



U.S. Department of Transportation

**Federal Railroad Administration**

## **Report to Congress:**

### **Blocked Crossing Portal**

**Infrastructure Investment and Jobs Act (IIJA), Section  
22404(i)**

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## Abbreviations in this Report

BNSF	BNSF Railway Company
CN/IC	Canadian National Railway Company/Illinois Central Railroad Company
CPKC/SOO/DME <sup>1</sup>	Canadian Pacific Kansas City/SOO Line Railroad Company/Dakota, Minnesota & Eastern Railroad Co.
CSX	CSX Transportation Inc.
FRA	Federal Railroad Administration
IJA	Infrastructure Investment and Jobs Act
KCS	The Kansas City Southern Railway Company
NS	Norfolk Southern Railway Company
Portal	FRA’s Public Blocked Crossing Incident Reporter
PTC	Positive Train Control
RFI	Request for Information
SMT	Safety Management Team
UP	Union Pacific Railroad Company

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<sup>1</sup> CP and KCS’ data was provided separately. However, following the merger, the data is being reported only for CPKC.

## Legislative Direction

Section 22404 of the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law, requires FRA to maintain a blocked crossing portal (Portal) for three years, to receive, store, and retrieve information regarding blocked highway-rail grade crossings. Section 22404(i) of IIJA also requires FRA to publish an annual report regarding the agency's blocked crossing program, including the underlying causes of blocked crossings, program challenges, and other findings.

In addition, based on the information received through the Portal, FRA is required to submit a report to Congress that describes:

- A. Frequent and long-duration blocked highway-rail grade crossings, including the locations, dates, durations, and impacts resulting from such occurrences;
- B. FRA's process for verifying the accuracy of complaints submitted to the Portal, including whether the Portal continues to be effective in collecting such information and identifying blocked crossings;
- C. FRA's use of the Portal data to assess the underlying cause(s) and overall impacts of blocked crossings;
- D. FRA's engagement with affected parties to identify and facilitate solutions to frequent and long-duration blocked crossings; and
- E. Whether the Portal continues to be an effective method to collect blocked crossing information and what changes could improve its effectiveness.

## Executive Summary

This document responds to section 22404(i) of IIJA which, as described above, requires FRA to publish an annual report on its blocked crossing program and to submit a report to Congress specific to FRA's Portal. This document constitutes the required annual report on FRA's blocked crossing program and the required report to Congress on FRA's Portal; FRA will publish this report on its public website. For future years, FRA anticipates publishing the annual report on its website.

### FRA's Blocked Crossing Program

Blocked and occupied crossings occur when a stopped or a slow-moving train impedes the flow of motor vehicle or pedestrian traffic across the railroad tracks for extended periods of time. Blocked and occupied crossings pose potential safety risks and can hinder emergency services' access to individuals and hospitals. Frustrated drivers may attempt to clear a crossing before a train arrives by approaching the crossing at a high rate of speed. When faced with a standing train blocking access to the crossing, pedestrians may attempt to crawl between stopped railcars. Accordingly, FRA's blocked crossing program focuses on providing data, investigating crossings known to be blocked on a frequent basis, and facilitating communication with railroads and State and local authorities.

Historically, FRA has learned of blocked crossing occurrences in a variety of ways, including through complaints submitted by members of the public or inquiries from elected representatives seeking to respond to constituent concerns about blocked crossings in their local communities. FRA has also collected information from meetings with local government agencies and the general public, telephonic and written communication from the public and private businesses, and State agencies that voluntarily submit their State-collected blocked crossing data.

In December 2019, FRA established a webpage ([www.fra.dot.gov/blockedcrossings](http://www.fra.dot.gov/blockedcrossings)), which is commonly referred to as the Portal. FRA created the Portal to enable the public and law enforcement to report blocked highway-rail grade crossings directly to FRA. Since the opening of the Portal, FRA has collected and analyzed the data submitted, and used the data to inform the agency's related outreach activities. FRA encourages the public, railroad personnel, private entities, government officials, law enforcement, and first responders to report block crossing incidents as soon as possible *and* when it is safe to do so. In particular, FRA encourages State, regional and local government officials to include their blocked crossing information within the Portal to help make FRA's blocked crossing database more robust.

FRA's blocked crossing outreach also includes, but is not limited to, town hall meetings, investigations of some blocked crossing complaints, and discussions with local communities to encourage them to utilize newer technologies to mitigate delays experienced by road users (both highway traffic and pedestrians). As discussed below, although the data has proven useful in certain instances, there are shortcomings associated with the data.

In addition to maintenance and use of data gathered from the Portal, FRA is taking numerous other actions related to blocked crossings. For example, on May 2, 2023, FRA issued Safety Advisory 2023-03, *Accident Mitigation and Train Length*.<sup>2</sup> In Safety Advisory 2023-03, FRA recognized that the operation of longer trains may, in certain instances, mean that trains are occupying highway-rail grade crossings for longer periods of time, potentially blocking access to homes, hospitals, schools, or businesses, and causing unexpected disruptions to local communities. Accordingly, in the Safety Advisory FRA recommended that railroads take action to identify geographic areas with highway-rail grade crossings that could be impacted by longer trains, and work with local communities and emergency responders to identify and implement methods of preventing, or at least mitigating, the impacts of such blockages. Related to the operation of longer trains and the resulting potential impact on highway-rail grade crossings, including the occurrence of blocked crossings, FRA is also in the process of seeking Office of Management and Budget approval to gather, on a monthly basis, certain train length data from Class I freight railroads.<sup>3</sup> FRA will monitor railroads' actions related to Safety Advisory 2023-03 and use the information gathered through this information collection effort, in combination with data garnered from the Portal, to continue to identify best practices that can be implemented by all stakeholders to prevent the occurrence of blocked crossings and mitigate the impact of blockages when they do occur.

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<sup>2</sup> 88 FR 27570 (available at <https://railroads.dot.gov/elibrary/safety-advisory-2023-03-accident-mitigation-and-train-length>)

<sup>3</sup> See 88 FR 47233 (July 21, 2023).

## Frequent and Long Duration Blocked Crossings

FRA’s Blocked Crossing Portal opened on December 19, 2019, and as of June 1, 2023, there have been 71,282 blocked crossing reports submitted to the Portal covering 57,810 unique events. To prevent the same blocked crossing incident being reported multiple times by different reporters, to be considered a “unique event,” a blocked crossing incident must be reported as having occurred at least 30 minutes before or after another blocked crossing incident reported at the same crossing.

To date, the Portal data indicates that Texas has the highest number of blocked crossing reports submitted, with a total of 11,711 reports -- followed by Ohio with 10,461 reports. Union Pacific is the railroad with the most reports (21,231) of blocked crossings submitted to the Portal, followed by Norfolk Southern with 17,236 blocked crossing reports. All reports of blocked crossings can be accessed at the following link: [Blocked Crossings \(dot.gov\)](https://www.fra.dot.gov/BlockedCrossings).<sup>4</sup>

**Figure 1: States with the highest number of blocked crossing reports in calendar year 2022**

States with Highest Number of Blocked Crossing Reports (January 1, 2022 – December 31, 2022)	Number of Blocked Crossing Reports (January 1, 2022 – December 31, 2022)
Texas	6,509
Ohio	3,575
Illinois	2,952
Indiana	2,534
Tennessee	1,484

FRA’s Portal data indicates that the duration of blocked crossing incidents has ranged from less than 15 minutes to more than 24 hours. Impacts of reported blocked crossing events include delays to both commercial and non-commercial traffic, delays to emergency responders, increased particulate emissions from vehicles stopped at crossings, increased delays for families getting to and from schools and increased risk of injury or loss of life if pedestrians attempt to crawl between stopped railcars to avoid being delayed by a stopped train.

**Figure 2: Breakdown of Blocked Crossing Reports received in calendar year 2022 by Duration**

<sup>4</sup> FRA notes that although Texas, Ohio, UP, and NS have received the highest number of blocked crossing reports to the portal as compared to other states and railroads, this data alone, does not mean that Texas, Ohio, UP, and NS have actually experienced the most blocked crossing incidents. For example, this data could reflect the fact that individuals in Texas or Ohio are more likely to report blocked crossing incidents than individuals in other states.

Reported Duration of Blocked Crossing Incident	Number of Blocked Crossing Reports per Duration Period (January 1, 2022 – December 31, 2022)
0-15 minutes	3,134
16-30 minutes	7,609
31-60 minutes	8,450
1-2 hours	5,830
2-6 hours	3,444
6-12 hours	871
12-24 hours	460
More 24 hours	957

It is important to note that FRA has discovered instances where the Portal has not been used for its intended purpose. For example, complainants have submitted multiple reports for a single blocked crossing event, or false reports, hoping that a larger number of reports will compel FRA to investigate or take other action.

**FRA’s Process for Verifying the Accuracy of Reports Submitted to Portal**

FRA’s process for verifying blocked crossing reports has evolved. Initially, for crossings where blocked crossing incidents were reported to the Portal on three separate calendar days within the same month, FRA would reach out to the applicable railroad and ask the railroad to provide the reason(s) why its trains blocked the crossing. In late 2020, FRA’s Safety Management Teams (who serve as the agency’s primary liaisons with the senior leadership of railroads throughout the country) were directed to work with the railroads to identify and address the causes and contributing factors that result in particular crossings being reported as blocked on at least three separate calendar days in any month. FRA focused initial efforts to crossings reported as blocked on three separate days in a month with a goal of addressing the most problematic crossings first. Subsequently, FRA began to forward all reported blocked crossing incidents to railroad leadership on a monthly basis, to demonstrate the widespread nature of blocked crossings and the seriousness of the problem.

This effort has met with limited success because in general, railroads do not have established protocols to track or investigate blocked crossing incidents. Additionally, there is no regulatory or other legal requirement for railroads to investigate or track the occurrences of blocked crossings or the underlying causes of those blockages, or to respond to FRA’s inquiries related to these incidents. For example, although railroads generally have been willing to provide FRA with certain limited information related to blocked crossing incidents that occur as a result of known events (e.g., mechanical defects with equipment), railroads do not respond to FRA’s inquiries on a regular basis with relevant information. In some cases, railroads just do not

respond to FRA’s inquiries, respond that they have no record of any particular blockage, or affirmatively refuse to respond citing the lack of a legal requirement for such a response.

## Use of Portal Data

Public reports of blocked crossing incidents that have been submitted to the Portal provide solid evidence of community impacts resulting from blocked crossings. To date, only 6% of highway-rail grade crossings in the U.S. have been reported to the Portal as the location of a blocked crossing incident. FRA continues to rely on complaints as the primary source of information about blocked crossing incidents. However, FRA uses data from the Portal as an additional source of information to help identify blocked crossing “hot spots.”

The collected data has facilitated FRA’s work with a community or FRA’s investigation of blocked crossing complaints from the public. There have also been instances in which FRA received information on blocked crossings through other channels (such as correspondence from elected officials and news reports) and data analysis conducted on the Portal’s blocked crossing reports supported FRA’s decision to dedicate staff and resources to investigate, analyze, and respond.

Through investigations and outreach efforts, FRA has found there is no “one size fits all” solution for resolving persistently blocked crossings. Two communities that have experienced persistently blocked crossings highlight the unique circumstances that often need to be addressed in order to mitigate blocked crossing concerns. FRA received over 2,000 blocked crossing reports from an area near Raymond, Ohio. FRA’s investigation revealed that a CSX train frequently blocked the exit road for workers leaving a plant at the end of their shift. To address the issue, CSX installed air compressors along the track to make it easier to “break” the train and open the crossing for motorist traffic, while keeping the train’s air brakes engaged.

In the Houston, Texas, area, UP modified the PTC screen in the cab of the locomotive to identify critical crossings, which had been selected in collaboration with the local community and first responders, for the train crew. UP issued instructions to train crews and dispatchers, prohibiting them from blocking crossings identified as critical to first responders.

## Engagement with Affected Parties

After determining blocked crossings in the East End district of Houston to be a significant problem and a request from the Houston area Congressional delegation, FRA started an initiative to address them. FRA met with local officials and the railroads within the area to determine the full extent of the blocked crossing problem and work to resolve it.

Beginning in September 2022, FRA assigned two inspectors to monitor the railroad dispatch center, collect data on blocked crossings, participate in monthly meetings with the railroads involved, provide weekly updates to FRA senior leadership, and collaborate with Operation Lifesaver, Inc. and local first responders. During this initiative, FRA staff conducted over 33 site visits to the railroad dispatch center, constituent meetings with 12 individual neighborhoods, and 25 field visits to observe train patterns and operations. FRA also held meetings with the Houston police and fire departments to identify and address critical routes and establish blocked crossing

protocols. In addition, FRA visited the Emergency Services Central Dispatch Center in Charleston, South Carolina to discuss technology that is being used to assist first responders.

By collaborating with railroads and the public authorities, this initiative dramatically reduced the number and severity of blocked crossings in the East End district of Houston, from over 400 reports in September 2022 to under 100 reports two months later.<sup>5</sup> FRA also worked with the railroads involved to use their PTC data to verify public blocked crossing reports submitted to the Portal. FRA discovered the PTC data contradicted many blocked crossing reports submitted by the general public to the Portal. When public blocked crossing reports from the Portal showing multiple crossings being blocked at the same time were compared to the PTC data, the PTC data showed that no train was present at the crossings identified and time recorded in many public blocked crossing reports. By using the PTC data, FRA can verify which reports are accurate by seeing which crossings were blocked and at what times.

### Expected Continued Effectiveness of Portal

Currently, FRA's Portal contains data with limited reliability regarding blocked crossings. The Portal is, however, a good tool that helps identify potential areas of concern and inform responses to complaints.

FRA has identified a method to improve the reliability of the data from the Portal through verification using PTC data and reports to the railroads' emergency notification systems. With regards to highway-rail grade crossings located on PTC-equipped routes, FRA can request PTC data from railroads to verify when and for how long the crossing was blocked.

FRA regulations do not specifically address the amount of time a train may occupy a grade crossing, either while stationary or moving. Train length can increase blocked crossings in a number of ways: (1) the longer the train, the longer the time it takes for that train to clear the crossings; (2) the train length can exceed the length of siding track which usually does not have a crossing, leaving trains to idle on the main line where there are numerous crossings; and (3) some rail yards are not large enough to accommodate the longer trains so part of the train "hangs out" of the yard on the main line blocking crossings, or the train must be processed on the main line before it can enter the yard, during which time it is blocking crossings.

### Recommendations

Understanding the reasons for blocked and occupied crossings is vital to determining a way to eliminate these occurrences or mitigating their impact to communities. As such, investigations into the blocked crossings are of vital importance. FRA recommends requiring Class I railroads to respond to FRA's requests for information on specific blocked crossing events with any information they have relevant to those events. FRA recommends that Congress provide FRA the authority to require Class I railroads to gather the information on PTC-equipped routes and report it to FRA, through a rulemaking if deemed necessary by the Administrator. In addition,

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<sup>5</sup> To ensure the number of reports submitted adequately reflected what was actually happening at crossings in the East End of Houston, FRA assigned staff to monitor the occurrence of blocked crossings in the area. The assigned FRA staff were notified in near real time when a crossing was reported to the portal as blocked, enabling FRA staff to either physically observe the blocked crossing or view city cameras to confirm the blockages.



FRA encourages railroads to investigate reported blocked crossing incidents that are included in FRA's monthly blocked crossing reports. To effectively investigate, the railroad will need to identify the data necessary to understand the cause of the blocked crossing and how to collect that data during an investigation. The Portal will remain available to the public and first responders to continue to report blocked crossings.