How to Access Crossing Data from the FRA Office of Safety Analysis Website A Brief Guide

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1. Accessing the FRA Office of Safety Analysis Website:

The Federal Railroad Administration (FRA) Office of Safety Analysis Website provides access to railroad safety data from files maintained by FRA. These include the National Highway-Rail Crossing Inventory data, and information from the Railroad Accident Incident Reporting System. There are two methods to access the Website:

1. FRA Home Page Method:

- Go to the FRA Home Page at http://www.fra.dot.gov.
- In the upper left hand corner, click on "Railroad Safety."
- In the lower left, click on "Safety Data."
- The FRA Office of Safety Analysis Home Page will appear.

2. Direct Method to this Website:

- Go to http://safetydata.fra.dot.gov/.
- The FRA Office of Safety Analysis Home Page will appear.
- Suggest adding this page-link to your "Favorites."

Upon reaching this page, the user will be able to view Sections and Line Items of railroad safety information that are available. From this page, users can run queries, download data, access publications and forms, and view current statistical information about railroad safety. The user can scroll down this page and click on the links for the information that is desired. See Figure 1.

There are two Sections that are applicable for Crossing Data. They are:

5.0 – Highway-Rail Crossing Accidents, and **8.0** – Highway-Rail Crossing Inventory (See Figure 2.)

By clicking on one of the Line items in these Sections, the visitor is taken directly to that portion of the Website which contains the desired data. There are several other links on this page that are worthwhile investigating for possible use. Under "8.0 - Highway-Rail Crossing Inventory," there is a subsection called "Canned Queries for Public and Private Crossings" that may provide specific data that might be desired.

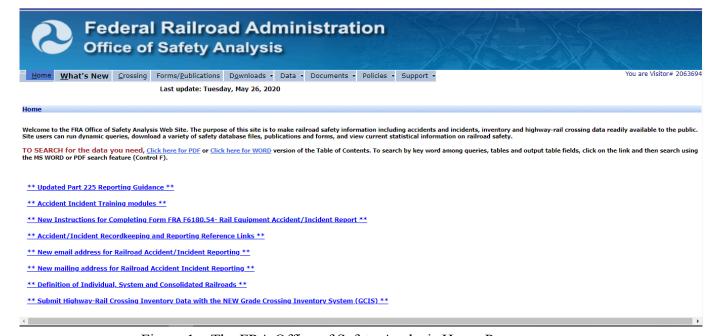


Figure 1. The FRA Office of Safety Analysis Home Page

On the Home Page, there is a Link Bar with Tabs that will take the user directly to specific sections of this Website. The following Tab Links are on the Bar:

Home: This Home Page (Figure 1.)

Crossing: Crossing Inventory & Accident Reports

Forms/Publications: Inventory & Accident Forms, and past publications

Downloads: Download Inventory/Accident Data

Data: Develop specific queries for crossing data

Documents: Reports and Bulletins of statistics **Policies**: Privacy and Website policies

Support: Contact links and Frequently Asked Questions

This Guide will show how to access crossing data from first clicking on the **Crossing** Tab.



Figure 2. Home Page Section 8 links directly to Crossing Inventory Data

2. Accessing National Highway-Rail Crossing Inventory Data for a Single Crossing:

Click on the <u>Crossing</u> Tab located on the Link Bar. The "5.02 – Query and Generate Crossing Accident (and Inventory) Reports" page will appear. See Figure 3. The top portion of this page allows the user to enter the crossing number and obtain inventory or accident reports.

To access Inventory data for a single crossing, enter the Crossing ID Number in the "Crossing #" box. Select the "Report Type" for <u>Inventory</u> and then the "Inventory Type" for <u>Current</u> for the current Inventory Report, or for <u>History</u> for the current and all historical inventory reports. Then, click on the **Generate Report** button.

If any records are found, a report will appear that displays the National Highway-Rail Crossing Inventory data for the crossing number entered. If "History" was selected, all of the records containing both the current and historical data will be displayed. The page with the most current crossing record will be first and will be indicated by the words "Current Record" beside the Effective Date field at the top right. Pages with a date following "End-Date of Record" are historical records for the same crossing. The user can view, print, and save these reports.

If there are no records for this crossing number in the file, one of two messages will appear. The first is "Crossing Number is Valid, but No Records are found." This means that the entered crossing number is a valid number, which was probably assigned to a crossing by the railroad, but the railroad or the State never sent the Crossing Inventory Form to the FRA to be put in the National File. Thus, it is not in the National File.

The second message might be that "<u>The Crossing Number is Invalid</u>." This means that the number entered is not a valid crossing number, that is, it is not correct. The user needs to check to see if it was entered correctly, or back track to the source to obtain the correct valid number, and try again.

To look for another crossing, close the report, and click on the **Crossing** Tab again, or click on the user's computer Windows Tool Bar **BACK** button.

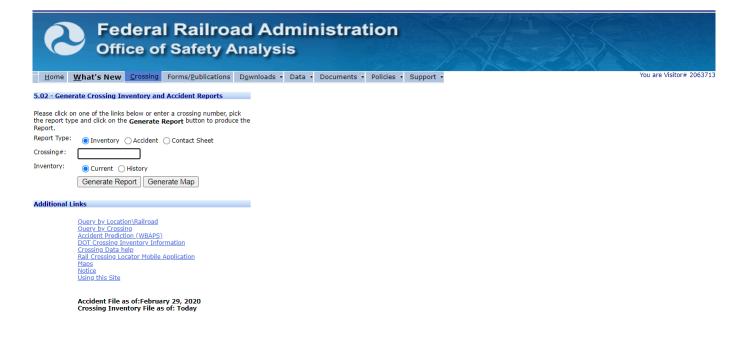


Figure 3. Webpage "5.02 – Query and Generate Crossing Accident (and Inventory) Reports"

The second portion of the page contains **Additional Links**. These include:

Query by Location/Railroad: To run a query for a list of crossings for a State,
County, City, or Railroad, or any combination
thereof.
Query by Crossing: To run a query for a range of crossing numbers.
Accident Prediction: To run Accident Prediction data using WBAPS.
DOT Crossing Inventory This will take the user to the Crossing
Information: Inventory Program Webpage which contains a vast
amount of important information related to the
Inventory Program.
Crossing Data Help: Help for using this Website
Maps:
Notice: FRA Legal Notice.
Using this Site: Users can view information about generated reports
and obtain query instructions.
Dates : Indicates the last date that the data for this Website
was updated.

One of the most common uses of the Website is to locate a specific crossing or identify a group of crossings located in a State, County, City or on a Railroad, or any combination thereof. To do this, the user, under "Additional Links," needs to click on <u>Query by Location/Railroad</u>. See Figure 4 and Section 4 of this Brief. Choose the <u>State</u>, and then either <u>County</u> or <u>City</u> (if it is positively known that the crossing(s) is located within the City). It is suggested to not specify a <u>Street</u> because spellings vary and are often not correctly spelled. Also, it is suggested to chose "<u>All</u>" Railroads for the first query search, and then narrow the list down by choosing a railroad if there are too many crossings in the initial list. If the user does decide to choose a Railroad, be careful because it is possible that the sought crossing maybe under a different railroad name, possibly a previous railroad owner.

In choosing a Railroad, click on the down arrow and initially a short list of the most major railroads will appear. If the desired railroad is not in the short list, close the dropdown window, and click on the line underneath the box, "Click here for a complete listing of all Railroads" and all 650 railroads will appear in the dropdown window. Be sure to select the Crossing Type, Position and Status desired before clicking on the "Run Query" button.

If a range of crossing numbers is desired, click on the **Query by Crossing** link, enter the range of numbers desired (**From** and **To**), and click on **Find Crossing(s) Range** button. You can enter a partial crossing number (3 or more digits), and obtain a list of all crossings in the National File within that range.

When the list of crossings appears, the total number of crossings resulting from the query will show at the top left and the total number of pages will be indicated. Click on the **Next** button, or the **Go To Page** (**GO**) button, in order to access the additional pages. The user can also click on the **Show All** button and all of the pages will be reduced to just one page.

To obtain an Inventory Report for a crossing, or group of crossings (up to 10) from the list of crossings generated, click on the little check box(s) on the left side to select the desired crossing record(s) to view or print, and then click on the **Generate Report** button to get the actual reports for the checked crossings. (Note: To deselect checked records, click on the **Uncheck All** button.)

3. Accessing Accident/Incident Data or Contact Data for a Crossing:

To obtain Accident Report(s) for a crossing, from the <u>Crossing</u> tab, go to the **Highway-Rail Crossing Inventory & Accidents Page**, enter the **Crossing #**, select "**Report Type**:" as "<u>Accident,"</u> and then click on the **Generate Report** button. If any records are found, the Accident Reports will be displayed.

If the "Contact Sheet" is selected, a Contact List report will be generated. To obtain the names to contact for more information about a crossing that is located on the Contact Sheet, select "**Report Type**:" as "Contact Sheet," and click on the **Generate Report** button.

4. <u>Accessing National Highway-Rail Crossing Inventory Data for Crossings for Specified Locations (State, County, City) and/or by Railroad:</u>

From the Crossing tab, Highway-Rail Crossing Inventory and Accidents Page, click on the Query by Location/Railroad link.

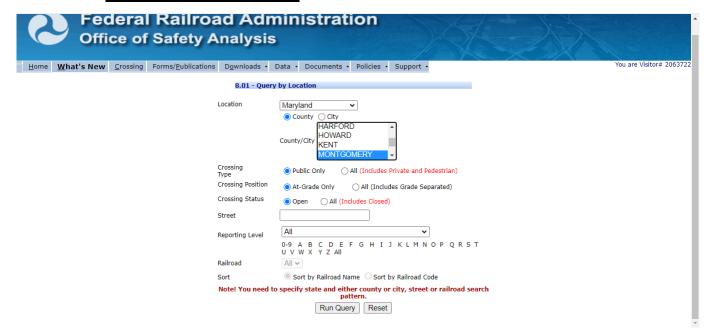


Figure 4. Query by Location/Railroad Webpage for locating Crossing Records

In the "8.01 Query by Location" window, specify the location criteria desired. For example, to obtain crossings in Montgomery County, MD, for all railroads, click on the down arrow following the State box and select 'Maryland'. Then, click on the circle button in front of County. Then, click on the down arrow following the County/City box and select 'Montgomery'. Then, make sure the Railroad box shows ALL. Next, click on the Run Query button.

Note: If you wanted to obtain crossings in Montgomery County, MD, for a particular Railroad, instead of selecting "ALL" in the Railroad box, click on the down arrow and select the railroad. The selection of Railroad names lists only the major railroads. If the railroad desired is not in this list, close the dropdown window, and click on the note below the box, "Click here for a complete list of Railroads." Then click on the down arrow again and the complete list of all 650 railroads will appear. Make the desired selection.

If any crossing records are found after the query is generated, a list of the results will appear as shown in Figure 5. In this example, twenty six (26) crossings for all railroads located in Montgomery County, MD, are displayed.



Figure 5. List of crossings for Montgomery County, MD, using the "Query by Location/Railroad" link.

Scroll through the list and click on the little check box on the left preceding each crossing where it is desired to view the specific inventory data for that crossing. Then click on the "Report Type" desired, either "Inventory," or "Accident," or "Contact Sheet." For the report type "Inventory," select either "Current" (to see only the current Inventory report) or "History" (to see the current and historical Inventory reports). Then click on the **Generate Report** button to get the report records to view, print, or save.



Figure 6. List of Crossings generated from a query showing 5 pages of data.

In the example in Figure 6, below the button "Generate Report," there are the numbers 1, 2, 3, 4, 5 where the number "1" is in black and the other numbers are in blue. This is shown when there is more than one page resulting from the query. In order to navigate to the different pages, just click on the page number. To get rid of the pages and show all the results on one page or in one list, click on the "Show All" button. To clear the

checks that may have been selected to view specific crossing reports, just click on the little check box again, or click on the "Reset" button to remove all of the checked boxes.

5. <u>Downloading Crossing Data:</u>

To download bulk crossing data for a State to a user's computer from the National Highway-Rail Crossing Inventory file, click on the **Downloads** tab. A list of Download selections will appear as shown in Figure 7.



Figure 7. Download page to select bulk data to be downloaded to the user's computer.

Click on the <u>Highway-Rail Crossing Database Files and Reports</u> link. The **Download Hwy-Rail Crossing Inventory Files** window will appear as shown if Figure 8.

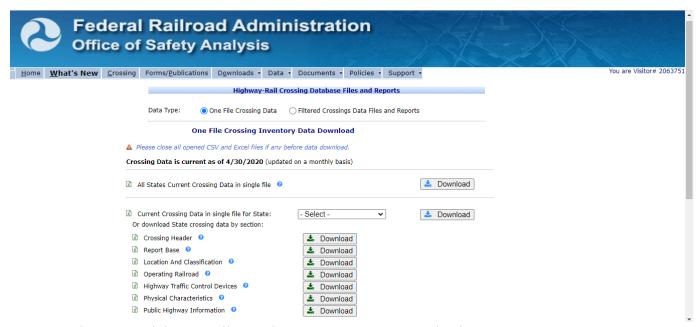


Figure 8. Highway-Rail Crossing Inventory Data Download Page.

To get the current crossing information for all the crossings in the United States, select the "One File Crossing Data" circle at the top, then click the "Download" button next to the "All States Current Crossing Data in single file". Or when the "One File Crossing Data circle is selected, a user may select just one state from the pull down menu "Current Crossing Data in single file for State". This will generate a CSV file as shown in Figure 10

For more refined sets of data to download, a user may select the "Filtered Crossings Data Files and Reports" circle on the top. This brings users to a screen where various filters may be selected to narrow down the bulk data to download. For instance, in Figure 9, the State of Kansas is selected, Union Pacific railroad, All crossings (this includes private crossings, pedestrian crossings, and grade-separeted crossings), Published (this only downloads the current record for each crossing instead of all historical records for each crossings), Major Only (Minor reports are when a railroad operates over a crossing but they aren't the Primary Operating Railroad and only provide information such as train counts), and Open (this will not download closed crossings). Click "Download Data" to generate a CSV file.



Figure 9. Download page for filtered crossing data

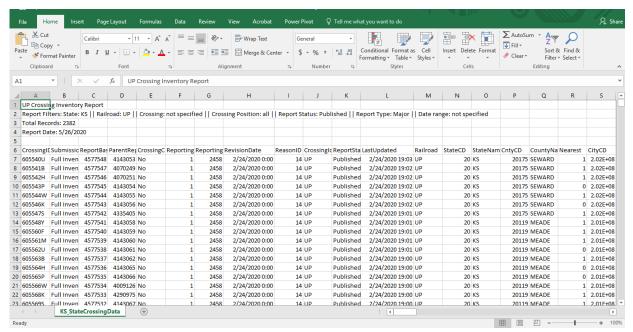


Figure 10. Downloaded CSV file from the filters selected in Figure 9.

The CSV file has a row for each crossing that meets the selected filter, and has a column for each field of the Inventory Form. To interpret the data in Excel, a user can use a Data Dictionary guide found on the webpage. To find the Data Dictionary, click on the "Downloads" tab on the top bar of the Safety Data page. Then click on "FRA Database File Structures". Then select the document "6180.71 - U.S. DOT Crossing Inventory Form-Effect. 3/7/2015 - v2.5.0.0 12-28-2016 (655KB)".

For instance, Figure 11 shows Column AP circled in the downloaded CSV file. That column heading is "PosXing". Referecing the Data Dictionay document, in Figure 12, it shows that the PosXing column corresponds to field I.19 (Crossing Position) of the Inventory Form. If the CSV file has a 1 in Column AP for a crossing, then it is an At-Grade crossing. If there is a 2 in Column AP for a crossing, then it is a RR Under crossing, Finally, if there is a 3 in Co.umn AP for a crossing, then it is a RR Over crossing.

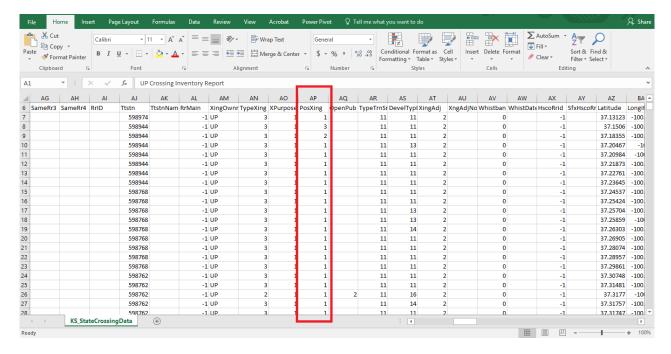


Figure 11. Highlighting Column AP, the PosXing data, for the CSV file.

I.6	Highway	Highway Type & No.	15 = Institutional 16 = Farm 17 = Recreational 18 = RR Yard	varchar(256)
1.0 1.26	Highway	HSR Corridor ID		(/
I.26		State Contact (Telephone No.)		varchar(4)
I.27	HwyCont Latitude	Latitude		varchar(10)
1.27	LLsource	Lat/Long Source	1 = Actual 2 = Estimated	varchar(256) varchar(1)
1.28	Longitude	Longitude		varchar(256)
I.7	MultFrmsFiled	Do Other Railroads Operate a Separate Track at Crossing?	1 = Yes 2 = No	varchar(1)
I.4	Nearest	In/Near	0 = In 1 = Near	varchar(1)
I.20	OpenPub	Public Access (If Private Crossing)	1 = Yes 2 = No	varchar(1)
1.33	PolCont	Emergency Notification Telephone No.		varchar(10)
I.19	PosXing	Crossing Position	1 = At Grade 2 = RR Under 3 = RR Over	varchar(1)
1.1	Kamoau	The code associated with the TTimary Operating Kalifoad		varchar(32)
	ReportBaseId	Foreign Key to the CI_ReportBase table		int
I.34	RrCont	Railroad Contact (Telephone No.)		varchar(10)
I.13	RrID	Line Segment		varchar(256)
I.15	RrMain	The code associated with the Parent Railroad		varchar(32)
I.32.A	RrNarr	Railroad Narrative		varchar(max)
		11		
		Grade Crossing Inventory System (GCIS) v2.5.0.0 Data Dict	ionary for External Use	

Figure 12. Highlighting the PosXing row in the Data Dictionary document.

6. Obtaining Accident Prediction Reports – WBAPS:

WBAPS is FRA's Highway-Rail Crossing Web Based Accident Prediction System. WBAPS generates reports listing open public at-grade highway-rail crossings ranked by predicted accidents per year. To access WBAPS, click on the Crossing tab which takes the user to the Highway-Rail Crossing Inventory & Accidents Page. Click on the Accident Prediction – WBAPS link, located under the title "Additional Links." The WBAPS Webpage will appear. See Figure 13.

First, choose to Search by: **Location** or **Crossing.** Then, select the State, and the County or City desired. Then, click on the "**Select**" button to place the selection in the box "Location Selected" box. (Note: The user can select multiple cities or counties by holding down the "CTRL" key while selecting.) The State and County (or City) selected will appear in the box at the bottom left of the page. The user can also combine Counties and Cities in several States by repeating the process until the desired locations are listed in the "Locations selected" box.

If a specific railroad is to be selected, click on the down arrow and select the desired Railroad by again clicking on the "**Select**" button and the railroad will appear in the "Railroad Selected" box at the bottom right of the page. See Figure 13.

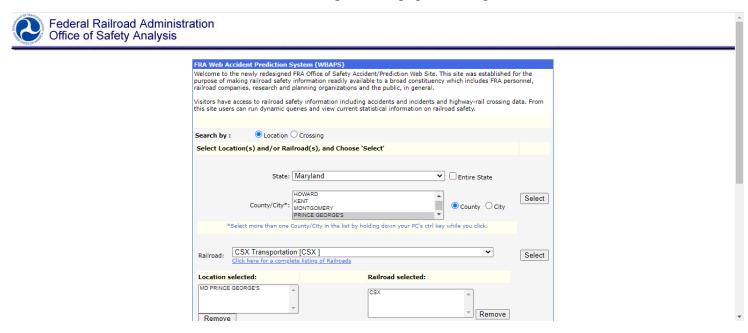


Figure 13. Web Based Accident Prediction System (WBAPS) Page.

Scroll down the page and where the number of records to be displayed or printed will appear. Also, there is a choice of including a cover page, the accident prediction ranking, the crossing profile (brief of inventory data), the accident history, and/or the contact list. Chose either

"VIEW Report" (the normal selection to view the data and print it), or "DOWNLOAD" to download to the user's computer and save the result for future reference. See Figure

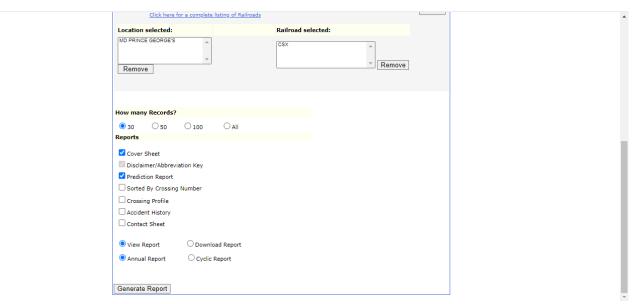


Figure 14. WBAPS choices for the Number of Records and the Reports to be generated.

After making the selections, click on the "Generate Report" button. A report with the pages selected, including the Accident Prediction list, will appear as follows in Figure 16.

	•		Pl	J BL I	C HIGHW	AY-RAIL C	ROSSINGS I	RAN	VK.	ΕD	BY	PI	RED	IC	TEL)				
(7				ACCII	DENTS PEI	R YEAR AS O)F	12/.	31/	201	9*								
		*Num of Collisions: Most recent year is partial year (data is not for the complete calendar year) unless Accidents per Year is 'AS OF DECEMBER 31'.																		
RANK	PRED COLLS.	CROSSING	RR	STATE	COUNTY	CITY	ROAD				LISIO 16		DATE					HWY PVD		AADT
1	0.141691	140905K	CSX	MD	PRINCE GEOR	RIVERDALE	QUEENSBURY ROAD	0	1	1	0	0	_	FQ	31	2	70	YES	2	6,000
2	0.101954	140899J	CSX	MD	PRINCE GEOR	COLLEGE PARK	SUNNYSIDE AVE	N 0	0	0	1	0		GT	33	2	70	YES	4	5,070
3	0.037167	140263Y	CSX	MD	PRINCE GEOR	HYATTSVILLE	52ND AVENUE	0	0	0	0	0	05/17	GT	19	3	25	YES	2	10,000
4	0.027802	140255G	CSX	MD	PRINCE GEOR	HYATTSVILLE	TANGLEWOOD DRI	0	0	0	0	0	05/17	GT	22	2	25	YES	2	3,900
5	0.025457	140253T	CSX	MD	PRINCE GEOR	HYATTSVILLE	DECATUR STREET	0 1	0	0	0	0	09/18	GT	12	1	25	YES	2	8,000
6	0.023177	140259J	CSX	MD	PRINCE GEOR	HYATTSVILLE	LLOYD STREET	0	0	0	0	0	05/17	GT	22	2	25	YES	2	2,400
7	0.022543	922873T	CSX	MD	PRINCE GEOR	COLLEGE PARK	PEDESTRIAN STA	0	0	0	0	1		NO	34	2	70	NO		0
8	0.022507	140254A	CSX	MD	PRINCE GEOR	HYATTSVILLE	BALTIMORE AVE	N 0	0	0	0	0		GT	7	1	10	YES	3	10,950
9	0.013131	140260D	CSX	MD	PRINCE GEOR	BLADENSBURG	LAWRENCE STREET	0	0	0	0	0	05/17	GT	22	2	25	YES	2	550
10	0.011103	529571K	CSX	MD	PRINCE GEOR	BOWIE	CENTRAL AVENUE	0	0	0	0	0		GT	1	1	25	YES	4	12,400
11	0.008524	529614B	CSX	MD	PRINCE GEOR	BOWIE	HIGHBRIDGE ROAD	0	0	0	0	0		FL	1	1	25	YES	2	3,000
12	0.007469	529615H	CSX	MD	PRINCE GEOR	BOWIE	OLD CHAPEL ROAD	0	0	0	0	0		FL	1	1	25	YES	2	2,110
13	0.004914	529613U	CSX	MD	PRINCE GEOR	BOWIE	ZUG ROAD	0	0	0	0	0		ХВ	1	1	30	YES	2	325
14	0.003989	529585T	CSX	MD	PRINCE GEOR	BOWIE	MOUNT OAK ROAD	0	0	0	0	0		GT	1	1	25	YES	2	804

Figure 15. WBAPS Accident Prediction List of ranked crossings.

A page that provides the definitions for the codes used in the report will be displayed as part of the Report as shown in Figure 16.

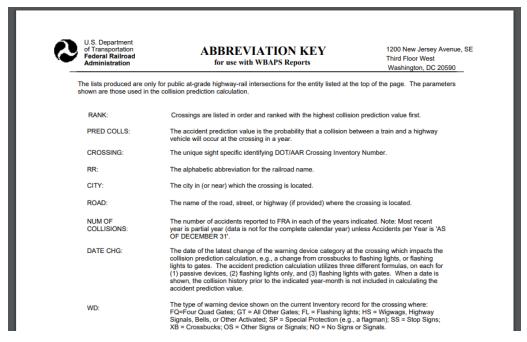


Figure 16. WBAPS Abbreviation Key page

7. <u>Getting Help</u>:

For assistance with using this Website, or to answer any questions, contact the FRA Project Office Help Desk at Web@dot.gov.