

Reference

UMTA-MA-06-0186-89-2
DOT-TSC-UMTA-89-5

Safety Information Reporting and Analysis System (SIRAS)



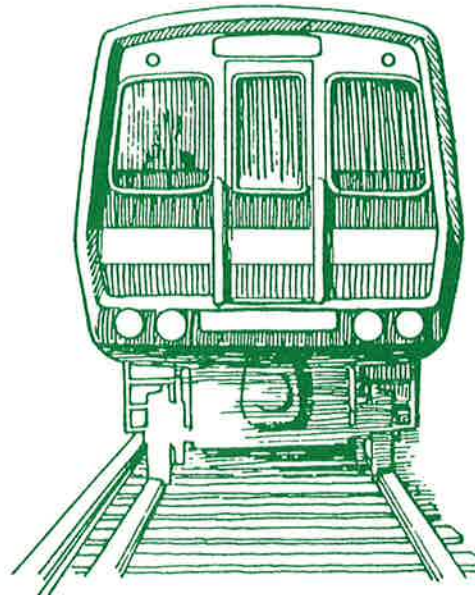
U.S. Department
of Transportation

**Urban Mass
Transportation
Administration**

HEAVY RAIL TRANSIT SAFETY 1988 Annual Report

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

Urban Mass Transportation
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Office of Technical Assistance
Washington, DC 20590



UMTA Technical Assistance Program

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1. Report No. UMTA-MA-06-0186-89-2	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle HEAVY RAIL TRANSIT SAFETY 1988 ANNUAL REPORT		5. Report Date September 1989	
		6. Performing Organization Code DTS-43	
7. Author(s) Mary Claire Drain		8. Performing Organization Report No. DOT-TSC-UMTA-89-5	
9. Performing Organization Name and Address U. S. Department of Transportation Research and Special Programs Administration Transportation Systems Center Cambridge, MA 02142		10. Work Unit No. (TRAIS) UT901/U9503	
		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, 1988 - December 31, 1988		14. Sponsoring Agency Code UT-3	
15. Supplementary Notes			
16. Abstract The <u>Heavy Rail Transit Safety 1988 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 1988, 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 36	22. Price

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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. New reporting thresholds were established and implemented on January 1, 1986. Up to four transit data reports are submitted: a Statistical Data Report, a Train Accident Report, a Casualty Report and a Fire 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, the Casualty Report and a Fire Report are submitted only during those months when reportable (according to specific SIRAS thresholds contained in Appendix A-1) train accidents, fires, or casualties occur.

To assist in understanding the terms used in this report, a glossary has been provided in Section 1.

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 within 30 days after an incident which occurs under the train accident, fire and casualty thresholds.*

FIRE - A fire incident involving the phenomenon of combustion manifested in light, flame and heat.*

FIRE REPORT - A SIRAS report containing specific information on individual fires (station fires, train in revenue service fires, and right-of-way fires) submitted to UMTA by rail transit systems on a monthly basis, when applicable.

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 revenue 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, 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

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 PERCENT OF TOTAL	1987 TOTAL
BART	14,269,866	14,593,470	14,890,888	15,056,218	58,810,442	3.32	56,554,731
CTA	35,701,405	34,339,992	36,407,273	35,334,936	141,783,606	7.99	143,695,150
GCRTA	1,448,457	1,437,984	1,377,741	1,421,845	5,686,027	.32	5,737,412
MARTA	16,340,000	13,250,000	16,837,000	16,333,000	62,760,000	3.54	65,434,000
MBTA	30,986,000	31,020,400	31,981,000	32,838,600	126,826,000	7.15	121,345,500
MDTA	2,548,719	2,505,412	2,744,893	2,742,490	10,541,514	.59	10,503,793
MTAMD	3,366,423	3,514,107	3,510,553	3,506,999	13,898,082	.78	12,401,561
NYCTA	268,817,944	274,460,304	254,885,300	270,729,040	1,068,892,588	60.26	1,057,081,815
PATCO	2,744,768	2,729,185	2,696,535	2,796,756	10,967,244	.62	10,853,291
PATH	14,160,569	14,387,092	14,099,537	14,220,973	56,868,171	3.21	58,190,454
SEPTA	17,663,014	18,898,998	16,414,578	17,474,820	70,451,410	3.97	69,683,874
SIRTOA	1,619,742	1,558,509	1,452,528	1,608,342	6,239,121	.35	6,442,121
WMATA	32,899,545	36,209,041	36,722,086	34,263,261	140,093,933	7.90	131,983,955
TOTAL	442,566,452	448,904,494	434,019,912	448,327,280	1,773,818,138	100.0	681,972,551

II. STATISTICAL DATA

(B) CAR MILES

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 PERCENT OF TOTAL	1987 TOTAL
BART	7,660,938	7,982,751	8,100,584	8,250,875	31,995,148	6.24	30,826,481
CTA	13,175,084	13,365,574	13,106,642	13,057,307	52,704,607	10.28	52,850,814
GCRTA	548,590	528,006	554,369	553,251	2,184,216	.43	2,197,890
MARTA	3,378,000	3,439,000	3,869,000	3,749,000	14,435,000	2.82	12,538,000
MBTA	3,818,920	3,673,908	3,827,990	3,981,269	15,302,087	2.99	15,134,652
MDTA	707,900	660,900	626,100	620,300	2,615,200	.51	2,745,300
MTAMD	1,159,000	1,130,800	970,800	938,400	4,199,000	.82	3,276,000
NYCTA	78,406,409	79,231,777	80,009,951	80,444,909	318,093,046	62.05	305,817,937
PATCO	1,022,890	992,260	1,013,666	1,016,737	4,045,553	.79	3,976,920
PATH	3,034,872	3,141,426	3,338,991	3,245,820	12,761,109	2.49	11,589,170
SEPTA	4,137,735	4,427,928	4,150,908	4,069,067	16,785,638	3.27	16,296,599
SIRTOA	502,833	511,199	512,437	553,953	2,080,422	.41	2,207,840
WMATA	8,330,235	9,084,343	9,218,598	8,779,587	35,412,763	6.91	33,522,331
TOTAL	125,883,406	128,169,872	129,300,036	129,260,475	512,613,789	100.0	183,185,077

III. TRAIN ACCIDENTS

(A) BY TYPE ACCIDENT

		Collision with other train		Collision with Obstacle		Collision with Person		Derailment		Rail-Highway Crossing		TOTAL	
		1988 TOTAL	1987 TOTAL	1988 TOTAL	1987 TOTAL	1988 TOTAL	1987 TOTAL	1988 TOTAL	1987 TOTAL	1988 TOTAL	1987 TOTAL	1988 TOTAL	1987 TOTAL
BART	NUMBER	0	0	0	0	0	0	1	1	N/A	N/A	1	1
	Per 1,000,000 Car Miles	0	0	0	0	0	0	.03	.03	N/A	N/A	.01	.03
CTA	NUMBER	1	1	3	3	9	5	1	0	2	6	16	15
	Per 1,000,000 Car Miles	.02	.02	.02	.06	.06	.09	.01	0	.01	.11	.11	.28
GCRTA	NUMBER	0	1	4	1	4	2	0	0	N/A	N/A	8	4
	Per 1,000,000 Car Miles	0	.05	.07	.05	.07	.09	0	0	N/A	N/A	1.42	1.9
MARTA	NUMBER	0	0	0	0	0	0	0	0	0	0	0	0
	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	0	0	0	0
MBTA	NUMBER	0	1	0	0	0	0	0	0	N/A	N/A	0	1
	Per 1,000,000 Car Miles	0	.06	0	0	0	0	0	0	N/A	N/A	0	.06
MDTA	NUMBER	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	N/A	N/A	0	0
MITAMD	NUMBER	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	N/A	N/A	0	0
NYCTA	NUMBER	1	0	2	1	53	60	5	2	N/A	N/A	61	63
	Per 1,000,000 Car Miles	.003	0	.001	.003	.04	.20	.004	.01	N/A	N/A	.06	.21
PATCO	NUMBER	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	N/A	N/A	0	0
PATH	NUMBER	0	2	0	1	0	0	3	1	0	0	3	4
	Per 1,000,000 Car Miles	0	.02	0	.03	0	0	.05	.03	0	0	.05	.03
SEPTA	NUMBER	0	1	0	0	0	0	0	0	N/A	N/A	0	1
	Per 1,000,000 Car Miles	0	.06	0	0	0	0	0	0	N/A	N/A	0	.06
SIRTOA	NUMBER	0	0	0	1	0	0	0	1	N/A	N/A	0	2
	Per 1,000,000 Car Miles	0	0	0	.045	0	0	0	.045	N/A	N/A	0	.09
WMATA	NUMBER	0	0	0	0	0	0	0	0	N/A	N/A	0	0
	Per 1,000,000 Car Miles	0	0	0	0	0	0	0	0	N/A	N/A	0	0
TOTAL	NUMBER	2	6	9	7	66	67	10	5	2	6	89	91
	Per 1,000,000 Car Miles	.003	.01	.02	.01	.13	.13	.02	.01	.003	.01	.17	.18

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

III. TRAIN ACCIDENTS

(B) BY CASUALTIES AND DAMAGE ESTIMATES

	1988 INJURIES	1988 FATALITIES	1988 TRAIN DAMAGE ESTIMATE (\$)	1988 OTHER TRANSIT DAMAGE ESTIMATE (\$)	1988 NON- TRANSIT DAMAGE ESTIMATE (\$)	1988 TOTAL DAMAGE ESTIMATE (\$)	1987 TOTAL DAMAGE ESTIMATE (\$)
COLLISION WITH OTHER TRAIN	60	0	16,349	1,200	0	17,549	229,483
COLLISION WITH OBSTACLE	47	0	1,044,997	83,887	0	1,128,884	124,202
COLLISION WITH PERSON	43	19	0	0	100	100	*29,000
DERAILMENT	21	0	843,949	174,400	0	1,018,719	148,237
RAIL-HIGHWAY CROSSING	1	0	100	0	500	600	705
TOTAL	172	19	1,905,395	259,857	600	2,165,852	531,627

* Automobile crashed thru guard rail and fence,
Not a rail-highway crossing accident, as transit
system involved does not have rail-highway crossings.

IV. CASUALTIES

(A) NON-FATALITIES BY LOCATION

LOCATION	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 PASSENGERS	1988 PERCENT OF TOTAL	1987 TOTAL	FOUR QUARTER MOVING AVERAGE
ON PLATFORM	327	316	274	318	1,235	0.70	40.5	1,111	308.75
ON TRACKWAY	57	64	54	36	211	0.12	6.9	233	53.00
ON-BOARD TRAIN	201	258	196	191	846	0.48	27.7	948	211.50
ALIGHTING FROM TRAIN	53	77	46	55	231	0.13	7.6	319	57.75
BOARDING TRAIN	111	86	92	62	351	0.20	11.5	343	87.75
IN TRAIN ACCIDENT	68	49	19	37	173	0.10	5.7	150	43.25
STATION FIRES	0	0	0	0	0	0.00	0.0	3	0.00
RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0.0	0	0.00
TRAIN FIRES (IN REVENUE SERVICE)	0	0	2	0	2	0.00	0.1	15	0.00
TOTAL	817	850	683	699	3,049	1.72	100.0	3,122	762.00

IV. CASUALTIES

(B) FATALITIES BY LOCATION

<u>LOCATION</u>	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 PASSENGERS	1988 PERCENT OF TOTAL	1987 TOTAL	FOUR QUARTER MOVING AVERAGE
ON PLATFORM	0	0	0	0	0	0.00	0.0	1	0.00
ON TRACKWAY	0	0	1	0	1	0.00	5.3	4	0.25
ON-BOARD TRAIN	0	0	0	0	0	0.00	0.0	1	0.00
ALIGHTING FROM TRAIN	0	0	0	0	0	0.00	0.0	0	0.00
BOARDING TRAIN	0	0	0	0	0	0.00	0.0	0	0.00
IN TRAIN ACCIDENT	3	3	6	6	18	0.01	94.7	28	4.50
STATION FIRES	0	0	0	0	0	0.00	0.0	0	0.00
RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0.0	0	0.00
TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0.0	0	0.00
TOTAL	3	3	7	6	19	0.01	100.0	34	4.75

(A) TOTAL OF ALL RRT SYSTEMS

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 PERCENT OF TOTAL	1987 TOTAL
STATION FIRES							
Non-Public Areas	3	4	6	9	22	0.46	30
Public Areas							
Trash Receptacles	242	164	146	178	730	15.16	427
Concession	2	0	0	0	2	0.04	1
Other	63	47	61	60	231	4.80	175
TRAIN FIRES (in revenue service)							
Underfloor	66	36	49	27	178	3.70	412
Roof	0	0	0	0	0	0.00	1
Passenger Compartment	27	37	36	34	134	2.78	170
Operator Compartment	11	0	0	0	11	0.23	1
Other	318	251	245	222	1,036	21.52	1,271
RIGHT-OF-WAY FIRES							
Ties, protection board walkways (wooden elements)	22	164	119	57	362	7.52	262
Traction power distribution	16	9	8	7	40	0.83	55
Substation	0	0	0	0	0	0.00	3
Signal System	4	1	1	1	7	0.15	23
Grass, trash, debris	247	284	307	298	1,136	23.59	938
Flammable intrusion	0	0	0	0	0	0.00	0
Stored materials	1	0	0	0	1	0.02	1
Track greasers	1	0	0	2	3	0.06	4
Other	123	278	339	182	922	19.15	750
TOTALS	1,146	1,275	1,317	1,077	4,815	100.00	4,524

VI. SYSTEM SPECIFIC OVERVIEW

(A) TOTAL OF ALL RRT SYSTEMS

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	1	1	0	0	2	0.00	6
● COLLISION WITH OBSTACLE	3	2	3	1	9	0.02	6
● COLLISION WITH PERSON	15	16	13	22	66	0.13	67
● DERAILMENT	3	3	3	1	10	0.02	6
● RAIL HIGHWAY CROSSING	0	1	1	0	2	0.00	6
TOTAL TRAIN ACCIDENTS	22	23	20	24	89	0.17	91
<u>CASUALTIES</u>						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	327	316	274	318	1,235	0.70	1,112
● ON-TRACKWAY	57	64	55	36	212	0.12	237
● ON-BOARD TRAIN	201	258	196	191	846	0.48	949
● ALIGHTING FROM TRAIN	53	77	46	55	231	0.13	319
● BOARDING TRAIN	111	86	92	62	351	0.20	343
● IN TRAIN ACCIDENT	71	52	25	43	191	0.11	178
● STATION FIRES	0	0	0	0	0	0.00	3
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	2	0	2	0.00	15
TOTAL CASUALTIES	820	853	690	705	3,068	1.73	3,156
INJURIES	817	850	683	699	3,049	1.72	3,122
FATALITIES	3	3	7	6	19	0.01	34

VI. SYSTEM SPECIFIC OVERVIEW

(B) BAY AREA RAPID TRANSIT DISTRICT (BART)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	PER 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	1	0	0	0	1	0.03	1
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	1	0	0	0	1	0.03	1
CASUALTIES						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	3	4	0	2	9	0.15	13
● ON-TRACKWAY	1	0	2	1	4	0.07	4
● ON-BOARD TRAIN	4	4	1	3	12	0.20	23
● ALIGHTING FROM TRAIN	2	9	3	5	19	0.32	23
● BOARDING TRAIN	6	4	7	2	19	0.32	23
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	16	21	13	13	63	1.07	86
INJURIES	16	21	13	13	63	1.07	86
FATALITIES	0	0	0	0	0	0.00	0

NA Not applicable - BART does not have rail-highway crossings.

VI. SYSTEM SPECIFIC OVERVIEW

(C) CHICATO TRANSIT AUTHORITY (CTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	1	0	0	1	0.02	1
● COLLISION WITH OBSTACLE	1	0	1	1	3	0.06	3
● COLLISION WITH PERSON	2	2	4	1	9	0.17	5
● DERAILMENT	1	0	0	0	1	0.02	0
● RAIL HIGHWAY CROSSING	0	1	1	0	2	0.04	6
TOTAL TRAIN ACCIDENTS	4	4	6	2	16	0.30	15
<u>CASUALTIES</u>						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	2	1	0	2	5	0.04	15
● ON-TRACKWAY	0	0	3	0	3	0.02	2
● ON-BOARD TRAIN	0	3	3	4	10	0.07	29
● ALIGHTING FROM TRAIN	3	6	4	4	17	0.12	22
● BOARDING TRAIN	3	3	4	2	12	0.08	5
● IN TRAIN ACCIDENT	20	40	5	12	77	0.54	51
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	8
TOTAL CASUALTIES	28	53	19	24	124	0.87	132
INJURIES	28	52	15	23	118	0.83	125
FATALITIES	0	1	4	1	6	0.04	7

VI. SYSTEM SPECIFIC OVERVIEW

(D) GREATER CLEVELAND REGIONAL TRANSIT AUTHORITY (GCRTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	1
● COLLISION WITH OBSTACLE	1	2	1	0	4	1.82	1
● COLLISION WITH PERSON	2	1	0	1	4	1.82	2
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	3	3	1	1	8	3.64	4
CASUALTIES						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	0	1	0	2	3	0.53	7
● ON-TRACKWAY	0	0	0	0	0	0.00	0
● ON-BOARD TRAIN	1	1	4	0	6	1.05	5
● ALIGHTING FROM TRAIN	3	0	1	0	4	0.70	5
● BOARDING TRAIN	1	0	0	2	3	0.53	0
● IN TRAIN ACCIDENT	3	0	9	0	12	2.11	19
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	8	2	14	4	28	4.91	36
INJURIES	8	2	14	4	28	4.91	36
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

(E) METROPOLITAN ATLANTA REGIONAL TRANSIT AUTHORITY (MARTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	0
● RAIL HIGHWAY CROSSING	0	0	0	0	0	0.00	0
TOTAL TRAIN ACCIDENTS	0	0	0	0	0	0.00	0
<u>CASUALTIES</u>						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	4	4	4	2	14	0.22	9
● ON-TRACKWAY	2	4	1	0	7	0.11	7
● ON-BOARD TRAIN	1	3	2	0	6	0.10	4
● ALIGHTING FROM TRAIN	6	3	2	0	11	0.18	11
● BOARDING TRAIN	5	3	3	3	14	0.22	8
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	18	17	12	5	52	0.83	39
INJURIES	18	17	12	5	52	0.83	38
FATALITIES	0	0	0	0	0	0.00	1

VI. SYSTEM SPECIFIC OVERVIEW

(F) MASSACHUSETTS BAY TRANSPORTATION AUTHORITY (MBTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	1
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	1
<u>CASUALTIES</u>							
● ON-PLATFORM	6	11	10	7	34	0.27	74
● ON-TRACKWAY	6	1	5	6	18	0.14	10
● ON-BOARD TRAIN	6	5	6	2	19	0.15	31
● ALIGHTING FROM TRAIN	5	8	5	8	26	0.21	49
● BOARDING TRAIN	17	12	11	8	48	0.38	33
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	22
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	40	37	37	31	145	1.14	219
INJURIES	40	37	37	31	145	1.14	219
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

(G) METRO DADE COUNTY TRANSIT AGENCY (MDTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	-0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	0
CASUALTIES						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	0	0	2	0	2	0.19	6
● ON-TRACKWAY	1	0	1	0	2	0.19	0
● ON-BOARD TRAIN	1	3	0	0	4	0.38	4
● ALIGHTING FROM TRAIN	1	1	0	0	2	0.19	1
● BOARDING TRAIN	0	5	1	0	6	0.57	1
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	3	9	4	0	16	1.52	12
INJURIES	3	9	4	0	16	1.52	12
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

(H) MASS TRANSIT ADMINISTRATION OF MARYLAND (MTAMD)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 PER 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	0
CASUALTIES							
						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	0	0	0	0	0	0.00	3
● ON-TRACKWAY	0	0	0	0	0	0.00	2
● ON-BOARD TRAIN	0	1	0	0	1	0.07	3
● ALIGHTING FROM TRAIN	0	0	0	0	0	0.00	3
● BOARDING TRAIN	1	0	0	0	1	0.07	2
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	1	1	0	0	2	0.14	13
INJURIES	1	1	0	0	2	0.14	13
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

(I) NEW YORK CITY TRANSIT AUTHORITY (NYCTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	1	0	0	0	1	0.00	0
● COLLISION WITH OBSTACLE	1	0	1	0	2	0.01	1
● COLLISION WITH PERSON	11	13	9	20	53	0.17	60
● DERAILMENT	1	0	3	1	5	0.02	2
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	14	13	13	21	61	0.19	63
<u>CASUALTIES</u>							
						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	285	259	231	278	1,053	0.99	908
● ON-TRACKWAY	41	57	36	19	153	0.14	195
● ON-BOARD TRAIN	172	218	152	166	708	0.66	787
● ALIGHTING FROM TRAIN	24	28	16	27	95	0.09	142
● BOARDING TRAIN	56	39	35	29	159	0.15	189
● IN TRAIN ACCIDENT	48	12	11	31	102	0.10	62
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	2	0	2	0.00	6
TOTAL CASUALTIES	626	613	483	550	2,272	2.12	2,289
INJURIES	623	611	480	545	2,259	2.11	2,263
FATALITIES	3	2	3	5	13	0.01	23

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

VI. SYSTEM SPECIFIC OVERVIEW

(J) PORT AUTHORITY TRANSIT CORPORATION (PATCO)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	0
CASUALTIES							
						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	0	1	1	3	5	0.46	3
● ON-TRACKWAY	0	0	0	0	0	0.00	0
● ON-BOARD TRAIN	4	2	0	1	7	0.64	7
● ALIGHTING FROM TRAIN	0	2	0	0	2	0.18	8
● BOARDING TRAIN	2	2	3	0	7	0.64	1
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	6	7	4	4	21	1.91	19
INJURIES	6	7	4	4	21	1.91	19
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

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

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	2
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	1
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	3	0	0	3	0.24	1
● RAIL HIGHWAY CROSSING	0	0	0	0	0	0.00	0
TOTAL TRAIN ACCIDENTS	0	3	0	0	3	0.24	4
<u>CASUALTIES</u>						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	5	5	2	3	15	0.26	19
● ON-TRACKWAY	1	0	0	0	1	0.02	1
● ON-BOARD TRAIN	4	2	3	3	12	0.21	9
● ALIGHTING FROM TRAIN	0	0	0	0	0	0.00	3
● BOARDING TRAIN	3	1	3	1	8	0.14	0
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	6
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	13	8	8	7	36	0.63	38
INJURIES	13	8	8	7	36	0.63	38
FATALITIES	0	0	0	0	0	0.00	0

VI. SYSTEM SPECIFIC OVERVIEW

(L) SOUTHEASTERN PENNSYLVANIA TRANSPORTATION AUTHORITY (SEPTA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	1
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	1
<u>CASUALTIES</u>							
● ON-PLATFORM	11	19	16	12	58	0.82	28
● ON-TRACKWAY	4	1	6	7	18	0.26	14
● ON-BOARD TRAIN	5	8	22	4	39	0.55	25
● ALIGHTING FROM TRAIN	5	16	10	7	38	0.54	31
● BOARDING TRAIN	8	14	15	11	48	0.68	39
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	18
● STATION FIRES	0	0	0	0	0	0.00	1
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	33	58	69	41	201	2.86	156
INJURIES	33	58	69	41	201	2.86	156
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

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

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 per 1,000,000 CAR MILES	1987 TOTAL
<u>TRAIN ACCIDENTS</u>							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	1
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	1	1	0.50	1
● RAIL HIGHWAY CROSSING	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL TRAIN ACCIDENTS	0	0	0	1	1	0.50	2
<u>CASUALTIES</u>						PER 1,000,000 PASSENGERS	
● ON-PLATFORM	3	4	2	4	13	2.10	7
● ON-TRACKWAY	1	0	1	2	4	0.65	2
● ON-BOARD TRAIN	2	6	0	4	12	1.94	17
● ALIGHTING FROM TRAIN	3	3	2	1	9	1.45	16
● BOARDING TRAIN	3	0	1	1	5	0.81	14
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	0
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	12	13	6	12	43	6.94	56
INJURIES	12	13	6	12	43	6.94	56
FATALITIES	0	0	0	0	0	0.00	0

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

VI. SYSTEM SPECIFIC OVERVIEW

(N) WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY (WMATA)

	1988 FIRST QUARTER	1988 SECOND QUARTER	1988 THIRD QUARTER	1988 FOURTH QUARTER	1988 TOTAL	1988 Per 1,000,000 CAR MILES	1987 TOTAL
TRAIN ACCIDENTS							
● COLLISION WITH OTHER TRAIN	0	0	0	0	0	0.00	0
● COLLISION WITH OBSTACLE	0	0	0	0	0	0.00	0
● COLLISION WITH PERSON	0	0	0	0	0	0.00	0
● DERAILMENT	0	0	0	0	0	0.00	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	0.00	0
CASUALTIES							
● ON-PLATFORM	8	7	6	3	24	0.17	20
● ON-TRACKWAY	0	1	0	1	2	0.01	0
● ON-BOARD TRAIN	1	2	3	4	10	0.07	5
● ALIGHTING FROM TRAIN	1	1	3	3	8	0.06	5
● BOARDING TRAIN	6	3	9	2	20	0.14	28
● IN TRAIN ACCIDENT	0	0	0	0	0	0.00	0
● STATION FIRES	0	0	0	0	0	0.00	2
● RIGHT-OF-WAY FIRES	0	0	0	0	0	0.00	0
● TRAIN FIRES (IN REVENUE SERVICE)	0	0	0	0	0	0.00	0
TOTAL CASUALTIES	16	14	21	13	64	0.46	60
INJURIES	16	14	21	13	64	0.46	60
FATALITIES	0	0	0	0	0	0.00	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 the following threshold levels:

A. TRAIN COLLISIONS

1. All collisions of trains in revenue service 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 trains in revenue service and other obstacles (end of track barriers, 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. All derailments of trains in revenue service regardless of severity.

C. EXCLUSIONS

1. Accidents (collisions or derailments) occurring in yards and non-revenue service areas which do not involve trains in revenue service are excluded.
2. Accidents (collisions or derailments) 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

Reportable casualties are casualties involving passengers or other personnel (contractors, etc.) which occur on station platforms, on trackways, boarding, alighting and/or on-board trains which result in fatalities or personnel injuries, regardless of severity.

B. EXCLUSIONS

1. Assaults
2. Attempted suicides
3. Suicides and injury resulting from illness
4. Trespassers

FIRE REPORTING THRESHOLDS

Reportable fires are all fires in stations, on trains in revenue service or on the right-of-way when the fire requires extinguishment by fire suppression system or person.

Each fire is reported regardless of damage.

