

Safety Information Reporting and Analysis System (SIRAS)

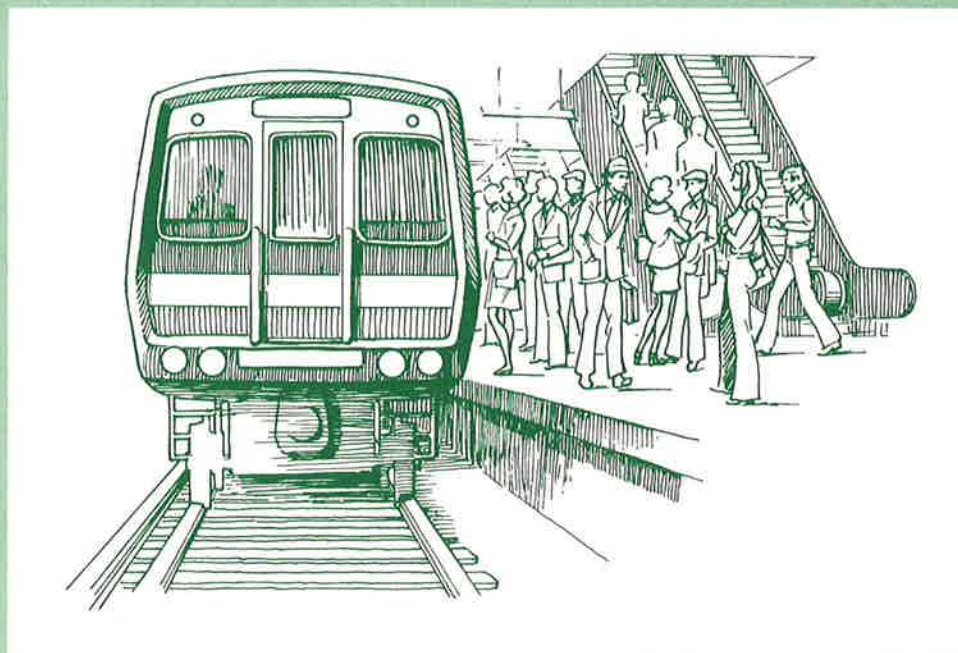


U.S. Department of
Transportation

HEAVY RAIL TRANSIT SAFETY 1985 Annual Report

Research and Special Programs
Administration
Transportation Systems Center
Cambridge, MA 02142

Urban Mass Transportation
Administration
Office of Technical Assistance
Washington DC 20590



UMTA Technical Assistance Program

NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof.

1. Report No. UMTA-MA-06-0152-86-2	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle HEAVY RAIL TRANSIT SAFETY 1985 ANNUAL REPORT		5. Report Date September 1986	
7. Author(s) Mary Claire Drain		6. Performing Organization Code DTS-43	
9. Performing Organization Name and Address U. S. Department of Transportation Research and Special Programs Administration Transportation Systems Center Cambridge, MA 02142		8. Performing Organization Report No. DOT-TSC-UMTA-86-12	
		10. Work Unit No. (TR AIS) UM778/U7009	
		11. Contract or Grant No.	
12. Sponsoring Agency Name and Address U.S. Department of Transportation Urban Mass Transportation Administration Office of Technical Assistance Washington, DC 20590		13. Type of Report and Period Covered Annual Report January 1, 1985 - December 31, 1985	
		14. Sponsoring Agency Code URT-6	
15. Supplementary Notes			
16. Abstract The <u>Heavy Rail Transit Safety 1985 Annual Report</u> is a compendium and analysis of heavy rail transit accident and casualty statistics reported by the thirteen heavy rail transit systems in the United States during 1985, under UMTA's Safety Information Reporting and Analysis System (SIRAS)			
17. Key Words Safety, Statistics, Transportation Fatalities, Injuries, Casualties, Accidents, Heavy Rail Transit, RRT, SIRAS		18. Distribution Statement DOCUMENT IS AVAILABLE TO THE PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD VIRGINIA 22161	
19. Security Classif. (of this report) UNCLASSIFIED	20. Security Classif. (of this page) UNCLASSIFIED	21. No. of Pages 32	22. Price

<u>CONTENTS</u>	<u>PAGE</u>
Introduction	1
I: Glossary	2
II. Statistical Data	
(A) Passengers	3
(B) Car Miles	4
III. Train Accidents	
(A) By Type Accident	5
(B) By Casualties and Damage Estimates	6
IV. Casualties	
(A) Non-Fatalities By Event Causing Injury	7
(B) Non-Fatalities By Type Person	8
(C) Non-Fatalities By Location	9
(D) Fatalities By Event Causing Fatality	10
(E) Fatalities By Type Person	11
(F) Fatalities By Location	12
V. System-Specific Overview	
(A) Total of All RRT Systems	13
(B) Bay Area Rapid Transit District (BART)	14
(C) Chicago Transit Authority (CTA)	15
(D) Greater Cleveland Regional Transit Authority (GCRTA)	16
(E) Metropolitan Atlanta Regional Transit Authority (MARTA)	17
(F) Massachusetts Bay Transportation Authority (MBTA)	18
(G) Metro Dade County Transportation Administration (MDTA)	19
(H) Mass Transit Administration of Maryland (MTAMD)	20
(I) New York City Transit Authority (NYCTA)	21
(J) Port Authority Transit Corporation (PATCO)	22
(K) Port Authority Trans-Hudson Corporation (PATH)	23
(L) Southeastern Pennsylvania Transportation Authority (SEPTA)	24
(M) Staten Island Rapid Transit Operating Authority (SIRTOA)	25
(N) Washington Metropolitan Area Transit Authority (WMATA)	26
Appendix A.	
RRT Thresholds	A-1

INTRODUCTION

The Safety Information Reporting and Analysis System (SIRAS) is a voluntary safety reporting system, developed by the Urban Mass Transportation Administration (UMTA) in cooperation with the American Public Transit Association (APTA) and the heavy rail transit (RRT) systems operating in the United States. Since its implementation on January 1, 1983, the operating RRT systems have been reporting transit safety data to UMTA on a monthly basis. Up to three transit data reports are submitted: a Statistical Data Report, a Train Accident Report and a Casualty Report. All transit systems submit a monthly Statistical Data Report containing the total number of car miles and number of passengers in the reporting month. The Train Accident Report and the Casualty Report are submitted only during those months when reportable (according to specific SIRAS thresholds contained in Appendix A) train accidents or casualties occur.

To assist in understanding the terms used in this report, a glossary has been provided in Section I .

Note: Column and row entries may not sum to the total shown due to rounding.

I. GLOSSARY

The following definitions are to be used as a reference in understanding the terms in this report.

AUTHORIZED PERSON IN STATION OR OTHER AUTHORIZED LOCATION - A person legally on a transit system's property in a location deemed licit.

CAR MILES - Distances traveled by each rail transit car of a transit system in both revenue and non-revenue service during a reporting period.

CASUALTY - A fatality or injury in accordance with SIRAS thresholds.*

CASUALTY REPORT - A SIRAS report containing specific information on individual casualties (fatalities or injuries) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

COLLISION WITH OBSTACLE - A SIRAS train accident type involving the collision of a rail transit revenue train with obstacles (e.g., shopping carts, foreign objects, etc.) other than trains and persons.*

COLLISION WITH PERSON - A SIRAS train accident type involving the collision of a rail transit revenue train with a person on a track or platform.*

COLLISION WITH OTHER TRAIN - A SIRAS train accident type involving the collision of a rail transit revenue train with another rail transit train (e.g., revenue or non-revenue train, work train, etc.).*

DERAILMENT - A SIRAS train accident type involving a rail transit revenue train's leaving the rails.*

FATALITY - A death confirmed to result from a rail transit accident within 30 days after the accident.*

FIRE - A SIRAS train accident type involving the phenomenon of combustion manifested in light, flame and heat.*

NON-AUTHORIZED PERSON IN NON-AUTHORIZED LOCATION - A person illegally on a transit system's property in a location deemed illicit.

PASSENGER IN UNAUTHORIZED AREA - A person on, boarding or alighting from a rail transit revenue train in a location deemed illicit.

PASSENGER IN VEHICLE, BOARDING OR ALIGHTING - A person on, boarding or alighting from a rail transit revenue train in a location deemed licit.

RAIL-HIGHWAY CROSSING - A SIRAS train accident type involving the intersection of an otherwise exclusive (rail transit) right-of-way and a highway where motor vehicle and pedestrian traffic safety is enhanced by one or more crossing warning mechanisms.*

TRAIN ACCIDENT - An event involving one or more trains resulting in any casualty or property damage in accordance with SIRAS thresholds.*

TRAIN ACCIDENT REPORT - A SIRAS report containing specific information on individual train accidents (collisions with trains, collisions with obstacles, collisions with persons, derailments, fires or rail-highway crossings) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

STATISTICAL DATA REPORT - A SIRAS report containing total car miles and total passengers submitted to UMTA by rail transit systems on a monthly basis.

* For additional information, please see Appendix A. RRT Thresholds

II. STATISTICAL DATA

(A) PASSENGERS

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PERCENT OF TOTAL	1984 TOTAL
BART	14,984,057	15,616,956	15,652,002	15,239,784	61,492,799	9.3	59,768,054
CTA	38,101,538	39,777,622	38,708,313	38,891,258	155,478,731	23.6	153,053,407
GCRTA	1,427,422	1,405,667	1,334,912	1,390,521	5,558,522	0.8	6,170,587
MARTA	14,993,000	16,843,000	16,987,000	16,111,000	64,934,000	9.8	51,941,000
MBTA	26,829,700	27,892,000	26,663,000	28,312,000	109,696,700	16.62	102,529,600
MDTA	1,161,337	1,357,504	1,610,577	1,673,254	5,802,672	0.9	* 1,445,806
MTAMD	2,308,832	2,437,947	2,595,886	2,871,579	10,214,244	1.5	7,248,642
NYCTA	N/R	N/R	N/R	N/R	N/R	N/R	997,282,551
PATCO	N/R	N/R	N/R	N/R	N/R	N/R	(I) 9,417,240
PATH	12,801,279	14,121,072	18,244,125	13,904,254	59,070,730	9.0	54,654,890
SEPTA	18,479,473	18,650,188	16,843,491	17,851,790	71,824,942	10.9	71,555,725
SIRTOA	1,556,975	1,544,900	1,384,112	1,563,756	6,049,743	0.9	6,161,133
WMATA	24,961,120	28,086,233	29,360,261	27,473,462	109,881,076	16.6	92,782,693
TOTAL	157,604,733	167,733,089	169,383,679	165,282,658	660,004,159	100.0	1,614,011,328

* MDTA began revenue operation in June of 1984.

I Incomplete - PATCO did not submit report for December 1984.

N/R No Report - NYCTA and PATCO did not submit reports for 1985.

II. STATISTICAL DATA

(B) CAR MILES

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PERCENT OF TOTAL	1984 TOTAL
BART	7,522,815	7,734,716	7,785,315	7,756,875	30,799,721	17.84	30,291,103
CTA	12,925,771	13,041,270	13,162,409	13,196,982	52,326,432	30.31	50,244,676
GCRTA	553,788	517,451	526,236	547,671	2,145,146	1.24	2,180,647
MARTA	3,133,000	3,200,729	3,095,000	3,063,839	12,492,568	7.24	7,096,471
MBTA	3,553,709	3,878,378	3,529,483	3,618,000	14,579,570	8.45	14,213,296
MDTA	361,000	479,300	512,800	535,800	1,888,900	1.09	* 497,100
MTAMD	395,857	489,342	511,756	520,624	1,917,579	1.11	1,997,454
NYCTA	N/R	N/R	N/R	N/R	N/R	N/R	289,248,667
PATCO	N/R	N/R	N/R	N/R	N/R	N/R	(I) 3,760,983
PATH	2,751,422	2,724,443	2,898,892	2,773,835	11,148,592	6.46	10,508,311
SEPTA	4,022,123	4,010,354	4,015,586	4,088,196	16,136,259	9.35	15,871,379
SIRTOA	577,423	576,883	557,545	584,890	2,296,741	1.33	2,483,695
WMATA	6,890,707	6,923,449	6,632,894	6,435,953	26,883,003	15.57	19,427,538
TOTAL	42,687,615	43,576,315	43,227,916	43,122,665	172,614,511	100.0	447,821,320

* MDTA began revenue operation in June of 1984.

I Incomplete - PATCO did not submit report for December 1984.

N/R No Report - NYCTA and PATCO did not submit reports for 1985.

III. TRAIN ACCIDENTS

(A) BY TYPE ACCIDENT

	NUMBER	Collision with other train		Collision with Obstacle		Collision with Person		Derailment		Fire		Rail-Highway Crossing		TOTAL	
		1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL	1985 TOTAL	1984 TOTAL
BART	PER 1,000,000 CAR MILES	0	0	0	.03	0	0	0	0	0	0	N/A	N/A	0	1
	NUMBER	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
CTA	PER 1,000,000 CAR MILES	0	.02	.02	0	.14	0	.02	0	.05	3	.06	.06	.10	0.3
	NUMBER	0	1	1	0	7	0	1	1	2	3	4	4	5	15
GCRTA	PER 1,000,000 CAR MILES	1	0	0	1	3	1	1	1	0	0	N/A	N/A	2	5
	NUMBER	0.5	0	0	0.5	1.5	0.5	0.5	0.5	0	0	N/A	N/A	1.0	2.5
MARTA	PER 1,000,000 CAR MILES	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NUMBER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MBTA	PER 1,000,000 CAR MILES	1	0	0	0	0	0	0	0	0	0	N/A	N/A	1	0
	NUMBER	.06	0	0	0	0	0	0	0	0	0	N/A	N/A	.06	0
MDTA *	PER 1,000,000 CAR MILES	1	0	0	0	0	0	0	0	1	0	N/A	N/A	2	0
	NUMBER	0.5	0	0	0	0	0	0	0	0.5	0	N/A	N/A	1.0	0
MTAND	PER 1,000,000 CAR MILES	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	NUMBER	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
NYCTA	PER 1,000,000 CAR MILES	N/R	0	N/R	0	N/R	0	N/R	.04	N/R	0	N/A	N/A	N/R	0.4
	NUMBER	N/R	0	N/R	0	N/R	0	N/R	12	N/R	0	N/A	N/A	N/R	12
PATCO	PER 1,000,000 CAR MILES	N/R	(1)	N/R	(1)	N/R	(1)	N/R	(1)	N/R	(1)	N/A	N/A	N/R	(1) 1
	NUMBER	N/R	0	N/R	0	N/R	0	N/R	0	N/R	0	N/A	N/A	N/R	25
PATH	PER 1,000,000 CAR MILES	0	0	0	1	0	0	0	0	1	0	0	0	0	2
	NUMBER	0	0	0	.09	0	0	0	0	.09	0	0	0	0	.18
SEPTA	PER 1,000,000 CAR MILES	2	0	0	0	1	0	0	0	0	0	N/A	N/A	2	1
	NUMBER	.12	0	0	0	.06	0	0	0	0	0	N/A	N/A	.12	.06
SIRTOA	PER 1,000,000 CAR MILES	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	NUMBER	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
WMATA	PER 1,000,000 CAR MILES	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	NUMBER	0	0	0	0	0	0	0	0	0	0	N/A	N/A	0	0
TOTAL	PER 1,000,000 CAR MILES	5	1	1	3	12	1	14	1	3	3	4	4	12	37
	NUMBER	.03	*	*	.01	*	*	.03	*	.01	.02	.01	.01	.07	.08

* MDTA began revenue operations in June 1984. N/A Not applicable - RRT system does not have rail-highway crossings.
 I Incomplete - PATCO did not submit report for December 1984. N/R No report - NYCTA and PATCO did not submit reports for 1985.

III. TRAIN ACCIDENTS

(B) BY CASUALTIES AND DAMAGE ESTIMATES

	INJURIES	FATALITIES	TRAIN DAMAGE ESTIMATE (\$)	OTHER TRANSIT DAMAGE ESTIMATE (\$)	NON-TRANSIT DAMAGE ESTIMATE (\$)	1985 TOTAL DAMAGE ESTIMATE (\$)	1984 TOTAL DAMAGE ESTIMATE (\$)
COLLISION WITH OTHER TRAIN	132	0	2,558,391	11,881	0	* 2,570,272	54,118
COLLISION WITH OBSTACLE	4	0	65,596	0	0	65,596	186,465
COLLISION WITH PERSON	0	1	0	0	0	0	100
DERAILMENT	10	0	58,720	1,021	0	59,741	963,377
FIRE	0	0	20,000	0	0	20,000	126,457
RAIL-HIGHWAY CROSSING	0	1	0	800	0	800	46,257
TOTAL	146	2	2,702,707	13,702	0	(I) 2,716,409	(I) 1,376,774

(I) Incomplete - NYCTA and PATCO did not submit reports for 1985.

PATCO did not submit reports for December 1984.

* In 1985 there were five incidents of a train striking a train, whereas in 1984 there was one incident of a train striking a train. This accounts for the increase in total damage estimate.

IV. CASUALTIES

(A) NON-FATALITIES BY EVENT CAUSING INJURY

EVENT CAUSING INJURY	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
STRUCK BY TRAIN	1	1	1	1	4	0.00	0.38	50	1.00
CAUGHT/STRUCK BY TRAIN DOOR	27	24	37	40	128	0.19	12.09	140	32.00
DRAGGED IN CLOSED DOOR	0	0	0	0	0	0.00	0.00	18	0.00
THROWN/FELL FROM TRAIN MOVEMENT	5	9	9	6	29	0.04	2.74	106	7.30
FELL, SLIPPED, TRIPPED, STUMBLE	143	152	129	144	568	0.86	53.64	1,364	142.00
STRUCK BY MISSILE, LOOSE OBJECT	1	3	3	4	11	0.02	1.04	123	2.75
INJURED IN TRAIN ACCIDENT	0	11	67	78	156	0.24	14.73	154	39.00
MISCELLANEOUS	40	29	39	55	163	0.25	15.39	192	40.75
TOTAL	217	229	285	328	* 1,059	1.60	100.0	** 2,147	264.75

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

IV. CASUALTIES

(B) NON-FATALITIES BY TYPE PERSON

<u>TYPE PERSON</u>	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
PASSENGER IN VEHICLE, BOARDING OR ALIGHTING	63	71	140	164	438	0.66	41.4	782	109.50
AUTHORIZED PERSON IN STATION OR OTHER AUTHORIZED LOCATION	154	148	139	160	601	0.91	56.8	1,173	150.25
NON-AUTHORIZED PERSON IN NON-AUTHORIZED LOCATION	0	9	5	3	17	0.03	1.6	14	4.25
EMERGENCY FORCE (FIRE, POLICE, MEDICAL)	0	0	0	0	0	0.00	0.0	0	0.00
CONTRACTOR, OTHER OFFICIAL DUTY PERSON	0	1	1	0	2	0.00	0.2	4	0.50
PASSENGER IN UNAUTHORIZED AREA	0	0	0	1	1	0.00	0.0	174	0.25
TOTAL	217	229	285	328	* 1,059	1.60	100.0	** 2,147	264.75

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

(C) NON-FATALITIES BY LOCATION

LOCATION	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
IN RAPID RAIL TRANSIT STATION	152	139	136	156	583	0.88	55.1	1,168	145.75
BOARDING/ALIGHTING	39	43	54	65	201	0.30	19.0	344	50.25
ON BOARD TRAIN	21	34	87	100	242	0.37	22.8	485	60.50
TRACK AND TRACK STRUCTURE	5	13	8	7	33	0.05	3.1	150	8.25
TOTAL	217	229	285	328	* 1,059	1.60	100.0	** 2,147	264.75

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

IV. CASUALTIES

(D) FATALITIES BY EVENT CAUSING FATALITY

EVENT CAUSING INJURY	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
STRUCK BY TRAIN	0	2	2	0	4	0.006	26.67	37	1.00
CAUGHT/STRUCK BY TRAIN DOOR	0	0	0	0	0	0.000	0.00	0	0.00
DRAGGED IN CLOSED DOOR	0	0	0	0	0	0.000	0.00	0	0.00
THROWN/FELL FROM TRAIN MOVEMENT	0	0	0	1	1	0.002	6.67	0	0.25
FELL, SLIPPED, TRIPPED, STUMBLER	1	0	0	0	1	0.002	6.67	7	0.25
STRUCK BY MISSILE, LOOSE OBJECT	0	0	0	0	0	0.000	0.00	0	0.00
INJURED IN TRAIN ACCIDENT	0	0	0	0	0	0.000	0.00	3	0.00
MISCELLANEOUS	2	2	5	0	9	0.014	60.00	8	2.25
TOTAL	3	4	7	1	* 15	0.024	100.0	** 55	3.75

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

IV. CASUALTIES

(E) FATALITIES BY TYPE PERSON

TYPE PERSON	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 per 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
PASSENGER IN VEHICLE, BOARDING OR ALIGHTING	0	0	1	0	1	0.002	6.73	2	0.25
AUTHORIZED PERSON IN STATION OR OTHER AUTHORIZED LOCATION	1	0	0	0	1	0.002	6.73	3	0.25
NON-AUTHORIZED PERSON IN NON-AUTHORIZED LOCATION	2	3	6	1	12	0.018	80.0	8	3.00
EMERGENCY FORCE (FIRE, POLICE, MEDICAL)	0	0	0	0	0	0.000	0.0	0	0.00
CONTRACTOR, OTHER OFFICIAL DUTY PERSON	0	0	0	0	0	0.000	0.0	1	0.00
PASSENGER IN UNAUTHORIZED AREA	0	1	0	0	1	0.002	6.73	41	0.25
TOTAL	3	4	7	1	* 15	0.024	100.0	** 55	3.75

* NYCTA and PATCO did not submit reports in 1985.
 ** PATCO did not submit reports in December 1984.

IV. CASUALTIES

(E) FATALITIES BY LOCATION

<u>LOCATION</u>	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 PASSENGERS	1985 PERCENT OF TOTAL	1984 TOTAL	FOUR QUARTER MOVING AVERAGE
IN RAPID RAIL TRANSIT STATION	1	0	0	0	1	0.002	6.7	2	0.25
BOARDING/ALIGHTING	0	0	0	0	0	0.000	0.0	2	0.00
ON BOARD TRAIN	0	0	1	0	1	0.002	6.7	5	0.25
TRACK AND TRACK STRUCTURE	2	4	6	1	13	0.020	86.6	46	3.25
TOTAL	3	4	7	1	* 15	0.024	100.0	** 55	3.75

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

V. SYSTEM-SPECIFIC OVERVIEW

(A) TOTAL OF ALL RRT SYSTEMS

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	1	2	2	5	0.029	1
● COLLISION WITH OBSTACLE	0	1	0	0	1	0.006	3
● COLLISION WITH PERSON	0	0	1	0	1	0.006	12
● DERAILMENT	0	0	0	1	1	0.006	14
● FIRE	0	1	0	0	1	0.006	3
● RAIL HIGHWAY CROSSING	0	0	1	2	4	0.023	5
TOTAL TRAIN ACCIDENTS	0	3	4	5	12	0.069	38
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	153	139	136	156	584	0.885	1,170
● BOARDING/ALIGHTING	39	43	54	65	201	0.305	346
● ON BOARD TRAIN	21	34	88	100	243	0.368	491
● TRAIN AND TRACK STRUCTURE	7	17	14	8	46	0.070	195
TOTAL CASUALTIES	220	233	292	329	* 1,074	1.628	** 2,202
INJURIES	217	229	285	328	* 1,059	1.605	** 2,147
FATALITIES	3	4	7	1	* 15	0.023	** 55

* NYCTA and PATCO did not submit reports in 1985.

** PATCO did not submit reports in December 1984.

V. SYSTEM-SPECIFIC OVERVIEW

(B) BAY AREA RAPID TRANSIT DISTRICT (BART)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	1
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	1
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	11	13	7	11	42	0.689	55
● BOARDING/ALIGHTING	1	2	1	3	7	0.115	7
● ON BOARD TRAIN	0	1	1	1	3	0.049	0
● TRAIN AND TRACK STRUCTURE	1	3	0	0	4	0.066	2
TOTAL CASUALTIES	13	19	9	15	56	0.918	64
INJURIES	13	19	9	15	56	0.918	64
FATALITIES	0	0	0	0	0	0.000	0

N/A Not applicable - BART does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(C) CHICAGO TRANSIT AUTHORITY (CTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	1
● COLLISION WITH OBSTACLE	0	1	0	0	1	0.019	0
● COLLISION WITH PERSON	0	0	1	0	1	0.019	7
● DERAILMENT	0	0	0	0	0	0.000	1
● FIRE	0	0	0	0	0	0.000	2
● RAIL HIGHWAY CROSSING	0	0	1	2	3	0.058	4
TOTAL TRAIN ACCIDENTS	0	1	2	2	5	0.096	15
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	11	6	9	4	30	0.194	35
● BOARDING/ALIGHTING	3	6	1	3	13	0.084	12
● ON BOARD TRAIN	1	3	4	2	10	0.065	41
● TRAIN AND TRACK STRUCTURE	0	2	5	0	7	0.045	18
TOTAL CASUALTIES	15	17	19	9	60	0.387	106
INJURIES	15	15	14	9	53	0.342	99
FATALITIES	0	2	5	0	7	0.045	7

V. SYSTEM-SPECIFIC OVERVIEW

(D) GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCRTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	1	0	1	0.500	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	1
● COLLISION WITH PERSON	0	0	0	0	0	0.000	3
● DERAILMENT	0	0	0	1	1	0.500	1
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	1	1	2	1.000	5
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	0	2	0	1	3	0.500	4
● BOARDING/ALIGHTING	0	0	2	0	2	0.333	1
● ON BOARD TRAIN	0	0	64	12	76	12.667	3
● TRAIN AND TRACK STRUCTURE	0	0	0	1	1	0.167	3
TOTAL CASUALTIES	0	2	66	14	82	13.667	11
INJURIES	0	2	66	14	82	13.667	8
FATALITIES	0	0	0	0	0	0.000	3

N/A Not applicable - GCRTA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(E) METROPOLITAN ATLANTA REGIONAL TRANSIT AUTHORITY (MARTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	0
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	29	36	32	32	129	1.985	9
● BOARDING/LIGHTING	1	2	7	0	10	0.354	0
● ON BOARD TRAIN	5	0	4	0	9	0.138	2
● TRAIN AND TRACK STRUCTURE	1	0	3	2	6	0.092	1
TOTAL CASUALTIES	36	38	46	34	154	2.569	12
INJURIES	36	38	46	34	154	0.000	12
FATALITIES	0	0	0	0	0	0.000	0

N/A Not applicable - MARTA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(F) MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	1	0	1	0.067	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	1	0	1	0.067	0
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	43	45	32	38	158	1.436	146
● BOARDING/ALIGHTING	3	3	2	10	18	0.164	26
● ON BOARD TRAIN	1	6	2	2	11	0.100	11
● TRAIN AND TRACK STRUCTURE	0	2	0	1	3	0.027	3
TOTAL CASUALTIES	47	56	36	51	190	1.727	186
INJURIES	47	56	36	50	189	1.718	185
FATALITIES	0	0	0	1	1	0.009	1

N/A Not applicable - MBTA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(G) METRO DADE COUNTY TRANSPORTATION ADMINISTRATION (MDTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	1	0	0	1	0.500	* 0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	* 0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	* 0
● DERAILMENT	0	0	0	0	0	0.000	* 0
● FIRE	0	1	0	0	1	0.500	* 0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	2	0	0	2	1.000	* 0
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	4	2	9	6	21	3.500	* 5
● BOARDING/LIGHTING	0	0	2	0	2	0.333	* 0
● ON BOARD TRAIN	1	8	0	0	9	1.500	* 3
● TRAIN AND TRACK STRUCTURE	0	0	0	0	0	0.000	* 0
TOTAL CASUALTIES	5	10	11	6	32	5.333	* 8
INJURIES	5	10	11	6	32	5.333	* 8
FATALITIES	0	0	0	0	0	0.000	* 0

* MDTA began revenue operation in June of 1984.
 N/A Not applicable - MDTA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(H) MASS TRANSIT ADMINISTRATION OF MARYLAND (MTAMD)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	0
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	0	0	2	0	2	0.200	0
● BOARDING/ALIGHTING	0	0	0	0	0	0.000	0
● ON BOARD TRAIN	0	1	0	0	1	0.100	0
● TRAIN AND TRACK STRUCTURE	0	0	0	0	0	0.000	0
TOTAL CASUALTIES	0	1	2	0	3	0.300	0
INJURIES	0	1	2	0	3	0.300	0
FATALITIES	0	0	0	0	0	0.000	0

N/A Not applicable - MTAMD does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(I) NEW YORK CITY TRANSIT AUTHORITY (NYCTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	N/R	N/R	N/R	N/R	N/R	N/R	0
● COLLISION WITH OBSTACLE	N/R	N/R	N/R	N/R	N/R	N/R	0
● COLLISION WITH PERSON	N/R	N/R	N/R	N/R	N/R	N/R	0
● DERAILMENT	N/R	N/R	N/R	N/R	N/R	N/R	12
● FIRE	N/R	N/R	N/R	N/R	N/R	N/R	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	N/R	N/R	N/R	N/R	N/R	N/R	12
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	N/R	N/R	N/R	N/R	N/R	N/R	748
● BOARDING/ALIGHTING	N/R	N/R	N/R	N/R	N/R	N/R	187
● ON BOARD TRAIN	N/R	N/R	N/R	N/R	N/R	N/R	357
● TRAIN AND TRACK STRUCTURE	N/R	N/R	N/R	N/R	N/R	N/R	151
TOTAL CASUALTIES	N/R	N/R	N/R	N/R	N/R	N/R	1,443
INJURIES	N/R	N/R	N/R	N/R	N/R	N/R	1,403
FATALITIES	N/R	N/R	N/R	N/R	N/R	N/R	40

N/A Not applicable - NYCTA does not have rail-highway crossings.
 N/R No Report - NYCTA did not submit reports for 1985.

V. SYSTEM-SPECIFIC OVERVIEW

(J) PORT AUTHORITY TRANSIT CORPORATION (PATCO)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	N/R	N/R	N/R	N/R	N/R	N/R	0
● COLLISION WITH OBSTACLE	N/R	N/R	N/R	N/R	N/R	N/R	0
● COLLISION WITH PERSON	N/R	N/R	N/R	N/R	N/R	N/R	1
● DERAILMENT	N/R	N/R	N/R	N/R	N/R	N/R	0
● FIRE	N/R	N/R	N/R	N/R	N/R	N/R	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	N/R	N/R	N/R	N/R	N/R	N/R	(I) 1
<u>CASUALTIES</u>							
						PER 1,000,000 PASSENGERS	
● IN RAPID RAIL TRANSIT STATION	N/R	N/R	N/R	N/R	N/R	N/R	13
● BOARDING/ALIGHTING	N/R	N/R	N/R	N/R	N/R	N/R	1
● ON BOARD TRAIN	N/R	N/R	N/R	N/R	N/R	N/R	3
● TRAIN AND TRACK STRUCTURE	N/R	N/R	N/R	N/R	N/R	N/R	1
TOTAL CASUALTIES	N/R	N/R	N/R	N/R	N/R	N/R	(I) 18
INJURIES	N/R	N/R	N/R	N/R	N/R	N/R	(I) 18
FATALITIES	N/R	N/R	N/R	N/R	N/R	N/R	(I) 0

I Incomplete - PATCO did not submit report for December 1984.

N/A Not applicable - PATCO does not have rail-highway crossings.

N/R No report - PATCO did not submit reports for 1985.

V. SYSTEM-SPECIFIC OVERVIEW

(K) PORT AUTHORITY TRANS-HUDSON CORPORATION (PATH)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	1
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	1
● RAIL HIGHWAY CROSSING	0	0	0	0	0	0.000	0
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	2
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	17	20	15	14	66	1.119	22
● BOARDING/ALIGHTING	0	1	3	1	5	0.085	0
● ON BOARD TRAIN	0	4	0	1	5	0.085	0
● TRAIN AND TRACK STRUCTURE	2	2	0	1	5	0.085	0
TOTAL CASUALTIES	19	27	18	17	81	1.373	22
INJURIES	19	27	18	17	81	1.373	22
FATALITIES	0	0	0	0	0	0.000	0

V. SYSTEM-SPECIFIC OVERVIEW

(L) SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY (SEPTA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	2	2	0.125	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	1
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	2	2	0.125	1
<u>CASUALTIES</u>							
● IN RAPID-RAIL TRANSIT STATION	37	16	30	50	133	1.847	36
● BOARDING/ALIGHTING	31	29	36	48	144	2.000	100
● ON BOARD TRAIN	13	11	13	82	119	1.653	54
● TRAIN AND TRACK STRUCTURE	3	7	6	3	19	0.264	14
TOTAL CASUALTIES	84	63	85	183	415	5.764	204
INJURIES	82	62	83	183	410	5.695	203
FATALITIES	2	1	2	0	5	0.069	1

N/A Not Applicable - SEPTA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(M) STATEN ISLAND RAPID TRANSIT OPERATING AUTHORITY (SIRTOA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	0
CASUALTIES							
● IN RAPID RAIL TRANSIT STATION	0	0	0	0	0	0.000	0
● BOARDING/ALIGHTING	0	0	0	0	0	0.000	0
● ON BOARD TRAIN	0	0	0	0	0	0.000	0
● TRAIN AND TRACK STRUCTURE	0	1	0	0	1	0.167	2
TOTAL CASUALTIES	0	1	0	0	1	0.167	2
INJURIES	0	0	0	0	0	0.000	0
FATALITIES	0	1	0	0	1	0.167	2

N/A Not Applicable - SIRTOA does not have rail-highway crossings.

V. SYSTEM-SPECIFIC OVERVIEW

(N) WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

	1985 FIRST QUARTER	1985 SECOND QUARTER	1985 THIRD QUARTER	1985 FOURTH QUARTER	1985 TOTAL	1985 PER 1,000,000 CAR MILES	1984 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.000	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.000	0
● COLLISION WITH PERSON	0	0	0	0	0	0.000	0
● DERAILMENT	0	0	0	0	0	0.000	0
● FIRE	0	0	0	0	0	0.000	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.000	0
<u>CASUALTIES</u>							
● IN RAPID RAIL TRANSIT STATION	1	0	0	0	1	0.009	1
● BOARDING/ALIGHTING	0	0	0	0	0	0.000	0
● ON BOARD TRAIN	0	0	0	0	0	0.000	0
● TRAIN AND TRACK STRUCTURE	0	0	0	0	0	0.000	0
TOTAL CASUALTIES	1	0	0	0	1	0.009	1
INJURIES	0	0	0	0	0	0.000	1
FATALITIES	1	0	0	0	1	0.009	0

N/A Not Applicable - WMATA does not have rail-highway crossings.

RRT THRESHOLDS

TRAIN ACCIDENT REPORTING THRESHOLDS

A "reportable train accident" is any accident which satisfies one or more of the following threshold levels:

A. TRAIN COLLISIONS

1. All rail transit revenue train collisions involving other rail transit equipment (such as revenue or non-revenue trains, work trains or work equipment), persons and/or rail highway crossings are to be reported.
2. Collisions between revenue trains and other obstacles (shopping carts, foreign objects, etc.) which result in \$5,000 or greater property damage, or casualties, are to be reported.

"Property Damage" refers to the estimated cost to repair or replace damaged property (vehicles, equipment, right-of-way, etc.) to a state equivalent to that which existed prior to the accident. Property damage does not include the cost of clearing wreckage.

B. TRAIN DERAILMENTS

1. Rail transit train derailments which result in \$5,000 or greater property damage are to be reported.

C. FIRES

1. Fires which involve the participation of the local fire department in the fire fighting, and/or which cause the evacuation of passengers onto the system right-of-way are to be reported.

D. EXCLUSIONS

1. Accidents (collisions, derailments or fires) occurring in yards and non-revenue service areas which do not involve revenue trains are excluded.
2. Accidents (collisions, derailments or fires) which involve only work trains and servicing equipment are excluded.
3. Collisions between train cars resulting from coupling operations which do not involve passenger casualties are excluded.

CASUALTY REPORTING THRESHOLDS

A "reportable casualty" is any casualty which satisfies one or more of the following threshold levels:

A. PASSENGER AND OTHER CASUALTIES

1. Casualties involving passengers or other personnel (contractors, etc.) which occur at or in exclusive approaches to or from faregates, or equivalent, or within the normal "paid" area, and which result in:
 - a. Fatalities, or
 - b. Personal injuries which require immediate medical treatment beyond first aid, are to be reported as casualties.

"Medical treatment" means treatment requiring the attention of a physician or registered professional medical personnel. "Medical treatment" as used here, does not refer to minor first aid treatment (one-time treatment), precautionary measures such as tetanus shots, or subsequent observation of minor scratches, cuts, bruises or splinters.

B. EXCLUSIONS

1. Assaults are excluded.
2. Attempted suicides are excluded.
3. Suicides are excluded.

