

# FTA

FEDERAL TRANSIT ADMINISTRATION

## 2018 Joint SSO and RTA Workshop

### Rail Safety Data Report

**Rick Gerhart**  
**Office of Transit Safety and Oversight**  
**Federal Transit Administration**

**October 24, 2018**



U.S. Department of Transportation  
Federal Transit Administration

# Agenda

- Safety Data Reporting
  - SSO Annual Reporting
  - NTD Monthly Safety Reporting by RTAs
- How we use the safety data
- What is the Rail Safety Data Report (RSDR)
  - What it does not do
  - Who is included
  - Some examples of what's in the RSDR
- Availability of the RSDR

# SSO Annual Reporting

## Hazard Management Process - Hazard Tracking

Please list all hazards reported to your agency through RFGPTS Hazard Management Programs. Specific reporting instructions are provided on the previous worksheet.

## Corrective Action Plans (CAP)

Please provide information regarding each CAP developed in 2017 and all other CAPs reported as open in 2017. Specific instructions for completing this worksheet are provided on the previous worksheet.

## Event Investigation and Reporting

Please provide information regarding all incidents meeting the thresholds established in §659.33. Event Thresholds and specific reporting instructions are provided on the previous worksheet.

Rail Fixed Guideway Public Transportation System	SSO Internal Tracking No. (must be unique)	Date	Time (hh:mm AM/PM)	Mode	Event Type	Collision With (only if Collision)	Event Location	Received Notification Within 2 Hours? (§659.33(c))	Fatalities (§659.33(a)(1) (if none, report 0))					Injuries (§659.33(b))
									Passenger	Patron	Public	Worker	Total	

## State Oversight and RFGPTS General Information

Please provide the address for your State Oversight Agency (SOA) and for the Rail Fixed Guideway Public Transportation Systems (RFGPTSs) under your jurisdiction.

### State Oversight Agency

Agency Name

Rail Fixed Guideway Public Transportation System

Please list any or the criteria used to select the RFGPTSs in the State Safety Oversight Program.

Rail Fixed Guideway Public Transportation System

Project Name



This is the name of the project.

Mode

Please select the mode of the project.

NEPA Decision

If this project has a NEPA decision, please indicate the date.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	  <h2 style="text-align: center;">Annual Reporting Template</h2> <h1 style="text-align: center;">2017</h1> <p>Please use this reporting template to report State Safety Oversight (SSO) Program information for Calendar Year 2017. Each reporting section is located on a different worksheet within this file. Click the tabs below to navigate through the template. <b>Please fill out the Agency Information Tab prior to completing the rest of the tabs.</b> Specific instructions are provided within. Please pay special attention to the instructions provided on each worksheet before completing the In addition to completing and submitting this reporting template, FTA requires each SSO agency to submit the following:</p> <ol style="list-style-type: none"> <li>1. A copy of the SSO agency's 2017 Certification of Compliance with 49 CFR part 659.</li> <li>2. A copy of the Program Standard and Procedures (if these documents were revised in 2017).</li> <li>3. A copy of the 2017 Annual Reports and Chief Executive certifications received from each rail fixed guideway public transportation system (RFGPTS) under your jurisdiction.</li> <li>4. A copy of the letter sent to each RFGPTS by the SSO agency approving their 2017 Annual Reports.</li> <li>5. A copy of the internal safety audit reports, including the completed checklists used to perform the audits, conducted by each RFGPTS in 2017 (if not already included in the 2017 RFGPTS Annual Reports).</li> <li>6. A copy of the SSO agency's Three-Year Review Report (if conducted in 2017).</li> </ol> <p style="text-align: center;"><b>Status: Incomplete</b> <span style="float: right;">Reporting deadline: 4/15/18</span></p> <p><b>Status:</b> Red status means that entries in the template are <b>Incomplete</b>, and the template does not include all required elements. Green status means that entries in the template are <b>complete</b>, and the template includes all required elements.</p> <p><b>***Please do not cut and paste cells in this workbook***</b></p>														
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															

# National Transit Database

- NTD safety data that transit agencies report to FTA:
- S&S 40 – Major event report form
  - One for each reportable major event
- S&S 50 – Non-major summary report form
  - Monthly summary of all non-major reportable events
- For more NTD safety data info, please refer to Maggie Schilling's presentation from the May, 2018 SSO workshop, posted on the FTA website
  - <https://www.transit.dot.gov/regulations-and-guidance/safety/national-transit-database-ntd-safety-reporting>

# How we use the data – currently

Transforming the data into information for:

- Supporting the SSO audit program
- SSO program performance monitoring
- Supporting responses to inquiries and specific safety concerns
- **Rail Safety Data Report (RSDR)**

# How we use the data – upcoming

- Supporting Safety Management Systems (SMS) risk management and safety assurance activities
- Facilitating development of safety performance criteria for the National Safety Plan
- Helping States, MPOs and transit agencies set safety performance targets, as required under the Public Transportation Agency Safety Plan rule (PTASP)

# What is the RSDR

- Presents trends and patterns in rail safety data
  - By rail transit modes
  - By person types
  - By probable causes
- Focuses on safety outcomes in 2015 and the trend of the data between 2007 and 2015.
- Uses causal data reported by SSOAs
- Updates the 2007 - 2013 Rail Safety Statistics Report

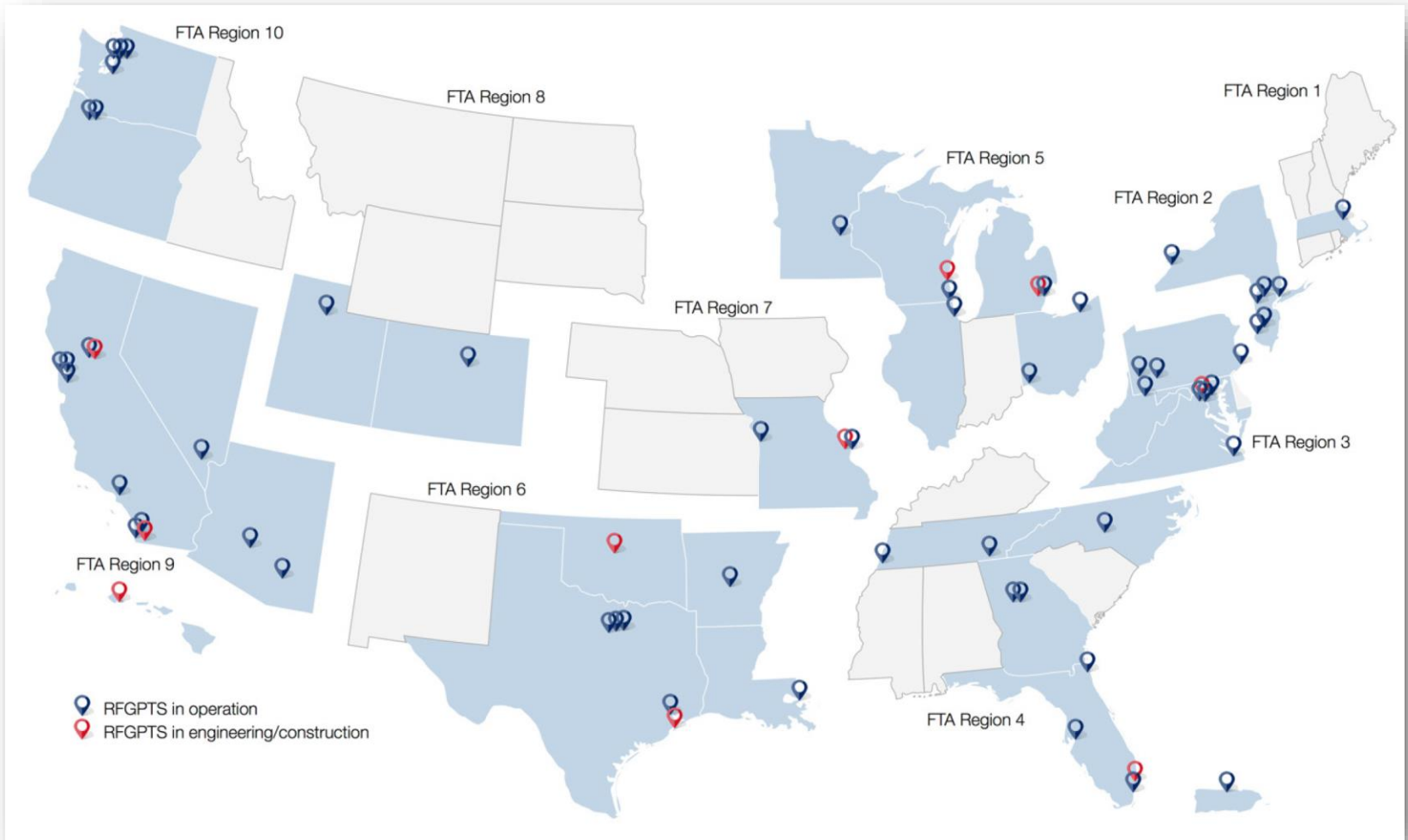
# What the RSDR does NOT do

- It does not make safety performance predictions
- It does not compare individual rail transit agencies
- It does not make judgements as to why certain trends have occurred

*The RSDR simply presents the reported data*



# Who is included?



# Events (per 659.33)

- A fatality;
- Injuries to two or more individuals;
- Property damage to rail transit vehicles, non-rail transit vehicles, other rail transit property or facilities, or non-transit property that equals or exceeds \$25,000;
- An evacuation for reasons of life safety;
- A mainline derailment;
- A collision with an individual on a rail right-of-way; and
- A collision between a rail transit vehicle and a second rail transit vehicle or a rail transit non-revenue vehicle.

(Note: Definitions/thresholds for some event categories changed under 674)

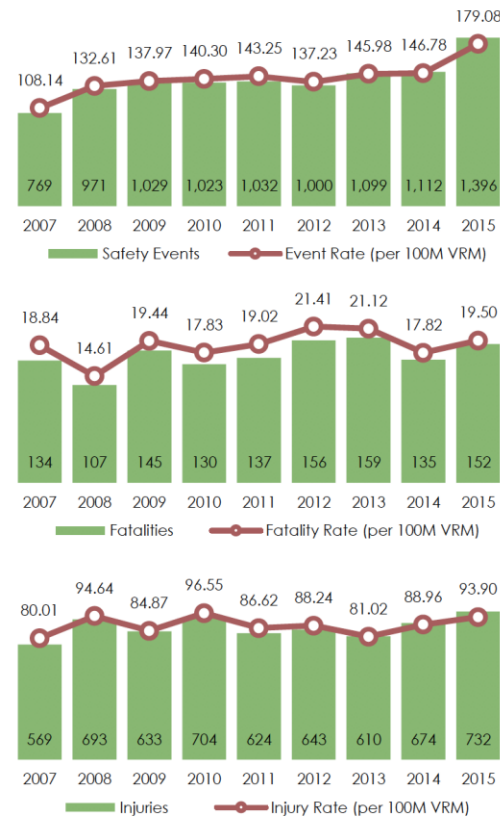
# Events, Fatalities and Injuries

In 2015, SSOAs reported

- **1,396 events** that resulted in
  - **152 fatalities** and
  - **732 injuries**

All three of these annual totals increased between 2014 and 2015.

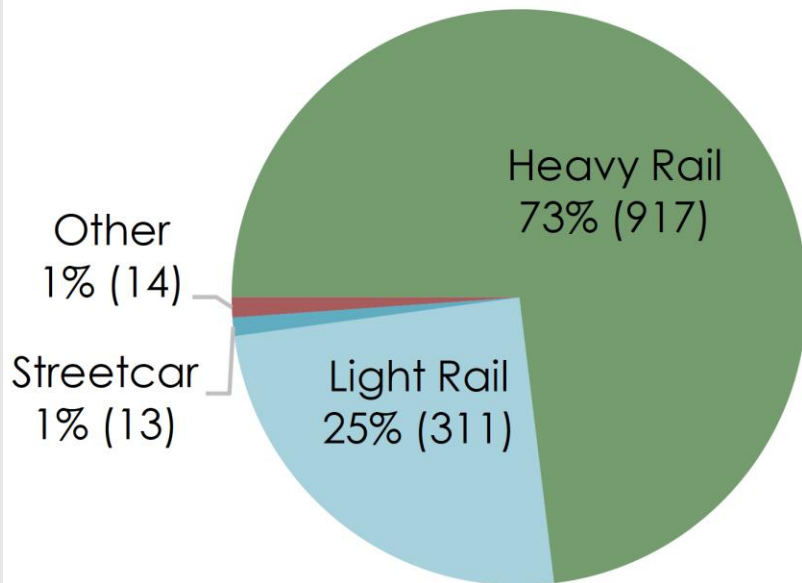
- Events increased 25.5% and averaged an increase of 7.7% per year after 2007.
- Fatalities increased 12.6% and averaged an increase of 1.6% per year after 2007.
- Injuries increased 8.6% and averaged an increase of 3.2% per year after 2007.



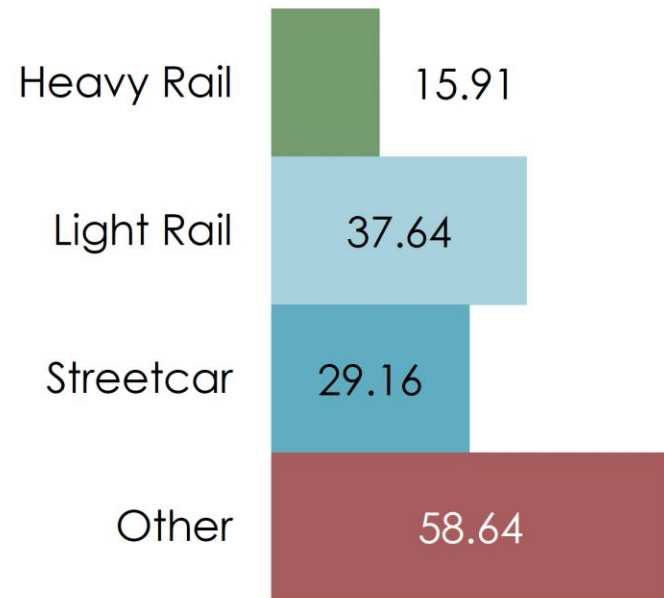
**Figure 1. Events, Fatalities, and Injuries and Rates per 100M VRM, 2007–2015**

# Modal Comparisons

## Fatalities, 2007-2015



## Fatality Rate, 2007-2015

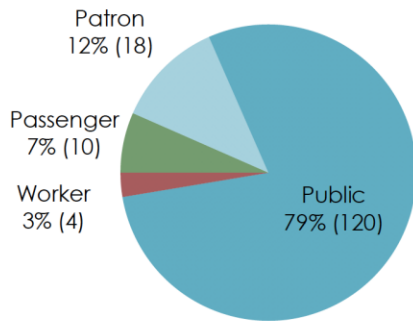


# Person Types

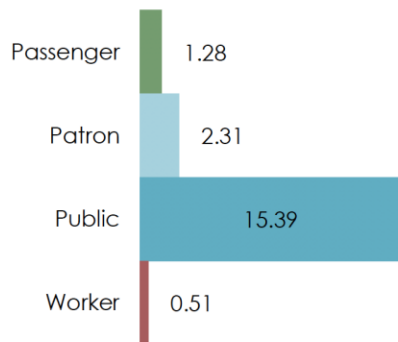
- **Passengers** aboard rail transit vehicles or in the process of boarding or alighting;
- **Patrons**, including all other customers on transit agency property;
- **Workers**, including rail transit agency employees and contractors; and
- The **public**, including pedestrians, automobile drivers, suicides, and trespassers.

# Fatality Trends by Person Types

Fatalities, 2015



Fatality Rate, 2015

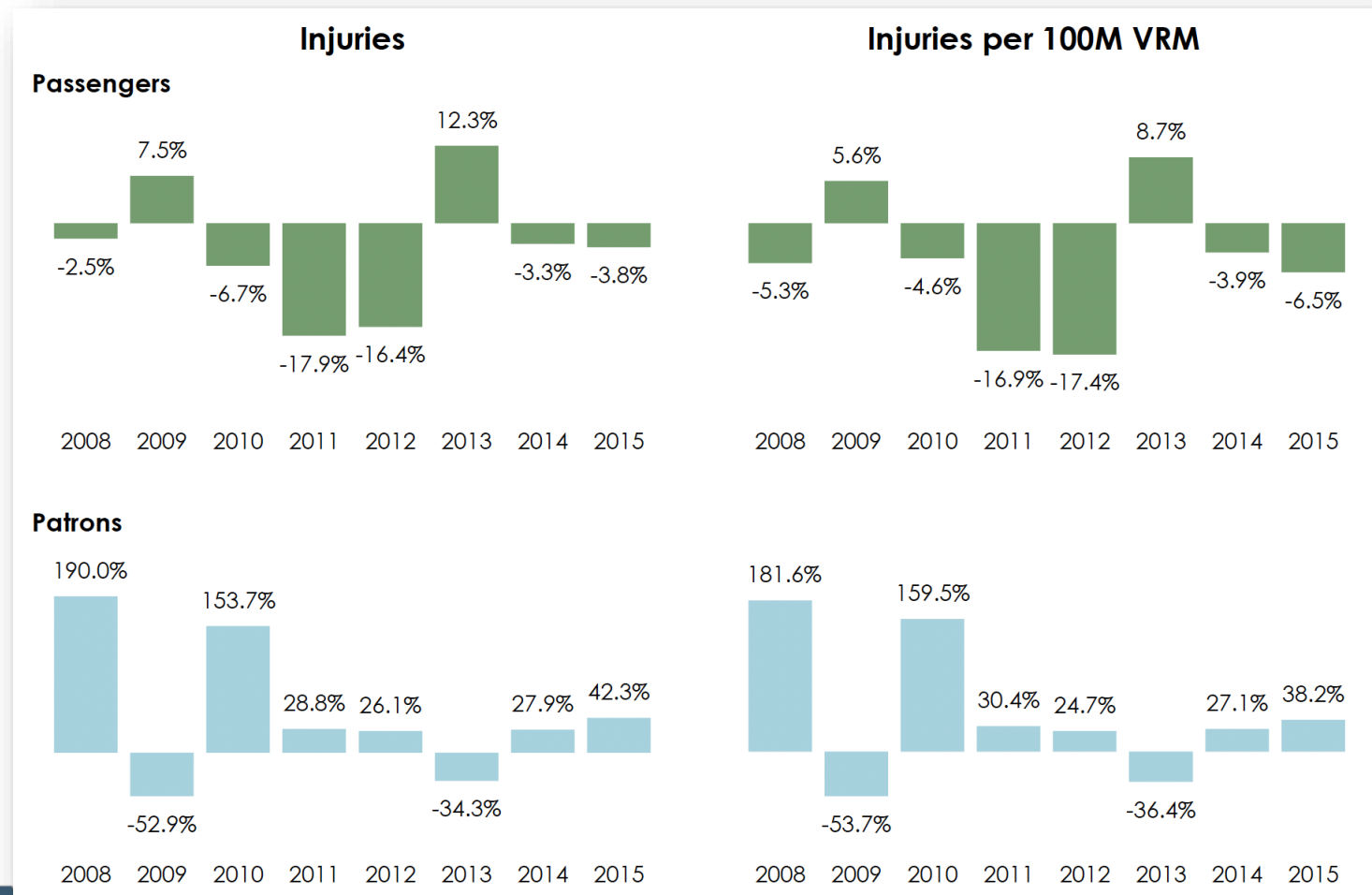


	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Trend
Passenger	7	1	13	9	3	8	6	5	10	6.9	
Patron	20	11	13	19	26	35	26	24	18	21.3	
Public	105	92	115	97	107	112	119	106	120	108.1	
Worker	2	3	4	5	1	1	8	0	4	3.1	

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Trend
Passenger	0.98	0.14	1.74	1.23	0.42	1.10	0.80	0.66	1.28	0.93	
Patron	2.81	1.50	1.74	2.61	3.61	4.80	3.45	3.17	2.31	2.88	
Public	14.77	12.56	15.42	13.30	14.85	15.37	15.81	13.99	15.39	14.62	
Worker	0.28	0.41	0.54	0.69	0.14	0.14	1.06	0.00	0.51	0.42	

# Year-to-Year Injury Rate Changes by Person Type



# Probably Cause – SSO Reporting

- Rule violations/Human factors
- Equipment Failure
- Poor maintenance
- Slips and falls
- Action of motorist (behavior of the driver of a non-transit vehicle)
- Imprudent customer actions
- Pedestrian actions:
- Suicides:
- Trespassing:
- Medically related:
- Other (acts of nature or unknown causes)



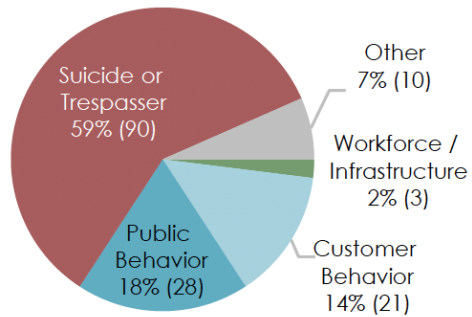
# RSDR Probable Cause Groupings

RSDR Probable Cause	SSO Program Probable Cause
<b>Workforce or Infrastructure</b>	Equipment Failure Rule Violations/Human Factors Poor Maintenance
<b>Customer Behavior</b>	Slips and Falls Imprudent Customer Actions
<b>Public Behavior</b>	Actions of Motorists Pedestrian Actions Suicides Trespassing
<b>Other</b>	Medically Related Other

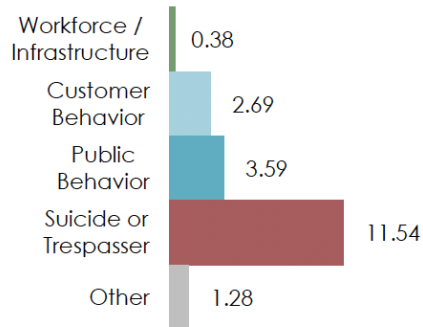
# Causal Trends

## Fatalities and Rates per 100M VRM by Probable Cause

**Fatalities, 2015**



**Fatality Rate, 2015**



	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Trend
Workforce / Infrastructure	6	7	12	2	0	1	1	0	3	3.6	
Customer Behavior	22	13	17	17	14	34	26	26	21	21.1	
Public Behavior	102	84	112	91	105	105	114	103	118	103.8	
Suicide or Trespasser	87	72	95	81	88	84	98	85	90	86.7	
Other	4	3	4	20	18	16	18	6	10	11.0	

	2007	2008	2009	2010	2011	2012	2013	2014	2015	Avg	Trend
Workforce / Infrastructure	0.84	0.96	1.61	0.27	0.00	0.14	0.13	0.00	0.38	0.48	
Customer Behavior	3.09	1.78	2.28	2.33	1.94	4.67	3.45	3.43	2.69	2.85	
Public Behavior	14.34	11.47	15.02	12.48	14.58	14.41	15.14	13.60	15.14	14.03	
Suicide or Trespasser	12.23	9.83	12.74	11.11	12.22	11.53	13.02	11.22	11.54	11.72	
Other	0.56	0.41	0.54	2.74	2.50	2.20	2.39	0.79	1.28	1.49	

# Rail Safety Data Report

Available on FTA's website

<https://www.transit.dot.gov/regulations-and-guidance/safety/rail-safety-data-report>

Thank you!



# Questions

Rick Gerhart  
Program Manager  
Office of System Safety  
Office of Transit Safety and Oversight  
Federal Transit Administration  
202.366.8970  
[Richard.Gerhart@dot.gov](mailto:Richard.Gerhart@dot.gov)