           | 7       | 8         | 2         | 2        | 49          | 50    | 102             | 18.58   | 104    | 18.95           |
| Grand Trunk Western Railroad.....                | 49      | 61        | 11        | 12       | 85          | 90    | 200             | 21.21   | 218    | 23.12           |
| Long Island Railroad.....                        | 9       | 9         | 21        | 21       | 111         | 113   | 173             | 14.40   | 176    | 14.65           |
| Norfolk and Western Railway.....                 | 188     | 265       | 50        | 59       | 211         | 224   | 632             | 17.97   | 734    | 20.87           |
| Pittsburg and Lake Erie Railroad.....            | 3       | 4         | 3         | 3        | 8           | 8     | 24              | 5.73    | 25     | 5.97            |
| Western Maryland Railway.....                    | 3       | 4         | 7         | 7        | 10          | 10    | 32              | 14.05   | 33     | 14.49           |
| SUBTOTAL, EASTERN DISTRICT:..                    | 847     | 1,175     | 359       | 373      | 2,058       | 2,086 | 4,540           | 12.11   | 4,915  | 13.12           |
| SOUTHERN DISTRICT                                |         |           |           |          |             |       |                 |         |        |                 |
| Alabama Great Southern Railroad.....             | 23      | 32        | 5         | 5        | 11          | 11    | 43              | *       | 53     | *               |
| Central of Georgia Railroad.....                 | 25      | 26        | 6         | 7        | 33          | 34    | 82              | *       | 85     | *               |
| Cinn., N.C. & Texas Pacific Railway....          | 9       | 14        | 7         | 7        | 22          | 22    | 44              | *       | 49     | *               |
| Clinchfield Railroad.....                        | 1       | 2         | 3         | 3        | 8           | 8     | 24              | 14.12   | 25     | 14.71           |
| Florida East Coast Railway.....                  | 16      | 22        | 20        | 20       | 4           | 4     | 43              | 18.72   | 49     | 21.33           |
| Illinois Central Gulf Railroad.....              | 178     | 240       | 34        | 34       | 170         | 170   | 560             | 15.01   | 623    | 16.69           |
| Louisville and Nashville Railroad.....           | 109     | 140       | 33        | 34       | 202         | 213   | 524             | 15.80   | 568    | 17.13           |
| Seaboard Coast Line Railroad.....                | 220     | 292       | 53        | 53       | 198         | 199   | 734             | 18.79   | 808    | 20.69           |
| Southern Railway.....                            | 201     | 255       | 54        | 58       | 180         | 181   | 530             | 13.08   | 589    | 14.54           |
| SUBTOTAL, SOUTHERN DISTRICT:..                   | 782     | 1,023     | 215       | 221      | 828         | 842   | 2,584           | 16.77   | 2,849  | 18.49           |
| WESTERN DISTRICT                                 |         |           |           |          |             |       |                 |         |        |                 |
| Atchison, Topeka and Santa Fe Railway..          | 239     | 323       | 57        | 59       | 147         | 147   | 684             | 11.07   | 771    | 12.47           |
| Burlington Northern Inc.....                     | 139     | 189       | 50        | 63       | 355         | 380   | 914             | 10.04   | 1,008  | 11.07           |
| Chicago and Northwestern Trans. Company.....     | 125     | 150       | 25        | 25       | 128         | 129   | 355             | 11.72   | 381    | 12.58           |
| Chicago, Milw., St. Paul & Pacific Railroad..... | 89      | 112       | 19        | 19       | 99          | 102   | 330             | 15.00   | 356    | 16.18           |
| Chicago, Rock Island & Pacific Railroad.....     | 58      | 108       | 13        | 15       | 103         | 107   | 258             | 15.47   | 314    | 18.83           |
| Colorado and Southern Railway.....               | 6       | 15        | 2         | 2        | 6           | 6     | 29              | 22.19   | 36     | 27.54           |
| Denver and Rio Grande Western Railroad.          | 12      | 16        | 3         | 5        | 18          | 18    | 62              | 7.99    | 68     | 8.76            |
| Duluth, Missabe and Iron Range Railway.          | ---     | ---       | ---       | ---      | 19          | 19    | 27              | 8.67    | 27     | 8.67            |
| Fort Worth and Denver Railway.....               | 10      | 11        | 2         | 2        | 16          | 17    | 44              | 18.98   | 46     | 19.84           |
| Kansas City Southern Railway.....                | 23      | 32        | 4         | 4        | 23          | 25    | 63              | 13.52   | 94     | 15.31           |
| Louisiana and Arkansas Railway.....              | 33      | 47        | 2         | 2        | 16          | 16    | 75              | *       | 89     | *               |
| Missouri-Kansas-Texas Railroad.....              | 41      | 61        | 6         | 8        | 67          | 68    | 174             | 32.22   | 195    | 36.10           |
| Missouri Pacific Railroad.....                   | 388     | 546       | 40        | 45       | 214         | 226   | 858             | 20.63   | 1,039  | 24.98           |
| St. Louis-San Francisco Railway.....             | 94      | 125       | 11        | 13       | 33          | 34    | 230             | 14.86   | 265    | 17.12           |
| St. Louis Southwestern Railway.....              | 26      | 43        | 5         | 5        | 44          | 46    | 122             | 15.08   | 139    | 17.18           |
| Soo Line Railroad.....                           | 66      | 97        | 6         | 7        | 75          | 80    | 215             | 22.80   | 254    | 26.94           |
| Southern Pacific Trans. Company.....             | 195     | 253       | 88        | 92       | 391         | 425   | 1,097           | 16.38   | 1,196  | 17.86           |
| Union Pacific Railroad.....                      | 143     | 192       | 40        | 44       | 300         | 314   | 825             | 16.11   | 895    | 17.48           |
| Western Pacific Railroad.....                    | 21      | 31        | 8         | 11       | 46          | 49    | 110             | 22.04   | 127    | 25.45           |
| SUBTOTAL, WESTERN DISTRICT:..                    | 1,712   | 2,351     | 383       | 421      | 2,100       | 2,208 | 6,492           | 14.57   | 7,300  | 16.38           |
| CLASS I PR (SWITCHING AND TERMINAL)              |         |           |           |          |             |       |                 |         |        |                 |
| EASTERN DISTRICT                                 |         |           |           |          |             |       |                 |         |        |                 |
| Union Railroad (Pennsylvania).....               | ---     | ---       | ---       | ---      | 14          | 14    | 29              | 8.46    | 29     | 8.46            |
| CLASS II AND III RAILROADS.....                  | 187     | 255       | 51        | 52       | 417         | 418   | 1,273           | 16.33   | 1,348  | 17.30           |
| RECAPITULATION                                   |         |           |           |          |             |       |                 |         |        |                 |
| Class I PR (Line-Haul).....                      | 3,341   | 4,549     | 957       | 1,015    | 4,986       | 5,136 | 13,616          | 13.97   | 15,064 | 15.46           |
| Class I RR (Switching and Terminal)....          | ---     | ---       | ---       | ---      | 14          | 14    | 29              | 8.46    | 29     | 8.46            |
| Class II & III Railroads.....                    | 187     | 255       | 51        | 52       | 417         | 418   | 1,273           | 16.33   | 1,348  | 17.30           |
| TOTAL FOR ALL RAILROADS.....                     | 3,528   | 4,804     | 1,008     | 1,067    | 5,417       | 5,568 | 14,918          | 14.13   | 16,441 | 15.57           |

TABLE R3. TRAIN ACCIDENTS BY RAILROAD, TYPE, AND CAUSE, 1978

|   | .....Collisions..... |       |       |       |       | .....Derailments..... |                  |       |       |       |       |                 |
|---|----------------------|-------|-------|-------|-------|-----------------------|------------------|-------|-------|-------|-------|-----------------|
|   | Human<br>Factor      | Equip | Track | Other | Total | Damages<br>(\$)       | Human<br>Factors | Equip | Track | Other | Total | Damages<br>(\$) |
| CLASS I RR (LINE-HAUL)                              |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| EASTERN DISTRICT                                    |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| National Railroad Passenger Corp.<br>(Amtrak).....  | 12                   | 1     | ---   | 3     | 16    | 397,900               | 11               | 19    | 34    | 7     | 71    | 1,647,995       |
| Baltimore and Ohio Railroad.....                    | 30                   | 1     | 2     | 5     | 38    | 1,217,620             | 37               | 71    | 184   | 56    | 350   | 9,083,373       |
| Bessemer and Lake Erie Railroad...                  | 1                    | 1     | ---   | ---   | 2     | 3,000                 | 2                | 7     | 3     | ---   | 12    | 565,350         |
| Boston and Maine Corp.....                          | 5                    | ---   | ---   | 1     | 6     | 43,275                | 4                | 7     | 26    | 10    | 47    | 9,19,203        |
| Chesapeake and Ohio Railway.....                    | 39                   | 2     | 3     | 4     | 48    | 349,678               | 45               | 62    | 106   | 29    | 242   | 6,347,790       |
| Consolidated Rail Corp.....                         | 142                  | 8     | 21    | 15    | 186   | 3,773,187             | 208              | 228   | 784   | 92    | 1,312 | 16,858,573      |
| Delaware and Hudson Railway.....                    | 1                    | ---   | ---   | ---   | 1     | 33,100                | 3                | 4     | 24    | 6     | 37    | 1,213,188       |
| Detroit, Toledo and Ironton<br>Railroad.....        | 2                    | 1     | 1     | 1     | 5     | 23,077                | 11               | 2     | 13    | 2     | 28    | 1,058,671       |
| Elgin, Joliet and Eastern Railway..                 | 10                   | 1     | ---   | ---   | 11    | 111,490               | 4                | 3     | 12    | 12    | 31    | 2,19,513        |
| Grand Trunk Western Railroad.....                   | 15                   | 1     | ---   | ---   | 17    | 245,951               | 27               | 14    | 11    | 3     | 55    | 1,369,764       |
| Long Island Railroad.....                           | 5                    | ---   | ---   | 1     | 6     | 138,558               | ---              | ---   | 1     | ---   | 1     | 8,025           |
| Norfolk and Western Railway.....                    | 16                   | 1     | ---   | 1     | 20    | 405,057               | 16               | 35    | 64    | 13    | 130   | 5,295,174       |
| Pittsburg and Lake Erie Railroad...                 | 1                    | ---   | ---   | ---   | 1     | 4,945                 | 13               | 9     | 32    | 7     | 61    | 799,142         |
| Western Maryland Railway.....                       | 2                    | 2     | ---   | ---   | 4     | 54,700                | 4                | 1     | 14    | 6     | 25    | 596,500         |
| SUBTOTAL, EASTERN<br>DISTRICT.....                  | 283                  | 19    | 27    | 32    | 361   | 6,601,538             | 367              | 462   | 1,306 | 245   | 2,402 | 46,004,261      |
| SOUTHERN DISTRICT                                   |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| Alabama Great Southern Railroad...                  | 2                    | ---   | ---   | ---   | 2     | 396,450               | 6                | 3     | 3     | ---   | 12    | 135,500         |
| Central of Georgia Railroad.....                    | 3                    | ---   | ---   | ---   | 3     | 19,275                | 10               | 6     | 29    | 1     | 46    | 6,00,525        |
| Cinn., N.O. & Texas Pacific<br>Railway.....         | 6                    | ---   | ---   | ---   | 6     | 21,175                | 1                | 13    | 6     | ---   | 20    | 1,120,746       |
| Clinchfield Railroad.....                           | 2                    | 3     | ---   | ---   | 5     | 359,571               | 3                | 8     | 12    | 18    | 41    | 1,821,354       |
| Florida East Coast Railway.....                     | 2                    | ---   | 1     | ---   | 3     | 489,367               | 3                | 2     | 3     | 1     | 9     | 354,989         |
| Illinois Central Gulf Railroad.....                 | 33                   | 6     | 9     | 4     | 52    | 769,644               | 53               | 67    | 356   | 45    | 523   | 18,731,764      |
| Louisville and Nashville Railroad..                 | 63                   | 2     | 6     | 6     | 77    | 4,068,483             | 136              | 131   | 326   | 73    | 666   | 18,279,330      |
| Seaboard Coast Line Railroad.....                   | 44                   | 6     | 4     | ---   | 54    | 1,101,622             | 88               | 90    | 207   | 30    | 415   | 8,841,281       |
| Southern Railway.....                               | 48                   | 1     | ---   | 1     | 50    | 1,728,667             | 60               | 53    | 104   | 12    | 229   | 4,552,705       |
| SUBTOTAL, SOUTHERN<br>DISTRICT.....                 | 203                  | 18    | 20    | 11    | 252   | 8,954,474             | 360              | 373   | 1,046 | 180   | 1,961 | 54,438,195      |
| WESTERN DISTRICT                                    |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| Atchison, Topeka and Santa Fe<br>Railway.....       | 67                   | 3     | 2     | 6     | 78    | 1,230,842             | 54               | 59    | 83    | 14    | 210   | 6,467,526       |
| Burlington Northern Inc.....                        | 135                  | 5     | 6     | 10    | 156   | 3,589,510             | 120              | 166   | 322   | 42    | 650   | 22,559,597      |
| Chicago and Northwestern Trans.<br>Company.....     | 59                   | 7     | 3     | 6     | 75    | 1,096,515             | 67               | 84    | 433   | 62    | 666   | 13,472,067      |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 32                   | 6     | 5     | 7     | 50    | 1,090,833             | 79               | 103   | 302   | 34    | 518   | 13,956,529      |
| Chicago, Rock Island & Pacific<br>Railroad.....     | 21                   | 4     | 3     | 3     | 31    | 712,829               | 54               | 111   | 422   | 29    | 616   | 12,650,660      |
| Colorado and Southern Railway.....                  | 4                    | ---   | ---   | ---   | 4     | 21,500                | 7                | 7     | 21    | 6     | 43    | 2,116,155       |
| Denver and Rio Grande Western<br>Railroad.....      | 6                    | ---   | ---   | ---   | 6     | 194,020               | 4                | 3     | 5     | 3     | 15    | 7,01,271        |
| Duluth, Missabe and Iron Range<br>Railway.....      | 1                    | ---   | ---   | 2     | 3     | 15,475                | 4                | 1     | 5     | 7     | 17    | 182,718         |
| Port Worth and Denver Railway.....                  | 4                    | 1     | ---   | ---   | 5     | 48,110                | 1                | 2     | 24    | 3     | 30    | 1,815,004       |
| Kansas City Southern Railway.....                   | 17                   | 2     | ---   | 2     | 21    | 372,599               | 10               | 22    | 40    | 9     | 81    | 3,932,862       |
| Louisiana and Arkansas Railway.....                 | 13                   | ---   | 1     | 2     | 16    | 137,300               | 10               | 12    | 33    | 5     | 60    | 1,026,671       |
| Missouri-Kansas-Texas Railroad.....                 | 15                   | ---   | ---   | 15    | 15    | 138,195               | 13               | 25    | 51    | 2     | 91    | 1,303,887       |
| Missouri Pacific Railroad.....                      | 25                   | ---   | 2     | 3     | 30    | 729,744               | 24               | 76    | 69    | 10    | 179   | 10,183,558      |
| St. Louis-San Francisco Railway....                 | 34                   | 3     | 6     | 3     | 46    | 840,839               | 37               | 30    | 80    | 7     | 154   | 4,754,261       |
| St. Louis Southwestern Railway....                  | 17                   | ---   | 1     | 1     | 19    | 286,345               | 21               | 25    | 18    | 7     | 71    | 4,581,127       |
| Soo Line Railroad.....                              | 32                   | 1     | 1     | 2     | 36    | 340,860               | 25               | 31    | 71    | 11    | 138   | 5,293,468       |
| Southern Pacific Trans. Company....                 | 66                   | 7     | 1     | 5     | 101   | 1,419,196             | 92               | 140   | 223   | 37    | 492   | 13,410,636      |
| Union Pacific Railroad.....                         | 81                   | 3     | 6     | 8     | 98    | 3,786,669             | 77               | 106   | 67    | 16    | 266   | 12,630,158      |
| Western Pacific Railroad.....                       | 18                   | ---   | ---   | 1     | 19    | 188,800               | 8                | 12    | 8     | 8     | 36    | 1,192,914       |
| SUBTOTAL, WESTERN<br>DISTRICT.....                  | 669                  | 42    | 37    | 61    | 809   | 16,240,401            | 727              | 1,015 | 2,277 | 316   | 4,335 | 134,235,329     |
| CLASS I RR (SWITCHING AND TERMINAL)                 |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| EASTERN DISTRICT                                    |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| Union Railroad (Pennsylvania).....                  | 4                    | 1     | ---   | 2     | 7     | 33,965                | 4                | 2     | 13    | 3     | 22    | 90,086          |
| CLASS II AND III RAILROADS.....                     |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| RECAPITULATION                                      |                      |       |       |       |       |                       |                  |       |       |       |       |                 |
| Class I RR (Line-Haul).....                         | 1,080                | 76    | 80    | 99    | 1,335 | 31,996,413            | 1,392            | 1,746 | 4,337 | 696   | 8,171 | 236,677,765     |
| Class I RR (Switching and<br>Terminal).....         | 3                    | ---   | ---   | 2     | 5     | 33,965                | 4                | 1     | 12    | 3     | 20    | 90,086          |
| Class II & III Railroads.....                       | 96                   | 8     | 11    | 21    | 136   | 1,600,187             | 92               | 122   | 313   | 45    | 572   | 13,498,652      |
| TOTAL FOR ALL RAILROADS.....                        | 1,179                | 84    | 91    | 122   | 1,476 | 33,630,565            | 1,488            | 1,869 | 4,662 | 744   | 8,763 | 250,266,525     |

TABLE R3. (CONT)

|   | Defects.....     |       |       |       |       | Damages<br>(\$) | Accidents | Acc/Mil<br>Train Miles | Damages<br>(\$) |
|---|------------------|-------|-------|-------|-------|-----------------|-----------|------------------------|-----------------|
|   | Human<br>Factors | Equip | Track | Other | Total |                 |           |                        |                 |
| CLASS I RR (LINE-HAUL)                              |                  |       |       |       |       |                 |           |                        |                 |
| EASTERN DISTRICT                                    |                  |       |       |       |       |                 |           |                        |                 |
| National Railroad Passenger Corp.<br>(Amtrak).....  | 3                | 37    | 4     | 39    | 83    | 2,396,796       | 170       | 5.1                    | 4,442,691       |
| Baltimore and Ohio Railroad.....                    | ---              | 3     | ---   | 10    | 13    | 104,485         | 401       | 18.3                   | 10,405,478      |
| Bessemer and Lake Erie Railroad.....                | ---              | ---   | ---   | ---   | ---   | ---             | 14        | 13.9                   | 568,350         |
| Boston and Maine Corp.....                          | 1                | 2     | ---   | 14    | 17    | 96,400          | 70        | 16.6                   | 1,058,878       |
| Chesapeake and Ohio Railway.....                    | ---              | ---   | ---   | 9     | 9     | 55,050          | 299       | 15.0                   | 6,752,518       |
| Consolidated Rail Corp.....                         | 46               | 48    | 19    | 104   | 217   | 5,447,592       | 1,715     | 17.6                   | 28,079,352      |
| Delaware and Hudson Railway.....                    | 2                | ---   | ---   | 1     | 3     | 22,100          | 41        | 17.1                   | 1,268,388       |
| Detroit, Toledo and Ironton<br>Railroad.....        | ---              | ---   | ---   | 3     | 3     | 189,068         | 36        | 21.2                   | 1,270,816       |
| Elgin, Joliet and Eastern Railway..                 | ---              | ---   | ---   | ---   | ---   | ---             | 42        | 13.7                   | 331,003         |
| Grand Trunk Western Railroad.....                   | ---              | 1     | ---   | 2     | 3     | 168,511         | 75        | 13.1                   | 1,824,226       |
| Long Island Railroad.....                           | 2                | 1     | ---   | 4     | 7     | 242,898         | 14        | 1.6                    | 389,461         |
| Norfolk and Western Railway.....                    | 5                | 1     | 1     | 12    | 19    | 169,027         | 169       | 7.4                    | 5,869,258       |
| Pittsburg and Lake Erie Railroad...                 | ---              | ---   | ---   | ---   | ---   | ---             | 62        | 45.7                   | 804,087         |
| Western Maryland Railway.....                       | 1                | ---   | ---   | ---   | 1     | 5,000           | 30        | 19.0                   | 658,200         |
| SUBTOTAL, EASTERN<br>DISTRICT:.....                 | 60               | 93    | 24    | 198   | 375   | 8,916,927       | 3,138     | 14.0                   | 63,722,726      |
| SOUTHERN DISTRICT                                   |                  |       |       |       |       |                 |           |                        |                 |
| Alabama Great Southern Railroad....                 | ---              | ---   | ---   | 4     | 4     | 42,450          | 18        | 5.8                    | 574,400         |
| Central of Georgia Railroad.....                    | ---              | ---   | ---   | 4     | 4     | 42,600          | 53        | 15.7                   | 662,400         |
| Cinn., N.O. & Texas Pacific<br>Railway.....         | ---              | 2     | ---   | 1     | 3     | 39,000          | 29        | 5.9                    | 1,180,921       |
| Clinchfield Railroad.....                           | ---              | ---   | ---   | ---   | ---   | ---             | 46        | 34.2                   | 2,180,925       |
| Florida East Coast Railway.....                     | ---              | ---   | ---   | 2     | 2     | 9,185           | 14        | 4.5                    | 853,541         |
| Illinois Central Gulf Railroad.....                 | 3                | 9     | 1     | 46    | 59    | 1,156,208       | 634       | 24.4                   | 20,657,616      |
| Louisville and Nashville Railroad..                 | 6                | 5     | 1     | 24    | 36    | 681,428         | 779       | 26.7                   | 23,029,241      |
| Seaboard Coast Line Railroad.....                   | 38               | 4     | 5     | 31    | 78    | 1,488,144       | 547       | 19.2                   | 11,431,047      |
| Southern Railway.....                               | 1                | 3     | ---   | 22    | 26    | 547,556         | 305       | 12.1                   | 6,829,149       |
| SUBTOTAL, SOUTHERN<br>DISTRICT:.....                | 48               | 23    | 7     | 134   | 212   | 4,006,571       | 2,425     | 19.5                   | 67,399,240      |
| WESTERN DISTRICT                                    |                  |       |       |       |       |                 |           |                        |                 |
| Atchison, Topeka and Santa Fe<br>Railway.....       | 11               | 10    | 3     | 26    | 50    | 654,780         | 338       | 5.9                    | 10,353,148      |
| Burlington Northern Inc.....                        | 15               | 22    | 6     | 47    | 90    | 1,122,811       | 896       | 13.0                   | 27,271,918      |
| Chicago and Northwestern Trans.<br>Company.....     | 2                | 3     | 1     | 18    | 24    | 496,517         | 765       | 35.0                   | 15,065,119      |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 1                | 5     | ---   | 17    | 23    | 676,561         | 591       | 36.4                   | 15,723,923      |
| Chicago, Rock Island & Pacific<br>Railroad.....     | 1                | 2     | 1     | 22    | 26    | 568,011         | 673       | 48.4                   | 13,931,500      |
| Colorado and Southern Railway.....                  | ---              | 3     | ---   | 1     | 4     | 26,169          | 51        | 31.0                   | 2,165,824       |
| Denver and Rio Grande Western<br>Railroad.....      | ---              | ---   | ---   | ---   | ---   | ---             | 21        | 3.1                    | 895,291         |
| Duluth, Missabe and Iron Range<br>Railway.....      | ---              | ---   | ---   | 1     | 1     | 4,450           | 21        | 19.3                   | 202,643         |
| Fort Worth and Denver Railway.....                  | 1                | 3     | ---   | 5     | 9     | 169,168         | 44        | 21.9                   | 2,032,282       |
| Kansas City Southern Railway.....                   | ---              | ---   | ---   | 2     | 2     | 223,307         | 104       | 30.5                   | 4,528,788       |
| Louisiana and Arkansas Railway.....                 | 1                | 1     | ---   | 2     | 4     | 16,400          | 80        | 49.1                   | 1,182,571       |
| Missouri-Kansas-Texas Railroad....                  | 2                | 2     | ---   | 6     | 10    | 50,117          | 116       | 26.6                   | 1,492,199       |
| Missouri Pacific Railroad.....                      | 2                | 2     | ---   | 4     | 8     | 236,345         | 217       | 5.9                    | 11,149,647      |
| St. Louis-San Francisco Railway...:                 | 2                | 5     | 3     | 18    | 28    | 367,020         | 228       | 17.0                   | 5,962,140       |
| St. Louis Southwestern Railway....                  | 3                | 6     | ---   | 4     | 15    | 231,817         | 105       | 16.0                   | 5,099,289       |
| Soo Line Railroad.....                              | 3                | 2     | 1     | 8     | 14    | 327,513         | 188       | 27.0                   | 5,961,841       |
| Southern Pacific Trans. Company....                 | 8                | 28    | ---   | 37    | 73    | 1,842,906       | 666       | 14.4                   | 16,672,738      |
| Union Pacific Railroad.....                         | 1                | 10    | ---   | 21    | 32    | 334,824         | 398       | 9.4                    | 16,751,871      |
| Western Pacific Railroad.....                       | 6                | 3     | ---   | 5     | 14    | 101,620         | 69        | 15.3                   | 1,483,334       |
| SUBTOTAL, WESTERN<br>DISTRICT:.....                 | 59               | 109   | 15    | 244   | 427   | 7,450,336       | 5,571     | 15.7                   | 157,926,066     |
| CLASS I RR (SWITCHING AND TERMINAL)                 |                  |       |       |       |       |                 |           |                        |                 |
| EASTERN DISTRICT                                    |                  |       |       |       |       |                 |           |                        |                 |
| Union Railroad (Pennsylvania).....                  | ---              | ---   | ---   | ---   | ---   | ---             | 29        | 11.4                   | 124,053         |
| CLASS II AND III RAILROADS.....                     | 16               | 5     | 4     | 50    | 75    | 680,503         | 782       | 16.5                   | 15,779,342      |
| RECAPITULATION                                      |                  |       |       |       |       |                 |           |                        |                 |
| Class I RR (Line-Haul).....                         | 162              | 212   | 40    | 550   | 964   | 20,373,834      | 10,470    | 14.9                   | 289,046,032     |
| Class I RR (Switching and<br>Terminal).....         | ---              | ---   | ---   | ---   | ---   | ---             | 25        | 9.9                    | 124,053         |
| Class II & III Railroads.....                       | 16               | 5     | 4     | 49    | 74    | 680,503         | 782       | 16.5                   | 15,779,342      |
| TOTAL FOR ALL RAILROADS.....                        | 178              | 217   | 44    | 599   | 1,038 | 21,054,337      | 11,277    | 15.0                   | 304,951,427     |

TABLE R4. TRAIN ACCIDENTS INVOLVING CONSISTS TRANSPORTING HAZARDOUS MATERIALS, BY RAILROAD, 1978

| RAILROAD                                    | Consists<br>In hazmat<br>Accidents | Total<br>Cars in<br>Consist | Total cars<br>Containing<br>Hazmat | Total cars<br>Damaged<br>W/hazmat | Total cars<br>Releasing<br>Hazmat | People<br>Evacuated | Equipment<br>Dollar<br>Damages |
|---|------------------------------------|-----------------------------|------------------------------------|-----------------------------------|-----------------------------------|---------------------|--------------------------------|
| CLASS I RR (LINE-HAUL)                      |                                    |                             |                                    |                                   |                                   |                     |                                |
| EASTERN DISTRICT                            |                                    |                             |                                    |                                   |                                   |                     |                                |
| National Railroad Passenger Corp. (Amtrak)  | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Baltimore and Ohio Railroad                 | 64                                 | 4,799                       | 234                                | 89                                | 17                                | 148                 | 2,526,130                      |
| Bessemer and Lake Erie Railroad             | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Boston and Maine Corp.                      | 11                                 | 668                         | 27                                 | 5                                 | ---                               | ---                 | 269,930                        |
| Chesapeake and Ohio Railway                 | 18                                 | 1,304                       | 145                                | 60                                | 14                                | 350                 | 1,603,130                      |
| Consolidated Rail Corp.                     | 75                                 | 5,611                       | 371                                | 70                                | 15                                | 566                 | 2,550,460                      |
| Delaware and Hudson Railway                 | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Detroit, Toledo and Ironton Railroad        | 3                                  | 21                          | 4                                  | 4                                 | ---                               | ---                 | 18,100                         |
| Elgin, Joliet and Eastern Railway           | 2                                  | 64                          | 19                                 | 4                                 | 1                                 | ---                 | 87,250                         |
| Grand Trunk Western Railroad                | 4                                  | 129                         | 17                                 | 7                                 | 1                                 | ---                 | 14,650                         |
| Long Island Railroad                        | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Norfolk and Western Railway                 | 18                                 | 1,513                       | 71                                 | 12                                | 2                                 | ---                 | 456,689                        |
| Pittsburg and Lake Erie Railroad            | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Western Maryland Railway                    | 3                                  | 268                         | 15                                 | 5                                 | 1                                 | ---                 | 78,450                         |
| SUBTOTAL, EASTERN DISTRICT:                 | 198                                | 14,377                      | 903                                | 256                               | 51                                | 1,064               | 7,604,789                      |
| SOUTHERN DISTRICT                           |                                    |                             |                                    |                                   |                                   |                     |                                |
| Alabama Great Southern Railroad             | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Central of Georgia Railroad                 | 3                                  | 144                         | 6                                  | 2                                 | ---                               | ---                 | 43,600                         |
| Cinn., N.O. & Texas Pacific Railway         | 7                                  | 715                         | 15                                 | 1                                 | ---                               | ---                 | 282,350                        |
| Clinchfield Railroad                        | 6                                  | 737                         | 73                                 | ---                               | ---                               | ---                 | 199,157                        |
| Florida East Coast Railway                  | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Illinois Central Gulf Railroad              | 70                                 | 4,613                       | 462                                | 111                               | 24                                | 660                 | 2,723,515                      |
| Louisville and Nashville Railroad           | 76                                 | 5,223                       | 421                                | 157                               | 18                                | 6,845               | 3,046,787                      |
| Seaboard Coast Line Railroad                | 55                                 | 4,932                       | 424                                | 51                                | 10                                | 200                 | 1,673,253                      |
| Southern Railway                            | 17                                 | 1,339                       | 64                                 | 30                                | 7                                 | ---                 | 916,025                        |
| SUBTOTAL, SOUTHERN DISTRICT:                | 234                                | 17,703                      | 1,465                              | 352                               | 59                                | 7,705               | 8,884,687                      |
| WESTERN DISTRICT                            |                                    |                             |                                    |                                   |                                   |                     |                                |
| Atchison, Topeka and Santa Fe Railway       | 54                                 | 2,821                       | 223                                | 78                                | 22                                | 3,645               | 4,248,165                      |
| Burlington Northern Inc.                    | 28                                 | 1,170                       | 73                                 | 39                                | 5                                 | 11                  | 1,774,950                      |
| Chicago and Northwestern Trans. Company     | 23                                 | 1,607                       | 62                                 | 35                                | 5                                 | 2,000               | 811,124                        |
| Chicago, Milw., St. Paul & Pacific Railroad | 12                                 | 776                         | 19                                 | 9                                 | 3                                 | ---                 | 96,706                         |
| Chicago, Rock Island & Pacific Railroad     | 42                                 | 2,664                       | 152                                | 46                                | 8                                 | 900                 | 1,161,056                      |
| Colorado and Southern Railway               | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Denver and Rio Grande Western Railroad      | 3                                  | 220                         | 5                                  | ---                               | ---                               | ---                 | 127,316                        |
| Duluth, Missabe and Iron Range Railway      | 2                                  | 47                          | 5                                  | 5                                 | ---                               | ---                 | 771                            |
| Fort Worth and Denver Railway               | 2                                  | 92                          | 3                                  | ---                               | ---                               | ---                 | 9,100                          |
| Kansas City Southern Railway                | 27                                 | 2,705                       | 141                                | 17                                | 1                                 | ---                 | 1,306,869                      |
| Louisiana and Arkansas Railway              | 12                                 | 828                         | 61                                 | 10                                | 1                                 | 6                   | 345,750                        |
| Missouri-Kansas-Texas Railroad              | 16                                 | 1,243                       | 53                                 | 12                                | ---                               | ---                 | 490,400                        |
| Missouri Pacific Railroad                   | 43                                 | 3,280                       | 269                                | 52                                | 20                                | 249                 | 2,867,150                      |
| St. Louis-San Francisco Railway             | 47                                 | 3,037                       | 102                                | 20                                | 8                                 | ---                 | 1,182,290                      |
| St. Louis Southwestern Railway              | 4                                  | 333                         | 28                                 | 15                                | 5                                 | 1,800               | 1,655,275                      |
| Soo Line Railroad                           | 61                                 | 3,869                       | 247                                | 55                                | 1                                 | 14                  | 1,752,588                      |
| Southern Pacific Trans. Company             | 94                                 | 7,524                       | 512                                | 94                                | 16                                | 4,245               | 2,323,295                      |
| Union Pacific Railroad                      | 52                                 | 3,655                       | 166                                | 23                                | 9                                 | 1,750               | 2,092,608                      |
| Western Pacific Railroad                    | 3                                  | 192                         | 4                                  | 1                                 | ---                               | ---                 | 170,233                        |
| SUBTOTAL, WESTERN DISTRICT:                 | 525                                | 36,083                      | 2,125                              | 511                               | 104                               | 14,620              | 22,415,646                     |
| CLASS I RR (SWITCHING AND TERMINAL)         |                                    |                             |                                    |                                   |                                   |                     |                                |
| EASTERN DISTRICT                            |                                    |                             |                                    |                                   |                                   |                     |                                |
| Union Railroad (Pennsylvania)               | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| CLASS II AND III RAILROADS.....             | 76                                 | 5,161                       | 451                                | 110                               | 18                                | 2,992               | 3,307,934                      |
| RECAPITULATION                              |                                    |                             |                                    |                                   |                                   |                     |                                |
| Class I RR (Line-Haul)                      | 957                                | 68,163                      | 4,493                              | 1,119                             | 214                               | 23,389              | 38,905,122                     |
| Class I RR (Switching and Terminal)         | ---                                | ---                         | ---                                | ---                               | ---                               | ---                 | ---                            |
| Class II & III Railroads                    | 76                                 | 5,161                       | 451                                | 110                               | 18                                | 2,992               | 3,307,934                      |
| TOTAL FOR ALL RAILROADS                     | 1,035                              | 73,324                      | 4,944                              | 1,229                             | 232                               | 26,381              | 42,213,056                     |

TABLE R5. CASUALTIES IN TRAIN ACCIDENTS BY RAILROAD,  
1978

| Railroad   | ..Collisions.. |         | ..Derailments.. |         | ....Other..... |         | .....Totals..... |         | Miles<br>(000) | Kid/Mil<br>Miles | Inj/Mil<br>Miles |
|--|----------------|---------|-----------------|---------|----------------|---------|------------------|---------|----------------|------------------|------------------|
|  | Killed         | Injured | Killed          | Injured | Killed         | Injured | Killed           | Injured |                |                  |                  |
| CLASS I RR (LINE-HAUL)                             |                |         |                 |         |                |         |                  |         |                |                  |                  |
| EASTERN DISTRICT                                   |                |         |                 |         |                |         |                  |         |                |                  |                  |
| National Railroad Passenger Corp.<br>(Amtrak)..... | ---            | 114     | ---             | 56      | 3              | 21      | 3                | 191     | 32,797         | 0.09             | 5.82             |
| Baltimore and Ohio Railroad.....                   | ---            | 11      | ---             | 18      | ---            | 4       | ---              | 33      | 21,831         | 0.00             | 1.51             |
| Bessemer and Lake Erie Railroad.....               | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 1,003          | 0.00             | 0.00             |
| Boston and Maine Corp.....                         | ---            | ---     | ---             | 1       | ---            | ---     | ---              | 1       | 4,191          | 0.00             | 0.23             |
| Chesapeake and Ohio Railway.....                   | ---            | 6       | ---             | 17      | 1              | 10      | 1                | 33      | 19,878         | 0.05             | 1.66             |
| Consolidated Rail Corp.....                        | ---            | 99      | 3               | 43      | 15             | 42      | 18               | 184     | 97,273         | 0.18             | 1.89             |
| Delaware and Hudson Railway.....                   | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 2,391          | 0.00             | 0.00             |
| Detroit, Toledo and Ironton Railroad.....          | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 1,695          | 0.00             | 0.00             |
| Elgin, Joliet and Eastern Railway.....             | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 3,061          | 0.00             | 0.00             |
| Grand Trunk Western Railroad.....                  | ---            | 4       | ---             | 3       | ---            | ---     | ---              | 7       | 5,722          | 0.00             | 1.22             |
| Long Island Railroad.....                          | ---            | 5       | ---             | ---     | ---            | 3       | ---              | 8       | 8,268          | 0.00             | 0.96             |
| Norfolk and Western Railway.....                   | ---            | 4       | 1               | 5       | 2              | 7       | 3                | 16      | 22,699         | 0.13             | 0.70             |
| Pittsburg and Lake Erie Railroad.....              | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 1,354          | 0.00             | 0.00             |
| Western Maryland Railway.....                      | ---            | ---     | ---             | ---     | 1              | 1       | 1                | 1       | 1,571          | 0.63             | 0.63             |
| SUBTOTAL, EASTERN DISTRICT:.....                   | ---            | 243     | 4               | 143     | 22             | 88      | 26               | 474     | 223,743        | 0.11             | 2.11             |
| SOUTHERN DISTRICT                                  |                |         |                 |         |                |         |                  |         |                |                  |                  |
| Alabama Great Southern Railroad.....               | ---            | ---     | ---             | ---     | 3              | 4       | 3                | 4       | 3,093          | 0.97             | 1.29             |
| Central of Georgia Railroad.....                   | ---            | ---     | ---             | ---     | 2              | 3       | 2                | 3       | 3,357          | 0.59             | 0.89             |
| Cinn., N.O. & Texas Pacific Railway.....           | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 4,865          | 0.00             | 0.00             |
| Clinchfield Railroad.....                          | ---            | 2       | ---             | 2       | ---            | ---     | ---              | 4       | 1,344          | 0.00             | 2.97             |
| Florida East Coast Railway.....                    | ---            | ---     | ---             | ---     | ---            | ---     | ---              | ---     | 3,086          | 0.00             | 0.00             |
| Illinois Central Gulf Railroad.....                | ---            | 565     | ---             | 17      | 3              | 37      | 3                | 619     | 25,886         | 0.11             | 23.91            |
| Louisville and Nashville Railroad.....             | 5              | 18      | 16              | 66      | 2              | 3       | 23               | 87      | 29,146         | 0.78             | 2.98             |
| Seaboard Coast Line Railroad.....                  | ---            | 7       | ---             | 3       | 9              | 28      | 9                | 38      | 28,419         | 0.31             | 1.33             |
| Southern Railway.....                              | 1              | 6       | 6               | 52      | 1              | 13      | 8                | 71      | 25,013         | 0.32             | 2.83             |
| SUBTOTAL, SOUTHERN DISTRICT:.....                  | 6              | 598     | 22              | 140     | 20             | 88      | 48               | 826     | 124,212        | 0.38             | 6.65             |

|          |                |         |
|----------|----------------|---------|
| Railroad | ..Collisions.. |         |
|          | Killed         | Injured |

-----

WESTERN DISTRICT

|   |     |     |
|---|-----|-----|
| Atchison, Topeka and Santa Fe Railway.....          | 2   | 10  |
| Burlington Northern Inc.....                        | 4   | 16  |
| Chicago and Northwestern Trans. Company...          | --- | 12  |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | --- | 3   |
| Chicago, Rock Island & Pacific Railroad...          | --- | 1   |
| Colorado and Southern Railway.....                  | --- | --- |
| Denver and Rio Grande Western Railroad....          | --- | 2   |
| Duluth, Missabe and Iron Range Railway....          | --- | 1   |
| Fort Worth and Denver Railway.....                  | --- | --- |
| Kansas City Southern Railway.....                   | --- | 2   |
| Louisiana and Arkansas Railway.....                 | --- | --- |
| Missouri-Kansas-Texas Railroad.....                 | --- | --- |
| Missouri Pacific Railroad.....                      | --- | 11  |
| St. Louis-San Francisco Railway.....                | --- | 4   |
| St. Louis Southwestern Railway.....                 | 1   | 1   |
| Soo Line Railroad.....                              | --- | 4   |
| Southern Pacific Trans. Company.....                | --- | 23  |
| Union Pacific Railroad.....                         | 3   | 20  |
| Western Pacific Railroad.....                       | --- | 4   |
| SUBTOTAL, WESTERN DISTRICT:.....                    | 10  | 114 |

CLASS I RR (SWITCHING AND TERMINAL)

EASTERN DISTRICT

|                                    |     |     |
|------------------------------------|-----|-----|
| Union Railroad (Pennsylvania)..... | --- | --- |
| CLASS II AND III RAILROADS.....    | --- | 15  |

RECAPITULATION

|  |     |     |
|--|-----|-----|
| Class I RR (Line-Haul).....              | 16  | 955 |
| Class I RR (Switching and Terminal)..... | --- | --- |
| Class II & III Railroads.....            | --- | 15  |
| TOTAL FOR ALL RAILROADS.....             | 16  | 970 |

TABLE R5. (CONT)

| ..Derailments. |         | ....Other..... |         | .....Totals..... |         | Miles<br>(000) | Kld/Mil<br>Miles | Inj/Mil<br>Miles |
|----------------|---------|----------------|---------|------------------|---------|----------------|------------------|------------------|
| Killed         | Injured | Killed         | Injured | Killed           | Injured |                |                  |                  |
| 2              | 10      | 6              | 14      | 10               | 34      | 57,041         | 0.17             | 0.59             |
| 1              | 29      | 7              | 6       | 12               | 51      | 68,455         | 0.17             | 0.74             |
| ---            | 10      | 3              | 2       | 3                | 24      | 21,811         | 0.13             | 1.10             |
| ---            | 15      | 1              | 14      | 1                | 32      | 16,210         | 0.06             | 1.97             |
| ---            | 7       | 1              | 6       | 1                | 14      | 13,897         | 0.07             | 1.00             |
| ---            | ---     | ---            | ---     | ---              | ---     | 1,640          | 0.00             | 0.00             |
| ---            | 3       | ---            | ---     | ---              | 5       | 6,663          | 0.00             | 0.75             |
| ---            | ---     | ---            | 1       | ---              | 2       | 1,086          | 0.00             | 1.84             |
| ---            | 3       | ---            | 1       | ---              | 4       | 2,006          | 0.00             | 1.99             |
| ---            | 5       | 1              | 1       | 1                | 6       | 3,400          | 0.29             | 2.35             |
| ---            | ---     | ---            | 2       | ---              | 2       | 1,628          | 0.00             | 1.22             |
| ---            | ---     | ---            | 5       | ---              | 5       | 4,349          | 0.00             | 1.15             |
| ---            | 23      | 2              | 5       | 2                | 39      | 36,388         | 0.05             | 1.07             |
| 1              | 6       | 2              | 2       | 3                | 12      | 13,371         | 0.22             | 0.89             |
| ---            | 5       | ---            | 3       | 1                | 9       | 6,530          | 0.15             | 1.37             |
| ---            | 4       | ---            | 6       | ---              | 14      | 6,962          | 0.00             | 2.01             |
| 2              | 19      | 9              | 37      | 11               | 79      | 46,090         | 0.23             | 1.71             |
| 1              | 14      | 4              | 12      | 6                | 46      | 42,115         | 0.19             | 1.09             |
| ---            | 6       | ---            | 5       | ---              | 15      | 4,509          | 0.00             | 3.32             |
| 7              | 159     | 36             | 122     | 53               | 395     | 354,161        | 0.15             | 1.11             |
| ---            | ---     | ---            | ---     | ---              | ---     | 2,525          | 0.00             | 0.00             |
| 6              | 183     | 4              | 18      | 12               | 216     | 47,320         | 0.25             | 4.56             |
| 33             | 442     | 78             | 298     | 127              | 1,695   | 702,117        | 0.18             | 2.41             |
| ---            | ---     | ---            | ---     | ---              | ---     | 2,525          | 0.00             | 0.00             |
| 8              | 183     | 4              | 18      | 12               | 216     | 47,320         | 0.25             | 4.56             |
| 41             | 625     | 82             | 316     | 139              | 1,911   | 751,964        | 0.18             | 2.54             |

TABLE R6. CASUALTIES IN NONTRAIN INCIDENTS BY RAILROAD, 1978

|  | ...Coupling... |         | Operating |         | Operating |         | Operating |         | Contact with |         | Getting on or |         |
|--|----------------|---------|-----------|---------|-----------|---------|-----------|---------|--------------|---------|---------------|---------|
|  | Killed         | Injured | Killed    | Injured | Killed    | Injured | Killed    | Injured | Killed       | Injured | Killed        | Injured |
| CLASS I RR (LINE-HAUL)                           |                |         |           |         |           |         |           |         |              |         |               |         |
| EASTERN DISTRICT                                 |                |         |           |         |           |         |           |         |              |         |               |         |
| National Railroad Passenger Corp. (Amtrak).....  | ---            | 14      | ---       | 7       | ---       | 2       | ---       | 8       | ---          | ---     | ---           | 49      |
| Baltimore and Ohio Railroad.....                 | ---            | 77      | ---       | 15      | ---       | 29      | ---       | 89      | ---          | ---     | ---           | 127     |
| Bessemer and Lake Erie Railroad...               | ---            | 4       | ---       | 1       | ---       | 3       | ---       | 5       | ---          | ---     | ---           | 3       |
| Boston and Maine Corp.....                       | ---            | 7       | ---       | ---     | ---       | 2       | ---       | 4       | ---          | ---     | ---           | 16      |
| Chesapeake and Ohio Railway.....                 | ---            | 80      | ---       | 21      | ---       | 30      | ---       | 91      | ---          | ---     | ---           | 115     |
| Consolidated Rail Corp.....                      | ---            | 233     | ---       | 139     | ---       | 65      | ---       | 255     | ---          | 1       | ---           | 280     |
| Delaware and Hudson Railway.....                 | ---            | 4       | ---       | 1       | ---       | 4       | ---       | 11      | ---          | ---     | ---           | 12      |
| Detroit, Toledo and Ironton Railroad.....        | ---            | 21      | ---       | 11      | ---       | 12      | ---       | 15      | ---          | ---     | ---           | 16      |
| Elgin, Joliet and Eastern Railway.....           | ---            | 10      | ---       | 8       | ---       | 10      | ---       | 28      | ---          | ---     | ---           | 29      |
| Grand Trunk Western Railroad.....                | ---            | 29      | ---       | 1       | ---       | 7       | ---       | 47      | ---          | ---     | ---           | 29      |
| Long Island Railroad.....                        | ---            | 7       | ---       | 6       | ---       | 4       | ---       | 25      | ---          | 1       | ---           | 73      |
| Norfolk and Western Railway.....                 | ---            | 73      | ---       | 22      | ---       | 33      | ---       | 108     | ---          | 1       | ---           | 73      |
| Pittsburg and Lake Erie Railroad...              | ---            | 8       | ---       | 1       | ---       | 2       | ---       | 11      | ---          | 1       | ---           | 3       |
| Western Maryland Railway.....                    | ---            | 4       | ---       | ---     | ---       | 4       | ---       | 10      | ---          | ---     | ---           | 6       |
| SUBTOTAL, EASTERN DISTRICT.....                  | ---            | 571     | ---       | 233     | ---       | 207     | ---       | 707     | ---          | 4       | ---           | 831     |
| SOUTHERN DISTRICT                                |                |         |           |         |           |         |           |         |              |         |               |         |
| Alabama Great Southern Railroad...               | ---            | 1       | ---       | ---     | ---       | 1       | ---       | 1       | ---          | ---     | ---           | 4       |
| Central of Georgia Railroad.....                 | ---            | 8       | ---       | ---     | ---       | 9       | ---       | 8       | ---          | ---     | ---           | 7       |
| Cinn., N.O. & Texas Pacific Railway.....         | ---            | 6       | ---       | ---     | ---       | 4       | ---       | ---     | ---          | ---     | ---           | 6       |
| Clinchfield Railroad.....                        | ---            | 1       | ---       | ---     | ---       | 3       | ---       | 1       | ---          | ---     | ---           | 4       |
| Florida East Coast Railway.....                  | ---            | ---     | ---       | ---     | ---       | 1       | ---       | ---     | ---          | ---     | ---           | 2       |
| Illinois Central Gulf Railroad.....              | ---            | 68      | ---       | 32      | ---       | 29      | ---       | 110     | ---          | 7       | ---           | 127     |
| Louisville and Nashville Railroad...             | ---            | 105     | ---       | 37      | ---       | 46      | ---       | 86      | ---          | 3       | ---           | 123     |
| Seaboard Coast Line Railroad.....                | ---            | 76      | ---       | 15      | ---       | 24      | ---       | 94      | ---          | ---     | ---           | 66      |
| Southern Railway.....                            | ---            | 37      | ---       | ---     | ---       | 29      | ---       | 61      | ---          | ---     | ---           | 42      |
| SUBTOTAL, SOUTHERN DISTRICT.....                 | ---            | 302     | ---       | 84      | ---       | 148     | ---       | 361     | ---          | 10      | ---           | 383     |
| WESTERN DISTRICT                                 |                |         |           |         |           |         |           |         |              |         |               |         |
| Atchison, Topeka and Santa Fe Railway.....       | ---            | 71      | ---       | 23      | ---       | 41      | ---       | 56      | ---          | 3       | ---           | 97      |
| Burlington Northern Inc.....                     | ---            | 173     | ---       | 62      | ---       | 86      | ---       | 260     | ---          | 4       | ---           | 304     |
| Chicago and Northwestern Trans. Company.....     | ---            | 42      | ---       | 6       | ---       | 21      | ---       | 57      | ---          | ---     | ---           | 70      |
| Chicago, Milw., St. Paul & Pacific Railroad..... | ---            | 44      | ---       | 12      | ---       | 15      | ---       | 75      | ---          | 1       | ---           | 62      |
| Chicago, Rock Island & Pacific Railroad.....     | ---            | 31      | ---       | 13      | ---       | 10      | ---       | 49      | ---          | ---     | ---           | 49      |
| Colorado and Southern Railway.....               | ---            | 8       | ---       | ---     | ---       | 3       | ---       | 14      | ---          | ---     | ---           | 6       |
| Denver and Rio Grande Western Railroad.....      | ---            | 13      | ---       | 3       | ---       | 6       | ---       | 11      | ---          | ---     | ---           | 20      |
| Duluth, Missabe and Iron Range Railway.....      | ---            | 1       | ---       | ---     | ---       | 1       | ---       | 10      | ---          | ---     | ---           | ---     |
| Fort Worth and Denver Railway.....               | ---            | 4       | ---       | 1       | ---       | 1       | ---       | 3       | ---          | ---     | ---           | 5       |
| Kansas City Southern Railway.....                | ---            | 13      | ---       | 1       | ---       | 3       | ---       | 11      | ---          | 1       | ---           | 14      |
| Louisiana and Arkansas Railway....               | ---            | 9       | ---       | 2       | ---       | 4       | ---       | 9       | ---          | ---     | ---           | 11      |
| Missouri-Kansas-Texas Railroad....               | ---            | 10      | ---       | 3       | ---       | 7       | ---       | 10      | ---          | 1       | ---           | 13      |
| Missouri Pacific Railroad.....                   | ---            | 77      | ---       | 29      | ---       | 21      | ---       | 85      | ---          | 2       | ---           | 101     |
| St. Louis-San Francisco Railway...               | ---            | 12      | ---       | 23      | ---       | 15      | ---       | 26      | ---          | 1       | ---           | 32      |
| St. Louis Southwestern Railway....               | ---            | 31      | ---       | 4       | ---       | 17      | ---       | 26      | ---          | ---     | ---           | 24      |
| Soo Line Railroad.....                           | ---            | 21      | ---       | 21      | ---       | 15      | ---       | 34      | ---          | 2       | ---           | 26      |
| Southern Pacific Trans. Company...               | ---            | 127     | ---       | 32      | ---       | 63      | ---       | 115     | ---          | 1       | ---           | 160     |
| Union Pacific Railroad.....                      | ---            | 78      | ---       | 18      | ---       | 33      | ---       | 101     | ---          | 3       | ---           | 104     |
| Western Pacific Railroad.....                    | ---            | 26      | ---       | 4       | ---       | 4       | ---       | 6       | ---          | ---     | ---           | 20      |
| SUBTOTAL, WESTERN DISTRICT.....                  | ---            | 791     | ---       | 257     | ---       | 366     | ---       | 960     | ---          | 19      | ---           | 1,118   |
| CLASS I RR (SWITCHING AND TERMINAL)              |                |         |           |         |           |         |           |         |              |         |               |         |
| EASTERN DISTRICT                                 |                |         |           |         |           |         |           |         |              |         |               |         |
| Union Railroad (Pennsylvania).....               | ---            | 6       | ---       | 1       | ---       | 5       | ---       | 10      | ---          | ---     | ---           | 14      |
| CLASS II AND III RAILROADS.....                  | ---            | 290     | ---       | 80      | ---       | 120     | ---       | 249     | ---          | 10      | ---           | 312     |
| RECAPITULATION                                   |                |         |           |         |           |         |           |         |              |         |               |         |
| Class I RR (Line-Haul).....                      | ---            | 1,664   | ---       | 574     | ---       | 721     | ---       | 2,028   | ---          | 33      | ---           | 2,332   |
| Class I RR (Switching and Terminal).....         | ---            | 6       | ---       | 1       | ---       | 5       | ---       | 10      | ---          | ---     | ---           | 14      |
| Class II & III Railroads.....                    | ---            | 290     | ---       | 80      | ---       | 120     | ---       | 249     | ---          | 10      | ---           | 312     |
| TOTAL FOR ALL RAILROADS.....                     | ---            | 1,960   | ---       | 655     | ---       | 846     | ---       | 2,287   | ---          | 43      | ---           | 2,658   |



TABLE R6. (CONT)

|  | Acc At |         | Struck or |         | .....Other..... |         | Per Mil |           | Totals  |           | Per Mil |         |
|--|--------|---------|-----------|---------|-----------------|---------|---------|-----------|---------|-----------|---------|---------|
|  | Killed | Injured | Killed    | Injured | Killed          | Injured | Killed  | Man Hours | Injured | Man Hours | Illness | Per Mil |
| CLASS I RR (LINE-HAUL)                           |        |         |           |         |                 |         |         |           |         |           |         |         |
| EASTERN DISTRICT                                 |        |         |           |         |                 |         |         |           |         |           |         |         |
| National Railroad Passenger Corp. (Amtrak).....  | ---    | ---     | ---       | 1       | 1               | 2,642   | 1       | 0.02      | 2,723   | 67.07     | 154     | 3.79    |
| Baltimore and Ohio Railroad.....                 | ---    | 2       | ---       | ---     | 1               | 1,216   | 1       | 0.03      | 1,555   | 49.07     | 54      | 1.70    |
| Bessemer and Lake Erie Railroad.....             | ---    | ---     | ---       | ---     | ---             | 135     | ---     | ---       | 151     | 56.60     | 2       | 0.78    |
| Boston and Maine Corp.....                       | ---    | ---     | ---       | ---     | 1               | 193     | 1       | 0.16      | 222     | 35.80     | 4       | 0.65    |
| Chesapeake and Ohio Railway.....                 | ---    | 1       | ---       | 1       | ---             | 1,327   | ---     | ---       | 1,666   | 45.71     | 15      | 0.41    |
| Consolidated Rail Corp.....                      | 1      | 4       | ---       | 2       | 14              | 6,876   | 15      | 0.08      | 9,855   | 54.13     | 385     | 2.11    |
| Delaware and Hudson Railway.....                 | ---    | ---     | ---       | 1       | ---             | 78      | ---     | ---       | 111     | 30.15     | ---     | ---     |
| Detroit, Toledo and Ironton Railroad.....        | ---    | 3       | ---       | ---     | ---             | 227     | ---     | ---       | 305     | 103.92    | ---     | ---     |
| Elgin, Joliet and Eastern Railway.....           | ---    | ---     | ---       | ---     | 1               | 226     | 1       | 0.18      | 311     | 56.66     | 2       | 0.36    |
| Grand Trunk Western Railroad.....                | ---    | 5       | ---       | ---     | ---             | 372     | ---     | ---       | 450     | 51.97     | 9       | 0.95    |
| Long Island Railroad.....                        | ---    | ---     | 1         | ---     | ---             | 850     | 2       | 0.17      | 966     | 80.42     | 49      | 4.08    |
| Norfolk and Western Railway.....                 | 2      | 10      | ---       | 1       | 2               | 1,360   | 4       | 0.11      | 1,661   | 47.79     | 25      | 0.71    |
| Pittsburg and Lake Erie Railroad.....            | ---    | ---     | ---       | ---     | 1               | 270     | 1       | 0.24      | 296     | 70.64     | ---     | ---     |
| Western Maryland Railway.....                    | ---    | 1       | ---       | ---     | ---             | 68      | ---     | ---       | 93      | 40.83     | 5       | 2.19    |
| SUBTOTAL, EASTERN DISTRICT.....                  | 3      | 26      | 1         | 6       | 22              | 17,840  | 26      | 0.07      | 20,425  | 54.50     | 704     | 1.86    |
| SOUTHERN DISTRICT                                |        |         |           |         |                 |         |         |           |         |           |         |         |
| Alabama Great Southern Railroad.....             | ---    | ---     | ---       | ---     | ---             | 27      | ---     | *         | 34      | *         | ---     | *       |
| Central of Georgia Railroad.....                 | ---    | ---     | ---       | ---     | ---             | 65      | ---     | *         | 97      | *         | 1       | *       |
| Cinn., N.O. & Texas Pacific Railway.....         | ---    | ---     | ---       | ---     | ---             | 57      | ---     | *         | 73      | *         | 2       | *       |
| Clinchfield Railroad.....                        | ---    | ---     | ---       | ---     | ---             | 43      | ---     | ---       | 52      | 30.59     | ---     | ---     |
| Florida East Coast Railway.....                  | ---    | ---     | ---       | ---     | ---             | 21      | ---     | ---       | 24      | 10.45     | ---     | ---     |
| Illinois Central Gulf Railroad.....              | 1      | 10      | ---       | 2       | 3               | 2,218   | 4       | 0.11      | 2,603   | 69.75     | 80      | 2.14    |
| Louisville and Nashville Railroad.....           | ---    | 7       | ---       | 1       | 1               | 1,276   | 1       | 0.03      | 1,666   | 50.83     | 25      | 0.75    |
| Seaboard Coast Line Railroad.....                | ---    | 7       | ---       | ---     | 4               | 1,171   | 4       | 0.10      | 1,456   | 37.28     | 28      | 0.72    |
| Southern Railway.....                            | ---    | ---     | ---       | ---     | ---             | 963     | ---     | ---       | 1,132   | 27.94     | 13      | 0.32    |
| SUBTOTAL, SOUTHERN DISTRICT.....                 | 1      | 24      | ---       | 4       | 6               | 5,841   | 9       | 0.06      | 7,157   | 46.46     | 149     | 0.97    |
| WESTERN DISTRICT                                 |        |         |           |         |                 |         |         |           |         |           |         |         |
| Atchison, Topeka and Santa Fe Railway.....       | 3      | 10      | ---       | 3       | 2               | 1,333   | 5       | 0.08      | 1,639   | 26.52     | 6       | 0.10    |
| Burlington Northern Inc.....                     | ---    | 3       | ---       | 4       | 3               | 4,489   | 3       | 0.03      | 5,385   | 59.15     | 228     | 2.50    |
| Chicago and Northwestern Trans. Company.....     | 2      | 18      | ---       | 1       | 3               | 1,595   | 5       | 0.17      | 1,810   | 59.77     | 68      | 2.25    |
| Chicago, Milw., St. Paul & Pacific Railroad..... | ---    | 4       | ---       | ---     | 1               | 1,077   | 1       | 0.05      | 1,290   | 58.62     | 14      | 0.64    |
| Chicago, Rock Island & Pacific Railroad.....     | ---    | 3       | ---       | ---     | 1               | 607     | 1       | 0.06      | 762     | 45.70     | 13      | 0.78    |
| Colorado and Southern Railway.....               | ---    | ---     | ---       | ---     | ---             | 62      | ---     | ---       | 93      | 71.16     | 6       | 4.59    |
| Denver and Rio Grande Western Railroad.....      | ---    | 1       | ---       | ---     | ---             | 147     | ---     | ---       | 201     | 25.89     | 1       | 0.13    |
| Duluth, Missabe and Iron Range Railway.....      | ---    | ---     | ---       | ---     | ---             | 133     | ---     | ---       | 145     | 46.56     | 3       | 0.96    |
| Fort Worth and Denver Railway.....               | ---    | ---     | ---       | ---     | ---             | 124     | ---     | ---       | 138     | 59.53     | 7       | 3.02    |
| Kansas City Southern Railway.....                | ---    | 1       | ---       | ---     | ---             | 206     | ---     | ---       | 250     | 40.72     | 5       | 0.81    |
| Louisiana and Arkansas Railway.....              | ---    | ---     | ---       | ---     | ---             | 85      | ---     | *         | 120     | *         | 3       | *       |
| Missouri-Kansas-Texas Railroad.....              | ---    | 3       | ---       | ---     | ---             | 209     | ---     | ---       | 256     | 47.40     | 8       | 1.48    |
| Missouri Pacific Railroad.....                   | ---    | 19      | ---       | 1       | 3               | 1,049   | 3       | 0.07      | 1,364   | 33.28     | 24      | 0.58    |
| St. Louis-San Francisco Railway.....             | ---    | ---     | ---       | 1       | 1               | 661     | 1       | 0.06      | 771     | 49.82     | 25      | 1.62    |
| St. Louis Southwestern Railway.....              | ---    | ---     | ---       | ---     | 1               | 307     | 1       | 0.12      | 409     | 50.55     | 8       | 0.99    |
| Soo Line Railroad.....                           | 1      | 6       | ---       | ---     | ---             | 506     | 2       | 0.21      | 631     | 66.91     | 39      | 4.14    |
| Southern Pacific Trans. Company.....             | 2      | 9       | ---       | 1       | 3               | 2,314   | 5       | 0.07      | 2,822   | 42.14     | 97      | 1.45    |
| Union Pacific Railroad.....                      | 3      | 4       | ---       | 1       | 8               | 2,694   | 11      | 0.21      | 3,036   | 59.30     | 29      | 0.57    |
| Western Pacific Railroad.....                    | ---    | 2       | ---       | ---     | 1               | 230     | 1       | 0.20      | 292     | 58.52     | 9       | 1.80    |
| SUBTOTAL, WESTERN DISTRICT.....                  | 11     | 83      | ---       | 12      | 28              | 17,828  | 39      | 0.09      | 21,434  | 48.10     | 593     | 1.33    |
| CLASS I RR (SWITCHING AND TERMINAL)              |        |         |           |         |                 |         |         |           |         |           |         |         |
| EASTERN DISTRICT                                 |        |         |           |         |                 |         |         |           |         |           |         |         |
| Union Railroad (Pennsylvania).....               | ---    | ---     | ---       | ---     | ---             | 110     | ---     | ---       | 146     | 42.59     | 1       | 0.29    |
| CLASS II AND III RAILROADS.....                  | 1      | 8       | ---       | 3       | 5               | 3,873   | 6       | 0.08      | 4,945   | 63.45     | 66      | 0.85    |
| RECAPITULATION                                   |        |         |           |         |                 |         |         |           |         |           |         |         |
| Class I RR (Line-Haul).....                      | 15     | 133     | 1         | 22      | 56              | 41,509  | 74      | 0.08      | 49,016  | 50.30     | 1,446   | 1.46    |
| Class I RR (Switching and Terminal).....         | ---    | ---     | ---       | ---     | ---             | 110     | ---     | ---       | 146     | 42.59     | 1       | 0.29    |
| Class II & III Railroads.....                    | 1      | 8       | ---       | 3       | 5               | 3,873   | 6       | 0.08      | 4,945   | 63.45     | 66      | 0.85    |
| TOTAL FOR ALL RAILROADS.....                     | 16     | 141     | 1         | 25      | 63              | 45,492  | 80      | 0.08      | 54,107  | 51.25     | 1,513   | 1.43    |

TABLE R7. FATALITIES IN TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NONTRAIN INCIDENTS BY RAILROAD, 1978

|   | Train Accidents |                  |            |                 |             | Train Incidents |              |                  |            |                 |             |       |
|---|-----------------|------------------|------------|-----------------|-------------|-----------------|--------------|------------------|------------|-----------------|-------------|-------|
|   | Empl on Duty    | Empl Not on Duty | Passengers | Non Trespassers | Trespassers | Total           | Empl on Duty | Empl Not on Duty | Passengers | Non Trespassers | Trespassers | Total |
| CLASS I RR (LINE-HAUL)                      |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| EASTERN DISTRICT                            |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| National Railroad Passenger Corp. (Amtrak)  | ---             | ---              | ---        | 3               | ---         | 3               | 2            | ---              | 1          | 1               | 9           | 13    |
| Baltimore and Ohio Railroad                 | ---             | ---              | ---        | ---             | ---         | ---             | 2            | ---              | ---        | 30              | 13          | 45    |
| Bessemer and Lake Erie Railroad             | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | 1          | ---             | ---         | 1     |
| Boston and Maine Corp.                      | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | 3          | 1               | 12          | 16    |
| Chesapeake and Ohio Railway                 | ---             | ---              | ---        | 1               | ---         | 1               | 2            | ---              | ---        | 30              | 9           | 41    |
| Consolidated Rail Corp.                     | ---             | ---              | ---        | 18              | ---         | 16              | 11           | 1                | 1          | 92              | 93          | 198   |
| Delaware and Hudson Railway                 | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 3               | 1           | 4     |
| Detroit, Toledo and Ironton Railroad        | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 2               | ---         | 2     |
| Elgin, Joliet and Eastern Railway           | ---             | ---              | ---        | ---             | ---         | ---             | 1            | ---              | ---        | ---             | ---         | 1     |
| Grand Trunk Western Railroad                | ---             | ---              | ---        | ---             | ---         | ---             | 1            | ---              | ---        | 9               | 6           | 16    |
| Long Island Railroad                        | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | 2          | ---             | 14          | 16    |
| Norfolk and Western Railway                 | 1               | ---              | ---        | 2               | ---         | 3               | ---          | ---              | ---        | 34              | 24          | 58    |
| Pittsburg and Lake Erie Railroad            | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | ---             | ---         | ---   |
| Western Maryland Railway                    | 1               | ---              | ---        | ---             | ---         | 1               | ---          | ---              | ---        | 1               | 2           | 3     |
| SUBTOTAL, EASTERN DISTRICT                  | 2               | ---              | ---        | 24              | ---         | 26              | 19           | 1                | 7          | 204             | 183         | 414   |
| SOUTHERN DISTRICT                           |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| Alabama Great Southern Railroad             | ---             | ---              | ---        | 3               | ---         | 3               | ---          | ---              | ---        | 5               | 3           | 8     |
| Central of Georgia Railroad                 | ---             | ---              | ---        | 2               | ---         | 2               | 1            | ---              | ---        | 4               | ---         | 5     |
| Cinn., N.O. & Texas Pacific Railway         | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 3               | ---         | 3     |
| Cinchfield Railroad                         | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | ---             | ---         | ---   |
| Florida East Coast Railway                  | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 5               | 14          | 19    |
| Illinois Central Gulf Railroad              | ---             | ---              | ---        | 3               | ---         | 3               | 3            | ---              | ---        | 39              | 15          | 57    |
| Louisville and Nashville Railroad           | 9               | ---              | ---        | 14              | ---         | 23              | 3            | ---              | ---        | 34              | 14          | 51    |
| Seaboard Coast Line Railroad                | 1               | ---              | ---        | 8               | ---         | 9               | ---          | 1                | 2          | 75              | 36          | 114   |
| Southern Railway                            | 3               | ---              | 4          | 1               | ---         | 8               | 1            | ---              | ---        | 44              | 24          | 69    |
| SUBTOTAL, SOUTHERN DISTRICT                 | 13              | ---              | 4          | 31              | ---         | 48              | 8            | 1                | 2          | 209             | 106         | 326   |
| WESTERN DISTRICT                            |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| Atchison, Topeka and Santa Fe Railway       | 4               | ---              | ---        | 6               | ---         | 10              | 2            | ---              | ---        | 71              | 30          | 103   |
| Burlington Northern Inc.                    | 4               | ---              | ---        | 5               | 3           | 12              | 6            | 1                | ---        | 63              | 20          | 90    |
| Chicago and Northwestern Trans. Company     | ---             | ---              | ---        | 3               | ---         | 3               | 4            | ---              | ---        | 27              | 16          | 47    |
| Chicago, Milw., St. Paul & Pacific Railroad | ---             | ---              | ---        | 1               | ---         | 1               | 3            | ---              | ---        | 19              | 8           | 30    |
| Chicago, Rock Island & Pacific Railroad     | ---             | ---              | ---        | ---             | 1           | 1               | ---          | ---              | ---        | 13              | 1           | 14    |
| Colorado and Southern Railway               | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 2               | 1           | 3     |
| Denver and Rio Grande Western Railroad      | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 6               | 4           | 10    |
| Duluth, Missabe and Iron Range Railway      | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | ---             | ---         | ---   |
| Fort Worth and Denver Railway               | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 1               | 1           | 2     |
| Kansas City Southern Railway                | ---             | ---              | ---        | 1               | ---         | 1               | ---          | ---              | ---        | 1               | 1           | 2     |
| Louisiana and Arkansas Railway              | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 4               | ---         | 4     |
| Missouri-Kansas-Texas Railroad              | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 5               | 3           | 8     |
| Missouri Pacific Railroad                   | ---             | ---              | ---        | 2               | ---         | 2               | 2            | ---              | ---        | 80              | 18          | 100   |
| St. Louis-San Francisco Railway             | 1               | ---              | ---        | 2               | ---         | 3               | 1            | ---              | ---        | 39              | 8           | 48    |
| St. Louis Southwestern Railway              | 1               | ---              | ---        | ---             | ---         | 1               | ---          | ---              | ---        | 9               | 2           | 11    |
| Soo Line Railroad                           | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 15              | 2           | 17    |
| Southern Pacific Trans. Company             | ---             | ---              | ---        | 7               | 4           | 11              | 3            | ---              | ---        | 47              | 38          | 88    |
| Union Pacific Railroad                      | 2               | 1                | ---        | 4               | 1           | 8               | 3            | 1                | ---        | 40              | 13          | 57    |
| Western Pacific Railroad                    | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | 5               | 1           | 6     |
| SUBTOTAL, WESTERN DISTRICT                  | 12              | 1                | ---        | 31              | 9           | 53              | 24           | 2                | ---        | 447             | 167         | 640   |
| CLASS I RR (SWITCHING AND TERMINAL)         |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| EASTERN DISTRICT                            |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| Union Railroad (Pennsylvania)               | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | ---             | ---         | ---   |
| CLASS II AND III RAILROADS                  | 1               | ---              | ---        | 11              | ---         | 12              | 1            | ---              | ---        | 33              | 13          | 47    |
| RECAPITULATION                              |                 |                  |            |                 |             |                 |              |                  |            |                 |             |       |
| Class I RR (Line-Haul)                      | 27              | 1                | 4          | 86              | 9           | 127             | 51           | 4                | 9          | 860             | 456         | 1,380 |
| Class I RR (Switching and Terminal)         | ---             | ---              | ---        | ---             | ---         | ---             | ---          | ---              | ---        | ---             | ---         | ---   |
| Class II & III Railroads                    | 1               | ---              | ---        | 11              | ---         | 12              | 1            | ---              | ---        | 33              | 13          | 47    |
| TOTAL FOR ALL RAILROADS                     | 28              | 1                | 4          | 97              | 9           | 139             | 52           | 4                | 9          | 893             | 469         | 1,427 |

TABLE R7. (CONT)

|   | Nontrain Incidents..... |                        |                 |                         |                  | Total..... |                    |                        |                 |                         |                  |       |
|---|-------------------------|------------------------|-----------------|-------------------------|------------------|------------|--------------------|------------------------|-----------------|-------------------------|------------------|-------|
|   | Empl<br>on<br>Duty      | Empl<br>Not on<br>Duty | Pass-<br>engers | Non<br>Tres-<br>passers | Tres-<br>passers | Total      | Empl<br>on<br>Duty | Empl<br>Not on<br>Duty | Pass-<br>engers | Non<br>Tres-<br>passers | Tres-<br>passers | Total |
| CLASS I RR (LINE-HAUL)                              |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| EASTERN DISTRICT                                    |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| National Railroad Passenger Corp. (Amtrak).....     | ---                     | ---                    | ---             | 1                       | ---              | 1          | 2                  | ---                    | 1               | 5                       | 9                | 17    |
| Baltimore and Ohio Railroad.....                    | 1                       | ---                    | ---             | ---                     | ---              | 1          | 3                  | ---                    | 30              | 13                      | 46               | 46    |
| Bessemer and Lake Erie Railroad.....                | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | 1               | ---                     | 1                | 1     |
| Boston and Maine Corp.....                          | ---                     | ---                    | ---             | 1                       | ---              | 1          | ---                | ---                    | 3               | 2                       | 12               | 17    |
| Chesapeake and Ohio Railway.....                    | ---                     | ---                    | ---             | ---                     | ---              | ---        | 2                  | ---                    | ---             | 31                      | 9                | 42    |
| Consolidated Rail Corp.....                         | 6                       | 3                      | ---             | 1                       | 5                | 15         | 17                 | 4                      | 1               | 111                     | 96               | 231   |
| Delaware and Hudson Railway.....                    | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 3                       | 1                | 4     |
| Detroit, Toledo and Ironton Railroad.....           | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | 2               | ---                     | ---              | 2     |
| Elgin, Joliet and Eastern Railway.....              | 1                       | ---                    | ---             | ---                     | ---              | 1          | 2                  | ---                    | ---             | ---                     | ---              | 2     |
| Grand Trunk Western Railroad.....                   | ---                     | ---                    | ---             | ---                     | ---              | ---        | 1                  | ---                    | ---             | 9                       | 6                | 16    |
| Long Island Railroad.....                           | 1                       | ---                    | ---             | ---                     | 1                | 2          | 1                  | ---                    | 2               | ---                     | 15               | 18    |
| Norfolk and Western Railway.....                    | 1                       | ---                    | ---             | 3                       | ---              | 4          | 2                  | ---                    | ---             | 39                      | 24               | 65    |
| Pittsburg and Lake Erie Railroad.....               | 1                       | ---                    | ---             | ---                     | ---              | 1          | 1                  | ---                    | ---             | ---                     | ---              | 1     |
| Western Maryland Railway.....                       | ---                     | ---                    | ---             | ---                     | ---              | ---        | 1                  | ---                    | ---             | 1                       | 2                | 4     |
| SUBTOTAL, EASTERN DISTRICT:.....                    | 11                      | 3                      | ---             | 6                       | 6                | 26         | 32                 | 4                      | 7               | 234                     | 189              | 466   |
| SOUTHERN DISTRICT                                   |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| Alabama Great Southern Railroad.....                | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 8                       | 3                | 11    |
| Central of Georgia Railroad.....                    | ---                     | ---                    | ---             | ---                     | ---              | ---        | 1                  | ---                    | ---             | 6                       | ---              | 7     |
| Cinn., N.O. & Texas Pacific Railway.....            | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 3                       | ---              | 3     |
| Clinchfield Railroad.....                           | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | ---                     | ---              | ---   |
| Florida East Coast Railway.....                     | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 5                       | 14               | 19    |
| Illinois Central Gulf Railroad.....                 | 3                       | ---                    | ---             | 1                       | ---              | 4          | 6                  | ---                    | ---             | 43                      | 15               | 64    |
| Louisville and Nashville Railroad.....              | 1                       | ---                    | ---             | ---                     | ---              | 1          | 13                 | ---                    | ---             | 48                      | 14               | 75    |
| Seaboard Coast Line Railroad.....                   | 3                       | ---                    | ---             | 1                       | ---              | 4          | 4                  | 1                      | 2               | 84                      | 36               | 127   |
| Southern Railway.....                               | ---                     | ---                    | ---             | ---                     | ---              | ---        | 4                  | ---                    | 4               | 45                      | 24               | 77    |
| SUBTOTAL, SOUTHERN DISTRICT:.....                   | 7                       | ---                    | ---             | 2                       | ---              | 9          | 28                 | 1                      | 6               | 242                     | 106              | 363   |
| WESTERN DISTRICT                                    |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| Atchison, Topeka and Santa Fe Railway.....          | 2                       | ---                    | ---             | 3                       | ---              | 5          | 8                  | ---                    | ---             | 80                      | 30               | 118   |
| Burlington Northern Inc.....                        | 2                       | ---                    | ---             | ---                     | 1                | 3          | 12                 | 1                      | ---             | 68                      | 24               | 105   |
| Chicago and Northwestern Trans. Company....         | 2                       | ---                    | ---             | 3                       | ---              | 5          | 6                  | ---                    | ---             | 33                      | 16               | 55    |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 1                       | ---                    | ---             | ---                     | ---              | 1          | 4                  | ---                    | ---             | 20                      | 8                | 32    |
| Chicago, Rock Island & Pacific Railroad....         | 1                       | ---                    | ---             | ---                     | ---              | 1          | 1                  | ---                    | ---             | 13                      | 2                | 16    |
| Colorado and Southern Railway.....                  | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 2                       | 1                | 3     |
| Denver and Rio Grande Western Railroad....          | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 6                       | 4                | 10    |
| Duluth, Missabe and Iron Range Railway.....         | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | ---                     | ---              | ---   |
| Fort Worth and Denver Railway.....                  | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 1                       | 1                | 2     |
| Kansas City Southern Railway.....                   | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 2                       | 1                | 3     |
| Louisiana and Arkansas Railway.....                 | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 4                       | ---              | 4     |
| Missouri-Kansas-Texas Railroad.....                 | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | 5                       | 3                | 8     |
| Missouri Pacific Railroad.....                      | 2                       | ---                    | ---             | 1                       | ---              | 3          | 4                  | ---                    | ---             | 82                      | 19               | 105   |
| St. Louis-San Francisco Railway.....                | 1                       | ---                    | ---             | ---                     | ---              | 1          | 3                  | ---                    | ---             | 41                      | 8                | 52    |
| St. Louis Southwestern Railway.....                 | 1                       | ---                    | ---             | ---                     | ---              | 1          | 2                  | ---                    | ---             | 9                       | 2                | 13    |
| Soo Line Railroad.....                              | ---                     | ---                    | 1               | 1                       | ---              | 2          | ---                | ---                    | ---             | 16                      | 3                | 19    |
| Southern Pacific Trans. Company.....                | 2                       | ---                    | ---             | 3                       | ---              | 5          | 5                  | ---                    | ---             | 54                      | 45               | 104   |
| Union Pacific Railroad.....                         | 5                       | 1                      | ---             | 3                       | 1                | 10         | 11                 | 3                      | ---             | 47                      | 15               | 76    |
| Western Pacific Railroad.....                       | 1                       | ---                    | ---             | ---                     | ---              | 1          | 1                  | ---                    | ---             | 5                       | 1                | 7     |
| SUBTOTAL, WESTERN DISTRICT:.....                    | 20                      | 1                      | ---             | 10                      | 7                | 38         | 57                 | 4                      | ---             | 488                     | 183              | 732   |
| CLASS I RR (SWITCHING AND TERMINAL)                 |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| EASTERN DISTRICT                                    |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| Union Railroad (Pennsylvania).....                  | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | ---                     | ---              | ---   |
| CLASS II AND III RAILROADS.....                     | 3                       | ---                    | ---             | 2                       | 1                | 6          | 5                  | ---                    | ---             | 46                      | 14               | 65    |
| RECAPITULATION                                      |                         |                        |                 |                         |                  |            |                    |                        |                 |                         |                  |       |
| Class I RR (Line-Haul).....                         | 38                      | 4                      | ---             | 18                      | 13               | 73         | 117                | 9                      | 13              | 964                     | 478              | 1,581 |
| Class I RR (Switching and Terminal).....            | ---                     | ---                    | ---             | ---                     | ---              | ---        | ---                | ---                    | ---             | ---                     | ---              | ---   |
| Class II & III Railroads.....                       | 3                       | ---                    | ---             | 2                       | 1                | 6          | 5                  | ---                    | ---             | 46                      | 14               | 65    |
| TOTAL FOR ALL RAILROADS.....                        | 41                      | 4                      | ---             | 20                      | 14               | 79         | 122                | 9                      | 13              | 1,010                   | 492              | 1,646 |

TABLE R8. NONFATAL CASUALTIES IN TRAIN ACCIDENTS, TRAIN INCIDENTS, AND NONTRAIN INCIDENTS BY RAILROAD, 1978

|  | Train Accidents..... |                  |             |                  |              | Train Incidents..... |              |                  |             |                  |              |        |
|--|----------------------|------------------|-------------|------------------|--------------|----------------------|--------------|------------------|-------------|------------------|--------------|--------|
|  | Empl on Duty         | Empl Not on Duty | Pass-engers | Non Tres-passers | Tres-passers | Total                | Empl on Duty | Empl Not on Duty | Pass-engers | Non Tres-passers | Tres-passers | Total  |
| CLASS I RR (LINE-HAUL)                           |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| EASTERN DISTRICT                                 |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| National Railroad Passenger Corp. (Amtrak).....  | 35                   | 1                | 155         | ---              | ---          | 191                  | 249          | ---              | 53          | 2                | 4            | 308    |
| Baltimore and Ohio Railroad.....                 | 28                   | ---              | ---         | 4                | 1            | 33                   | 309          | ---              | 3           | 153              | 14           | 479    |
| Bessemer and Lake Erie Railroad.....             | ---                  | ---              | ---         | ---              | ---          | ---                  | 16           | ---              | ---         | 10               | 1            | 27     |
| Boston and Maine Corp.....                       | ---                  | ---              | 1           | ---              | ---          | 1                    | 48           | ---              | 5           | 18               | 12           | 83     |
| Chesapeake and Ohio Railway.....                 | 29                   | ---              | ---         | 4                | ---          | 33                   | 289          | 3                | 2           | 146              | 23           | 463    |
| Consolidated Rail Corp.....                      | 122                  | 1                | 46          | 13               | 2            | 184                  | 1,475        | 1                | 19          | 269              | 109          | 1,873  |
| Delaware and Hudson Railway.....                 | ---                  | ---              | ---         | ---              | ---          | ---                  | 30           | ---              | ---         | 3                | 1            | 34     |
| Detroit, Toledo and Ironton Railroad.....        | ---                  | ---              | ---         | ---              | ---          | ---                  | 31           | ---              | ---         | 7                | ---          | 38     |
| Elgin, Joliet and Eastern Railway.....           | ---                  | ---              | ---         | ---              | ---          | ---                  | 95           | ---              | ---         | 8                | ---          | 103    |
| Grand Trunk Western Railroad.....                | 7                    | ---              | ---         | ---              | ---          | 7                    | 145          | ---              | 1           | 47               | 9            | 202    |
| Long Island Railroad.....                        | 4                    | ---              | 3           | ---              | 1            | 8                    | 127          | ---              | 15          | 2                | 16           | 160    |
| Norfolk and Western Railway.....                 | 10                   | ---              | ---         | 6                | ---          | 16                   | 410          | 3                | ---         | 234              | 29           | 676    |
| Pittsburg and Lake Erie Railroad.....            | ---                  | ---              | ---         | ---              | ---          | ---                  | 20           | ---              | ---         | 5                | ---          | 25     |
| Western Maryland Railway.....                    | 1                    | ---              | ---         | ---              | ---          | 1                    | 22           | ---              | ---         | 5                | 3            | 30     |
| SUBTOTAL, EASTERN DISTRICT:.....                 | 236                  | 2                | 205         | 27               | 4            | 474                  | 3,266        | 7                | 98          | 909              | 221          | 4,501  |
| SOUTHERN DISTRICT                                |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| Alabama Great Southern Railroad.....             | 3                    | ---              | ---         | 1                | ---          | 4                    | 17           | ---              | ---         | 26               | 2            | 45     |
| Central of Georgia Railroad.....                 | ---                  | ---              | ---         | 3                | ---          | 3                    | 52           | ---              | ---         | 26               | 2            | 80     |
| Cinn., N.O. & Texas Pacific Railway.....         | ---                  | ---              | ---         | ---              | ---          | ---                  | 31           | ---              | ---         | 13               | 2            | 46     |
| Clinchfield Railroad.....                        | 3                    | ---              | ---         | 1                | ---          | 4                    | 21           | ---              | ---         | 3                | 1            | 25     |
| Florida East Coast Railway.....                  | ---                  | ---              | ---         | ---              | ---          | ---                  | 6            | ---              | ---         | 10               | 14           | 30     |
| Illinois Central Gulf Railroad.....              | 42                   | ---              | 571         | 6                | ---          | 619                  | 344          | ---              | 7           | 200              | 15           | 566    |
| Louisville and Nashville Railroad.....           | 54                   | ---              | ---         | 32               | 1            | 87                   | 390          | ---              | ---         | 99               | 28           | 517    |
| Seaboard Coast Line Railroad.....                | 20                   | ---              | ---         | 16               | 2            | 38                   | 455          | 3                | 4           | 202              | 30           | 694    |
| Southern Railway.....                            | 26                   | 1                | 34          | 10               | ---          | 71                   | 277          | ---              | 1           | 226              | 16           | 520    |
| SUBTOTAL, SOUTHERN DISTRICT:.....                | 148                  | 1                | 605         | 69               | 3            | 826                  | 1,593        | 3                | 12          | 805              | 110          | 2,523  |
| WESTERN DISTRICT                                 |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| Atchison, Topeka and Santa Fe Railway.....       | 24                   | ---              | ---         | 10               | ---          | 34                   | 377          | ---              | ---         | 262              | 29           | 668    |
| Burlington Northern Inc.....                     | 50                   | ---              | ---         | 1                | ---          | 51                   | 749          | 1                | 4           | 142              | 22           | 918    |
| Chicago and Northwestern Trans. Company.....     | 17                   | ---              | 5           | 2                | ---          | 24                   | 206          | ---              | 2           | 90               | 36           | 334    |
| Chicago, Milw., St. Paul & Pacific Railroad..... | 28                   | ---              | ---         | 4                | ---          | 32                   | 218          | ---              | 3           | 92               | 13           | 326    |
| Chicago, Rock Island & Pacific Railroad.....     | 10                   | ---              | 1           | 2                | 1            | 14                   | 179          | ---              | 10          | 97               | 14           | 300    |
| Colorado and Southern Railway.....               | ---                  | ---              | ---         | ---              | ---          | ---                  | 19           | ---              | ---         | 13               | 1            | 33     |
| Denver and Rio Grande Western Railroad.....      | 2                    | ---              | ---         | ---              | 3            | 5                    | 45           | ---              | ---         | 13               | ---          | 58     |
| Duluth, Missabe and Iron Range Railway.....      | 1                    | ---              | ---         | 1                | ---          | 2                    | 19           | ---              | ---         | 8                | ---          | 27     |
| Fort Worth and Denver Railway.....               | 3                    | ---              | ---         | 1                | ---          | 4                    | 32           | ---              | ---         | 10               | 2            | 44     |
| Kansas City Southern Railway.....                | 7                    | ---              | ---         | 1                | ---          | 8                    | 58           | ---              | ---         | 32               | 2            | 92     |
| Louisiana and Arkansas Railway.....              | ---                  | ---              | ---         | 2                | ---          | 2                    | 44           | ---              | ---         | 38               | 3            | 85     |
| Missouri-Kansas-Texas Railroad.....              | ---                  | ---              | ---         | 5                | ---          | 5                    | 126          | ---              | ---         | 57               | 4            | 187    |
| Missouri Pacific Railroad.....                   | 27                   | ---              | ---         | 12               | ---          | 39                   | 439          | 2                | ---         | 481              | 17           | 939    |
| St. Louis-San Francisco Railway.....             | 10                   | ---              | ---         | 2                | ---          | 12                   | 110          | ---              | ---         | 95               | 12           | 217    |
| St. Louis Southwestern Railway.....              | 9                    | ---              | ---         | ---              | ---          | 9                    | 93           | ---              | ---         | 27               | 8            | 128    |
| Soo Line Railroad.....                           | 12                   | ---              | ---         | 2                | ---          | 14                   | 147          | ---              | ---         | 86               | 4            | 237    |
| Southern Pacific Trans. Company.....             | 57                   | ---              | ---         | 21               | 1            | 79                   | 828          | ---              | 3           | 181              | 96           | 1,106  |
| Union Pacific Railroad.....                      | 39                   | 2                | ---         | 5                | ---          | 46                   | 662          | 2                | 2           | 161              | 11           | 838    |
| Western Pacific Railroad.....                    | 12                   | ---              | ---         | 1                | 2            | 15                   | 86           | ---              | ---         | 22               | 13           | 121    |
| SUBTOTAL, WESTERN DISTRICT:.....                 | 308                  | 2                | 6           | 72               | 7            | 395                  | 4,437        | 5                | 24          | 1,907            | 287          | 6,660  |
| CLASS I RR (SWITCHING AND TERMINAL)              |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| EASTERN DISTRICT                                 |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| Union Railroad (Pennsylvania).....               | ---                  | ---              | ---         | ---              | ---          | ---                  | 29           | ---              | ---         | ---              | ---          | 29     |
| CLASS II AND III RAILROADS.....                  | 43                   | ---              | 25          | 148              | ---          | 216                  | 1,010        | ---              | 43          | 213              | 35           | 1,301  |
| PERCAPITULATION                                  |                      |                  |             |                  |              |                      |              |                  |             |                  |              |        |
| Class I RR (Line-Haul).....                      | 692                  | 5                | 816         | 168              | 14           | 1,695                | 9,296        | 15               | 134         | 3,621            | 618          | 13,684 |
| Class I RR (Switching and Terminal).....         | ---                  | ---              | ---         | ---              | ---          | ---                  | 29           | ---              | ---         | ---              | ---          | 29     |
| Class II & III Railroads.....                    | 43                   | ---              | 25          | 148              | ---          | 216                  | 1,010        | ---              | 43          | 213              | 35           | 1,301  |
| TOTAL FOR ALL RAILROADS.....                     | 735                  | 5                | 841         | 316              | 14           | 1,911                | 10,335       | 15               | 177         | 3,834            | 653          | 15,014 |

TABLE R8. (CONT)

|  | Nontrain Incidents..... |                  |             |                  |              | Total..... |              |                  |             |                  |              |        |
|--|-------------------------|------------------|-------------|------------------|--------------|------------|--------------|------------------|-------------|------------------|--------------|--------|
|  | Empl on Duty            | Empl Not on Duty | Pass-engers | Non Tres-passers | Tres-passers | Total      | Empl on Duty | Empl Not on Duty | Pass-engers | Non Tres-passers | Tres-passers | Total  |
| CLASS I RR (LINE-HAUL)                           |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| EASTERN DISTRICT                                 |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| National Railroad Passenger Corp. (Amtrak).....  | 2,761                   | 19               | 50          | 38               | 9            | 2,877      | 3,045        | 20               | 258         | 40               | 13           | 3,376  |
| Baltimore and Ohio Railroad.....                 | 1,561                   | 33               | 10          | 5                | ---          | 1,609      | 1,898        | 33               | 13          | 162              | 15           | 2,121  |
| Bessemer and Lake Erie Railroad.....             | 153                     | ---              | ---         | ---              | ---          | 153        | 169          | ---              | ---         | 10               | 1            | 180    |
| Boston and Maine Corp.....                       | 202                     | 7                | 14          | 3                | ---          | 226        | 250          | 7                | 20          | 21               | 12           | 310    |
| Chesapeake and Ohio Railway.....                 | 1,647                   | 23               | 5           | 5                | 1            | 1,681      | 1,965        | 26               | 7           | 155              | 24           | 2,177  |
| Consolidated Rail Corp.....                      | 10,004                  | 139              | 21          | 50               | 26           | 10,240     | 11,601       | 141              | 86          | 332              | 137          | 12,297 |
| Delaware and Hudson Railway.....                 | 109                     | 1                | ---         | ---              | 1            | 111        | 139          | 1                | ---         | 3                | 2            | 145    |
| Detroit, Toledo and Ironton Railroad.....        | 302                     | ---              | ---         | 3                | ---          | 305        | 333          | ---              | ---         | 10               | ---          | 343    |
| Elgin, Joliet and Eastern Railway.....           | 305                     | 8                | ---         | ---              | ---          | 313        | 400          | 8                | ---         | 8                | ---          | 416    |
| Grand Trunk Western Railroad.....                | 483                     | 2                | 4           | 8                | 2            | 499        | 635          | 2                | 5           | 55               | 11           | 708    |
| Long Island Railroad.....                        | 912                     | 10               | 41          | 45               | 7            | 1,015      | 1,043        | 10               | 59          | 47               | 24           | 1,183  |
| Norfolk and Western Railway.....                 | 1,583                   | 43               | 3           | 75               | 2            | 1,706      | 2,003        | 46               | 3           | 315              | 31           | 2,398  |
| Pittsburg and Lake Erie Railroad.....            | 292                     | 3                | ---         | 1                | ---          | 296        | 312          | 3                | ---         | 6                | ---          | 321    |
| Western Maryland Railway.....                    | 93                      | 2                | 1           | 2                | ---          | 98         | 116          | 2                | 1           | 7                | 3            | 129    |
| SUBTOTAL, EASTERN DISTRICT:.....                 | 20,407                  | 290              | 149         | 235              | 48           | 21,129     | 23,909       | 299              | 452         | 1,171            | 273          | 26,104 |
| SOUTHERN DISTRICT                                |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| Alabama Great Southern Railroad.....             | 34                      | ---              | ---         | ---              | ---          | 34         | 54           | ---              | ---         | 27               | 2            | 83     |
| Central of Georgia Railroad.....                 | 98                      | ---              | ---         | ---              | ---          | 98         | 150          | ---              | ---         | 29               | 2            | 161    |
| Cinn., N.O. & Texas Pacific Railway.....         | 69                      | 4                | ---         | 2                | ---          | 75         | 100          | 4                | ---         | 15               | 2            | 121    |
| Clinchfield Railroad.....                        | 52                      | ---              | ---         | ---              | ---          | 52         | 76           | ---              | ---         | 4                | 1            | 81     |
| Florida East Coast Railway.....                  | 24                      | ---              | ---         | ---              | ---          | 24         | 30           | ---              | ---         | 10               | 14           | 54     |
| Illinois Central Gulf Railroad.....              | 2,571                   | 27               | 24          | 59               | 2            | 2,683      | 2,957        | 27               | 602         | 265              | 17           | 3,668  |
| Louisville and Nashville Railroad.....           | 1,689                   | 11               | ---         | 7                | 4            | 1,711      | 2,133        | 11               | ---         | 138              | 33           | 2,315  |
| Seaboard Coast Line Railroad.....                | 1,460                   | 11               | ---         | 11               | 2            | 1,484      | 1,935        | 14               | 4           | 229              | 34           | 2,216  |
| Southern Railway.....                            | 1,083                   | 28               | ---         | 34               | ---          | 1,145      | 1,386        | 29               | 35          | 270              | 16           | 1,736  |
| SUBTOTAL, SOUTHERN DISTRICT:.....                | 7,080                   | 81               | 24          | 113              | 8            | 7,306      | 8,821        | 85               | 641         | 967              | 121          | 10,655 |
| WESTERN DISTRICT                                 |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| Atchison, Topeka and Santa Fe Railway.....       | 1,589                   | 33               | ---         | 20               | 3            | 1,645      | 1,990        | 33               | ---         | 292              | 32           | 2,347  |
| Burlington Northern Inc.....                     | 5,483                   | 93               | 8           | 29               | ---          | 5,613      | 6,282        | 94               | 12          | 172              | 22           | 6,582  |
| Chicago and Northwestern Trans. Company.....     | 1,808                   | 20               | 19          | 29               | 2            | 1,878      | 2,031        | 20               | 26          | 121              | 38           | 2,236  |
| Chicago, Milw., St. Paul & Pacific Railroad..... | 1,280                   | 6                | 4           | 8                | 6            | 1,304      | 1,526        | 6                | 7           | 104              | 19           | 1,662  |
| Chicago, Rock Island & Pacific Railroad.....     | 760                     | 4                | 7           | 4                | ---          | 775        | 949          | 4                | 18          | 103              | 15           | 1,089  |
| Colorado and Southern Railway.....               | 99                      | ---              | ---         | ---              | ---          | 99         | 118          | ---              | ---         | 13               | 1            | 132    |
| Denver and Rio Grande Western Railroad.....      | 198                     | 2                | ---         | 2                | ---          | 202        | 245          | 2                | ---         | 15               | 3            | 265    |
| Duluth, Missabe and Iron Range Railway.....      | 111                     | 2                | ---         | 35               | ---          | 148        | 131          | 2                | ---         | 44               | ---          | 177    |
| Fort Worth and Denver Railway.....               | 143                     | 1                | ---         | 1                | ---          | 145        | 178          | 1                | ---         | 12               | 2            | 193    |
| Kansas City Southern Railway.....                | 254                     | ---              | ---         | 1                | ---          | 255        | 319          | ---              | ---         | 34               | 2            | 355    |
| Louisiana and Arkansas Railway.....              | 123                     | ---              | ---         | ---              | ---          | 123        | 167          | ---              | ---         | 40               | 3            | 210    |
| Missouri-Kansas-Texas Railroad.....              | 246                     | 1                | ---         | 17               | ---          | 264        | 372          | 1                | ---         | 79               | 4            | 456    |
| Missouri Pacific Railroad.....                   | 1,365                   | 21               | ---         | 22               | ---          | 1,408      | 1,831        | 23               | ---         | 515              | 17           | 2,386  |
| St. Louis-San Francisco Railway.....             | 775                     | 13               | ---         | 7                | 1            | 796        | 895          | 13               | ---         | 104              | 13           | 1,025  |
| St. Louis Southwestern Railway.....              | 416                     | 1                | ---         | ---              | ---          | 417        | 518          | 1                | ---         | 27               | 8            | 554    |
| Soo Line Railroad.....                           | 644                     | 18               | ---         | 8                | ---          | 670        | 803          | 18               | ---         | 96               | 4            | 921    |
| Southern Pacific Trans. Company.....             | 2,881                   | 24               | ---         | 10               | 4            | 2,919      | 3,766        | 24               | 3           | 212              | 101          | 4,106  |
| Union Pacific Railroad.....                      | 2,982                   | 66               | ---         | 15               | 2            | 3,065      | 3,683        | 70               | 2           | 181              | 13           | 3,949  |
| Western Pacific Railroad.....                    | 299                     | 1                | ---         | 1                | ---          | 301        | 397          | 1                | ---         | 24               | 15           | 437    |
| SUBTOTAL, WESTERN DISTRICT:.....                 | 21,456                  | 306              | 38          | 209              | 18           | 22,027     | 26,201       | 313              | 68          | 2,188            | 312          | 29,082 |
| CLASS I RR (SWITCHING AND TERMINAL)              |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| EASTERN DISTRICT                                 |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| Union Railroad (Pennsylvania).....               | 139                     | 8                | ---         | ---              | ---          | 147        | 168          | 8                | ---         | ---              | ---          | 176    |
| CLASS II AND III RAILROADS.....                  | 4,919                   | 18               | 23          | 46               | 5            | 5,011      | 5,972        | 18               | 91          | 407              | 40           | 6,528  |
| RECAPITULATION                                   |                         |                  |             |                  |              |            |              |                  |             |                  |              |        |
| Class I RR (Line-Haul).....                      | 48,943                  | 677              | 211         | 557              | 74           | 50,462     | 58,931       | 697              | 1,161       | 4,346            | 706          | 65,841 |
| Class I RR (Switching and Terminal).....         | 139                     | 8                | ---         | ---              | ---          | 147        | 168          | 8                | ---         | ---              | ---          | 176    |
| Class II & III Railroads.....                    | 4,919                   | 18               | 23          | 46               | 5            | 5,011      | 5,972        | 18               | 91          | 407              | 40           | 6,528  |
| TOTAL FOR ALL RAILROADS.....                     | 54,001                  | 703              | 234         | 603              | 79           | 55,620     | 65,071       | 723              | 1,252       | 4,753            | 746          | 72,545 |

TABLE R9. FATALITIES TO EMPLOYEES ON DUTY BY TYPE AND RAILROAD, 1978

|   | I. Exec Office Staff        |         |         | III. Maintenance of Way and Structures |         |         | IV. Maintenance of Equipment and Stores |         |         |
|---|-----------------------------|---------|---------|--|---------|---------|---|---------|---------|
|   | II. Prof, Clerical, General | Man Hrs | Kld/Mil | Man Hrs                                | Kld/Mil | Man Hrs | Man Hrs                                 | Kld/Mil | Man Hrs |
|   | Killed                      | (Thou)  | Man Hrs | Killed                                 | (Thou)  | Man Hrs | Killed                                  | (Thou)  | Man Hrs |
| CLASS I RR (LINE-HAUL)                      |                             |         |         |  |         |         |   |         |         |
| EASTERN DISTRICT                            |                             |         |         |  |         |         |   |         |         |
| National Railroad Passenger Corp. (Amtrak)  | ---                         | 13,696  | 0.00    | 2                                      | 7,562   | 0.26    | ---                                     | 11,065  | 0.00    |
| Baltimore and Ohio Railroad                 | ---                         | 5,111   | 0.00    | ---                                    | 5,988   | 0.00    | 1                                       | 6,397   | 0.16    |
| Bessemer and Lake Erie Railroad             | ---                         | 957     | 0.00    | ---                                    | 386     | 0.00    | ---                                     | 742     | 0.00    |
| Boston and Maine Corp.                      | ---                         | 1,480   | 0.00    | ---                                    | 1,243   | 0.00    | ---                                     | 1,397   | 0.00    |
| Chesapeake and Ohio Railway                 | ---                         | 9,424   | 0.00    | ---                                    | 4,911   | 0.00    | ---                                     | 9,200   | 0.00    |
| Consolidated Rail Corp.                     | 4                           | 40,587  | 0.10    | 4                                      | 32,962  | 0.12    | 2                                       | 41,185  | 0.05    |
| Delaware and Hudson Railway                 | ---                         | 933     | 0.00    | ---                                    | 552     | 0.00    | ---                                     | 806     | 0.00    |
| Detroit, Toledo and Ironton Railroad        | ---                         | 666     | 0.00    | ---                                    | 377     | 0.00    | ---                                     | 765     | 0.00    |
| Elgin, Joliet and Eastern Railway           | 1                           | 1,455   | 0.69    | ---                                    | 1,012   | 0.00    | ---                                     | 908     | 0.00    |
| Grand Trunk Western Railroad                | ---                         | 3,099   | 0.00    | ---                                    | 1,177   | 0.00    | ---                                     | 1,838   | 0.00    |
| Long Island Railroad                        | ---                         | 2,545   | 0.00    | 1                                      | 1,867   | 0.54    | ---                                     | 3,928   | 0.00    |
| Norfolk and Western Railway                 | ---                         | 9,433   | 0.00    | ---                                    | 6,296   | 0.00    | 2                                       | 7,020   | 0.28    |
| Pittsburg and Lake Erie Railroad            | ---                         | 1,141   | 0.00    | ---                                    | 617     | 0.00    | 1                                       | 1,173   | 0.85    |
| Western Maryland Railway                    | ---                         | 300     | 0.00    | 1                                      | 442     | 2.26    | ---                                     | 507     | 0.00    |
| SUBTOTAL, EASTERN DISTRICT                  | 5                           | 90,847  | 0.06    | 8                                      | 65,392  | 0.12    | 6                                       | 86,951  | 0.07    |
| SOUTHERN DISTRICT                           |                             |         |         |  |         |         |   |         |         |
| Alabama Great Southern Railroad             | ---                         | ---     | A       | ---                                    | ---     | A       | ---                                     | ---     | A       |
| Central of Georgia Railroad                 | ---                         | ---     | A       | ---                                    | ---     | A       | ---                                     | ---     | A       |
| Cinn., N.O. & Texas Pacific Railway         | ---                         | ---     | A       | ---                                    | ---     | A       | ---                                     | ---     | A       |
| Clinchfield Railroad                        | ---                         | 187     | 0.00    | ---                                    | 362     | 0.00    | ---                                     | 354     | 0.00    |
| Florida East Coast Railway                  | ---                         | 568     | 0.00    | ---                                    | 711     | 0.00    | ---                                     | 324     | 0.00    |
| Illinois Central Gulf Railroad              | 1                           | 8,300   | 0.12    | 2                                      | 6,748   | 0.30    | 2                                       | 9,659   | 0.21    |
| Louisville and Nashville Railroad           | 1                           | 6,694   | 0.15    | 3                                      | 5,595   | 0.54    | 2                                       | 7,223   | 0.28    |
| Seaboard Coast Line Railroad                | ---                         | 7,975   | 0.00    | 1                                      | 6,988   | 0.14    | 1                                       | 8,778   | 0.11    |
| Southern Railway                            | ---                         | 9,399   | 0.00    | ---                                    | 7,112   | 0.00    | ---                                     | 7,261   | 0.00    |
| SUBTOTAL, SOUTHERN DISTRICT                 | 2                           | 33,123  | 0.06    | 6                                      | 27,516  | 0.22    | 5                                       | 33,599  | 0.15    |
| WESTERN DISTRICT                            |                             |         |         |  |         |         |   |         |         |
| Atchison, Topeka and Santa Fe Railway       | ---                         | 15,101  | 0.00    | ---                                    | 12,369  | 0.00    | 2                                       | 14,369  | 0.14    |
| Burlington Northern Inc.                    | 1                           | 20,445  | 0.05    | 6                                      | 21,346  | 0.26    | 1                                       | 20,697  | 0.05    |
| Chicago and Northwestern Trans. Company     | ---                         | 6,453   | 0.00    | ---                                    | 6,660   | 0.00    | 1                                       | 6,134   | 0.16    |
| Chicago, Milw., St. Paul & Pacific Railroad | ---                         | 5,136   | 0.00    | ---                                    | 4,069   | 0.00    | 1                                       | 4,340   | 0.23    |
| Chicago, Rock Island & Pacific Railroad     | ---                         | 3,523   | 0.00    | ---                                    | 2,802   | 0.00    | 1                                       | 3,171   | 0.32    |
| Colorado and Southern Railway               | ---                         | 131     | 0.00    | ---                                    | 417     | 0.00    | ---                                     | 2       | 0.00    |
| Denver and Rio Grande Western Railroad      | ---                         | 1,768   | 0.00    | ---                                    | 1,655   | 0.00    | ---                                     | 1,809   | 0.00    |
| Duluth, Missabe and Iron Range Railway      | ---                         | 684     | 0.00    | ---                                    | 713     | 0.00    | ---                                     | 784     | 0.00    |
| Fort Worth and Denver Railway               | ---                         | 249     | 0.00    | ---                                    | 700     | 0.00    | ---                                     | 254     | 0.00    |
| Kansas City Southern Railway                | ---                         | 1,254   | 0.00    | ---                                    | 1,290   | 0.00    | ---                                     | 988     | 0.00    |
| Louisiana and Arkansas Railway              | ---                         | ---     | B       | ---                                    | ---     | B       | ---                                     | ---     | B       |
| Missouri-Kansas-Texas Railroad              | ---                         | 1,357   | 0.00    | ---                                    | 1,097   | 0.00    | ---                                     | 912     | 0.00    |
| Missouri Pacific Railroad                   | ---                         | 8,952   | 0.00    | 1                                      | 8,092   | 0.12    | ---                                     | 7,483   | 0.00    |
| St. Louis-San Francisco Railway             | ---                         | 3,352   | 0.00    | 1                                      | 3,260   | 0.31    | ---                                     | 3,306   | 0.00    |
| St. Louis Southwestern Railway              | ---                         | 1,640   | 0.00    | ---                                    | 1,684   | 0.00    | ---                                     | 1,861   | 0.00    |
| Soo Line Railroad                           | ---                         | 2,077   | 0.00    | ---                                    | 2,273   | 0.00    | ---                                     | 1,896   | 0.00    |
| Southern Pacific Trans. Company             | ---                         | 18,494  | 0.00    | 1                                      | 12,069  | 0.08    | 3                                       | 14,460  | 0.21    |
| Union Pacific Railroad                      | 2                           | 14,819  | 0.13    | 3                                      | 10,783  | 0.28    | 4                                       | 11,637  | 0.34    |
| Western Pacific Railroad                    | ---                         | 1,485   | 0.00    | 1                                      | 1,080   | 0.93    | ---                                     | 812     | 0.00    |
| SUBTOTAL, WESTERN DISTRICT                  | 3                           | 106,920 | 0.03    | 13                                     | 92,359  | 0.14    | 13                                      | 94,915  | 0.14    |
| CLASS I RR (SWITCHING AND TERMINAL)         |                             |         |         |  |         |         |   |         |         |
| EASTERN DISTRICT                            |                             |         |         |  |         |         |   |         |         |
| Union Railroad (Pennsylvania)               | ---                         | 768     | 0.00    | ---                                    | 375     | 0.00    | ---                                     | 433     | 0.00    |
| CLASS II AND III RAILROADS                  |                             |         |         |  |         |         |   |         |         |
| RECAPITULATION                              |                             |         |         |  |         |         |   |         |         |
| Class I RR (Line-Haul)                      | 10                          | 230,890 | 0.04    | 27                                     | 185,267 | 0.15    | 24                                      | 215,465 | 0.11    |
| Class I RR (Switching and Terminal)         | ---                         | 768     | 0.00    | ---                                    | 375     | 0.00    | ---                                     | 433     | 0.00    |
| Class II & III Railroads                    | ---                         | ---     | C       | 3                                      | ---     | C       | ---                                     | ---     | C       |
| TOTAL FOR ALL RAILROADS                     | 10                          | 231,658 | 0.04    | 30                                     | 185,642 | 0.16    | 24                                      | 215,898 | 0.11    |

TABLE R9. (CONT)

|   | V. Via. Transportation<br>not train, engine, yard |         |         | Vib. Transportation<br>Train and Engine |         |         | .....TOTAL..... |           |         |
|---|---|---------|---------|---|---------|---------|-----------------|-----------|---------|
|   | Killed  | Man Hrs | Kld/Mil | Killed                                  | Man Hrs | Kld/Mil | Killed          | Man Hrs   | Kld/Mil |
|   |   | (Thou)  | Man Hrs |   | (Thou)  | Man Hrs |                 | (Thou)    | Man Hrs |
| CLASS I RP (LINE-HAUL)                              |   |         |         |   |         |         |                 |           |         |
| EASTERN DISTRICT                                    |   |         |         |   |         |         |                 |           |         |
| National Railroad Passenger Corp. (Amtrak).....     | ---   | 8,278   | 0.00    | ---                                     | ---     | ---     | 2               | 40,601    | 0.05    |
| Baltimore and Ohio Railroad.....                    | ---   | 2,959   | 0.00    | 2                                       | 11,237  | 0.18    | 3               | 31,692    | 0.09    |
| Bessemer and Lake Erie Railroad.....                | ---   | 132     | 0.00    | ---                                     | 360     | 0.00    | ---             | 2,577     | 0.00    |
| Boston and Maine Corp.....                          | ---   | 407     | 0.00    | ---                                     | 1,674   | 0.00    | ---             | 6,201     | 0.00    |
| Chesapeake and Ohio Railway.....                    | ---   | 2,937   | 0.00    | 2                                       | 9,575   | 0.20    | 2               | 36,447    | 0.05    |
| Consolidated Rail Corp.....                         | ---   | 11,999  | 0.00    | 7                                       | 55,323  | 0.13    | 17              | 182,056   | 0.09    |
| Delaware and Hudson Railway.....                    | ---   | 147     | 0.00    | ---                                     | 1,203   | 0.00    | ---             | 3,681     | 0.00    |
| Detroit, Toledo and Ironton Railroad.....           | ---   | 155     | 0.00    | ---                                     | 922     | 0.00    | ---             | 2,935     | 0.00    |
| Elgin, Joliet and Eastern Railway.....              | ---   | 358     | 0.00    | 1                                       | 1,756   | 0.57    | 2               | 5,489     | 0.36    |
| Grand Trunk Western Railroad.....                   | ---   | 592     | 0.00    | 1                                       | 2,723   | 0.37    | 1               | 9,429     | 0.11    |
| Long Island Railroad.....                           | ---   | 792     | 0.00    | ---                                     | 2,880   | 0.00    | 1               | 12,012    | 0.06    |
| Norfolk and Western Railway.....                    | ---   | 2,324   | 0.00    | ---                                     | 10,100  | 0.00    | 2               | 35,173    | 0.06    |
| Pittsburg and Lake Erie Railroad.....               | ---   | 205     | 0.00    | ---                                     | 1,054   | 0.00    | 1               | 4,190     | 0.24    |
| Western Maryland Railway.....                       | ---   | 107     | 0.00    | ---                                     | 922     | 0.00    | 1               | 2,278     | 0.44    |
| SUBTOTAL, EASTERN DISTRICT:.....                    | ---   | 31,442  | 0.00    | 13                                      | 100,129 | 0.13    | 32              | 374,761   | 0.09    |
| SOUTHERN DISTRICT                                   |   |         |         |   |         |         |                 |           |         |
| Alabama Great Southern Railroad.....                | ---   | ---     | A       | ---                                     | ---     | A       | ---             | ---       | A       |
| Central of Georgia Railroad.....                    | ---   | ---     | A       | 1                                       | ---     | A       | 1               | ---       | A       |
| Cinn., N.O. & Texas Pacific Railway.....            | ---   | ---     | A       | ---                                     | ---     | A       | ---             | ---       | A       |
| Clinchfield Railroad.....                           | ---   | 159     | 0.00    | ---                                     | 628     | 0.00    | ---             | 1,700     | 0.00    |
| Florida East Coast Railway.....                     | ---   | 109     | 0.00    | ---                                     | 585     | 0.00    | ---             | 2,297     | 0.00    |
| Illinois Central Gulf Railroad.....                 | ---   | 2,154   | 0.00    | 1                                       | 10,458  | 0.10    | 6               | 37,319    | 0.16    |
| Louisville and Nashville Railroad.....              | ---   | 2,038   | 0.00    | 7                                       | 11,617  | 0.60    | 13              | 33,167    | 0.39    |
| Seaboard Coast Line Railroad.....                   | 1   | 2,972   | 0.34    | 1                                       | 12,342  | 0.08    | 4               | 39,055    | 0.10    |
| Southern Railway.....                               | 1   | 2,995   | 0.33    | 3                                       | 13,745  | 0.22    | 4               | 40,513    | 0.10    |
| SUBTOTAL, SOUTHERN DISTRICT:.....                   | 2   | 10,438  | 0.19    | 13                                      | 49,375  | 0.26    | 28              | 154,051   | 0.18    |
| WESTERN DISTRICT                                    |   |         |         |   |         |         |                 |           |         |
| Atchison, Topeka and Santa Fe Railway.....          | ---   | 3,818   | 0.00    | 6                                       | 16,148  | 0.37    | 8               | 61,805    | 0.13    |
| Burlington Northern Inc.....                        | ---   | 6,279   | 0.00    | 4                                       | 22,279  | 0.18    | 12              | 91,046    | 0.13    |
| Chicago and Northwestern Trans. Company.....        | 1   | 2,329   | 0.43    | 4                                       | 8,705   | 0.46    | 6               | 30,281    | 0.20    |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | ---   | 1,733   | 0.00    | 3                                       | 6,729   | 0.45    | 4               | 22,007    | 0.18    |
| Chicago, Rock Island & Pacific Railroad.....        | ---   | 1,439   | 0.00    | ---                                     | 5,739   | 0.00    | 1               | 16,674    | 0.06    |
| Colorado and Southern Railway.....                  | ---   | 23      | 0.00    | ---                                     | 734     | 0.00    | ---             | 1,307     | 0.00    |
| Denver and Rio Grande Western Railroad.....         | ---   | 472     | 0.00    | ---                                     | 2,059   | 0.00    | ---             | 7,763     | 0.00    |
| Duluth, Missabe and Iron Range Railway.....         | ---   | 353     | 0.00    | ---                                     | 580     | 0.00    | ---             | 3,114     | 0.00    |
| Fort Worth and Denver Railway.....                  | ---   | 232     | 0.00    | ---                                     | 883     | 0.00    | ---             | 2,318     | 0.00    |
| Kansas City Southern Railway.....                   | ---   | 280     | 0.00    | ---                                     | 2,328   | 0.00    | ---             | 6,140     | 0.00    |
| Louisiana and Arkansas Railway.....                 | ---   | ---     | B       | ---                                     | ---     | B       | ---             | ---       | B       |
| Missouri-Kansas-Texas Railroad.....                 | ---   | 293     | 0.00    | ---                                     | 1,742   | 0.00    | ---             | 5,401     | 0.00    |
| Missouri Pacific Railroad.....                      | ---   | 2,525   | 0.00    | 3                                       | 14,539  | 0.21    | 4               | 41,592    | 0.10    |
| St. Louis-San Francisco Railway.....                | ---   | 1,007   | 0.00    | 2                                       | 4,552   | 0.44    | 3               | 15,477    | 0.19    |
| St. Louis Southwestern Railway.....                 | ---   | 389     | 0.00    | 2                                       | 2,517   | 0.79    | 2               | 8,091     | 0.25    |
| Soo Line Railroad.....                              | ---   | 712     | 0.00    | ---                                     | 2,472   | 0.00    | ---             | 9,430     | 0.00    |
| Southern Pacific Trans. Company.....                | ---   | 3,225   | 0.00    | 1                                       | 18,715  | 0.05    | 5               | 66,963    | 0.07    |
| Union Pacific Railroad.....                         | ---   | 2,953   | 0.00    | 2                                       | 11,007  | 0.18    | 11              | 51,199    | 0.21    |
| Western Pacific Railroad.....                       | ---   | 274     | 0.00    | ---                                     | 1,339   | 0.00    | 1               | 4,990     | 0.20    |
| SUBTOTAL, WESTERN DISTRICT:.....                    | 1   | 28,337  | 0.04    | 27                                      | 123,067 | 0.22    | 57              | 445,598   | 0.13    |
| CLASS I RR (SWITCHING AND TERMINAL)                 |   |         |         |   |         |         |                 |           |         |
| EASTERN DISTRICT                                    |   |         |         |   |         |         |                 |           |         |
| Union Railroad (Pennsylvania).....                  | ---   | 152     | 0.00    | ---                                     | 1,700   | 0.00    | ---             | 3,428     | 0.00    |
| CLASS II AND III RAILROADS.....                     |   |         |         |   |         |         |                 |           |         |
| ---   | ---   | ---     | C       | 2                                       | ---     | C       | 5               | 77,935    | 0.06    |
| RECAPITULATION                                      |   |         |         |   |         |         |                 |           |         |
| Class I RR (Line-Haul).....                         | 3   | 70,217  | 0.04    | 53                                      | 272,571 | 0.19    | 117             | 974,410   | 0.12    |
| Class I RP (Switching and Terminal).....            | ---   | 152     | 0.00    | ---                                     | 1,700   | 0.00    | ---             | 3,428     | 0.00    |
| Class II & III Railroads.....                       | ---   | ---     | C       | 2                                       | ---     | C       | 5               | 77,935    | 0.06    |
| TOTAL FOR ALL RAILROADS.....                        | 3   | 70,369  | 0.04    | 55                                      | 274,271 | 0.20    | 122             | 1,055,773 | 0.12    |

A Included in Southern Railway System  
 B Included in Kansas City Southern Railway  
 C Class II and III Railroad man hours are not available by occupational categories.

TABLE 110. INJURIES TO EMPLOYEES ON DUTY BY TYPE AND RAILROAD, 1978

|   | I. Exec Office Staff        |         |                 | III. Maintenance of Way and Structures |         |                 | IV. Maintenance of Equipment and Stores |         |                 |
|---|-----------------------------|---------|-----------------|--|---------|-----------------|---|---------|-----------------|
|   | II. Prof, Clerical, General |         |                 | Man Hrs Inj/Mil                        |         |                 | Man Hrs Inj/Mil                         |         |                 |
|   | Injured (Thou)              | Man Hrs | Inj/Mil Man Hrs | Injured (Thou)                         | Man Hrs | Inj/Mil Man Hrs | Injured (Thou)                          | Man Hrs | Inj/Mil Man Hrs |
| CLASS I RR (LINE-HAUL)                      |                             |         |                 |  |         |                 |   |         |                 |
| EASTERN DISTRICT                            |                             |         |                 |  |         |                 |   |         |                 |
| National Railroad Passenger Corp. (Amtrak)  | 241                         | 13,696  | 17.60           | 1,404                                  | 7,562   | 185.67          | 682                                     | 11,065  | 61.64           |
| Baltimore and Ohio Railroad                 | 76                          | 5,111   | 15.26           | 564                                    | 5,988   | 94.19           | 343                                     | 6,397   | 53.62           |
| Bessemer and Lake Erie Railroad             | 3                           | 957     | 3.13            | 56                                     | 386     | 145.06          | 75                                      | 742     | 101.08          |
| Boston and Maine Corp.                      | 12                          | 1,480   | 8.11            | 60                                     | 1,243   | 48.27           | 73                                      | 1,397   | 52.25           |
| Chesapeake and Ohio Railway                 | 83                          | 9,424   | 8.81            | 369                                    | 4,911   | 75.14           | 664                                     | 9,200   | 72.17           |
| Consolidated Rail Corp.                     | 516                         | 40,587  | 12.71           | 4,152                                  | 32,962  | 125.96          | 3,191                                   | 41,185  | 77.48           |
| Delaware and Hudson Railway                 | 4                           | 933     | 4.29            | 29                                     | 552     | 52.54           | 22                                      | 806     | 27.30           |
| Detroit, Toledo and Ironton Railroad        | 16                          | 686     | 23.32           | 51                                     | 377     | 135.26          | 119                                     | 785     | 151.59          |
| Elgin, Joliet and Eastern Railway           | 38                          | 1,455   | 26.12           | 70                                     | 1,012   | 69.17           | 77                                      | 908     | 84.80           |
| Grand Trunk Western Railroad                | 46                          | 3,099   | 14.84           | 100                                    | 1,177   | 84.96           | 167                                     | 1,838   | 90.86           |
| Long Island Railroad                        | 63                          | 2,545   | 24.75           | 225                                    | 1,667   | 120.51          | 332                                     | 3,928   | 84.52           |
| Norfolk and Western Railway                 | 205                         | 9,433   | 21.73           | 479                                    | 6,296   | 76.08           | 554                                     | 7,020   | 76.92           |
| Pittsburg and Lake Erie Railroad            | 10                          | 1,141   | 8.76            | 88                                     | 617     | 142.63          | 143                                     | 1,173   | 121.91          |
| Western Maryland Railway                    | 10                          | 300     | 33.33           | 20                                     | 442     | 45.25           | 23                                      | 507     | 45.36           |
| SUBTOTAL, EASTERN DISTRICT                  | 1,325                       | 90,847  | 14.58           | 7,667                                  | 65,392  | 117.25          | 6,465                                   | 86,951  | 74.35           |
| SOUTHERN DISTRICT                           |                             |         |                 |  |         |                 |   |         |                 |
| Alabama Great Southern Railroad             | ---                         | ---     | A               | 12                                     | ---     | A               | 5                                       | ---     | A               |
| Central of Georgia Railroad                 | 4                           | ---     | A               | 30                                     | ---     | A               | 14                                      | ---     | A               |
| Cinn., N.O. & Texas Pacific Railway         | 2                           | ---     | A               | 28                                     | ---     | A               | 10                                      | ---     | A               |
| Clinchfield Railroad                        | 1                           | 187     | 5.35            | 30                                     | 362     | 82.67           | 12                                      | 354     | 33.90           |
| Florida East Coast Railway                  | ---                         | 568     | 0.00            | 12                                     | 711     | 16.88           | 6                                       | 324     | 18.52           |
| Illinois Central Gulf Railroad              | 78                          | 8,300   | 9.40            | 981                                    | 6,748   | 145.38          | 1,038                                   | 9,659   | 107.46          |
| Louisville and Nashville Railroad           | 73                          | 6,694   | 10.91           | 583                                    | 5,595   | 104.20          | 484                                     | 7,223   | 67.01           |
| Seaboard Coast Line Railroad                | 70                          | 7,975   | 8.78            | 532                                    | 6,988   | 76.13           | 467                                     | 8,778   | 53.20           |
| Southern Railway                            | 63                          | 9,399   | 6.70            | 261                                    | 7,112   | 36.70           | 479                                     | 7,261   | 65.97           |
| SUBTOTAL, SOUTHERN DISTRICT                 | 291                         | 33,123  | 8.79            | 2,469                                  | 27,516  | 89.73           | 2,515                                   | 33,599  | 74.85           |
| WESTERN DISTRICT                            |                             |         |                 |  |         |                 |   |         |                 |
| Atchison, Topeka and Santa Fe Railway       | 74                          | 15,101  | 4.90            | 576                                    | 12,369  | 46.57           | 611                                     | 14,369  | 42.52           |
| Burlington Northern Inc.                    | 221                         | 20,445  | 10.81           | 2,602                                  | 21,346  | 121.90          | 1,412                                   | 20,697  | 68.22           |
| Chicago and Northwestern Trans. Company     | 60                          | 6,453   | 9.30            | 685                                    | 6,660   | 102.85          | 685                                     | 6,134   | 111.67          |
| Chicago, Milw., St. Paul & Pacific Railroad | 98                          | 5,136   | 19.08           | 421                                    | 4,069   | 103.47          | 407                                     | 4,340   | 93.76           |
| Chicago, Rock Island & Pacific Railroad     | 45                          | 3,523   | 12.77           | 241                                    | 2,802   | 86.01           | 233                                     | 3,171   | 73.48           |
| Colorado and Southern Railway               | 1                           | 131     | 7.63            | 47                                     | 417     | 112.71          | 2                                       | 2       | 0.00            |
| Denver and Rio Grande Western Railroad      | 5                           | 1,768   | 2.83            | 92                                     | 1,655   | 55.59           | 48                                      | 1,809   | 26.53           |
| Duluth, Missabe and Iron Range Railway      | 5                           | 684     | 7.31            | 49                                     | 713     | 68.72           | 38                                      | 784     | 48.47           |
| Fort Worth and Denver Railway               | 1                           | 249     | 4.02            | 105                                    | 700     | 150.00          | 9                                       | 254     | 35.43           |
| Kansas City Southern Railway                | 3                           | 1,254   | 2.39            | 123                                    | 1,290   | 95.35           | 66                                      | 968     | 68.83           |
| Louisiana and Arkansas Railway              | 3                           | ---     | B               | 59                                     | ---     | B               | 8                                       | ---     | B               |
| Missouri-Kansas-Texas Railroad              | 5                           | 1,357   | 3.68            | 134                                    | 1,097   | 122.15          | 43                                      | 912     | 47.15           |
| Missouri Pacific Railroad                   | 47                          | 8,952   | 5.25            | 583                                    | 8,092   | 72.05           | 295                                     | 7,483   | 39.42           |
| St. Louis-San Francisco Railway             | 21                          | 3,352   | 6.26            | 284                                    | 3,260   | 87.12           | 310                                     | 3,306   | 93.77           |
| St. Louis Southwestern Railway              | 13                          | 1,640   | 7.93            | 172                                    | 1,684   | 102.14          | 93                                      | 1,861   | 49.97           |
| Soo Line Railroad                           | 21                          | 2,077   | 10.11           | 247                                    | 2,273   | 108.67          | 196                                     | 1,896   | 103.38          |
| Southern Pacific Trans. Company             | 253                         | 18,494  | 13.68           | 998                                    | 12,069  | 82.69           | 804                                     | 14,460  | 55.60           |
| Union Pacific Railroad                      | 184                         | 14,819  | 12.42           | 1,208                                  | 10,783  | 112.03          | 1,138                                   | 11,637  | 97.79           |
| Western Pacific Railroad                    | 24                          | 1,485   | 16.16           | 95                                     | 1,080   | 87.96           | 71                                      | 812     | 87.44           |
| SUBTOTAL, WESTERN DISTRICT                  | 1,084                       | 106,920 | 10.14           | 8,721                                  | 92,359  | 94.43           | 6,471                                   | 94,915  | 68.18           |
| CLASS I RR (SWITCHING AND TERMINAL)         |                             |         |                 |  |         |                 |   |         |                 |
| EASTERN DISTRICT                            |                             |         |                 |  |         |                 |   |         |                 |
| Union Railroad (Pennsylvania)               | 10                          | 768     | 13.02           | 36                                     | 375     | 96.00           | 34                                      | 433     | 78.52           |
| CLASS II AND III RAILROADS                  | 248                         | ---     | C               | 1,860                                  | ---     | C               | 1,416                                   | ---     | C               |
| RECAPITULATION                              |                             |         |                 |  |         |                 |   |         |                 |
| Class I RR (Line-Haul)                      | 2,700                       | 230,890 | 11.69           | 18,857                                 | 185,267 | 101.78          | 15,451                                  | 215,465 | 71.71           |
| Class I RR (Switching and Terminal)         | 10                          | 768     | 13.02           | 36                                     | 375     | 96.00           | 34                                      | 433     | 78.52           |
| Class II & III Railroads                    | 248                         | ---     | C               | 1,860                                  | ---     | C               | 1,416                                   | ---     | C               |
| TOTAL FOR ALL RAILROADS                     | 2,958                       | 231,658 | 12.77           | 20,753                                 | 185,642 | 111.79          | 16,901                                  | 215,898 | 78.28           |



TABLE R10. (CONT)

|   | V. Via. Transportation<br>not train, engine, yard |                   |                    | Vib. Transportation<br>Train and Engine |                   |                    | .....TOTAL..... |                   |                    |
|---|---|-------------------|--------------------|---|-------------------|--------------------|-----------------|-------------------|--------------------|
|   | Injured   | Man Hrs<br>(Thou) | Inj/Mil<br>Man Hrs | Injured                                 | Man Hrs<br>(Thou) | Inj/Mil<br>Man Hrs | Injured         | Man Hrs<br>(Thou) | Inj/Mil<br>Man Hrs |
| CLASS I RR (LINE-HAUL)                              |   |                   |                    |   |                   |                    |                 |                   |                    |
| EASTERN DISTRICT                                    |   |                   |                    |   |                   |                    |                 |                   |                    |
| National Railroad Passenger Corp. (Amtrak).....     | 531   | 8,278             | 64.15              | ---                                     | ---               | ---                | 2,858           | 40,601            | 70.39              |
| Baltimore and Ohio Railroad.....                    | 43  | 2,959             | 14.53              | 804                                     | 11,237            | 71.55              | 1,832           | 31,692            | 57.81              |
| Bessemer and Lake Erie Railroad.....                | 1   | 132               | 7.58               | 32                                      | 360               | 88.89              | 167             | 2,577             | 64.80              |
| Boston and Maine Corp.....                          | 3   | 407               | 7.37               | 96                                      | 1,674             | 58.54              | 246             | 6,201             | 39.67              |
| Chesapeake and Ohio Railway.....                    | 84  | 2,937             | 28.60              | 748                                     | 9,975             | 74.99              | 1,948           | 36,447            | 53.45              |
| Consolidated Rail Corp.....                         | 190   | 11,999            | 15.63              | 3,106                                   | 55,323            | 56.14              | 11,155          | 182,056           | 61.27              |
| Delaware and Hudson Railway.....                    | 4   | 187               | 21.39              | 78                                      | 1,203             | 64.84              | 137             | 3,681             | 37.22              |
| Detroit, Toledo and Ironton Railroad.....           | 7   | 155               | 42.42              | 140                                     | 922               | 151.84             | 333             | 2,935             | 113.46             |
| Elgin, Joliet and Eastern Railway.....              | 6   | 358               | 16.76              | 204                                     | 1,756             | 116.17             | 395             | 5,489             | 71.96              |
| Grand Trunk Western Railroad.....                   | 11  | 592               | 18.58              | 302                                     | 2,723             | 110.91             | 626             | 9,429             | 66.39              |
| Long Island Railroad.....                           | 42  | 792               | 53.03              | 320                                     | 2,660             | 111.11             | 982             | 12,012            | 81.75              |
| Norfolk and Western Railway.....                    | 40  | 2,324             | 17.21              | 700                                     | 10,100            | 69.31              | 1,978           | 35,173            | 56.24              |
| Pittsburg and Lake Erie Railroad.....               | 7   | 205               | 34.15              | 64                                      | 1,054             | 60.72              | 312             | 4,190             | 74.46              |
| Western Maryland Railway.....                       | 1   | 107               | 9.35               | 57                                      | 922               | 61.62              | 111             | 2,278             | 48.73              |
| SUBTOTAL, EASTERN DISTRICT.....                     | 970   | 31,442            | 30.85              | 6,653                                   | 100,129           | 66.44              | 23,080          | 374,761           | 61.59              |
| SOUTHERN DISTRICT                                   |   |                   |                    |   |                   |                    |                 |                   |                    |
| Alabama Great Southern Railroad.....                | 2   | ---               | A                  | 34                                      | ---               | A                  | 53              | ---               | A                  |
| Central of Georgia Railroad.....                    | 5   | ---               | A                  | 96                                      | ---               | A                  | 149             | ---               | A                  |
| Cinn., N.O. & Texas Pacific Railway.....            | 1   | ---               | A                  | 57                                      | ---               | A                  | 98              | ---               | A                  |
| Clinchfield Railroad.....                           | 1   | 169               | 5.92               | 32                                      | 628               | 50.96              | 76              | 1,700             | 44.71              |
| Florida East Coast Railway.....                     | ---   | 199               | 0.00               | 10                                      | 585               | 17.09              | 28              | 2,297             | 12.19              |
| Illinois Central Gulf Railroad.....                 | 57  | 2,154             | 26.46              | 716                                     | 10,456            | 68.66              | 2,872           | 37,319            | 76.96              |
| Louisville and Nashville Railroad.....              | 41  | 2,038             | 20.12              | 923                                     | 11,617            | 79.45              | 2,104           | 33,167            | 63.44              |
| Seaboard Coast Line Railroad.....                   | 56  | 2,972             | 18.84              | 779                                     | 12,342            | 63.12              | 1,904           | 39,055            | 48.75              |
| Southern Railway.....                               | 38  | 2,996             | 12.68              | 526                                     | 13,745            | 38.41              | 1,369           | 40,513            | 33.79              |
| SUBTOTAL, SOUTHERN DISTRICT.....                    | 201   | 10,438            | 19.26              | 3,177                                   | 49,375            | 64.34              | 8,653           | 154,051           | 56.17              |
| WESTERN DISTRICT                                    |   |                   |                    |   |                   |                    |                 |                   |                    |
| Atchison, Topeka and Santa Fe Railway.....          | 9   | 3,818             | 2.36               | 714                                     | 16,148            | 44.22              | 1,984           | 61,805            | 32.10              |
| Burlington Northern Inc.....                        | 120   | 6,279             | 19.11              | 1,686                                   | 22,279            | 75.68              | 6,041           | 91,046            | 66.35              |
| Chicago and Northwestern Trans. Company.....        | 45  | 2,329             | 19.32              | 485                                     | 8,705             | 55.72              | 1,960           | 30,281            | 64.73              |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 21  | 1,733             | 12.12              | 562                                     | 6,729             | 83.52              | 1,509           | 22,007            | 68.57              |
| Chicago, Rock Island & Pacific Railroad.....        | 6   | 1,439             | 4.17               | 406                                     | 5,739             | 70.74              | 931             | 16,674            | 55.84              |
| Colorado and Southern Railway.....                  | 1   | 23                | 43.48              | 60                                      | 734               | 81.74              | 111             | 1,307             | 84.93              |
| Denver and Rio Grande Western Railroad.....         | 1   | 472               | 2.12               | 96                                      | 2,059             | 47.60              | 244             | 7,763             | 31.43              |
| Duluth, Missabe and Iron Range Railway.....         | 1   | 353               | 2.83               | 35                                      | 580               | 60.34              | 128             | 3,114             | 41.10              |
| Fort Worth and Denver Railway.....                  | 2   | 232               | 8.62               | 54                                      | 863               | 61.16              | 171             | 2,318             | 73.77              |
| Kansas City Southern Railway.....                   | 4   | 280               | 14.29              | 116                                     | 2,328             | 49.83              | 314             | 6,140             | 51.14              |
| Louisiana and Arkansas Railway.....                 | ---   | ---               | B                  | 91                                      | ---               | B                  | 161             | ---               | B                  |
| Missouri-Kansas-Texas Railroad.....                 | 1   | 293               | 3.41               | 181                                     | 1,742             | 103.90             | 364             | 5,401             | 67.39              |
| Missouri Pacific Railroad.....                      | 32  | 2,526             | 12.67              | 840                                     | 14,539            | 57.78              | 1,797           | 41,592            | 43.21              |
| St. Louis-San Francisco Railway.....                | 12  | 1,007             | 11.92              | 243                                     | 4,552             | 53.36              | 870             | 15,477            | 56.21              |
| St. Louis Southwestern Railway.....                 | 6   | 369               | 20.57              | 222                                     | 2,517             | 88.20              | 508             | 8,091             | 62.79              |
| Soo Line Railroad.....                              | 16  | 712               | 22.47              | 279                                     | 2,472             | 112.86             | 759             | 9,430             | 80.49              |
| Southern Pacific Trans. Company.....                | 38  | 3,225             | 11.78              | 1,548                                   | 18,715            | 82.71              | 3,641           | 66,963            | 54.37              |
| Union Pacific Railroad.....                         | 56  | 2,953             | 18.96              | 1,065                                   | 11,007            | 96.76              | 3,651           | 51,199            | 71.31              |
| Western Pacific Railroad.....                       | 5   | 274               | 18.25              | 193                                     | 1,339             | 144.14             | 386             | 4,990             | 77.76              |
| SUBTOTAL, WESTERN DISTRICT.....                     | 378   | 28,337            | 13.34              | 8,878                                   | 123,067           | 72.14              | 25,532          | 445,598           | 57.30              |
| CLASS I RR (SWITCHING AND TERMINAL)                 |   |                   |                    |   |                   |                    |                 |                   |                    |
| EASTERN DISTRICT                                    |   |                   |                    |   |                   |                    |                 |                   |                    |
| Union Railroad (Pennsylvania).....                  | 1   | 152               | 6.58               | 86                                      | 1,700             | 50.59              | 167             | 3,428             | 48.72              |
| CLASS II AND III RAILROADS.....                     | 203   | ---               | C                  | 2,171                                   | ---               | C                  | 5,898           | 77,935            | 75.68              |
| RECAPITULATION                                      |   |                   |                    |   |                   |                    |                 |                   |                    |
| Class I RR (Line-Haul).....                         | 1,549   | 70,217            | 22.06              | 18,708                                  | 272,571           | 68.64              | 57,265          | 974,410           | 58.77              |
| Class I RR (Switching and Terminal).....            | 1   | 152               | 6.58               | 86                                      | 1,700             | 50.59              | 167             | 3,428             | 48.72              |
| Class II & III Railroads.....                       | 203   | ---               | C                  | 2,171                                   | ---               | C                  | 5,898           | 77,935            | 75.68              |
| TOTAL FOR ALL RAILROADS.....                        | 1,753   | 70,369            | 24.91              | 20,965                                  | 274,271           | 76.44              | 63,330          | 1,055,773         | 59.98              |

A Included in Southern Railway System  
 B Included in Kansas City Southern Railway  
 C Class II and III Railroad man hours are not available by occupational categories.

TABLE R11. ILLNESSES TO EMPLOYEES ON DUTY BY TYPE AND RAILROAD, 1978

|   | I. Exec Office Staff |                |                 | III. Maintenance of Way and Structures |         |                 | IV. Maintenance of Equipment and Stores |         |                 |
|---|----------------------|----------------|-----------------|--|---------|-----------------|---|---------|-----------------|
|   | Illness              | Man Hrs (Thou) | Ill/Mil Man Hrs | Illness (Thou)                         | Man Hrs | Ill/Mil Man Hrs | Illness (Thou)                          | Man Hrs | Ill/Mil Man Hrs |
| CLASS I RR (LINE-HAUL)                      |                      |                |                 |  |         |                 |   |         |                 |
| EASTERN DISTRICT                            |                      |                |                 |  |         |                 |   |         |                 |
| National Railroad Passenger Corp. (Amtrak)  | 8                    | 13,696         | 0.58            | 118                                    | 7,562   | 15.60           | 16                                      | 11,065  | 1.63            |
| Baltimore and Ohio Railroad                 | 3                    | 5,111          | 0.59            | 31                                     | 5,988   | 5.18            | 14                                      | 6,397   | 2.19            |
| Bessemer and Lake Erie Railroad             | ---                  | 957            | 0.00            | ---                                    | 386     | 0.00            | 2                                       | 742     | 2.70            |
| Boston and Maine Corp.                      | ---                  | 1,480          | 0.00            | 4                                      | 1,243   | 3.22            | ---                                     | 1,397   | 0.00            |
| Chesapeake and Ohio Railway                 | ---                  | 9,424          | 0.00            | 3                                      | 4,911   | 0.61            | 7                                       | 9,200   | 0.76            |
| Consolidated Rail Corp.                     | 14                   | 40,587         | 0.34            | 187                                    | 32,962  | 5.67            | 137                                     | 41,185  | 3.33            |
| Delaware and Hudson Railway                 | ---                  | 933            | 0.00            | ---                                    | 552     | 0.00            | ---                                     | 806     | 0.00            |
| Detroit, Toledo and Ironton Railroad        | ---                  | 686            | 0.00            | ---                                    | 377     | 0.00            | ---                                     | 785     | 0.00            |
| Elgin, Joliet and Eastern Railway           | ---                  | 1,455          | 0.00            | 2                                      | 1,012   | 1.98            | ---                                     | 908     | 0.00            |
| Grand Trunk Western Railroad                | 2                    | 3,099          | 0.65            | ---                                    | 1,177   | 0.00            | 3                                       | 1,838   | 1.63            |
| Long Island Railroad                        | 3                    | 2,545          | 1.18            | 26                                     | 1,867   | 13.93           | 11                                      | 3,928   | 2.80            |
| Norfolk and Western Railway                 | 5                    | 9,433          | 0.53            | 5                                      | 6,296   | 0.79            | 13                                      | 7,020   | 1.85            |
| Pittsburg and Lake Erie Railroad            | ---                  | 1,141          | 0.00            | ---                                    | 617     | 0.00            | ---                                     | 1,173   | 0.00            |
| Western Maryland Railway                    | ---                  | 300            | 0.00            | 5                                      | 442     | 11.31           | ---                                     | 507     | 0.00            |
| SUBTOTAL, EASTERN DISTRICT                  | 35                   | 90,847         | 0.39            | 381                                    | 65,392  | 5.83            | 205                                     | 86,951  | 2.36            |
| SOUTHERN DISTRICT                           |                      |                |                 |  |         |                 |   |         |                 |
| Alabama Great Southern Railroad             | ---                  | ---            | A               | ---                                    | ---     | A               | ---                                     | ---     | A               |
| Central of Georgia Railroad                 | ---                  | ---            | A               | 1                                      | ---     | A               | ---                                     | ---     | A               |
| Cinn., N.O. & Texas Pacific Railway         | 1                    | ---            | A               | ---                                    | ---     | A               | ---                                     | ---     | A               |
| Clinchfield Railroad                        | ---                  | 187            | 0.00            | ---                                    | 362     | 0.00            | ---                                     | 354     | 0.00            |
| Florida East Coast Railway                  | ---                  | 568            | 0.00            | ---                                    | 711     | 0.00            | ---                                     | 324     | 0.00            |
| Illinois Central Gulf Railroad              | ---                  | 8,300          | 0.00            | 37                                     | 6,748   | 5.48            | 40                                      | 9,659   | 4.14            |
| Louisville and Nashville Railroad           | 2                    | 6,694          | 0.30            | 9                                      | 5,595   | 1.61            | 10                                      | 7,223   | 1.38            |
| Seaboard Coast Line Railroad                | 1                    | 7,975          | 0.13            | 13                                     | 6,988   | 1.86            | 11                                      | 8,778   | 1.25            |
| Southern Railway                            | 1                    | 9,399          | 0.11            | 4                                      | 7,112   | 0.56            | 6                                       | 7,261   | 0.83            |
| SUBTOTAL, SOUTHERN DISTRICT                 | 5                    | 33,123         | 0.15            | 64                                     | 27,516  | 2.33            | 67                                      | 33,599  | 1.99            |
| WESTERN DISTRICT                            |                      |                |                 |  |         |                 |   |         |                 |
| Atchison, Topeka and Santa Fe Railway       | ---                  | 15,101         | 0.00            | 2                                      | 12,369  | 0.16            | 1                                       | 14,369  | 0.07            |
| Burlington Northern Inc.                    | 3                    | 20,445         | 0.15            | 141                                    | 21,346  | 6.61            | 60                                      | 20,697  | 2.90            |
| Chicago and Northwestern Trans. Company     | ---                  | 6,453          | 0.00            | 44                                     | 6,660   | 6.61            | 17                                      | 6,134   | 2.77            |
| Chicago, Milw., St. Paul & Pacific Railroad | 2                    | 5,136          | 0.39            | 5                                      | 4,069   | 1.23            | 2                                       | 4,340   | 0.46            |
| Chicago, Rock Island & Pacific Railroad     | 4                    | 3,523          | 1.14            | 4                                      | 2,802   | 1.43            | 3                                       | 3,171   | 0.95            |
| Colorado and Southern Railway               | ---                  | 131            | 0.00            | 5                                      | 417     | 11.99           | ---                                     | 2       | 0.00            |
| Denver and Rio Grande Western Railroad      | ---                  | 1,768          | 0.00            | ---                                    | 1,655   | 0.00            | 1                                       | 1,809   | 0.55            |
| Duluth, Missabe and Iron Range Railway      | ---                  | 684            | 0.00            | 1                                      | 713     | 1.40            | 2                                       | 784     | 2.55            |
| Fort Worth and Denver Railway               | ---                  | 249            | 0.00            | 6                                      | 700     | 8.57            | ---                                     | 254     | 0.00            |
| Kansas City Southern Railway                | ---                  | 1,254          | 0.00            | 4                                      | 1,290   | 3.10            | 1                                       | 988     | 1.01            |
| Louisiana and Arkansas Railway              | ---                  | ---            | B               | 2                                      | ---     | B               | ---                                     | ---     | B               |
| Missouri-Kansas-Texas Railroad              | ---                  | 1,357          | 0.00            | 7                                      | 1,097   | 6.38            | ---                                     | 912     | 0.00            |
| Missouri Pacific Railroad                   | ---                  | 8,952          | 0.00            | 7                                      | 8,092   | 0.67            | 7                                       | 7,483   | 0.94            |
| St. Louis-San Francisco Railway             | ---                  | 3,352          | 0.00            | 11                                     | 3,260   | 3.37            | 9                                       | 3,306   | 2.72            |
| St. Louis Southwestern Railway              | ---                  | 1,640          | 0.00            | 7                                      | 1,684   | 4.16            | ---                                     | 1,861   | 0.00            |
| Soo Line Railroad                           | 2                    | 2,077          | 0.96            | 22                                     | 2,273   | 9.68            | 11                                      | 1,896   | 5.80            |
| Southern Pacific Trans. Company             | 4                    | 18,494         | 0.22            | 48                                     | 12,069  | 3.98            | 28                                      | 14,460  | 1.94            |
| Union Pacific Railroad                      | 1                    | 14,819         | 0.07            | 16                                     | 10,783  | 1.48            | 9                                       | 11,637  | 0.77            |
| Western Pacific Railroad                    | ---                  | 1,485          | 0.00            | 3                                      | 1,080   | 2.78            | 4                                       | 812     | 4.93            |
| SUBTOTAL, WESTERN DISTRICT                  | 16                   | 106,920        | 0.15            | 335                                    | 92,359  | 3.63            | 155                                     | 94,915  | 1.63            |
| CLASS I RR (SWITCHING AND TERMINAL)         |                      |                |                 |  |         |                 |   |         |                 |
| EASTERN DISTRICT                            |                      |                |                 |  |         |                 |   |         |                 |
| Union Railroad (Pennsylvania)               | ---                  | 768            | 0.00            | ---                                    | 375     | 0.00            | 1                                       | 433     | 2.31            |
| CLASS II AND III RAILROADS                  | 5                    | ---            | C               | 40                                     | ---     | C               | 9                                       | ---     | C               |
| RECAPITULATION                              |                      |                |                 |  |         |                 |   |         |                 |
| Class I RR (Line-Haul)                      | 56                   | 230,890        | 0.24            | 780                                    | 185,267 | 4.21            | 427                                     | 215,465 | 1.98            |
| Class I RR (Switching and Terminal)         | ---                  | 768            | 0.00            | ---                                    | 375     | 0.00            | 1                                       | 433     | 2.31            |
| Class II & III Railroads                    | 5                    | ---            | C               | 40                                     | ---     | C               | 9                                       | ---     | C               |
| TOTAL FOR ALL RAILROADS                     | 61                   | 231,658        | 0.26            | 820                                    | 185,642 | 4.42            | 437                                     | 215,898 | 2.02            |

TABLE R11. (CONT)

|  | V. Via. Transportation<br>not train, engine, yard |                   |                    | Vib. Transportation<br>Train and Engine |                   |                    | .....TOTAL..... |                   |                    |
|--|---|-------------------|--------------------|---|-------------------|--------------------|-----------------|-------------------|--------------------|
|  | Illness   | Man Hrs<br>(Thou) | Ill/Mil<br>Man Hrs | Illness                                 | Man Hrs<br>(Thou) | Ill/Mil<br>Man Hrs | Illness         | Man Hrs<br>(Thou) | Ill/Mil<br>Man Hrs |
| CLASS I RR (LINE-HAUL)                         |   |                   |                    |   |                   |                    |                 |                   |                    |
| EASTERN DISTRICT                               |   |                   |                    |   |                   |                    |                 |                   |                    |
| National Railroad Passenger Corp. (Amtrak)     | 43  | 8,278             | 5.19               | ---                                     | ---               | ---                | 187             | 40,601            | 4.61               |
| Baltimore and Ohio Railroad                    | 2   | 2,959             | 0.68               | 16                                      | 11,237            | 1.42               | 66              | 31,692            | 2.08               |
| Bessemer and Lake Erie Railroad                | ---   | 132               | 0.00               | ---                                     | 360               | 0.00               | 2               | 2,577             | 0.76               |
| Boston and Maine Corp.                         | ---   | 407               | 0.00               | ---                                     | 1,674             | 0.00               | 4               | 6,201             | 0.65               |
| Chesapeake and Ohio Railway                    | ---   | 2,937             | 0.00               | 7                                       | 9,975             | 0.70               | 17              | 36,447            | 0.47               |
| Consolidated Rail Corp.                        | 5   | 11,999            | 0.42               | 103                                     | 55,323            | 1.86               | 446             | 182,056           | 2.45               |
| Delaware and Hudson Railway                    | ---   | 167               | 0.00               | 2                                       | 1,203             | 1.66               | 2               | 3,681             | 0.54               |
| Detroit, Toledo and Ironton Railroad           | ---   | 155               | 0.00               | ---                                     | 922               | 0.00               | ---             | 2,935             | 0.00               |
| Elgin, Joliet and Eastern Railway              | ---   | 358               | 0.00               | 3                                       | 1,756             | 1.71               | 5               | 5,469             | 0.91               |
| Grand Trunk Western Railroad                   | ---   | 592               | 0.00               | 4                                       | 2,723             | 1.47               | 9               | 9,429             | 0.95               |
| Long Island Railroad                           | 1   | 792               | 1.26               | 20                                      | 2,880             | 6.94               | 61              | 12,012            | 5.08               |
| Norfolk and Western Railway                    | ---   | 2,324             | 0.00               | 2                                       | 10,100            | 0.20               | 25              | 35,173            | 0.71               |
| Pittsburg and Lake Erie Railroad               | ---   | 205               | 0.00               | ---                                     | 1,054             | 0.00               | ---             | 4,190             | 0.00               |
| Western Maryland Railway                       | ---   | 107               | 0.00               | ---                                     | 922               | 0.00               | 5               | 2,278             | 2.19               |
| SUBTOTAL, EASTERN DISTRICT                     | 51  | 31,442            | 1.62               | 157                                     | 100,129           | 1.57               | 629             | 374,761           | 2.21               |
| SOUTHERN DISTRICT                              |   |                   |                    |   |                   |                    |                 |                   |                    |
| Alabama Great Southern Railroad                | ---   | ---               | A                  | 1                                       | ---               | A                  | 1               | ---               | A                  |
| Central of Georgia Railroad                    | ---   | ---               | A                  | ---                                     | ---               | A                  | 1               | ---               | A                  |
| Cinn., N.O. & Texas Pacific Railway            | ---   | ---               | A                  | 1                                       | ---               | A                  | 2               | ---               | A                  |
| Clinchfield Railroad                           | ---   | 159               | 0.00               | ---                                     | 628               | 0.00               | ---             | 1,700             | 0.00               |
| Florida East Coast Railway                     | ---   | 109               | 0.00               | 2                                       | 565               | 3.42               | 2               | 2,297             | 0.87               |
| Illinois Central Gulf Railroad                 | ---   | 2,154             | 0.00               | 6                                       | 10,458            | 0.76               | 85              | 37,319            | 2.28               |
| Louisville and Nashville Railroad              | ---   | 2,038             | 0.00               | 8                                       | 11,617            | 0.69               | 29              | 33,167            | 0.87               |
| Seaboard Coast Line Railroad                   | ---   | 2,972             | 0.00               | 6                                       | 12,342            | 0.49               | 31              | 39,055            | 0.79               |
| Southern Railway                               | ---   | 2,996             | 0.00               | 6                                       | 13,745            | 0.44               | 17              | 40,513            | 0.42               |
| SUBTOTAL, SOUTHERN DISTRICT                    | ---   | 10,436            | 0.00               | 32                                      | 49,375            | 0.65               | 166             | 154,051           | 1.09               |
| WESTERN DISTRICT                               |   |                   |                    |   |                   |                    |                 |                   |                    |
| Atchison, Topeka and Santa Fe Railway          | ---   | 3,816             | 0.00               | 3                                       | 16,148            | 0.19               | 6               | 61,805            | 0.10               |
| Burlington Northern Inc.                       | 5   | 6,279             | 0.80               | 32                                      | 22,279            | 1.44               | 241             | 91,046            | 2.65               |
| Chicago and Northwestern Trans. Company        | ---   | 2,329             | 0.00               | 10                                      | 8,705             | 1.15               | 71              | 30,281            | 2.34               |
| Chicago, Milw., St. Paul & Pacific<br>Railroad | ---   | 1,733             | 0.00               | 8                                       | 6,729             | 1.19               | 17              | 22,007            | 0.77               |
| Chicago, Rock Island & Pacific Railroad        | 1   | 1,439             | 0.69               | 6                                       | 5,739             | 1.05               | 18              | 16,674            | 1.08               |
| Colorado and Southern Railway                  | ---   | 23                | 0.00               | 2                                       | 734               | 2.72               | 7               | 1,307             | 5.36               |
| Denver and Rio Grande Western Railroad         | ---   | 472               | 0.00               | ---                                     | 2,059             | 0.00               | 1               | 7,763             | 0.13               |
| Duluth, Missabe and Iron Range Railway         | ---   | 353               | 0.00               | ---                                     | 580               | 0.00               | 3               | 3,114             | 0.96               |
| Fort Worth and Denver Railway                  | ---   | 232               | 0.00               | 1                                       | 883               | 1.13               | 7               | 2,318             | 3.02               |
| Kansas City Southern Railway                   | ---   | 280               | 0.00               | ---                                     | 2,326             | 0.00               | 5               | 6,140             | 0.81               |
| Louisiana and Arkansas Railway                 | ---   | ---               | B                  | 4                                       | ---               | B                  | 6               | ---               | B                  |
| Missouri-Kansas-Texas Railroad                 | ---   | 293               | 0.00               | 1                                       | 1,742             | 0.57               | 8               | 5,401             | 1.48               |
| Missouri Pacific Railroad                      | ---   | 2,526             | 0.00               | 20                                      | 14,539            | 1.36               | 34              | 41,592            | 0.82               |
| St. Louis-San Francisco Railway                | ---   | 1,007             | 0.00               | 5                                       | 4,552             | 1.10               | 25              | 15,477            | 1.62               |
| St. Louis Southwestern Railway                 | 1   | 389               | 2.57               | 2                                       | 2,517             | 0.79               | 10              | 8,091             | 1.24               |
| Soo Line Railroad                              | ---   | 712               | 0.00               | 9                                       | 2,472             | 3.64               | 44              | 9,430             | 4.67               |
| Southern Pacific Trans. Company                | ---   | 3,225             | 0.00               | 45                                      | 18,715            | 2.40               | 125             | 66,963            | 1.87               |
| Union Pacific Railroad                         | ---   | 2,953             | 0.00               | 6                                       | 11,007            | 0.55               | 32              | 51,199            | 0.63               |
| Western Pacific Railroad                       | ---   | 274               | 0.00               | 2                                       | 1,339             | 1.49               | 9               | 4,990             | 1.80               |
| SUBTOTAL, WESTERN DISTRICT                     | 7   | 28,337            | 0.25               | 156                                     | 123,067           | 1.27               | 669             | 445,598           | 1.50               |
| CLASS I RR (SWITCHING AND TERMINAL)            |   |                   |                    |   |                   |                    |                 |                   |                    |
| EASTERN DISTRICT                               |   |                   |                    |   |                   |                    |                 |                   |                    |
| Union Railroad (Pennsylvania)                  | ---   | 152               | 0.00               | ---                                     | 1,700             | 0.00               | 1               | 3,428             | 0.29               |
| CLASS II AND III RAILROADS                     | 2   | ---               | C                  | 18                                      | ---               | C                  | 74              | 77,935            | 0.95               |
| RECAPITULATION                                 |   |                   |                    |   |                   |                    |                 |                   |                    |
| Class I RR (Line-Haul)                         | 56  | 70,217            | 0.83               | 345                                     | 272,571           | 1.27               | 1,666           | 974,410           | 1.71               |
| Class I RR (Switching and Terminal)            | ---   | 152               | 0.00               | ---                                     | 1,700             | 0.00               | 1               | 3,428             | 0.29               |
| Class II & III Railroads                       | 2   | ---               | C                  | 18                                      | ---               | C                  | 74              | 77,935            | 0.95               |
| TOTAL FOR ALL RAILROADS                        | 60  | 70,369            | 0.85               | 363                                     | 274,271           | 1.32               | 1,741           | 1,055,773         | 1.65               |

A Included in Southern Railway System

B Included in Kansas City Southern Railway

C Class II and III Railroad man hours are not available by occupational categories.

TABLE R12. INJURIES TO EMPLOYEES ON DUTY BY TYPE OF INJURY AND RAILROAD, 1978

|  | Amputations       |        |                   |     |               | Total | Fractures         |        |                   |     |                    | Total |       |
|--|-------------------|--------|-------------------|-----|---------------|-------|-------------------|--------|-------------------|-----|--------------------|-------|-------|
|  | Arm<br>or<br>Hand | Finger | Leg<br>or<br>Foot | Toe | Other<br>Part |       | Arm<br>or<br>Hand | Finger | Leg<br>or<br>Foot | Toe | Face<br>or<br>Head |       | Other |
| CLASS I RR (LINE-HAUL)                         |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| EASTERN DISTRICT                               |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| National Railroad Passenger Corp. (Amtrak)     | ---               | 4      | 1                 | 1   | ---           | 6     | 13                | 66     | 31                | 29  | 7                  | 12    | 158   |
| Baltimore and Ohio Railroad                    | ---               | 4      | 3                 | 1   | ---           | 8     | 21                | 60     | 52                | 18  | 5                  | 14    | 170   |
| Bessemer and Lake Erie Railroad                | ---               | ---    | ---               | --- | ---           | ---   | 2                 | 6      | 3                 | --- | 1                  | ---   | 12    |
| Boston and Maine Corp.                         | ---               | 1      | ---               | 1   | ---           | 2     | 4                 | 8      | 2                 | 5   | 3                  | 6     | 28    |
| Chesapeake and Ohio Railway                    | 1                 | 6      | ---               | 1   | ---           | 9     | 33                | 53     | 30                | 22  | 1                  | 20    | 159   |
| Consolidated Rail Corp.                        | 2                 | 23     | 8                 | 2   | ---           | 35    | 143               | 335    | 204               | 146 | 69                 | 119   | 1,016 |
| Delaware and Hudson Railway                    | ---               | ---    | ---               | --- | ---           | ---   | 2                 | 3      | 1                 | 1   | ---                | 3     | 10    |
| Detroit, Toledo and Ironton Railroad           | ---               | 1      | ---               | --- | ---           | 1     | 18                | 2      | 10                | 3   | ---                | 3     | 36    |
| Elgin, Joliet and Eastern Railway              | ---               | ---    | ---               | --- | ---           | ---   | 2                 | 8      | 2                 | 2   | 1                  | 2     | 17    |
| Grand Trunk Western Railroad                   | ---               | 1      | 1                 | --- | ---           | 2     | 6                 | 10     | 11                | 10  | 2                  | 6     | 45    |
| Long Island Railroad                           | ---               | ---    | ---               | --- | ---           | ---   | 1                 | 14     | 7                 | 10  | ---                | 1     | 33    |
| Norfolk and Western Railway                    | ---               | 8      | 4                 | --- | ---           | 12    | 25                | 53     | 40                | 32  | 10                 | 25    | 185   |
| Pittsburg and Lake Erie Railroad               | ---               | 1      | ---               | --- | ---           | 1     | 4                 | 8      | 2                 | 1   | ---                | 2     | 17    |
| Western Maryland Railway                       | ---               | 1      | ---               | --- | ---           | 1     | 3                 | 3      | 1                 | 1   | ---                | ---   | 8     |
| SUBTOTAL, EASTERN DISTRICT                     | 3                 | 50     | 17                | 6   | ---           | 76    | 277               | 629    | 396               | 280 | 99                 | 213   | 1,894 |
| SOUTHERN DISTRICT                              |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| Alabama Great Southern Railroad                | ---               | ---    | ---               | --- | ---           | ---   | ---               | ---    | ---               | 1   | 1                  | ---   | 2     |
| Central of Georgia Railroad                    | ---               | ---    | ---               | --- | ---           | ---   | 1                 | 4      | 2                 | 1   | ---                | ---   | 9     |
| Cinn., N.O. & Texas Pacific Railway            | ---               | ---    | ---               | --- | ---           | ---   | ---               | 3      | 1                 | 2   | ---                | 1     | 7     |
| Clinchfield Railroad                           | ---               | 1      | ---               | --- | ---           | 1     | 1                 | 4      | 1                 | --- | ---                | 7     | 13    |
| Florida East Coast Railway                     | ---               | 1      | ---               | --- | ---           | 1     | 1                 | 1      | 1                 | --- | 2                  | ---   | 6     |
| Illinois Central Gulf Railroad                 | 1                 | 2      | ---               | --- | ---           | 3     | 50                | 99     | 65                | 32  | 16                 | 23    | 285   |
| Louisville and Nashville Railroad              | ---               | 6      | ---               | --- | ---           | 6     | 25                | 29     | 35                | 24  | 5                  | 21    | 139   |
| Seaboard Coast Line Railroad                   | ---               | 8      | 3                 | 1   | ---           | 12    | 12                | 42     | 34                | 16  | 10                 | 26    | 140   |
| Southern Railway                               | ---               | 2      | 1                 | --- | ---           | 3     | 11                | 35     | 23                | 8   | 4                  | 17    | 98    |
| SUBTOTAL, SOUTHERN DISTRICT                    | 1                 | 20     | 4                 | 1   | ---           | 26    | 101               | 217    | 162               | 65  | 39                 | 95    | 699   |
| WESTERN DISTRICT                               |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| Atchison, Topeka and Santa Fe Railway          | ---               | 6      | 5                 | 2   | ---           | 13    | 26                | 81     | 54                | 25  | 11                 | 19    | 216   |
| Burlington Northern Inc.                       | 2                 | 14     | 5                 | 2   | 1             | 24    | 81                | 220    | 112               | 59  | 54                 | 56    | 582   |
| Chicago and Northwestern Trans. Company        | 1                 | 5      | ---               | 1   | ---           | 7     | 16                | 60     | 31                | 21  | 7                  | 20    | 175   |
| Chicago, Milw., St. Paul & Pacific<br>Railroad | ---               | 6      | 1                 | --- | ---           | 7     | 19                | 59     | 39                | 16  | 26                 | 18    | 177   |
| Chicago, Rock Island & Pacific Railroad        | ---               | 6      | ---               | 1   | ---           | 7     | 14                | 19     | 33                | 4   | 6                  | 9     | 85    |
| Colorado and Southern Railway                  | ---               | ---    | ---               | --- | ---           | ---   | ---               | 4      | ---               | 3   | 4                  | ---   | 11    |
| Denver and Rio Grande Western Railroad         | ---               | 2      | ---               | --- | ---           | 2     | 5                 | 11     | 7                 | 5   | 1                  | 3     | 32    |
| Duluth, Missabe and Iron Range Railway         | ---               | ---    | ---               | --- | ---           | ---   | 1                 | 5      | 3                 | 2   | ---                | ---   | 11    |
| Fort Worth and Denver Railway                  | ---               | 1      | ---               | --- | ---           | 1     | 2                 | 5      | 9                 | 3   | 1                  | 6     | 26    |
| Kansas City Southern Railway                   | ---               | ---    | ---               | --- | ---           | ---   | 7                 | 7      | 6                 | 4   | 1                  | 2     | 27    |
| Louisiana and Arkansas Railway                 | ---               | 1      | ---               | --- | ---           | 1     | ---               | 4      | 6                 | 1   | ---                | ---   | 11    |
| Missouri-Kansas-Texas Railroad                 | ---               | 1      | ---               | --- | ---           | 1     | 3                 | 15     | 7                 | 1   | ---                | 9     | 35    |
| Missouri Pacific Railroad                      | ---               | 6      | 2                 | --- | ---           | 8     | 29                | 47     | 42                | 10  | 6                  | 10    | 144   |
| St. Louis-San Francisco Railway                | ---               | 2      | ---               | --- | ---           | 2     | 15                | 31     | 16                | 5   | 1                  | 11    | 79    |
| St. Louis Southwestern Railway                 | 1                 | ---    | ---               | --- | ---           | 1     | 5                 | 13     | 5                 | 1   | 1                  | 3     | 28    |
| Soo Line Railroad                              | ---               | 3      | 1                 | --- | ---           | 4     | 9                 | 16     | 13                | 4   | 4                  | 7     | 53    |
| Southern Pacific Trans. Company                | 1                 | 4      | 1                 | --- | ---           | 6     | 45                | 78     | 89                | 32  | 11                 | 38    | 293   |
| Union Pacific Railroad                         | ---               | 9      | 3                 | 1   | ---           | 13    | 56                | 108    | 78                | 45  | 14                 | 50    | 351   |
| Western Pacific Railroad                       | ---               | ---    | ---               | --- | ---           | ---   | 2                 | 9      | 5                 | 3   | 2                  | 2     | 23    |
| SUBTOTAL, WESTERN DISTRICT                     | 5                 | 66     | 18                | 7   | 1             | 97    | 335               | 812    | 555               | 244 | 150                | 263   | 2,359 |
| CLASS I RR (SWITCHING AND TERMINAL)            |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| EASTERN DISTRICT                               |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| Union Railroad (Pennsylvania)                  | ---               | 1      | ---               | --- | ---           | 1     | 1                 | 2      | 1                 | --- | ---                | 1     | 5     |
| CLASS II AND III RAILROADS                     | 4                 | 14     | 1                 | 3   | ---           | 22    | 50                | 120    | 84                | 33  | 11                 | 61    | 359   |
| RECAPITULATION                                 |                   |        |                   |     |               |       |                   |        |                   |     |                    |       |       |
| Class I RR (Line-Haul)                         | 9                 | 136    | 39                | 14  | 1             | 199   | 713               | 1,656  | 1,113             | 609 | 288                | 571   | 4,952 |
| Class I RR (Switching and Terminal)            | ---               | 1      | ---               | --- | ---           | 1     | 1                 | 2      | 1                 | --- | ---                | 1     | 5     |
| Class II & III Railroads                       | 4                 | 14     | 1                 | 3   | ---           | 22    | 50                | 120    | 84                | 33  | 11                 | 61    | 359   |
| TOTAL FOR ALL RAILROADS                        | 13                | 151    | 40                | 17  | 1             | 222   | 764               | 1,780  | 1,198             | 642 | 299                | 633   | 5,316 |

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CLASS I RR (LINE-HAUL)

EASTERN DISTRICT

National Railroad Passenger Corp. (Amtrak).....  
 Baltimore and Ohio Railroad.....  
 Bessemer and Lake Erie Railroad.....  
 Boston and Maine Corp.....  
 Chesapeake and Ohio Railway.....  
 Consolidated Rail Corp.....  
 Delaware and Hudson Railway.....  
 Detroit, Toledo and Ironton Railroad.....  
 Elgin, Joliet and Eastern Railway.....  
 Grand Trunk Western Railroad.....  
 Long Island Railroad.....  
 Norfolk and Western Railway.....  
 Pittsburg and Lake Erie Railroad.....  
 Western Maryland Railway.....

SUBTOTAL, EASTERN DISTRICT:.....  
 SOUTHERN DISTRICT

Alabama Great Southern Railroad.....  
 Central of Georgia Railroad.....  
 Cinn., N.O. & Texas Pacific Railway.....  
 Clinchfield Railroad.....  
 Florida East Coast Railway.....  
 Illinois Central Gulf Railroad.....  
 Louisville and Nashville Railroad.....  
 Seaboard Coast Line Railroad.....  
 Southern Railway.....

SUBTOTAL, SOUTHERN DISTRICT:.....  
 WESTERN DISTRICT

Atchison, Topeka and Santa Fe Railway.....  
 Burlington Northern Inc.....  
 Chicago and Northwestern Trans. Company.....  
 Chicago, Milw., St. Paul & Pacific  
 Railroad.....  
 Chicago, Rock Island & Pacific Railroad....  
 Colorado and Southern Railway.....  
 Denver and Rio Grande Western Railroad.....  
 Duluth, Missabe and Iron Range Railway.....  
 Fort Worth and Denver Railway.....  
 Kansas City Southern Railway.....  
 Louisiana and Arkansas Railway.....  
 Missouri-Kansas-Texas Railroad.....  
 Missouri Pacific Railroad.....  
 St. Louis-San Francisco Railway.....  
 St. Louis Southwestern Railway.....  
 Soo Line Railroad.....  
 Southern Pacific Trans. Company.....  
 Union Pacific Railroad.....  
 Western Pacific Railroad.....

SUBTOTAL, WESTERN DISTRICT:.....

CLASS I RR (SWITCHING AND TERMINAL)

EASTERN DISTRICT

Union Railroad (Pennsylvania).....

CLASS II AND III RAILROADS.....

RECAPITULATION

Class I RR (Line-Haul).....  
 Class I RR (Switching and Terminal).....  
 Class II & III Railroads.....  
 TOTAL FOR ALL RAILROADS.....

TABLE R12. (CONT)

| .....Other Injuries..... |        |        |                             |               |                  |                  |       |        |                        |                          |
|--------------------------|--------|--------|-----------------------------|---------------|------------------|------------------|-------|--------|------------------------|--------------------------|
| Sprain<br>or<br>Bruise   | Strain | Cut    | Elec<br>Shock<br>or<br>Burn | Other<br>Burn | Dislo-<br>cation | Cinder<br>In Eye | Other | Total  | Total<br>In-<br>juries | Total<br>Fatal-<br>ities |
| 764                      | 1,126  | 440    | 29                          | 81            | 15               | 134              | 105   | 2,694  | 2,856                  | 2                        |
| 416                      | 645    | 329    | 1                           | 37            | 10               | 141              | 75    | 1,654  | 1,832                  | 3                        |
| 27                       | 75     | 23     | ---                         | 4             | 1                | 15               | 10    | 155    | 167                    | ---                      |
| 37                       | 77     | 49     | 3                           | 7             | 2                | 23               | 18    | 216    | 246                    | ---                      |
| 462                      | 741    | 313    | 4                           | 76            | 5                | 108              | 72    | 1,781  | 1,948                  | 2                        |
| 2,367                    | 4,025  | 2,017  | 38                          | 214           | 46               | 1,099            | 298   | 10,104 | 11,155                 | 17                       |
| 37                       | 57     | 22     | ---                         | 3             | 1                | 5                | 2     | 127    | 137                    | ---                      |
| 58                       | 138    | 47     | 1                           | 19            | 5                | 23               | 5     | 296    | 333                    | ---                      |
| 85                       | 126    | 82     | 1                           | 16            | 1                | 55               | 12    | 378    | 395                    | 2                        |
| 123                      | 244    | 84     | 1                           | 14            | ---              | 55               | 58    | 579    | 626                    | 1                        |
| 232                      | 371    | 164    | 39                          | 9             | 5                | 100              | 29    | 949    | 962                    | 1                        |
| 423                      | 748    | 264    | 4                           | 50            | 4                | 229              | 59    | 1,781  | 1,978                  | 2                        |
| 60                       | 110    | 41     | ---                         | 19            | ---              | 35               | 29    | 294    | 312                    | 1                        |
| 20                       | 45     | 13     | 1                           | 1             | ---              | 14               | 6     | 102    | 111                    | 1                        |
| 5,111                    | 8,528  | 3,888  | 122                         | 550           | 95               | 2,036            | 780   | 21,110 | 23,080                 | 32                       |
| 10                       | 22     | 8      | ---                         | 3             | ---              | 7                | 1     | 51     | 53                     | ---                      |
| 28                       | 65     | 25     | ---                         | 1             | 1                | 18               | 2     | 140    | 149                    | 1                        |
| 17                       | 30     | 17     | ---                         | 5             | 1                | 20               | 1     | 91     | 98                     | ---                      |
| 18                       | 26     | 9      | ---                         | ---           | ---              | 8                | 1     | 62     | 76                     | ---                      |
| 5                        | 2      | 8      | 1                           | 1             | 1                | ---              | 3     | 21     | 28                     | ---                      |
| 686                      | 982    | 437    | 10                          | 74            | 12               | 285              | 98    | 2,584  | 2,872                  | 6                        |
| 479                      | 804    | 327    | 11                          | 77            | 9                | 185              | 67    | 1,959  | 2,104                  | 13                       |
| 414                      | 749    | 311    | 7                           | 45            | 7                | 158              | 61    | 1,752  | 1,904                  | 4                        |
| 240                      | 554    | 229    | ---                         | 33            | 6                | 186              | 20    | 1,268  | 1,369                  | 4                        |
| 1,897                    | 3,234  | 1,371  | 29                          | 239           | 37               | 867              | 254   | 7,928  | 8,653                  | 28                       |
| 409                      | 616    | 431    | 8                           | 42            | 10               | 149              | 90    | 1,755  | 1,984                  | 8                        |
| 1,323                    | 2,555  | 959    | 8                           | 111           | 34               | 362              | 83    | 5,435  | 6,041                  | 12                       |
| 331                      | 658    | 395    | 4                           | 83            | 14               | 157              | 136   | 1,778  | 1,960                  | 6                        |
| 327                      | 604    | 220    | 9                           | 46            | 15               | 70               | 34    | 1,325  | 1,509                  | 4                        |
| 192                      | 348    | 120    | 6                           | 31            | 8                | 94               | 40    | 839    | 931                    | 1                        |
| 17                       | 52     | 20     | ---                         | 1             | ---              | 8                | 2     | 100    | 111                    | ---                      |
| 32                       | 91     | 50     | ---                         | 1             | 7                | 21               | 8     | 210    | 244                    | ---                      |
| 29                       | 48     | 11     | ---                         | 2             | 1                | 23               | 3     | 117    | 128                    | ---                      |
| 33                       | 60     | 26     | ---                         | 6             | ---              | 13               | 6     | 144    | 171                    | ---                      |
| 77                       | 122    | 37     | ---                         | 8             | 1                | 35               | 7     | 267    | 314                    | ---                      |
| 46                       | 61     | 20     | ---                         | 4             | ---              | 15               | 3     | 149    | 161                    | ---                      |
| 53                       | 121    | 50     | 1                           | 8             | 1                | 82               | 12    | 328    | 364                    | ---                      |
| 390                      | 701    | 264    | 6                           | 40            | 6                | 171              | 67    | 1,645  | 1,797                  | 4                        |
| 169                      | 290    | 123    | 4                           | 20            | 2                | 156              | 25    | 769    | 870                    | 3                        |
| 155                      | 189    | 56     | 1                           | 14            | 1                | 39               | 24    | 479    | 506                    | 2                        |
| 161                      | 302    | 100    | 2                           | 17            | 8                | 83               | 29    | 702    | 759                    | ---                      |
| 650                      | 1,359  | 517    | 11                          | 71            | 22               | 384              | 126   | 3,342  | 3,641                  | 5                        |
| 881                      | 1,212  | 560    | 15                          | 158           | 21               | 320              | 120   | 3,287  | 3,651                  | 10                       |
| 91                       | 136    | 60     | ---                         | 5             | 1                | 64               | 8     | 365    | 388                    | 1                        |
| 5,566                    | 9,525  | 4,019  | 75                          | 666           | 152              | 2,246            | 825   | 23,076 | 25,532                 | 56                       |
| 21                       | 72     | 22     | 2                           | 2             | 1                | 35               | 6     | 161    | 167                    | ---                      |
| 1,558                    | 2,033  | 918    | 15                          | 211           | 34               | 589              | 159   | 5,517  | 5,898                  | 5                        |
| 12,574                   | 21,287 | 9,278  | 226                         | 1,457         | 284              | 5,149            | 1,859 | 52,114 | 57,265                 | 116                      |
| 21                       | 72     | 22     | 2                           | 2             | 1                | 35               | 6     | 161    | 167                    | ---                      |
| 1,558                    | 2,033  | 918    | 15                          | 211           | 34               | 589              | 159   | 5,517  | 5,898                  | 5                        |
| 14,153                   | 23,392 | 10,218 | 243                         | 1,670         | 319              | 5,773            | 2,024 | 57,792 | 63,330                 | 121                      |

TABLE R13. CASUALTIES IN TRAIN INCIDENTS BY OCCURRENCE AND RAILROAD, 1978

|   | Coupling |     | Operating<br>Locos/Mtr Crs |     | Operating<br>Hand Brakes |     | Operating<br>Switches |     | Contact With<br>Fixed Structure |     | G=t |       |
|---|----------|-----|----------------------------|-----|--------------------------|-----|-----------------------|-----|---------------------------------|-----|-----|-------|
|   | Kld      | Inj | Kld                        | Inj | Kld                      | Inj | Kld                   | Inj | Kld                             | Inj | On  | Off   |
| CLASS I RR (LINE-HAUL)                              |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| EASTERN DISTRICT                                    |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| National Railroad Passenger Corp.<br>(Amtrak).....  | ---      | 5   | ---                        | 1   | ---                      | --- | ---                   | --- | ---                             | --- | --- | 26    |
| Baltimore and Ohio Railroad.....                    | ---      | 23  | ---                        | 26  | ---                      | 14  | ---                   | 3   | ---                             | 8   | --- | 76    |
| Bessemer and Lake Erie Railroad.....                | ---      | 1   | ---                        | 1   | ---                      | 2   | ---                   | --- | ---                             | --- | --- | 3     |
| Boston and Maine Corp.....                          | ---      | 2   | ---                        | 4   | ---                      | 2   | ---                   | --- | 1                               | 3   | 3   | 14    |
| Chesapeake and Ohio Railway.....                    | ---      | 35  | ---                        | 16  | ---                      | 15  | ---                   | 2   | ---                             | 21  | --- | 81    |
| Consolidated Rail Corp.....                         | ---      | 71  | ---                        | 128 | ---                      | 34  | ---                   | 17  | ---                             | 15  | 2   | 248   |
| Delaware and Hudson Railway.....                    | ---      | 1   | ---                        | 4   | ---                      | 2   | ---                   | --- | ---                             | --- | 1   | 9     |
| Detroit, Toledo and Ironton Railroad...             | ---      | 1   | ---                        | 2   | ---                      | 6   | ---                   | --- | ---                             | 4   | --- | 4     |
| Elgin, Joliet and Eastern Railway.....              | 1        | 9   | ---                        | 9   | ---                      | 4   | ---                   | 2   | ---                             | --- | --- | 19    |
| Grand Trunk Western Railroad.....                   | ---      | 7   | ---                        | 4   | ---                      | 4   | ---                   | --- | ---                             | 3   | 1   | 36    |
| Long Island Railroad.....                           | ---      | 1   | ---                        | 11  | ---                      | 1   | ---                   | 1   | ---                             | 3   | 1   | 15    |
| Norfolk and Western Railway.....                    | ---      | 31  | ---                        | 28  | ---                      | 16  | ---                   | 1   | ---                             | 4   | --- | 106   |
| Pittsburg and Lake Erie Railroad.....               | ---      | --- | ---                        | 1   | ---                      | 2   | ---                   | --- | ---                             | 2   | --- | 5     |
| Western Maryland Railway.....                       | ---      | 2   | ---                        | 5   | ---                      | 2   | ---                   | --- | ---                             | --- | --- | 3     |
| SUBTOTAL, EASTERN DISTRICT:..                       | 1        | 189 | ---                        | 242 | 1                        | 104 | ---                   | 26  | 2                               | 63  | 8   | 645   |
| SOUTHERN DISTRICT                                   |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| Alabama Great Southern Railroad.....                | ---      | --- | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | --- | --- | 5     |
| Central of Georgia Railroad.....                    | ---      | 2   | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | --- | --- | 16    |
| Cinn., N.O. & Texas Pacific Railway....             | ---      | --- | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | --- | --- | 6     |
| Clinchfield Railroad.....                           | ---      | 3   | ---                        | 3   | ---                      | 1   | ---                   | --- | ---                             | --- | --- | 5     |
| Florida East Coast Railway.....                     | ---      | 1   | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | --- | --- | 2     |
| Illinois Central Gulf Railroad.....                 | ---      | 29  | ---                        | 39  | ---                      | 6   | ---                   | 6   | ---                             | 20  | --- | 77    |
| Louisville and Nashville Railroad.....              | ---      | 16  | ---                        | 32  | ---                      | 14  | ---                   | 2   | ---                             | 12  | --- | 105   |
| Seaboard Coast Line Railroad.....                   | ---      | 33  | ---                        | 47  | ---                      | 17  | ---                   | 7   | ---                             | 9   | 4   | 147   |
| Southern Railway.....                               | ---      | 15  | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | --- | --- | 80    |
| SUBTOTAL, SOUTHERN DISTRICT:..                      | ---      | 99  | ---                        | 121 | ---                      | 36  | ---                   | 17  | ---                             | 41  | 4   | 443   |
| WESTERN DISTRICT                                    |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| Atchison, Topeka and Santa Fe Railway..             | 1        | 25  | ---                        | 41  | 1                        | 17  | ---                   | 3   | ---                             | 11  | 2   | 141   |
| Burlington Northern Inc.....                        | 1        | 31  | 1                          | 73  | ---                      | 29  | ---                   | 18  | ---                             | 33  | --- | 190   |
| Chicago and Northwestern Trans.<br>Company.....     | 1        | 3   | ---                        | 16  | ---                      | 8   | ---                   | 1   | ---                             | 4   | --- | 44    |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | ---      | 19  | ---                        | 4   | ---                      | 10  | ---                   | 3   | ---                             | 5   | --- | 62    |
| Chicago, Rock Island & Pacific<br>Railroad.....     | ---      | 11  | ---                        | 18  | ---                      | 2   | ---                   | 1   | ---                             | 4   | --- | 48    |
| Colorado and Southern Railway.....                  | ---      | 2   | ---                        | --- | ---                      | --- | ---                   | --- | ---                             | 2   | --- | 9     |
| Denver and Rio Grande Western Railroad.             | ---      | 4   | ---                        | 6   | ---                      | 6   | ---                   | --- | ---                             | 3   | --- | 10    |
| Duluth, Missabe and Iron Range Railway.             | ---      | 1   | ---                        | 1   | ---                      | 1   | ---                   | 1   | ---                             | --- | --- | 4     |
| Fort Worth and Denver Railway.....                  | ---      | --- | ---                        | 3   | ---                      | --- | ---                   | --- | ---                             | 1   | --- | 12    |
| Kansas City Southern Railway.....                   | ---      | 8   | ---                        | --- | ---                      | 5   | ---                   | 1   | ---                             | 2   | --- | 17    |
| Louisiana and Arkansas Railway.....                 | ---      | 5   | ---                        | --- | ---                      | 4   | ---                   | --- | ---                             | 1   | --- | 14    |
| Missouri-Kansas-Texas Railroad.....                 | ---      | 1   | ---                        | 25  | ---                      | 3   | ---                   | --- | ---                             | 2   | --- | 27    |
| Missouri Pacific Railroad.....                      | ---      | 35  | ---                        | 53  | ---                      | 10  | ---                   | 3   | ---                             | 15  | 2   | 104   |
| St. Louis-San Francisco Railway.....                | ---      | 12  | 7                          | 36  | ---                      | 5   | ---                   | --- | 1                               | 1   | 1   | 30    |
| St. Louis Southwestern Railway.....                 | ---      | 9   | ---                        | 7   | ---                      | 3   | ---                   | 1   | ---                             | 3   | --- | 22    |
| Soo Line Railroad.....                              | ---      | 15  | ---                        | 18  | ---                      | 13  | ---                   | 2   | ---                             | 1   | --- | 21    |
| Southern Pacific Trans. Company.....                | ---      | 57  | ---                        | 69  | ---                      | 29  | ---                   | 11  | ---                             | 16  | 3   | 239   |
| Union Pacific Railroad.....                         | ---      | 45  | ---                        | 43  | ---                      | 40  | ---                   | 11  | ---                             | 18  | 1   | 187   |
| Western Pacific Railroad.....                       | ---      | 6   | ---                        | 8   | ---                      | 3   | ---                   | --- | ---                             | 3   | --- | 16    |
| SUBTOTAL, WESTERN DISTRICT:..                       | 3        | 289 | 8                          | 421 | 1                        | 188 | ---                   | 56  | 1                               | 127 | 9   | 1,217 |
| CLASS I RR (SWITCHING AND TERMINAL)                 |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| EASTERN DISTRICT                                    |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| Union Railroad (Pennsylvania).....                  | ---      | 2   | ---                        | 2   | ---                      | 2   | ---                   | --- | ---                             | 5   | --- | 4     |
| CLASS II AND III RAILROADS.....                     | 1        | 138 | ---                        | 105 | ---                      | 32  | ---                   | 12  | ---                             | 49  | 1   | 285   |
| RECAPITULATION                                      |          |     |                            |     |                          |     |                       |     |                                 |     |     |       |
| Class I RR (Line-Haul).....                         | 4        | 577 | 8                          | 764 | 2                        | 330 | ---                   | 99  | 3                               | 231 | 21  | 2,305 |
| Class I RR (Switching and Terminal)....             | ---      | 2   | ---                        | 2   | ---                      | 2   | ---                   | --- | ---                             | 5   | --- | 4     |
| Class II & III Railroads.....                       | 1        | 138 | ---                        | 105 | ---                      | 32  | ---                   | 12  | ---                             | 49  | 1   | 285   |
| TOTAL FOR ALL RAILROADS.....                        | 5        | 717 | 8                          | 891 | 2                        | 364 | ---                   | 111 | 3                               | 285 | 22  | 2,594 |

TABLE R13. (CONT)

|   | Acc At     |              | Struck Cr  |             | ...Other... |       | .....TOTAL..... |            |        |                    |
|---|------------|--------------|------------|-------------|-------------|-------|-----------------|------------|--------|--------------------|
|   | Pub<br>Kld | Xings<br>Inj | Run<br>Kld | Over<br>Inj | Kld         | Inj   | Acc/Mil<br>Kld  | Man<br>Hrs | Inj    | Cas/Mil<br>Man Hrs |
| CLASS I RR (LINE-HAUL)                              |            |              |            |             |             |       |                 |            |        |                    |
| EASTERN DISTRICT                                    |            |              |            |             |             |       |                 |            |        |                    |
| National Railroad Passenger Corp.<br>(Amtrak).....  | ---        | 4            | 8          | 4           | 5           | 268   | 13              | .32        | 308    | 7.59               |
| Baltimore and Ohio Railroad.....                    | 31         | 156          | 14         | 25          | ---         | 148   | 45              | 1.42       | 479    | 15.11              |
| Bessemer and Lake Erie Railroad.....                | 1          | 10           | ---        | ---         | ---         | 10    | 1               | .39        | 27     | 10.48              |
| Boston and Maine Corp.....                          | 4          | 19           | 7          | 7           | 1           | 32    | 16              | 2.56       | 83     | 13.38              |
| Chesapeake and Ohio Railway.....                    | 29         | 158          | 9          | 23          | 2           | 110   | 41              | 1.12       | 463    | 12.70              |
| Consolidated Rail Corp.....                         | 105        | 293          | 83         | 86          | 7           | 981   | 198             | 1.09       | 1,873  | 10.29              |
| Delaware and Hudson Railway.....                    | 3          | 2            | ---        | 3           | ---         | 13    | 4               | 1.09       | 34     | 9.24               |
| Detroit, Toledo and Ironton Railroad...             | 2          | 7            | ---        | ---         | ---         | 14    | 2               | .68        | 38     | 12.95              |
| Elgin, Joliet and Eastern Railway.....              | ---        | 8            | ---        | 2           | ---         | 50    | 1               | .18        | 103    | 18.76              |
| Grand Trunk Western Railroad.....                   | 9          | 52           | 6          | 6           | ---         | 90    | 16              | 1.70       | 202    | 21.42              |
| Long Island Railroad.....                           | 3          | 6            | 11         | 10          | 1           | 112   | 16              | 1.33       | 160    | 13.32              |
| Norfolk and Western Railway.....                    | 35         | 230          | 18         | 41          | 5           | 219   | 58              | 1.65       | 676    | 19.22              |
| Pittsburg and Lake Erie Railroad.....               | ---        | 4            | ---        | 3           | ---         | 8     | ---             | ---        | 25     | 5.97               |
| Western Maryland Railway.....                       | 1          | 3            | 2          | 5           | ---         | 10    | 3               | 1.32       | 30     | 13.17              |
| SUBTOTAL, EASTERN DISTRICT:..                       | 223        | 952          | 156        | 215         | 21          | 2,065 | 414             | 1.10       | 4,501  | 12.01              |
| SOUTHERN DISTRICT                                   |            |              |            |             |             |       |                 |            |        |                    |
| Alabama Great Southern Railroad.....                | 5          | 27           | 3          | 2           | ---         | 11    | 8               | *          | 45     | *                  |
| Central of Georgia Railroad.....                    | 4          | 22           | ---        | 7           | 1           | 33    | 5               | *          | 80     | *                  |
| Cinn., N.O. & Texas Pacific Railway....             | 3          | 11           | ---        | 7           | ---         | 22    | 3               | *          | 46     | *                  |
| Clinchfield Railroad.....                           | ---        | 2            | ---        | 3           | ---         | 8     | ---             | ---        | 25     | 14.71              |
| Florida East Coast Railway.....                     | 6          | 16           | 13         | 7           | ---         | 4     | 19              | 8.27       | 30     | 13.06              |
| Illinois Central Gulf Railroad.....                 | 39         | 201          | 17         | 17          | 1           | 169   | 57              | 1.53       | 566    | 15.17              |
| Louisville and Nashville Railroad.....              | 34         | 106          | 11         | 23          | 6           | 207   | 51              | 1.54       | 517    | 15.59              |
| Seaboard Coast Line Railroad.....                   | 79         | 213          | 31         | 22          | ---         | 199   | 114             | 2.92       | 694    | 17.77              |
| Southern Railway.....                               | 43         | 212          | 26         | 32          | ---         | 181   | 69              | 1.70       | 520    | 12.84              |
| SUBTOTAL, SOUTHERN DISTRICT:..                      | 213        | 810          | 101        | 120         | 8           | 834   | 326             | 2.12       | 2,523  | 16.38              |
| WESTERN DISTRICT                                    |            |              |            |             |             |       |                 |            |        |                    |
| Atchison, Topeka and Santa Fe Railway..             | 69         | 254          | 30         | 29          | ---         | 147   | 103             | 1.67       | 668    | 10.81              |
| Burlington Northern Inc.....                        | 66         | 123          | 20         | 43          | 2           | 378   | 90              | .99        | 918    | 10.08              |
| Chicago and Northwestern Trans.<br>Company.....     | 35         | 115          | 9          | 16          | 2           | 127   | 47              | 1.55       | 334    | 11.03              |
| Chicago, Milw., St. Paul & Pacific<br>Railroad..... | 21         | 91           | 6          | 13          | 3           | 99    | 30              | 1.36       | 326    | 14.81              |
| Chicago, Rock Island & Pacific<br>Railroad.....     | 12         | 96           | 1          | 14          | 1           | 106   | 14              | .64        | 300    | 17.99              |
| Colorado and Southern Railway.....                  | 2          | 13           | 1          | 1           | ---         | 6     | 3               | 2.30       | 33     | 25.25              |
| Denver and Rio Grande Western Railroad.             | 7          | 9            | 1          | 4           | 2           | 16    | 10              | 1.29       | 58     | 7.47               |
| Duluth, Missabe and Iron Range Railway.             | ---        | ---          | ---        | ---         | ---         | 19    | ---             | ---        | 27     | 8.67               |
| Fort Worth and Denver Railway.....                  | 1          | 10           | 1          | 1           | ---         | 17    | 2               | .86        | 44     | 18.98              |
| Kansas City Southern Railway.....                   | 1          | 31           | ---        | 4           | 1           | 24    | 2               | .33        | 92     | 14.98              |
| Louisiana and Arkansas Railway.....                 | 4          | 43           | ---        | 2           | ---         | 16    | 4               | *          | 85     | *                  |
| Missouri-Kansas-Texas Railroad.....                 | 5          | 56           | 3          | 5           | ---         | 68    | 8               | 1.48       | 187    | 34.62              |
| Missouri Pacific Railroad.....                      | 76         | 470          | 20         | 25          | 2           | 224   | 100             | 2.40       | 939    | 22.58              |
| St. Louis-San Francisco Railway.....                | 36         | 89           | 3          | 10          | ---         | 34    | 47              | 3.10       | 217    | 14.02              |
| St. Louis Southwestern Railway.....                 | 10         | 33           | 1          | 4           | ---         | 46    | 11              | 1.36       | 128    | 15.82              |
| Soo Line Railroad.....                              | 15         | 82           | 2          | 5           | ---         | 80    | 17              | 1.80       | 237    | 25.13              |
| Southern Pacific Trans. Company.....                | 55         | 196          | 29         | 63          | 1           | 424   | 88              | 1.31       | 1,108  | 16.55              |
| Union Pacific Railroad.....                         | 35         | 157          | 21         | 23          | ---         | 314   | 57              | 1.11       | 838    | 16.37              |
| Western Pacific Railroad.....                       | 5          | 26           | 1          | 10          | ---         | 49    | 6               | 1.20       | 121    | 24.25              |
| SUBTOTAL, WESTERN DISTRICT:..                       | 455        | 1,896        | 149        | 272         | 14          | 2,194 | 640             | 1.44       | 6,660  | 14.95              |
| CLASS I RR (SWITCHING AND TERMINAL)                 |            |              |            |             |             |       |                 |            |        |                    |
| EASTERN DISTRICT                                    |            |              |            |             |             |       |                 |            |        |                    |
| Union Railroad (Pennsylvania).....                  | ---        | ---          | ---        | ---         | ---         | 14    | ---             | ---        | 29     | 8.46               |
| CLASS II AND III RAILROADS.....                     | 33         | 222          | 11         | 41          | 1           | 417   | 47              | .60        | 1,301  | 16.69              |
| RECAPITULATION                                      |            |              |            |             |             |       |                 |            |        |                    |
| Class I RR (Line-Haul).....                         | 891        | 3,658        | 406        | 607         | 43          | 5,093 | 1,360           | 1.42       | 13,664 | 14.04              |
| Class I RR (Switching and Terminal)....             | ---        | ---          | ---        | ---         | ---         | 14    | ---             | ---        | 29     | 8.46               |
| Class II & III Railroads.....                       | 33         | 222          | 11         | 41          | 1           | 417   | 47              | .60        | 1,301  | 16.69              |
| TOTAL FOR ALL RAILROADS.....                        | 924        | 3,880        | 419        | 646         | 44          | 5,524 | 1,427           | 1.35       | 15,014 | 14.22              |

Kld = Killed; Inj = Injured  
 Acc/Mil Man Hrs = Accidents per million man hours  
 Cas/Mil Man Hrs = Casualties per million man hours.



## **APPENDIX A : CLASS I AND CLASS II RAILROADS**

CLASS I RAILROADS, 1978

Line Haul

Alabama Great Southern Railroad Co.  
Atchison, Topeka and Santa Fe Railway Co.  
Baltimore and Ohio Railroad Co.  
Bessemer and Lake Erie Railroad Co.  
Boston and Maine Corp.  
Burlington Northern Inc.  
Central of Georgia Railroad Co.  
Chesapeake and Ohio Railway Co.  
Chicago and North Western Transportation Co.  
Chicago, and Milwaukee, St. Paul and Pacific Railroad Co.  
Chicago, Rock Island and Pacific Railroad Co.  
Cincinnati, New Orleans and Texas Pacific Railway Co.  
Clinchfield Railroad Co.  
Colorado and Southern Railway Co.  
Consolidated Rail Corp.  
Delaware and Hudson Railway Co.  
Denver and Rio Grande Western Railroad Co.  
Detroit, Toledo and Ironton Railroad Co.  
Duluth, Missabe and Iron Range Railway Co.  
Elgin, Joliet and Eastern Railway Co.  
Florida East Coast Railway Co.  
Fort Worth and Denver Railway Co.  
Grand Trunk Western Railroad Co.  
Illinois Central Gulf Railroad Co.  
Kansas City Southern Railway Co.  
Long Island Rail Road Co.  
Louisiana and Arkansas Railway Co.  
Louisville and Nashville Railroad Co.  
Missouri-Kansas-Texas Railroad Co.  
Missouri Pacific Railroad Co.  
National Railroad Passenger Corp. (AMTRAK)  
Norfolk and Western Railway Co.

CLASS I RAILROADS, 1978 (CONTINUED)

Line Haul

Pittsburgh and Lake Erie Railroad Co.  
St. Louis-San Francisco Railway Co.  
St. Louis Southwestern Railway Co.  
Seaboard Coast Line Railroad Co  
Soo Line Railroad Co.  
Southern Pacific Transportation Co.  
Southern Railway Co.  
Union Pacific Railroad Co.  
Western Maryland Railway Co.  
Western Pacific Railroad Co.

Switching and Terminal

Union Railroad Co. (Pennsylvania)

## CLASS II RAILROADS, 1978

### Line Haul

Auto-Train Corp.  
Bangor and Aroostook Railroad Co.  
Canadian Pacific Lines in Maine  
Central Vermont Railway Inc.  
Chicago and Illinois Midland Railway Co.  
Detroit and Toledo Shore Line Railroad Co.  
Duluth, Winnipeg and Pacific Railway Co.  
Georgia Railroad, Lessee Organization  
Georgia Southern and Florida Railway Co.  
Greenbay and Western Railroad Co.  
Illinois Terminal Railroad Co.  
Lake Superior and Ishpeming Railroad Co.  
Maine Central Railroad Co.  
Norfolk Southern Railway Co.  
Northwestern Pacific Railroad Co.  
Richmond, Fredericksburg and Potomac Railroad Co.  
Toledo, Peoria and Western Railroad Co.  
Western Railway of Alabama

### Switching and Terminal

Aliquippa and Southern Railroad Co.  
Alton and Southern Railway Co.  
Baltimore and Ohio Chicago Terminal Railroad Co.  
Belt Railway Co. of Chicago  
Birmingham Southern Railroad Co.  
Conemaugh and Black Lick Railroad Co.  
Cuyahoga Valley Railway Co.  
Houston Belt and Terminal Railway Co.  
Indiana Harbor Belt Railroad Co.  
Kansas City Terminal Railway Co.  
Kentucky and Indiana Terminal Railroad Co.

CLASS II RAILROADS, 1978 (CONTINUED)

Switching and Terminal (continued)

Lakefront Dock and Railroad Terminal Co.

Lake Terminal Railroad Co.

Monongahela Connecting Railroad Co.

Patapsco and Back Rivers Railroad Co.

Philadelphia Bethlehem and New England Railroad Co.

Port Terminal Railroad Assn.

South Buffalo Railway Co.

Terminal Railroad Association of St. Louis

## **APPENDIX B: REPORTING FORMS**

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 6180-53A | TOTAL FRA FORMS 6180-54     | TOTAL FRA FORMS 6180-57             |

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

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

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

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





**RAIL EQUIPMENT ACCIDENT/INCIDENT REPORT**

|   |  |                                    |                     |   |
|---|--|------------------------------------|---------------------|---|
| 1. NAME OF REPORTING RAILROAD   |  | Amtrak <input type="checkbox"/>    | 1a. Alphabetic Code | 1b. Railroad Accident/Incident No.                      |
|   |  | Autotrain <input type="checkbox"/> |                     |   |
| 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       |                     | 6. TIME OF ACCIDENT/INCIDENT                            |
|   |  | month                              | day                 | year  |
|   |  |                                    |                     | 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) |
|--------------|---------------------|---------------------------------|-----------------------------|

**ENVIRONMENTAL CONDITIONS**

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

**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                    |                                |
| MPH                                      | Recorded                                    | Est.                                  |   | 1. North                                    | 2. South    3. East    4. West |

**EQUIPMENT**

|  |  |                |   |  |
|--|--|----------------|---|--|
| 23. TRAILING TONS (gross tonnage, excluding power units) | 24. TYPE OF EQUIPMENT CONSIST (single entry) |                |   | 25. WAS THE EQUIPMENT IDENTIFIED IN ITEM 24 UNATTENDED?        |
|  | 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)   |
| 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<br>2. Yard      4. Industry             |
| 30. PRINCIPLE CAR/UNIT                                   | 30a. Initial and Number                      |                | 30b. Position in Train                            | 30c. Loaded (yes or no)  |
| (1) First Involved (derailed, struck, striking, etc.)    |  |                |   |  |
| (2) Causing (mechanical failures)                        |  |                |   |  |
| 31. LOCOMOTIVE UNITS (no. of)                            | a. Head End                                  | Mid Train      | Rear End  | 32. CARS (no. of)  |
|  | b. Manual                                    | c. Remote      | d. Manual    e. Remote                            | a. Freight    b. Pass.    c. Freight    d. Pass.    e. Caboose |
| (1) Total in Train                                       |  |                |   | (1) Total in Equipment Consist                                 |
| (2) Total Derailed                                       |  |                |   | (2) Total Derailed   |

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

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

**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)**

**HOURS ON DUTY**

|               |             |                |              |                 |                 |
|---------------|-------------|----------------|--------------|-----------------|-----------------|
| 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<br><br>Amtrak<br>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<br>month      day      year | 6. TIME OF ACCIDENT/INCIDENT<br>am <input type="checkbox"/> pm <input type="checkbox"/> |

**LOCATION**

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

**ACCIDENT/INCIDENT SITUATION**

| HIGHWAY USER INVOLVED   |                              |                         |      | RAILROAD EQUIPMENT INVOLVED       |                                 |                             |      |
|---|------------------------------|-------------------------|------|-----------------------------------|---------------------------------|-----------------------------|------|
| 12. TYPE  | 3. Truck-Trailer             | 6. Motorcycle           | CODE | 16. EQUIPMENT                     | 3. Train (standing)             | 6. Light loco(s) (moving)   | CODE |
| 1. Auto   | 4. Bus                       | 7. Pedestrian           |      | 1. Train (units pulling)          | 4. Car(s) (moving)              | 7. Light loco(s) (standing) |      |
| 2. Truck  | 5. School Bus                | 8. Other (specify)      |      | 2. Train (units pushing)          | 5. Car(s) (standing)            | 8. Other (specify)          |      |
| 13. SPEED (estimated mph at impact)   | 14. DIRECTION (geographical) | CODE                    |      | 17. POSITION OF CAR/UNIT IN TRAIN |                                 |                             | CODE |
|   | 1. North      3. East        |                         |      |                                   |                                 |                             |      |
|   | 2. South      4. West        |                         |      |                                   |                                 |                             |      |
| 15. POSITION  | CODE                         |                         |      | 18. CIRCUMSTANCE                  | CODE                            |                             |      |
| 1. Stalled on crossing  | 2. Stopped on crossing       | 3. Moving over crossing |      | 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     |      |

**ENVIRONMENT**

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

**TRAIN AND TRACK**

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

**CROSSING WARNING**

|                                  |  |  |  |  |      |
|----------------------------------|--|--|--|--|------|
| 31. TYPE                         | CODE                                       |  |  | 32. SIGNALLED CROSSING WARNING                                     | CODE |
| (place X in appropriate box(es)) | 1. <input type="checkbox"/> Gates          | 5. <input type="checkbox"/> Hwy. Traffic Signals | 9. <input type="checkbox"/> Watchman                     | Was the signaled crossing warning identified in item 31 operating? |      |
|                                  | 2. <input type="checkbox"/> Cantilever FLS | 6. <input type="checkbox"/> Audible              | 10. <input type="checkbox"/> Flagged by crew             | 1. Yes      2. No  |      |
|                                  | 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                        |  |      |
| 33. LOCATION OF WARNING          | CODE                                       |  | 34. CROSSING WARNING INTERCONNECTED WITH HIGHWAY SIGNALS | CODE   |      |
| 1. Both sides                    | 2. Side of vehicle approach                | 3. Opposite side of vehicle approach             | 1. Yes      2. No      3. Unknown                        | 35. CROSSING ILLUMINATED BY STREET LIGHTS OR SPECIAL LIGHTS        |      |
|                                  |  |  |  | 1. Yes      2. No      3. Unknown                                  |      |

**MOTORIST ACTION**

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

**HIGHWAY VEHICLE PROPERTY DAMAGE/CASUALTIES**

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

**ANNUAL SUMMARY REPORT**  
of  
**RAILROAD INJURY AND ILLNESS**  
(Covering Calendar Year \_\_\_\_)

**COMPLETE THIS REPORT WHETHER OR NOT THERE WERE  
ANY REPORTABLE OCCUPATIONAL INJURIES OR ILLNESSES.  
READ INSTRUCTIONS BEFORE COMPLETING THIS FORM**

**I. ESTABLISHMENTS INCLUDED IN THIS REPORT**

This report should include all establishments located in, or identified by, the reporting railroad. Enter the number of establishments (see definition in the FRA Guide).

\_\_\_\_\_

**II. AVERAGE EMPLOYMENT IN REPORTING YEAR**

Enter the average number of employees during calendar year. Count all classes of employees, including seasonal, temporary, part-time, etc. See instructions in the FRA Guide for examples of computing your average employment.

\_\_\_\_\_ (Round to the nearest whole number)

**III. TOTAL HOURS WORKED IN REPORTING YEAR**

Enter the total number of hours actually worked by all employees. DO NOT include any non-work time even

though paid, such as vacations, sick leave, holidays, etc.

\_\_\_\_\_ (Round to the nearest whole number)

**IV. REPORTABLE INJURIES AND ILLNESSES**

Did you have any reportable injuries or illnesses during the reporting year? (Check one)

- (1)  No - complete Section VII,
- (2)  Yes - complete Sections V, VI and VII.

**V. MONTHLY DATA OF REPORTABLE INJURIES AND ILLNESSES**

Of the Total Reportable Occupational Injuries and Illnesses (Section VI, Line 10 column 1), how many occurred in the following months?

|                      |            |             |            |
|----------------------|------------|-------------|------------|
| <u>Calendar Year</u> |            |             |            |
| Jan. _____           | Apr. _____ | July _____  | Oct. _____ |
| Feb. _____           | May _____  | Aug. _____  | Nov. _____ |
| Mar. _____           | June _____ | Sept. _____ | Dec. _____ |

B6

CORPORATE NAME AND MAILING ADDRESS OF REPORTING RAILROAD →

|          |  |
|----------|--|
| Name     | Alphabetic Railroad Code (See FRA Guide, Appendix A) |
| STREET   |  |
| CITY     | STATE  |
| ZIP CODE |  |

FORM FRA F6180-45 (7-76)  
PREVIOUS EDITIONS ARE OBSOLETE.

*This report is required by regulation (49 CFR 225). Failure to report can result in the imposition of civil penalties.*

**VI. INJURY AND ILLNESS SUMMARY** (Covering Calendar Year \_\_\_\_\_ )

- INSTRUCTIONS:**
- This section may be completed by Copying data from the "Annual Summary" which you are required to complete and post in your establishment.
  - Leave Section VI blank if there were no reportable injuries or illnesses during the reporting year.
  - Line 9 — Add all Occupational Illnesses (Lines 2 through 8) and enter on this line for each column (1) through (8).
  - Line 10 - Add Occupational Injuries (Line 1) and the sum of all Occupational Illnesses (Line 9) and enter on this line for each column (1) through (8).

| LINE | INJURY AND ILLNESS CATEGORY   | TOTAL CASES<br>(1)   | DEATHS<br>(2) | LOST WORKDAY CASES ONLY  |  |                            |   | NONFATAL CASES WITH-OUT LOST WORKDAYS<br>(7) | TERMINATIONS OR PERMANENT TRANSFERS<br>(8) |
|------|---|--|---------------|--|--|----------------------------|---|--|--|
|      |   |  |               | Total lost work-day cases (includes restricted workday cases)<br>(3) | Cases involving days away from work<br>(4) | Days away from work<br>(5) | Days of restricted work activity<br>(6) |  |  |
| 1    | <b>OCCUPATIONAL INJURIES</b>  |  |               |  |  |                            |   |  |  |
| 2    | OCCUPATIONAL ILLNESSES  | Occupational Skin Diseases or Disorders                        |               |  |  |                            |   |  |  |
| 3    |   | Dust Diseases of the Lungs                                     |               |  |  |                            |   |  |  |
| 4    |   | Respiratory Conditions Due to Toxic Agents                     |               |  |  |                            |   |  |  |
| 5    |   | Poisoning (Systemic Effects of Toxic Materials)                |               |  |  |                            |   |  |  |
| 6    |   | Disorders Due to Physical Agents                               |               |  |  |                            |   |  |  |
| 7    |   | Disorders Associated With Repeated Trauma                      |               |  |  |                            |   |  |  |
| 8    |   | All Other Occupational Illnesses                               |               |  |  |                            |   |  |  |
| 9    |   | <b>TOTAL OCCUPATIONAL ILLNESSES</b><br>(Add Lines 2 through 8) |               |  |  |                            |   |  |  |
| 10   | <b>TOTAL OCCUPATIONAL INJURIES AND ILLNESSES</b><br>(Add Lines 1 and 9) |  |               |  |  |                            |   |  |  |

**VII. COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Report prepared by: \_\_\_\_\_ Area Code and Phone: \_\_\_\_\_

Title: \_\_\_\_\_ Date: \_\_\_\_\_

**ANNUAL RAILROAD REPORT  
OF  
MANHOURS BY STATE**

|                         |                      |         |                 |              |                |         |
|-------------------------|----------------------|---------|-----------------|--------------|----------------|---------|
| 1. REPORTING RAILROAD   |                      |         | ALPHABETIC CODE |              | 2. REPORT YEAR |         |
| 3. ANNUAL MANHOURS      |                      |         |                 |              |                |         |
| A.                      | STATE                | B. CODE | C. M/HRS.       | A.           | STATE          | B. CODE |
| (1)                     | ALABAMA              | AL      |                 | (26)         | MONTANA        | MT      |
| (2)                     | ALASKA               | AK      |                 | (27)         | NEBRASKA       | NE      |
| (3)                     | ARIZONA              | AZ      |                 | (28)         | NEVADA         | NV      |
| (4)                     | ARKANSAS             | AR      |                 | (29)         | NEW HAMPSHIRE  | NH      |
| (5)                     | CALIFORNIA           | CA      |                 | (30)         | NEW JERSEY     | NJ      |
| (6)                     | COLORADO             | CO      |                 | (31)         | NEW MEXICO     | NM      |
| (7)                     | CONNECTICUT          | CT      |                 | (32)         | NEW YORK       | NY      |
| (8)                     | DELAWARE             | DE      |                 | (33)         | NORTH CAROLINA | NC      |
| (9)                     | DISTRICT OF COLUMBIA | DC      |                 | (34)         | NORTH DAKOTA   | ND      |
| (10)                    | FLORIDA              | FL      |                 | (35)         | OHIO           | OH      |
| (11)                    | GEORGIA              | GA      |                 | (36)         | OKLAHOMA       | OK      |
| (12)                    | IDAHO                | ID      |                 | (37)         | OREGON         | OR      |
| (13)                    | ILLINOIS             | IL      |                 | (38)         | PENNSYLVANIA   | PA      |
| (14)                    | INDIANA              | IN      |                 | (39)         | RHODE ISLAND   | RI      |
| (15)                    | IOWA                 | IA      |                 | (40)         | SOUTH CAROLINA | SC      |
| (16)                    | KANSAS               | KS      |                 | (41)         | SOUTH DAKOTA   | SD      |
| (17)                    | KENTUCKY             | KY      |                 | (42)         | TENNESSEE      | TN      |
| (18)                    | LOUISIANA            | LA      |                 | (43)         | TEXAS          | TX      |
| (19)                    | MAINE                | ME      |                 | (44)         | UTAH           | UT      |
| (20)                    | MARYLAND             | MD      |                 | (45)         | VERMONT        | VT      |
| (21)                    | MASSACHUSETTS        | MA      |                 | (46)         | VIRGINIA       | VA      |
| (22)                    | MICHIGAN             | MI      |                 | (47)         | WASHINGTON     | WA      |
| (23)                    | MINNESOTA            | MN      |                 | (48)         | WEST VIRGINIA  | WV      |
| (24)                    | MISSISSIPPI          | MS      |                 | (49)         | WISCONSIN      | WI      |
| (25)                    | MISSOURI             | MO      |                 | (50)         | WYOMING        | WY      |
| 4. TYPED NAME AND TITLE |                      |         |                 | 5. SIGNATURE |                | 6. DATE |

FORM FRA F 6180-56 (8-74) SUBMIT THIS FORM WITH THE FRA F 6180-55, DECEMBER REPORT.

**APPENDIX C: REPORTABILITY REQUIREMENTS  
AND DEFINITIONS**

## REPORTABILITY REQUIREMENTS

The rules governing monthly reporting of railroad accidents/incidents which were in effect at the close of 1977 define a reportable accident/incident as an event arising from the operation of a railroad that results, with minor exceptions, in one or more of the following circumstances:

(a) Any impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, pedestrian or other highway user at a rail-highway grade crossing;

(b) Any collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment (standing or moving) which results in more than \$2,300 in damages to railroad on-track equipment, signals, track, 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, that requires medical treatment;
- (iii) injury to one or more employees that requires medical treatment or results in restriction of work or motion for one or more days, one or more lost workdays, transfer to another job, termination of employment, or loss of consciousness; or
- (iv) any occupational illness of a railroad employee, as diagnosed by a physician.

## CLASSIFICATION OF ACCIDENTS/INCIDENTS

Train Accidents are events, with or without casualties, arising in connection with the operation of railroad on-track equipment which satisfy the conditions specified in (b) above. The damage threshold for reporting train accidents from 1957 through 1974 was \$750. In 1975 the threshold was increased to \$1,750, and in 1977 to \$2,300. The reporting threshold is reviewed periodically and adjusted every two years as necessary.

Train Incidents are events arising in connection with the movement of railroad on-track equipment which result in a reportable death, injury or illness, but do not result in damage to railroad equipment, track or roadbed of more than \$2,300.

Nontrain Incidents are events which result in a reportable death, injury or illness arising from the operation of a railroad, but not from the movement of railroad on-track equipment.

## CLASSIFICATION OF CASUALTIES

Fatalities: Prior to 1975, a death which resulted from railroad operations, but which occurred more than 24 hours after the injury, was reported as an injury and a subsequent fatality. Such fatal injuries now are classified as fatalities. In addition, fatalities resulting from occupational illnesses, if they occur within 365 days of the initial diagnosis of the illness are now reportable. These were not reportable prior to 1975.

Nonfatal Casualties: This is any injury or illness caused by a railroad accident/incident that is nonfatal, and includes the following:

Occupational Injuries: Major changes were made in the definition of a reportable injury in 1975. This was done to allow comparability of railroad industry statistics with those published by the Occupational Safety and Health Administration (OSHA) for other industries. Previous regulations required the reporting of any employee injury which prevented the employee from performing normally assigned duties for more than 24 hours in the aggregate during 10 days immediately following the injury. This resulted in the reporting of only those injuries causing at least 2 days of lost or restricted time. The revised regulation requires the reporting of any employee injury which results in one or more lost or restricted workdays, the administration of medical treatment beyond first aid, transfer to another job, termination of employment, or loss of consciousness. In addition, the case remains active for 365 days rather than the 10-day period previously specified. An injury to a person other than an employee-on-duty was formerly reportable if it prevented the customary vocation or mode of life of the injured person for more than 24 hours during the 10 days immediately following the injury. Such an injury is presently reportable if the injured person requires medical treatment beyond first aid. Lost and/or restricted workdays are tabulated only for employee-on-duty injuries and illnesses.

Occupational Illnesses: This is a new category with no counterpart in casualty statistics prior to 1975, and applies to employees only. An occupational illness is any abnormal condition or disorder, other than one resulting from an injury, which is caused by environment factors associated with an employee's employment, including but not limited to acute and chronic illness or diseases which may be caused by inhalation.

## TYPE OF PERSONS

Employees "on duty" are those persons who are engaged in the operation of a railroad. Ordinarily the fact that the employee is or is not under pay will determine this. However, employees on railroad property while



on rest or meal periods, "trading time", or doing work which they are expected to do but actually perform before pay starts or after pay stops, are considered to be employees "on duty".

Employees "not on duty" are those employees who are on railroad property for purposes connected with their employment or with other railroad permission, but who are not "on duty" as defined above.

Passengers are persons on, boarding, or alighting from railroad cars for the purpose of travel.

Nontrespassers are persons who are lawfully on that part of railroad property which is used in railroad operation (other than those herein defined as employees, passengers, or trespassers), and persons adjacent to railroad premises when injured as the result of the operation of a railroad.

Trespassers are persons who are on that part of railroad property used in railroad operation, and whose presence is prohibited, forbidden, or unlawful. Employees who are injured while trespassing are categorized as "trespassers". Also, a person on a rail-highway grade crossing is classified as a "trespasser" if the crossing is protected by gates or other barriers which are closed when the person enters the crossing, or if a person attempts to pass over or under trains or cars at the crossing.

Contractor employees are persons who are employed by a contractor engaged by a railroad to perform normal maintenance work to railroad rolling stock, track structure, bridges, building, etc.

#### CLASSIFICATION OF ON-TRACK EQUIPMENT

Train - A train is a locomotive unit(s) coupled, with or without cars and with or without markers displayed. Included in this definition are those trains consisting entirely of self-propelled units designed to carry passengers and/or freight traffic.

Locomotive - A locomotive is a self-propelled unit of equipment designed for moving other equipment. It includes a self-propelled unit designed to carry freight and/or passenger traffic.

Car - A car is any unit of equipment designed to be hauled by locomotives, or any unit of on-track work equipment such as a track motorcar, highway-rail car, on-track crane, on-track ballast tamping machine, etc.

Equipment Consist - An equipment consist is a train, locomotive(s), cut of cars, or any single car not coupled to another car or locomotive.

## DEFINITIONS

Class of Railroad: Railroads (including both line haul and switching and terminal companies) are classified according to annual gross operating revenues as follows:

- Class I - in excess of \$50 million
- Class II - between \$10 million and \$50,000
- Class III - less than \$10 million

Reportable Property Damage: Excludes cost of clearing wreck. Includes labor cost, and all other costs to repair or replace in kind damaged on-track equipment, signals, track, track structures, or roadbed.

Trainmen, the term as it is used in this publication, includes engineers and motormen, firemen and helpers, conductors, brakemen, and flagmen engaged in passenger, freight, yard or work service and train baggagemen, but does not include hostlers.

Man-hours refers to the service hours or days worked by employees, as shown on the "Monthly Report of Employees, Service, and Compensation" (ICC Wage Statistics, Form A and B) for Class I Railroads. For all other categories of railroads, this information is a total of employee hours worked as reported on the monthly Railroad Injury and Illness Summary (FRA F 6180-55).

Medical Treatment is treatment administered by a physician or by registered professional personnel under the standing orders of a physician. Medical treatment does not include first aid treatment (one-time treatment), precautionary measures such as tetanus shots, or subsequent observation of minor scratches, cuts, bruises, splinters, etc., which do not require medical care, even though these services were provided by a physician or registered professional personnel.

Lost Workdays - This term applies to employees only. It includes all full days or parts of days the employee, because of injury or occupational illness, is away from work (consecutive or not) on regularly assigned workdays (except on the day of injury or first day of illness).

Restriction of Work or Motion - This term applies to employees only. Restriction of work or motion occurs when an employee, because of injury or occupational illness, is assigned to a temporary job, works less than full time at a permanent job, or is unable to perform all normally assigned duties.

Locomotive Mile is a movement under its own power of a locomotive a distance of one mile. This item covers miles run by locomotives in road service and in train and yard-switching service. Switching miles are computed at the rate of six miles per hour for the time actually engaged in such service. A motor train-mile is a movement under its own power of a motor train a distance of one mile.

## **APPENDIX D: FINDING AIDS**

## SPECIAL TOPICS

Information on special topics not readily found by examination of the Table of Contents is as follows:

| <u>Subject</u>       | <u>Table number</u>  |
|----------------------|----------------------|
| Hazardous materials  | S9,S10,R4            |
| Miles, operational   | H6,S1,S2,R1          |
| Month, occurrence by | S2,S4,S40            |
| Speed of train       | S44                  |
| State, occurrence by | S3,S4,S9,S16,S17,S18 |
| Track type or class  | S43,S45              |

## CROSS REFERENCE

Users may wish to compare the data contained in this 1978 Accident/Incident with the Bulletins published in recent years. The "old numbers" listed below are the numbers by which tables were identified in the 1977 Bulletin. The symbol "U" indicates a Rapid Transit table which has been eliminated from the Bulletin and covered by the 1978 accident bulletin issued by the Urban Mass Transportation Administration.

| <u>1977 Table No.</u> | <u>New Table No. or Disposition</u> | <u>1977 Table No.</u> | <u>New Table No. or Disposition</u> |
|-----------------------|-------------------------------------|-----------------------|-------------------------------------|
| 1                     | H1                                  | 103-F                 | U                                   |
| 2, 2a                 | H2                                  | 104-A                 | S32                                 |
| 3                     | H6, H7                              | 104-B                 | S33                                 |
| 4                     | H3, H6, H8                          | 104-C                 | S7                                  |
| 5, 5a                 | H4                                  | 104-D                 | U                                   |
| 6                     | H5                                  | 104-E                 | U                                   |
| 101-A                 | S11                                 | 104-F                 | U                                   |
| 101-B                 | S12                                 | 105-A                 | S34                                 |
| 101-C                 | U                                   | 105-B                 | S35                                 |
| 101-D                 | U                                   | 105-C                 | S8                                  |
| 102-A                 | S28                                 | 105-D                 | U                                   |
| 102-B                 | S29                                 | 105-E                 | U                                   |
| 102-C                 | S5                                  | 105-F                 | U                                   |
| 102-D                 | U                                   | 106-A                 | S36                                 |
| 102-E                 | U                                   | 106-B                 | S37                                 |
| 102-F                 | U                                   | 106-D                 | U                                   |
| 103-A                 | S30                                 | 106-E                 | S38                                 |
| 103-B                 | S31                                 | 107-B                 | S37                                 |
| 103-C                 | S6                                  | 107-D                 | U                                   |
| 103-D                 | U                                   | 107-E                 | S38                                 |
| 103-E                 | U                                   | 107-F                 | U                                   |

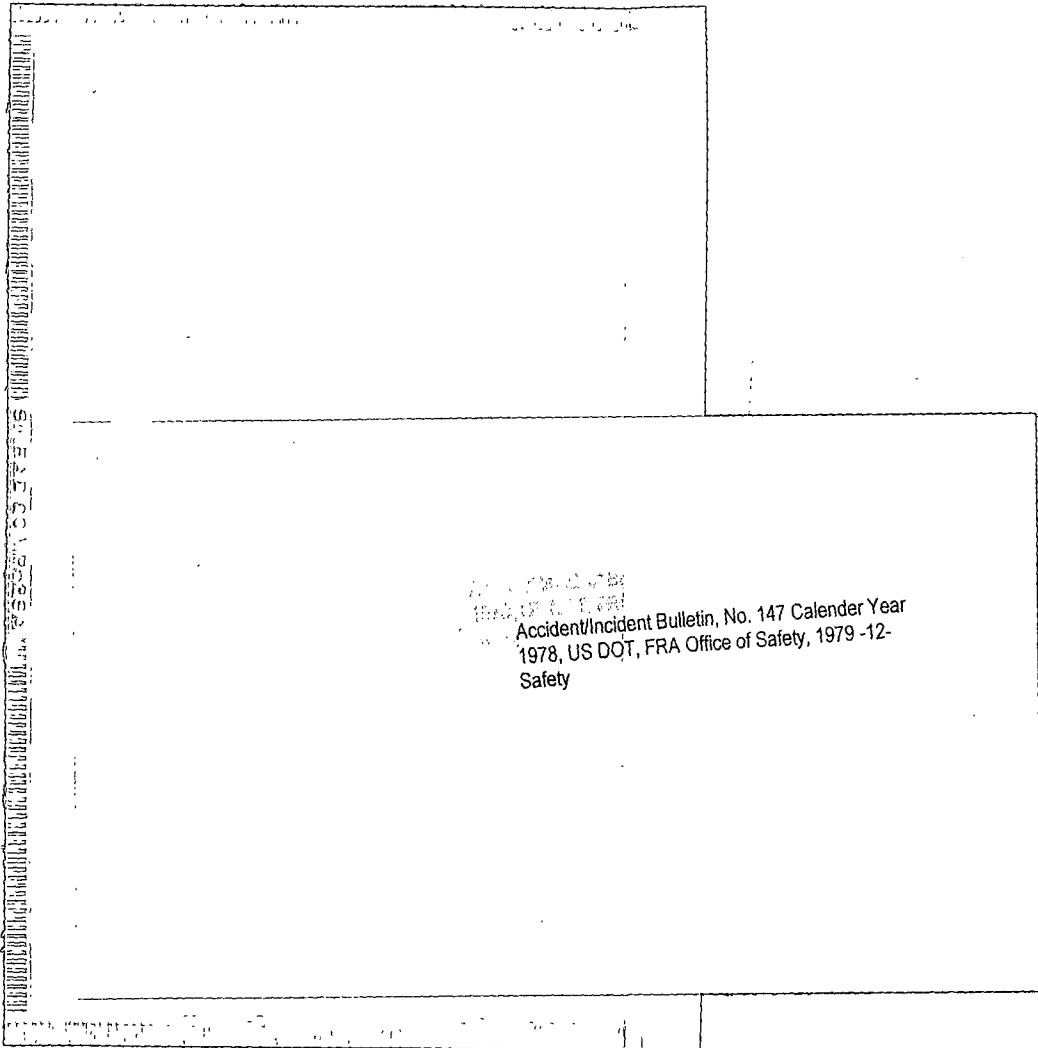
1977 Table  
No.

New Table No.  
or Disposition

1977 Table  
No.

New Table No.  
or Distribution

|       |          |       |        |
|-------|----------|-------|--------|
| 108-A | S36      | 132-A | S20    |
| 108-B | S37      | 132-B | S21    |
| 108-C | S38      | 132-C | U      |
| 108-E | U        | 132-D | U      |
| 109-A | S36      | 132-E | S22    |
| 109-B | S37      | 132-F | U      |
| 109-D | U        | 138-A | S40    |
| 109-E | U        | 138-B | U      |
| 110-A | S36      | 139-A | S2     |
| 110-B | S37      | 139-B | U      |
| 110-C | S38      | 140-A | S41    |
| 110-E | U        | 140-B | S42    |
| 111-A | S36      | 140-C | U      |
| 111-B | S37      | 140-D | U      |
| 111-C | S38      | 143-A | S23    |
| 111-D | U        | 143-B | S24    |
| 111-E | U        | 143-C | U      |
| 112-B | S37      | 143-D | U      |
| 112-E | U        | 144-A | S27    |
| 113-A | S36      | 144-B | U      |
| 113-B | S37      | 151-A | S39    |
| 113-C | S38      | 160-A | S43    |
| 113-D | U        | 161-A | S44    |
| 113-E | U        | 161-B | U      |
| 114-A | S36      | 162-A | S45    |
| 114-B | S37      | 200-A | S1, R1 |
| 114-C | S38      | 200-B | U      |
| 114-D | U        | 201-A | R3     |
| 114-E | U        | 201-B | U      |
| 114-F | U        | 202-A | R5     |
| 115   | S26      | 202-B | U      |
| 116-A | S13      | 203   | R2     |
| 116-B | S14      | 204   | R13    |
| 116-C | S15      | 205-A | R6     |
| 120-A | S16      | 205-B | U      |
| 120-B | S17      | 206-A | R7     |
| 120-C | U        | 206-B | U      |
| 120-D | U        | 206-C | R8     |
| 121-A | S18      | 206-D | U      |
| 121-B | U        | 207-A | R9     |
| 122-A | S3       | 207-B | R10    |
| 122-B | U        | 207-C | R11    |
| 123-A | S4       | 207-E | U      |
| 123-B | U        | 207-F | U      |
| 124   | S9       | 208-A | R12    |
| 125   | S10      | 208-B | U      |
| 131-A | S25, S26 | 208-B | U      |
| 131-B | U        | 210   | R4     |
| 131-C | S19      |       |        |



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Mr. R. L. Sheeps, Supt.  
Manufacturers Rwy. Co.  
2950 S. Broadway  
St. Louis, Mo. 63118

1974

FORM FRA F 29 (10-74)