TO: Regional Transportation Commission  
FROM: George Dondero, Executive Director  
RE: Director’s Report

---

THIS ITEM FOR INFORMATION ONLY

---

**Hwy 9 Complete Streets Corridor Plan RFP issued**

The Request for Proposals (RFP) for the Hwy 9/San Lorenzo Valley Complete Streets Corridor Plan was issued to planning consultant firms on December 2. The plan will identify, prioritize, and enable implementation of the most critical and cost effective transportation projects along Highway 9 between Felton and Boulder Creek. Consultant proposals are due to the RTC on January 17, 2017. The RTC is tentatively scheduled to award a contract to the selected firm in February 2017, with extensive public outreach to take place in the spring. This project is funded by a Caltrans planning grant.

**San Lorenzo River Bridge Walkway**

The San Lorenzo River Trestle Walkway provides a direct connection for pedestrians and bicyclists from the eastside coastal neighborhoods to the Santa Cruz Beach Boardwalk, the Santa Cruz Wharf, and the west side of the City of Santa Cruz. Thousands of residents and visitors use this walkway every year to get across town for work and for pleasure. Those familiar with the walkway know it is extremely narrow and difficult to maneuver, especially with bikes and pedestrians moving in both directions. The City of Santa Cruz was just awarded a grant that can cover some of the design costs as well. More funding is likely to be needed to complete the project. This project is part of the rail trail and will be integrated into Segments 8 and 9. The funding will be available by July and the sequencing of walkway design and design of Segments 8 and 9 will then be determined.

**ATP Grant to Segments 8 & 9**

Last month I announced the CTC Active Transportation Program staff recommendation to fund environmental and design work for Segments 8 and 9 of the Rail Trail. The CTC made their decision to award the $3.166m grant on December 7th.
Bike Santa Cruz County Awards

Bike Santa Cruz County had its annual fundraising dinner last Sunday night and presented 5 Lifetime Achievement Awards. One in particular was awarded to Cory Caletti, RTC Senior Planner and Program Manager of the Monterey Bay Sanctuary Scenic Trail. Commissioner John Leopold also presented BSCCo with a proclamation honoring the organizations work over its past 25 years. Congratulations, Cory!

Polar Express Update

Santa Cruz and Monterey Bay Railway began operations of Polar Express, a seasonal holiday excursion train, between the Santa Cruz wharf and the North Pole – a location near New Brighton State Beach. Operation was scheduled to begin prior to Thanksgiving, but began on November 26 due to delays in the delivery of passenger cars. Operation continued until early last week, when Polar Express operations were suspended for 10 days. RTC was told that service was suspended because Santa Cruz and Monterey Bay Railway did not notify the Federal Railroad Administration (FRA) that the track was recently upgraded to Class 1 status. In addition, inspection by the FRA resulted in a list of track “defects” because the track did not meet their minimum requirements for passenger operations. According to the Railway all of the “defects” noted by the FRA are being addressed and expects all track work and inspections to be completed by December 9, with operations to resume on December 10th.

On a related note, two County Supervisors Friend and McPherson sent a letter to Iowa Pacific Holdings, the parent company of the SC&MB Rwy. expressing concerns about the recent turn of events regarding safety and the required improvements to track prior to running any form of passenger service. The story received considerable attention by local TV stations. See http://www.kion546.com/news/polar-express-track-repairs-underway/197650855

Representatives of the Railway will attend today’s meeting to answer any questions commissioners may have.

Attachment 1: Letter to Iowa Pacific Holdings from Supervisors McPherson and Friend.
Attachment 2: Letter to McPherson and Friend from Edwin Ellis, Iowa Pacific Holdings
December 5, 2016

Ed Ellis, President
Iowa Pacific Holdings
118 South Clinton St, Suite 400
Chicago, IL 60661

Dear Mr. Ellis:

We were troubled to learn from local media reports that Iowa Pacific (the Santa Cruz-Monterey Railway) has been sanctioned by the Federal Railroad Administration (FRA) for improper activities relating to your provision of rail service in our county. While it is problematic that we learned about this from local media reports and not directly from your company, what is of greater concern to us is that a number of questions were left unanswered.

It was our good faith understanding that in operating rail service in our county, you would fully satisfy whatever regulatory requirements were stipulated by relevant federal agencies. In this case, we had the understanding that Iowa Pacific would notify the FRA that you would be operating the Polar Express at a Class I level on tracks that are rated “Excepted,” thus satisfying the need for regulatory oversight. It was problematic to learn that your company never notified the FRA and, in fact, an FRA spokeswoman told our local media "[t]he tracks do not currently meet the safety standards for passenger trains to operate over."

Given that §5.2.1 of our Administration, Coordination and Licensing agreement (ACL) stipulates that the “railway shall keep the track in a good and safe condition in conformity with applicable law” - and that you recently completed a survey of the line in advance of the Polar Express launch - how is this not in violation of that agreement? How did your review of the line not determine that the tracks did not meet “the safety standards for passenger trains to operate over”?

We have heard indirectly that Iowa Pacific is claiming this is basically a “paperwork issue” with the FRA. However, this is a point that the FRA clearly disputes. We have
December 5, 2016
Page 2

genuine concerns about your due diligence on the safety of the line and your willingness to run a passenger operation on a line that doesn’t meet the federal minimum requirements for safety.

We believe that our community deserves answers to these questions and we welcome your response to our letter and to the entire Santa Cruz County Regional Transportation Commission.

Sincerely,

ZACH FRIEND, Supervisor
Second District

BRUCE MCPHERSON, Supervisor
Fifth District

cc: Kevin Busath, Iowa Pacific Holdings
    Steve Hill, Iowa Pacific Holdings
    Mike Edwards, Iowa Pacific Holdings
    George Dondero, Santa Cruz County Regional Transportation Commission

ZF/BM:jfr
December 7, 2016

Mr. Zach Friend  
Supervisor, Second District  
County of Santa Cruz

Mr. Bruce McPherson  
Supervisor, Fifth District  
County of Santa Cruz

Gentlemen:

Thank you for your letter of December 5, 2016, regarding the Santa Cruz and Monterey Bay Railway.

This subsidiary of Iowa Pacific has an excellent safety record, with no employee injuries, crossing accidents or derailments since it began operations in 2012. At Iowa Pacific we take safety very seriously, and we expect all of our railway subsidiaries, including Santa Cruz and Monterey Bay, to operate safely. And when we observe or are informed of defects we investigate and respond. In fact, this and other Iowa Pacific railroads have received awards for their exemplary safety records in recent years:

- In 2014 Santa Cruz & Monterey Bay Railway was cited by the Association of American Railroads at its Railroad Safety Leadership Forum for being “injury and accident free... despite the challenges of being a startup organization handling both freight and passenger operations…”
- Iowa Pacific’s Chicago Terminal Railroad won the American Short Line Railroad Association’s Safety Award (Jake Award) in both 2013 and 2012.
- Another Iowa Pacific property, West Texas & Lubbock Railway, also won the American Short Line Railroad Association’s Jake Award in both 2013 and 2012.

We deeply regret that we did not provide the FRA with 10 days’ notice as required under 49CFR213.4, which was an oversight on our part.
You asked two questions in your letter. Here is a response to each question:

1. **How is the railway not in violation of section 5.2.1 of our agreement?**

   The FRA inspection did not result in any violations for track conditions. We received a violation for not providing the required notice of upgrading the track to FRA Class I status, and for inspections, but not for any track conditions. The track conditions were noted as “defects”; as you can see on page 13 of the attached FAQ provided by the FRA, a defect is defined “as a warning for a minor non-compliance with Federal regulations discovered during a routine FRA inspection. Most issues identified are classified as defects and are not considered serious at the time of inspection…” Under 49CFR213.9(b) train operations may continue for 30 days after such notice before the defect must be corrected. All of the items on the FRA inspector’s report were classified as “defects,” and none were classified as “violations.”

   SC&MB has a contractor in place this week working on correcting all the defects noted by the FRA, and those corrections have been completed. In addition, I have asked for further upgrades to improve ride quality and these upgrades are being completed this week as well.

   Section 5.2.1 of the administration agreement provides that the railway must be in conformity with applicable law. The inspection took place on November 29, 2016, so the track would not be out of conformity until December 29, 2016, well after the repairs will be complete.

2. **How did the review of the line not determine that the tracks did not meet the “safety standards for passenger trains to operate over”?**

   Again, the violation of the safety standards was for not providing the required notice, and for inspections, but not for any track condition.

   However, I am not satisfied with the way the track was inspected, which was conducted by hi-rail truck (permitted under 49CFR213.233(b) ). I have asked for a complete walking inspection of the track used by the Polar Express so that we can be certain that we take note of any additional track defects not documented by the FRA, and that we correct them this week as well. As you know, under Section 5.2.4 of the agreement the Commission disclaims any responsibility for maintenance, so all of these repairs are being paid for by the railway, not by any public dollars.

   We are not in any way claiming that the spokeswoman for the FRA is wrong. There are defects, and although all of the FRA defects on the inspector’s report are minor non-compliance items, repairs of these items are now complete. While the track is in use for Polar Express we will continue to conduct twice weekly inspections as required under 49CFR219.233(c) so that we can discover any defects that occur from operations and repair them in a timely manner.
I apologize for the difficulties created by this issue and we are committed to preventing a recurrence.

Please feel free to contact me should you have any additional questions.

Sincerely,

[Signature]

Edwin E. Ellis
President

cc: Kevin Busath
    Steve Hill
    Mike Edwards
    George Dondero, SCCRTC
    Luis Mendez, SCCRTC
Railroad Safety Data
Frequently Asked Questions (FAQ)

Table of Contents
Railroad Classifications and Groupings .......................................................... 3
  How are railroads classified on this site and what definitions are used for those classifications? .... 3
  What are groups and why are they used? .................................................................. 3
  What is the definition of Group 2 Railroads? ....................................................... 3
  What is the definition of Group 3 Railroads? ....................................................... 3
Accident and Injury Definitions .................................................................................. 3
  How does FRA define Injury Rates? ...................................................................... 3
  What is a Train Accident? ..................................................................................... 4
  What is a Highway-Rail Grade Crossing Incident? ............................................... 4
  What are Other Incidents? .................................................................................... 5
  Why are there multiple reports for the same accident and how are they handled? .......... 5
  How does the FRA prevent double counting accidents? ....................................... 5
  How does FRA calculate accidents and incidents involving a particular railroad? ........ 5
  What is a Joint Code? .......................................................................................... 6
  How are total incidents and accidents counted? .................................................... 7
  How are total incidents and accidents involving a single railroad counted? .......... 8
  How are total Train Accidents involving a single railroad counted? ....................... 9
  Does the FRA report train accidents separately from highway-rail crossing accidents? .... 9
  What is considered railroad involvement in an accident? ..................................... 9
  How are cause codes determined? ....................................................................... 10
  What is Covered Data? ....................................................................................... 10
  How to identify Freight Operations vs. Passenger Operations? ......................... 12
Railroad Inspection Definitions ............................................................................... 13
  What is the purpose of FRA Inspectors? ............................................................ 13
  What is an Observation? ..................................................................................... 13
  What is a Unit? .................................................................................................. 13
  What is a Defect? ............................................................................................... 13
What is an Inspection Report? .......................................................................................... 13
What is an Inspection Day? ............................................................................................ 13

The Percent Change Columns in the Ten Year Accident/Incident Overview Report .......... 14
What formula used to calculate Percent Change? .......................................................... 14
When could the Percent Change Results be misunderstood? ....................................... 14
How can I ensure the Percent Change Results are meaningful? .................................. 14
Railroad Classifications and Groupings

How are railroads classified on this site and what definitions are used for those classifications?
The FRA uses classifications as defined by the Surface Transportation Board (STB), formerly the Interstate Commerce Commission, which defines railroads as being Class I, Class II, or Class III based on revenue thresholds. More information can be found on the STB website Frequently Asked Questions for Economic and Industry Information.

What are groups and why are they used?
Railroad groups are a classification system based on employee-hours rather than revenue. FRA created the terms Group 2 and Group 3 railroads to create more convenient separation of non-Class I railroads for regulatory requirements purposes. FRA has specific regulations that exempt smaller (Group 3) railroads from certain regulations.

What is the definition of Group 2 Railroads?
Group 2 Railroads are any railroad that is NOT a Class I railroad as defined by the Surface Transportation Board (STB) AND has more than 400,000 annual employee-hours (equivalent to 200 full-time employees) of railroad workers on duty. Annual employee-hours are computed from the Form FRA F 6180.55 – Injury/Illness Summary.

Note: If a railroad has contracted to a non-railroad to perform functions for the railroad, safety sensitive and non-safety sensitive, these hours would not be shown on the F 6180.55.

What is the definition of Group 3 Railroads?
A Group 3 Railroad is any railroad that has less than 400,000 annual employee-hours (equivalent to 200 full-time employees) of railroad workers on duty. Annual employee-hours are computed from the Form FRA F 6180.55 – Injury/Illness Summary.

Note: If a railroad has contracted to a non-railroad to perform functions for the railroad, these hours would not be shown on the F 6180.55.

Accident and Injury Definitions

How does FRA define Injury Rates?
FRA bases the injury rate on the number of railroad worker on duty injuries and illnesses per 200,000 employee-hours annually (equivalent of 100 full time employees) of railroad worker on duty. This index is the same as that used by the Occupation Safety and Health Administration (OSHA).

Under regulation 29 CFR 1904.3 railroads subject to FRA regulations, directly report to FRA railroad worker on duty injuries and illness instead of using the OSHA 300 log. FRA uses the same reporting criteria (trigger) as OSHA and works closely with OSHA on determining
questionable cases. All cases reported to FRA are then reported by FRA to OSHA. FRA performs audits of railroad casualty reporting to monitor compliance with the regulation.

What is a Train Accident?
A train accident involves one or more railroads that have sustained combined track, equipment, and/or structures damage in excess of the reporting threshold. The reporting threshold, adjusted annually, is currently $10,500 (2014).

The computed accident damage only includes the loss and/or repair of cars and locomotives, repair of signal systems and other structures, and repair of roadbed and track. Not included in this calculation are the costs associated with clean-up, hazmat clean-up (support from fire department and other groups), loss of lading, societal damage (e.g., closing a business area during clean-up), loss of life or injury, loss of use of main line track, and loss of use of equipment/locomotives.

To prevent double-counting of incidents, Train Accidents reported on this website exclude grade crossing incidents that exceed the threshold. On the Form FRA F6180.54, this corresponds to a type of accident = ‘07’, so Accident reports with code ‘07’ are not counted in Train Accident counts. Thus, Highway-Rail Grade Crossing Incidents + Train Accidents + Other Incidents = Total Incidents.

What is a Highway-Rail Grade Crossing Incident?
A highway-rail grade crossing incident, also called a collision, highway-rail incident, highway-rail accident, grade crossing accident, or grade crossing incident, typically involves on-track railroad equipment striking a highway user or a highway user striking on-track equipment at a highway-rail crossing. A highway-rail crossing incident must meet the following three conditions: (1) involves on-track equipment, (2) involves a highway user, and (3) the accident occurred at a designated crossing. These incidents meeting all three conditions require the railroad to file a Form FRA F 6180.57.

Examples of a highway-rail crossing accident are as follows:

- An abandoned vehicle at a crossing struck by railroad equipment
- An automobile going around a downed gate, considered a trespasser, and being struck by a train
- A truck running into the side of a train at a crossing
- A jogger struck at a crossing by a single locomotive

Examples of accidents that are not considered highway-rail crossings are as follows:

- Two automobiles that collide at a crossing
- An automobile on the tracks, not at a designated crossing, is struck by a train (in this situation, the automobile would be considered an obstruction)
What are Other Incidents?
Other Incidents are any incident which results in a reportable injury, but does not require either a Form FRA F 6180.54 or F6180.57. These include everything from bee stings to falls on escalators to trespasser fatalities.

Why are there multiple reports for the same accident and how are they handled?
Due to the complexity of reporting and the needs of the FRA to collect complete information, there may be several reports for the same event. For example, a separate Form FRA F 6180.55a is required for each casualty associated with a single event; this is not unusual in statistical reporting. As a result, all railroads involved with an accident must report the accident and associated damage if the reporting conditions are met.

Example: Railroad A’s train is using Railroad B’s track when it hits a cement truck at a highway-rail crossing. The cement truck was going too fast to stop in time at the crossing and went through the downed gates; the train crew put the train into emergency braking, but was unable to prevent the collision. In addition, on an adjacent track there are three railroad cars belonging to Railroad C that have also sustained some damage as a result of the train-truck collision and subsequent derailment. So in this example, there is one accident, but four reports as follows:

- Railroad A must file a Form FRA F 6180.54 Rail Equipment Accident/Incident Report because the combined damage to the locomotive, track, and other railroad cars was over the reporting threshold
- Railroad A must also file a Form FRA F 6180.57 Highway-Rail Grade Crossing Accident/Incident Report because it occurred at a designated crossing
- Railroad B must file a Form FRA F 6180.54 Rail Equipment Accident/Incident Report because the train accident occurred on its track regardless of any damages to the track since Railroad B is the railroad responsible for track maintenance
- Railroad C must file a Form FRA F 6180.54 Rail Equipment Accident/Incident Report because their railroad car(s) was involved

In this example, there were no injuries or fatalities, but if there had been, separate Form FRA F 6180.55a Railroad Injury and Illness Summary Reports will need to be filed for each injury due to the collision/derailment.

How does the FRA prevent double counting accidents?
FRA has developed unique keys for each type of train accident, highway-rail crossing accident and casualty report that allows FRA to sort information into groups and link records from different databases to develop a complete accident picture while preventing double counting.

How does FRA calculate accidents and incidents involving a particular railroad?
On the forms FRA F 6180.54 and FRA F 6180.57, railroads are required to report their own incident number (incdtno), if applicable the incident number assigned by another involved railroad or entity (incdtno2), and the incident number assigned by the railroad or entity
responsible for track maintenance (incdtno3). If the reporting railroad is also the track maintainer they would report the same incident number in both incdtno and incdtno3.

Since incident numbers are a 10-digit railroad assigned number that only needs to be unique within the reporting month, the incident number alone is not sufficient to key incidents. As a result, FRA uses the following method:

- For train accidents (Form FRA F 6180.54) there can be one or more reports filed and as such, the incdtno3 is the only common element guaranteed across the forms. However, this number need not be unique, so FRA creates a unique key referred to as INC3 by concatenating the two digit year, two digit month, railroad code and incident number as iyr+imo+rr3+incdtno3.

  Note: By finding unique INC3 and we can generate a dataset of unique accident where we can filter on a particular railroad using the railroad field to calculate the number of accidents where a particular railroad was involved

- For grade crossing incidents (Form FRA F 6180.57) there will only be one report filed and as such, we can use the incdtno field. However, this number need not be unique, so FRA creates a unique key referred to as INC1 by concatenating the two digit year, two digit month, railroad code and incident number as iyr+imo+railroad+incdtno.

  Note: By finding unique INC1 and we can generate a dataset of unique grade crossing incidents where we can search on a particular railroad using railroad, rr2, and rr3 to calculate the number of grade crossing incidents where a particular railroad was involved

What is a Joint Code?
A special generated field called JointCD is appended to the end of each train accident report (Form FRA F 6180.54). This code is used to group the multiple reports associated with a single accident in the data. Only one record in the group of reports for a single accident will have a JointCD=1. This does not mean that the railroad that submitted the report with JointCD=1 is responsible for the accident since it is randomly assigned when multiple railroads are involved in an accident. The Joint Code can only take the values 1, 2, or 3 as follows:

- JointCD=1 is assigned to either the only railroad involved in an incident or randomly assigned to one of the railroads involved in an incident. Every accident will have one railroad assigned JointCD=1 which will only correspond to one report.
- JointCD=2 is assigned to all other railroads involved in an incident and will only correspond to one report per railroad. If only one railroad was involved the incident there will be no records with a JointCD=2 for that incident.
• JointCD=3 is assigned to any additional reports filed by the railroads to document damaged equipment. If no additional equipment was damaged there will be no reports assigned JointCD=3.

Referring back to the example in *Why are there multiple reports for the same accident and how are they handled?*; the reporting could go as follows:

• JointCD=1 is assigned to a single report for one of the railroads involved, let’s say Railroad C
• JointCD=2 is assigned to a single report for each of the other railroads A and B
• JointCD=3 is assigned to any additional reports filed by all railroads A, B, and C to account for each additional piece of equipment involved

How are total incidents and accidents counted?
Total accidents and incidents are reported using different forms based on circumstance (i.e. if the accident occurred at a grade crossing and thus requires a form 57, if the accident damage exceeded the reporting threshold and thus requires a form 54, if someone was injured or killed thus requiring a form(s) 55a). These reports are stored in separate data tables and must all be considered to get an accurate count of total accidents and incidents combined. In certain cases, there is overlap between incidents which meet multiple reporting criteria and as such, care must be taken when counting incidents. We must be cognizant when a single accident triggers the submission of one or more of the 54, 55a, and 57 forms and remove the duplicates from our calculation. This is illustrated in the figure below:

![Diagram showing the overlap of different reporting forms](image)

**Figure 1: Accident/Incident Reporting Data Environment and Overlap**
Using the following formula and order of operations, accidents and incidents can be computed in a way to eliminate double counting caused by the overlapping segments seen in Figure 1 above.

**Total Accidents and Incidents = Total Incidents at Highway-rail Grade Crossing Incidents + Total Train Accidents + Total Other Incidents**

1. **Total Highway-rail Grade Crossing Incidents** (see *What is a Highway-Rail Grade Crossing Incident?*) can be found by counting the number of Form FRA F 6180.57 reports since every Grade Crossing incident requires a single form 57
   a. This counts the entire circle for form 57s in Figure 1

2. **Total Train Accidents** (see *What is a Train Accident?*) can be calculated by counting the Form FRA F 6180.54 where JointCD=1 and subtracting those records where Type=7. This takes advantage of the business rule that each accident will only have one record with JointCD=1, however since this also overlaps with the Grade Crossing collisions that exceed the train accident reporting threshold, those records must be removed to prevent double counting
   a. This counts the circle for form 54s in Figure 1 while removing the overlap between it and the circle for form 57s (Type=7)

3. **Total Other Incidents** (see *What are Other Incidents?*) can be calculated by counting the unique keys, determined by iyr, imo, railroad, incdt no in the table of Forms FRA F 6180.55a and subtracting those reports where cas57=Y or cas54=Y to prevent double counting any train accidents or grade crossing collisions.
   a. This counts the circle for form 55a’s in Figure 1 while removing the overlaps between it and the other two circles (cas57=Y and cas54=Y)

How are total incidents and accidents involving a single railroad counted?
To calculate total incidents involving a single railroad, a similar method to calculating total incidents and accidents is applied, but each type of report must be filtered down to that specific railroad. Grade Crossings and Other Incidents are straightforward; however calculating Total Train Accidents for a specific railroad requires looking at additional records using JointCD=2. So the calculation for Total Train Accidents is calculated by:

**Railroad Accidents and Incidents = Railroad Incidents at Highway-rail Grade Crossing Incidents + Railroad Train Accidents + Railroad Other Incidents**

1. **Railroad Highway-rail Grade Crossing Incidents** can be found by counting the number of Form FRA F 6180.57 reports identifying the desired railroad since every Grade Crossing incident requires a single form 57
2. **Railroad Train Accidents** is calculated in two steps:
   a. Counting the number of Form FRA F 6180.54 where JointCD=1 and the railroad is filtered to the desired railroad and then subtracting those reports where Type=7
b. Counting the number of unique records keyed by using $iyr$, $imo$, $rr3$, $incdtno3$
where the $JointCD=2$ and then subtracting those reports where $Type=7$

3. **Railroad Other Incidents** can be calculated by counting the unique keys, determined by $iyr$,
$imo$, $railroad$, $incdtno$, which apply to the desired railroad, in the table of Forms FRA F 6180.55a and subtracting those reports where $cas57=Y$ or $cas54=Y$ to prevent double
counting any train accidents or grade crossing collisions.

**How are total Train Accidents involving a single railroad counted?**
Calculating Total Train Accidents for a specific railroad requires looking at additional records
using $JointCD=2$. So the calculation for Total Train Accidents is calculated by:

1. Counting the number of Form FRA F 6180.54 where $JointCD=1$ and the railroad is filtered
to the desired railroad
2. Counting the number of unique records using $iyr$, $imo$, $rr3$, $incdtno3$ where the
$JointCD=2$

**Does the FRA report train accidents separately from highway-rail crossing accidents?**
Accidents occurring at a highway-rail crossing resulting in damage in excess of the current
reporting threshold are considered both train accidents and highway-rail crossing collisions.
These incidents account for over 100 accidents per year. As explained above in *Why are there
multiple reports for the same accident and how are they handled?*; in this case, a minimum of
two reports must be filed for the same incident a Form FRA F 6180.54 and Form FRA F 6180.57
to record the train accident and the highway-rail crossing accident.


- When FRA reports only train accidents all accidents from Form FRA F 6180.54s, including
  those occurring at highway-rail crossings, are reported
- When FRA reports only highway-rail crossing accidents all accidents from Form FRA F 6180.57s, including those that also qualify as train accidents, are reported
- When FRA reports both train accidents and highway-rail crossing accidents are reported
  on the same chart or report, then those train accidents that are also highway-rail
  crossing accidents are only counted as highway-rail crossing accidents to prevent double
  counted

If a user calculates total accidents by looking at separate reports for train accidents and
highway-rail crossing accidents, those that occur at a highway-rail crossing which exceed the
current reporting threshold will be double counted.

**What is considered railroad involvement in an accident?**
Some train accidents have two or more railroads involved in the same accident. This could be
from a collision or from one railroad using another railroad’s track. For accident reporting, FRA
does not make a distinction regarding fault. Even if both railroads agree entirely on the cause of
the accident, if the accident meets the reporting criteria, all railroads involved are required to
submit a Form FRA F 6180.54 Rail-Equipment Train Accident/Incident Report. When displaying train accidents by railroad on http://safetydata.fra.dot.gov/, all the railroads involved are shown.

Since accident reporting is a per-railroad statistic and multiple railroads can be involved in a single event, accident counts cannot be aggregated as a method of determining total accidents for all railroads. An example of this is as follows: assuming there are a total of 2,500 train accidents in a year, but 10% or 250 or those had two railroads involved. Totaling the number of accidents by railroad would result in a 2,750 accidents, which is incorrect.

The example above can be seen in the simplified table below:

<table>
<thead>
<tr>
<th>Railroad</th>
<th>Accidents</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railroad A</td>
<td>1,500</td>
<td>All accidents involving Railroad A in a year</td>
</tr>
<tr>
<td>Railroad B</td>
<td>1,250</td>
<td>All accidents involving Railroad B in a year</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,750</strong></td>
<td><strong>This is incorrect - there are accidents involving both railroads so we are double counting</strong></td>
</tr>
<tr>
<td>Railroad A and Railroad B</td>
<td>-250</td>
<td>Since both railroads are counting 250 accidents in their totals, we need to subtract the duplicates from one of them</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,500</strong></td>
<td><strong>2,500 is the correct number of unique accidents in a year</strong></td>
</tr>
</tbody>
</table>

How are cause codes determined?
Any reportable accident requires the involved railroad to complete and submit a Form FRA F 6180.54 Rail-Equipment Train Accident/Incident Report, which includes a designation for the cause of the accident. The railroad performs an incident investigation and makes a determination of the primary cause of the incident.

When two or more railroads are involved in the same accident, they are required to communicate with each other for two key factors in accident reporting: first to determine if the damage threshold has been met for accident reporting and second to establish a unique incident number that both railroads will use when reporting the accident. This unique incident number enables FRA to link both reports. The railroads, however, are not required to agree on the cause. In most cases, the railroads do agree on the cause of an accident, however there are times when each railroad reports a different cause code. In order to preserve data submission records, FRA does not alter railroad reported data, but for data reporting purposes, the primary cause from the record associated with the report assigned with Joint Code=1 (See What is a Joint Code?) is used. Since these occurrences are small compared with the total incidents in the database and the database is a statistical tool, these infrequent occurrences do not significantly alter analysis.

What is Covered Data?
There is a special class of railroad worker on duty injuries, called covered data. These injuries are in the FRA Casualty Database and are reported to OSHA. The covered data cases were new
reportable cases added by OSHA in 2001 (29 CFR 1402) and include cases where a physician or licensed healthcare professional made specific recommendations or treatment; an example of a covered data case is a doctor telling an injured railroad worker to take over the counter medication (OTC) at higher than the recommended dosage. Specific definitions of what constitutes covered data can be found in the FRA Guide for Preparing Accident/Incident Reports. Since covered data is part of the casualty database, covered data cases are included in the data downloads. However, they are not displayed in the reports online because the agency wanted to be able to keep year-to-year comparisons relevant without a perceived decline in safety due to the new OSHA reporting requirements, per agreement with the railroads and explained in the Preamble to the 2003 Accident Rule revision.

Additionally, suicides are also considered covered data cases. These are a specific category of covered data indicated by the field coverdata=X. These cases are not available for data download and will be maintained in a separate database per the 2010 Accident Rule revision.
How to identify Freight Operations vs. Passenger Operations?
We are offering a new query to help meet requests for data differentiating Freight and Passenger operational and safety statistics. Dividing our data into Freight and Passenger often depends on what the user is looking for and specifically how they want to treat incidents that are not clearly divided between the two.

This new query primarily looks at the type of equipment involved to determine whether an accident involved a freight train or passenger train. If the equipment involved was not clearly indicated as freight or passenger, we then look at the railroad itself and if the railroad is one of our 28 passenger entities, then the incident is a passenger incident. Otherwise, it is freight.

This way, if a Class One Freight railroad has a holiday or dinner train service which carries passengers, accidents involving that type of equipment will be included as passenger operations.

If you have any questions or need further explanation about how this query was developed, please do not hesitate to ask via our comment tool: http://safetydata.fra.dot.gov/feedback/Home/PublicSite
Railroad Inspection Definitions

What is the purpose of FRA Inspectors?
Under Federal law and regulation the railroad is responsible for inspecting its own equipment, signals, and track and ensuring that the railroad employees are trained and qualified to perform their safety related tasks. The FRA Inspector is a compliance auditor whose job is to verify the equipment, track, etc. meets the FRA standards.

What is an Observation?
An observation represents an inspection performed on a particular inspection activity.

What is a Unit?
A unit represents an item inspected. That item could be a railroad car, a locomotive, a mile of track walked, a turnout, or a signal system.

Since each item has a different expected inspection rate, e.g., a railroad car may take 6 minutes if no exceptions are taken, a locomotive may take 40 minutes, while an entire signal system may take 2 days. Totaling and comparing units from different types of inspection items will lead to incorrect conclusions. Unit counts are only valid when comparing inspections within the same activity.

What is a Defect?
A defect is a warning for a minor non-compliance with Federal Regulations discovered during a routine FRA inspection. Most issues identified are classified as defects and are not considered serious at the time of inspection; however, these could become serious if not corrected. Before each routine inspection, FRA Inspectors review previous defects to a division/subdivision and pay special attention those items that were previously classified as defects to determine if repairs have been made. In cases where more serious or reoccurring defects are found, the inspector will follow the violation process.

What is an Inspection Report?
An inspector uses the Form FRA F 6180.96 report to record his/her inspection related activities. All Inspection Reports will have the entity inspected (who), location of the inspection (where), defects or exceptions found (what), the source code and activity codes (why), and the date of the inspection (when). Additional details are included in the inspection report based on the inspector's Discipline Compliance Manual. An inspector can write one or more inspection reports per day depending on the circumstances.

What is an Inspection Day?
An inspection day is a measure of the number of days spent inspecting. An inspector receives credit for one inspection day when one or more unique inspection reports have been written on a single day. Programming is used to generate these counts and also to prevent double counting when multiple reports are written in one day. There is no minimum number of hours to get credit for an inspection day and since the inspection day metric requires the generation of an
inspection report; it does not include assisting on an inspection where another inspector drafts the inspection report or performing special projects like audits or investigations.

The Percent Change Columns in the Ten Year Accident/Incident Overview Report

What formula used to calculate Percent Change?
Percent Change is the Newest Year's data minus the oldest year's data, multiplied by 100, and the result is then divided by the oldest year's data. For example: If the report is a ten year report from 2005 through 2014 the formula for the One Year percent change would be \((\text{2014 data} - \text{2013 data}) \times 100 / \text{2013 data}\) and the formula for the ten year percent change would be \((\text{2014 data} - \text{2005 data}) \times 100 / \text{2005 data}\).

When could the Percent Change Results be misunderstood?
The Percent Change results can be misleading and easily misunderstood whenever the report is run and the latest year represented in the report is not a full year. There is a 3 month lag between the month of the reportable event for which the report is submitted and the latest reported data represented in the report. As such, if the report user runs the report with the default month/year then the Percent Change results will not be comparing to equal reporting periods. The reason is that the comparison is being done between a full year's data for the oldest year and a partial year's data in the newest year.

NOTE: The FRA Office of Safety is working on a solution to this issue that will be deployed as soon as it is available.

How can I ensure the Percent Change Results are meaningful?
Depending on whether the user is looking for a full year comparison or a partial year comparison, the user can set the report parameters to get the report they desire.

The easiest way to get a full ten year Percent Change Result is to change the year of the report to the prior year.

If a true comparison of a partial year is what you are looking for, over a ten year period, then this can be done by either:

1. Selecting the "End Month for Report" that matches the "data current through the end" date in the default year; or
2. Selecting the desired "Start Month for Report" and "End Month for Report" for a prior year.