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Ms. Cynthia T. Brown
Chief, Section of Administration
Office of Proceedings
Surface Transportation Board
395 E Street, S.W.
Washington, D.C. 20423-0001

Re: STB Finance Docket No. 35743, *Application of the National Railroad Passenger Corporation under 49 U.S.C. § 24308(a) – Canadian National Railway Company*

Dear Ms. Brown:

Enclosed for filing under seal in the above-referenced proceeding is the Highly Confidential version of the Surrebuttal Evidentiary Submission of the National Railroad Passenger Corporation ("Amtrak"). Also enclosed for filing on the public record in this proceeding is the Public version of Amtrak's Surrebuttal Evidentiary Submission, which has been redacted in accordance with the applicable protective order.

Amtrak submits this Surrebuttal Evidentiary Submission in this proceeding, pursuant to the agreement reached by the parties and reflected in the Joint Request for Modification of the Procedural Schedule which was approved by the Board in a stamp decision served on October 11, 2017.

Please note that this filing contains color images. See 49 C.F.R. § 1104.2(d).

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'Edward Fishman', is written over a horizontal line.

Edward Fishman
Counsel for National Railroad
Passenger Corporation

cc: David Hirsh, Harkins Cunningham

PUBLIC VERSION - REDACTED

BEFORE THE
SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35743

APPLICATION OF THE NATIONAL RAILROAD PASSENGER CORPORATION UNDER
49 U.S.C. § 24308(A) – CANADIAN NATIONAL RAILWAY COMPANY

**SURREBUTTAL EVIDENTIARY SUBMISSION OF NATIONAL RAILROAD
PASSENGER CORPORATION**

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October 30, 2017

PUBLIC VERSION - REDACTED

BEFORE THE
SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35743

APPLICATION OF THE NATIONAL RAILROAD PASSENGER CORPORATION UNDER
49 U.S.C. § 24308(A) – CANADIAN NATIONAL RAILWAY COMPANY

**SURREBUTTAL EVIDENTIARY SUBMISSION OF NATIONAL RAILROAD
PASSENGER CORPORATION**

National Railroad Passenger Corporation (“Amtrak”) hereby submits this Surrebuttal Evidentiary Submission in this proceeding, pursuant to the agreement reached by the parties and reflected in the Joint Request for Modification of the Procedural Schedule which was approved by the Board in a stamp decision served on October 11, 2017. This Surrebuttal Evidentiary Submission consists of the following Verified Statements (accompanied by, where applicable, supporting Exhibits or Attachments).

A. Surrebuttal Verified Statement of Jason Maga.

Mr. Maga is a Senior Manager in the Host Railroads Group at Amtrak and the co-sponsor of the Vilter/Maga Rebuttal Verified Statement which was filed as part of Amtrak’s Rebuttal Evidentiary Submission. Mr. Maga’s Surrebuttal Verified Statement highlights the negative ramifications and deficiencies of CN’s Illini/Saluki schedule adjustment proposal which is described in the Rebuttal Verified Statement of Harald Krueger (“Krueger RVS”). The Maga Surrebuttal Verified Statement also explains why CN’s proposed schedule changes are not necessary to achieve 80% ASOTP on the Illini/Saluki or City of New Orleans services. In addition, the Maga Surrebuttal Verified Statement includes an additional contract provision for

Amtrak's delay-based incentive system proposal in order to clarify the impact of any material schedule changes agreed upon by the parties on the HRD thresholds proposed by Amtrak.

B. Joint Surrebuttal Verified Statement of John Williams and Judith Roberts.

Mr. Williams and Ms. Roberts, President and Vice President respectively of The Woodside Consulting Group, are the co-sponsors of the Williams/Roberts Rebuttal Verified Statement that was filed as part of Amtrak's Rebuttal Evidentiary Submission. The Williams/Roberts Surrebuttal Verified Statement describes the deficiencies in the additional Train Performance Calculator ("TPC") modeling of the Illini/Saluki service that is described in the Krueger RVS. It also highlights the flawed assumptions incorporated into the so-called "bubble" analysis described in the Krueger RVS.

Respectfully submitted,



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SURREBUTTAL VERIFIED STATEMENT OF JASON MAGA

TABLE OF CONTENTS

	<u>Page</u>
I. CN's Schedule Proposal Would Dramatically and Needlessly Lengthen the Illini/Saluki Schedules With No Assurance from CN of Improved ASOTP	2
A. Amtrak Proposed Reallocation of Existing Recovery Time.....	2
B. CN's Proposal Would Dramatically Lengthen Illini/Saluki Schedules.....	4
C. There are Substantial Flaws in CN's Alleged Rationale for Extending the Schedules	8
1. CN Lacks Evidentiary Support for Its Attempt to Blame Amtrak's Equipment for CN's Grade Crossing Activation Failures	8
2. CN Adds Extra PRT to the Schedules Based on Flawed TPC Modeling Assumptions	13
3. CN Adds Substantial Amounts of Arbitrary and Duplicative Recovery Time to the Schedules.....	16
4. CN Unnecessarily Adds Time to the Schedules As a Result of CN Grade Crossing Activation Failures	20
5. CN's Proposal Would Retain Endloaded Recovery Time	21
6. Summary of CN Schedule Proposals	22
II. CN's Proposed Schedule Changes Are Not Necessary to Achieve 80% ASOTP on the City of New Orleans or Illini/Saluki Services	24
A. ASOTP Has Been Significantly Higher When CN Made the Effort To Perform Better.....	24
B. Other Amtrak Routes Achieve 80% ASOTP With Endloaded Recovery Time	28
C. Even If Dramatically Longer Schedules Were Implemented As Proposed By CN, CN's Schedule Proposal Offers No Assurance That 80% ASOTP Would Result	29
D. CN's Claim That FTI Is the Only Type of HRD That CN Can Control Is Contradicted by the Evidence	30
E. Other Amtrak Hosts Have Been Able To Meet Similar FTI Thresholds	37
III. Additional Contractual Language for Amtrak's Delay-Based System Proposal.....	40
IV. Conclusion	42

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SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35743

APPLICATION OF THE NATIONAL RAILROAD PASSENGER CORPORATION UNDER
49 U.S.C. § 24308(A) – CANADIAN NATIONAL RAILWAY COMPANY

SURREBUTTAL VERIFIED STATEMENT OF JASON MAGA

My name is Jason Maga. I am a Senior Manager in the Host Railroads Group at Amtrak and one of the co-sponsors (along with my Amtrak colleague Paul Vilter) of the Rebuttal Verified Statement that we submitted in this proceeding on September 14, 2017 (the “Vilter/Maga RVS”). A copy of my resume was attached as Exhibit 1 to the Vilter/Maga RVS.

In this Surrebuttal Verified Statement, I have been asked to provide additional evidence that is responsive to the additional Train Performance Calculator (“TPC”) modeling of Amtrak’s Illini/Saluki service that is described in Section I of the Rebuttal Verified Statement of Harald Krueger (“Krueger RVS”) and CN’s schedule adjustment proposal for the Illini/Saluki service that is also described in that same section of the Krueger RVS. I also submit into the evidentiary record through this Surrebuttal Verified Statement an additional contractual provision for Appendix V of Amtrak’s proposed delay-based incentive system and explain the basis for Amtrak’s submission of this additional provision.

As described in further detail below, the Krueger RVS describes additional TPC modeling that was conducted by CN of Amtrak’s Illini/Saluki service using different assumptions than the initial TPC modeling that was described in CN’s Opening Evidentiary Submission. These flawed assumptions result in an overstatement of the pure running time (“PRT”) estimates that CN developed for the Illini/Saluki trains. The Krueger RVS also

describes the purported rationale for CN's schedule adjustment proposal, which would dramatically lengthen the schedules for the Illini/Saluki trains as a result of CN's proposed addition of unnecessary and arbitrary allowances.

CN's schedule adjustment proposal for the Illini/Saluki trains initially was provided to Amtrak in August 2017, just prior to the filing of CN's Rebuttal Evidentiary Submission and following Amtrak's February 2017 proposal to CN to reallocate existing recovery time in the Illini/Saluki schedules to more intermediate stations. Instead of seriously evaluating Amtrak's reallocation proposal, CN has taken the opportunity to propose dramatically longer schedules for the Illini/Saluki trains. CN's proposal appears to have been crafted to allow CN to earn additional incentive payments from Amtrak under CN's proposed checkpoint/relief-based system with no assurance of improvement in the on-time performance experienced by Amtrak passengers. Contrary to CN's claims as set forth in the Krueger RVS, CN's schedule adjustment proposal is not necessary to improve on-time performance, nor for CN to improve its performance as an Amtrak host (which CN did for a six-month period in 2013 when it made a concerted effort to improve its performance). Instead, CN's schedule adjustment proposal would result in substantial harm to Amtrak, its passengers and the State of Illinois that funds the Illini/Saluki service.

I. CN's Schedule Proposal Would Dramatically and Needlessly Lengthen the Illini/Saluki Schedules With No Assurance from CN of Improved ASOTP

A. Amtrak Proposed Reallocation of Existing Recovery Time

In February 2017, Amtrak transmitted proposed schedule adjustments for the Illini/Saluki and City of New Orleans services to CN. Amtrak's proposed changes reflected a redistribution of existing recovery time in the schedules to more intermediate stations along the route in an

effort to follow the Board's recommendation in the Ex Parte 726 proceeding.¹ Amtrak's proposal for the four Illini/Saluki trains involved the following²: (i) for the northbound trains, a reallocation of the 26 minutes of recovery time in the existing schedules from the last segment on CN between Homewood and Chicago/16th Street to a more dispersed distribution among seven different segments between stations along the route; and (ii) for the southbound trains, a reallocation of the 26 minutes of recovery time in the existing schedules from the last segment on CN between DuQuoin and Carbondale to a more dispersed distribution among five different segments between stations along the route.³ Amtrak proposed a similar reallocation of existing recovery time in the schedules for the City of New Orleans trains.⁴ Amtrak did not propose any change to the overall schedule time for either service, and did not propose changing the amount of pure running time ("PRT"), recovery time, miscellaneous time or dwell time in the schedules for either service.

¹ In that proceeding, the Board stated that "some schedules, particularly for long-distance trains, may need to be modified to more realistically distribute recovery time in light of an all-stations threshold." The Board further stated as follows: "Moreover, a number of current passenger rail schedules insert a very large share of recovery time between the last stations on a route. To support all-stations OTP on such a route could require a reevaluation and potential reallocation of recovery time across the entire route." See Ex Parte 726, On-Time Performance Under Section 213 of the Passenger Rail Investment and Improvement Act of 2008 (STB served July 28, 2016).

² Amtrak's proposed redistribution of recovery time is reflected in the "Recovery Minutes" column of the Schedule Skeletons attached to the February 12, 2017 email from Michael Azen of Amtrak to Scott Kuxmann of CN, which was attached as Exhibit 1 to the Krueger RVS.

³ The existing schedules for the Illini/Saluki trains also contain between 10 and 14 minutes of miscellaneous adjustment time. For the southbound trains, Amtrak proposed to redistribute 9 minutes of miscellaneous time from the last segment on CN to three earlier segments of the route. This is reflected in the "Misc. Adjust." column of the aforementioned Schedule Skeletons.

⁴ See Exhibit 1 to the Krueger RVS.

In a letter to CN's Scott Kuxmann dated April 3, 2017, I explained the rationale for Amtrak's proposed schedule adjustments.⁵ Specifically, I explained as follows: "Amtrak's schedule modification proposal takes some of the recovery time currently at the endpoints...and reallocates it to certain intermediate stations. A larger share of the reallocated recovery time was generally assigned to stations with higher ridership and/or that are later in the route and thus more likely to have had delays prior to the train's arrival at those stations." I further stated that "Amtrak anticipates that these changes will improve ASOTP on the City of New Orleans and Illini/Saluki services."⁶

B. CN's Proposal Would Dramatically Lengthen Illini/Saluki Schedules

In response to Amtrak's February 2017 proposal, CN in August of 2017 transmitted to Amtrak its proposed schedule changes for the Illini/Saluki service.⁷ Instead of suggesting adjustments to Amtrak's proposed reallocation of recovery time, CN proposes to substantially lengthen the schedules of the Illini/Saluki trains by 32 to 54 minutes. Specifically, CN proposes to lengthen the schedule of the northbound P390 by 32 minutes through (i) 10 additional minutes of PRT, (ii) 15 additional minutes of recovery time; and (iii) 7 additional minutes of miscellaneous time. CN proposes to lengthen the schedule for the northbound P392 by 54 minutes through (i) 10 additional minutes of PRT; (ii) 37 additional minutes of recovery time;

⁵ Amtrak made a similar proposal in 2011 to reallocate recovery time in the City of New Orleans and Illini/Saluki schedules to intermediate stations. CN rejected Amtrak's proposal at that time.

⁶ See April 3, 2017 letter from Amtrak's Jason Maga to CN's Scott Kuxmann, attached as part of Exhibit 1 to the Krueger RVS.

⁷ Amtrak is not asking the Board to order the adoption of its proposed reallocation of recovery time in the Illini/Saluki and City of New Orleans schedules. The information about Amtrak's proposal is explained above in order to provide the Board with meaningful background information relevant to the CN schedule adjustment proposal, which CN appears to be asking the Board to implement as part of any 80% ASOTP incentive system. See also October 27, 2017 letter from Amtrak's Jason Maga to CN's Scott Kuxmann, attached hereto as Exhibit 1 (reflecting Amtrak's response to CN's schedule adjustment proposal).

and (iii) 7 additional minutes of miscellaneous time.⁸ CN proposes similar changes to the southbound Illini/Saluki trains, adding between 32 and 39 minutes to their overall schedules through additional PRT, recovery time and miscellaneous time.⁹

CN makes every effort to downplay the extent of its proposal to substantially lengthen the Illini/Saluki schedules. See, e.g., Krueger RVS at 13 (characterizing CN’s proposed schedule changes as “only slightly lengthening those schedules”); August 18, 2017 letter from CN’s Scott Kuxmann, attached as Exhibit 2 to the Krueger RVS at 2 (describing CN’s proposed schedule extensions as “modest”); Joint Rebuttal Verified Statement of Paul Ladue and Scott Kuxmann (“Ladue/Kuxmann RVS”) at 31 (describing CN’s proposal as “a relatively small adjustment in trip time”).¹⁰ CN’s claims are belied by the sheer magnitude of the schedule extensions it has proposed, which would lengthen the Illini/Saluki scheduled trip time from 5.5 hours to over 6 hours for each train – and in the case of northbound P392, would lengthen the scheduled trip time from Carbondale to Chicago by nearly an hour. These are not “modest” schedule extensions by any stretch of the imagination, particularly from the perspective of Amtrak passengers.

CN ignores the detrimental impact that these proposed schedule extensions would have on Amtrak and its passengers. The longer schedules proposed by CN for the Illini/Saluki trains

⁸ CN’s proposal would extend the scheduled arrival time of P392 into Chicago from 9:45 pm to 10:39 pm.

⁹ See Exhibit 2 to the Krueger RVS. Specifically, CN proposes to lengthen the schedule of southbound P391 by 32 minutes through (i) 13 additional minutes of PRT; (ii) 16 additional minutes of recovery time; and (iii) 3 additional minutes of miscellaneous time. Similarly, CN proposes to lengthen the schedule of southbound P393 by 39 minutes through (i) 13 additional minutes of PRT; (ii) 23 additional minutes of recovery time, and (iii) 3 additional minutes of miscellaneous time. CN’s proposal would extend the scheduled arrival time of P393 into Carbondale from 9:43 pm to 10:14 pm.

¹⁰ On the other hand, without any attempt to explain the glaring inconsistency, CN characterizes Amtrak’s much more limited proposal to redistribute existing recovery time as introducing “significant changes” in the schedules. Ladue/Kuxmann RVS at 10.

would substantially disrupt Amtrak's train crew assignments and equipment turn schedules. For example, CN's proposal to increase each Illini/Saluki train schedule to over 6 hours would require Amtrak to use a second engineer on each train under its existing labor agreements, effectively doubling Amtrak's cost for engineers.¹¹ In addition, CN's proposal would create tighter crew and equipment turn windows which are more likely to be missed if any substantial level of delay occurs to the Illini/Saluki trains. For example, under CN's proposed schedule, Amtrak's crew turn arrangement between southbound P393 and the following morning's northbound P390 will be disrupted if the southbound P393 arrives into Carbondale more than 1 minute late under CN's proposed schedule.¹² Similar crew turn impacts will occur if northbound P392 arrives late into Chicago under CN's proposed schedule.¹³ Similarly, northbound P390's equipment turn for southbound P393 in Chicago may be threatened under CN's proposed schedule, which pushes back P390's arrival into Chicago 32 minutes later than presently scheduled, leaving less time available for cleaning and maintenance activities before the train consist must return south as P390. Furthermore, the longer schedules proposed by CN would

¹¹ Amtrak's labor agreements specify a scheduled run time of no more than six (6) hours and require a second engineer on each train if the scheduled run time exceeds 6 hours (as CN has proposed).

¹² If P393 arrives in Carbondale more than 1 minute later than CN's proposed scheduled arrival time of 10:14 pm, the Amtrak train crew will not be able to meet its mandatory 8-hour rest requirement before the scheduled P390 departure from Carbondale at 7:30 am the next morning. Upon arrival in Carbondale, P393's crew requires 30 minutes to wye the equipment for departure the next morning and then goes off duty. This crew's on-duty time the next morning is 45 minutes prior to scheduled departure. Thus, under CN's proposed schedule change, P393's crew off-duty time would be 10:44 pm and its on-duty time would be 6:45 am the next morning, leaving only a 1 minute window for delayed arrival before the mandatory 8-hour rest period would be disrupted.

¹³ Under CN's proposed schedule, northbound P392 is scheduled to arrive in Chicago at 10:39 pm and the crew's off-duty time would be at 10:49 pm. The crew's on-duty time for southbound P391 the next morning is 7:30 am for the 8:15 am departure, which means the Amtrak crew would not be able to obtain the minimum 8-hour rest period if the P392 arrives into Chicago at 11:31 pm or later.

force Amtrak to burn more fuel and incur additional hourly labor and other operational costs associated with the Illini/Saluki service.

Even assuming that CN were to handle the Illini/Saluki trains without substantial delay, the proposed CN schedule extensions also would dramatically alter the marketing and customer service landscape for the Illini/Saluki service. Whereas the current schedule offers a Chicago-Carbondale trip time that is only slightly slower than automobile travel, under CN's proposal even an on-time Illini/Saluki trip between Chicago and Carbondale would be more than an hour longer than driving. This would substantially undermine the public value and market competitiveness of Amtrak's Illini/Saluki service, which serves over 300,000 Amtrak passengers annually.¹⁴

In addition, CN's proposed extension of northbound P390's schedule likely would prevent P390's passengers from making an important connection with Amtrak train 7 (the Empire Builder) that is scheduled to depart from Chicago's Union Station shortly after the current arrival time of the northbound Illini/Saluki train. CN's proposal to push back the arrival times of the Illini/Saluki trains also would decrease other train connection windows in Chicago, making it more likely for Amtrak passengers to miss other connections if any substantial delay occurs to the Illini/Saluki trains.

Thus, for all of the foregoing reasons, the interests of Amtrak, the State of Illinois and Amtrak's passengers would be harmed significantly by CN's proposed schedule extensions.

¹⁴ According to Google Maps, it takes 5 hours and 11 minutes to drive between Chicago and Carbondale in average traffic conditions and at posted highway speed limits. The public value and market competitiveness of the Illini/Saluki trains is important to both Amtrak and the State of Illinois, which acting through the Illinois Department of Transportation ("Illinois DOT") provides the predominant share of the funding for this state-supported service.

C. There are Substantial Flaws in CN's Alleged Rationale for Extending the Schedules

This section outlines the numerous problems with the underlying components of CN's schedule adjustment proposal as reflected in the Krueger RVS. One of the fundamental assumptions of CN's schedule adjustment proposal is that Amtrak's equipment is solely responsible for certain CN grade crossing activation failures that occurred in 2014 and 2015, and that the operating restrictions CN has imposed on Amtrak following those CN grade crossing activation failures must be incorporated into the Illini/Saluki schedules. Amtrak is very mindful of the safety implications of these CN grade crossing activation failures, and is working actively with the FRA and CN to determine causation. However, as explained in the initial subsection below, CN's proposal to incorporate such operating restrictions into the Illini/Saluki schedules is improper and contradicted by the evidence from CN's own technical consultant. The remaining subsections below illustrate the various deficiencies in CN's proposal to add substantial additional time to the Illini/Saluki schedules.

1. CN Lacks Evidentiary Support for Its Attempt to Blame Amtrak's Equipment for CN's Grade Crossing Activation Failures

CN is responsible for maintaining the grade crossing warning systems over which Amtrak trains operate on CN. Moreover, Section 4.2.A of the Operating Agreement requires CN to maintain its rail facilities (including but not limited to CN's grade crossing warning systems) at a "level of utility" that permits each Amtrak train to operate at no less than the Base Timetable Speeds set forth in Appendix 1 to the Operating Agreement.¹⁵ In addition to its responsibilities for maintaining the grade crossing warning devices, CN also is responsible under FRA regulations for investigating credible reports of warning system malfunctions, for repairing

¹⁵ This "level of utility" provision of the Operating Agreement is not in dispute. Amtrak's Base Timetable Speeds in Appendix I of the Operating Agreement are generally set at 79 mph unless more specific speed restrictions apply at turnouts or other locations identified in CN's timetables.

malfunctioning components and for taking other remedial action required by 49 CFR Part 234 to ensure the safe operation of all trains on its lines.¹⁶

In 2014 and 2015, CN determined that Illini/Saluki trains experienced a total of [REDACTED] short warning activation failures at three different CN at-grade crossings on the 57-mile segment of CN track between Kinmundy and Mattoon. According to CN, its grade crossing warning devices did not activate for the minimum 20 seconds required by FRA regulations before the involved trains entered the crossings.¹⁷ CN reported to the FRA that its grade crossing warning devices in these six instances activated [REDACTED] prior to the trains entering the crossings.¹⁸

Following the 2014 grade crossing activation failures, CN imposed speed restrictions on Amtrak's Illini/Saluki trains operating between Chicago and Carbondale. Specifically, in September 2014, CN issued a bulletin specifying that all Illini/Saluki trains operating on CN between Chicago/Clark Street (milepost 1.5) and Centralia (milepost 253.2) would be restricted

¹⁶ See, generally, 49 CFR Part 234; see also 49 CFR 234.103(a) ("Upon receipt of a credible report of a warning system malfunction, a railroad having maintenance responsibility for the warning system shall promptly investigate the report and determine the nature of the malfunction. The railroad shall take appropriate action as required by Section 234.207"); 49 CFR 234.103(b) ("Until repair or correction of the warning system is completed, the railroad shall provide alternative means of warning highway traffic..."); 49 CFR 234.207(a) ("When any essential component of a highway-rail grade crossing warning system fails to perform its intended function, the cause shall be determined and the faulty component adjusted, repaired or replaced without undue delay").

¹⁷ See 49 CFR 234.225 ("A highway-rail grade crossing warning system shall be maintained to activate in accordance with the design of the warning system, but in no event shall it provide less than 20 seconds warning time for the normal operation of through trains before the grade crossing is occupied by rail traffic").

¹⁸ The railroad responsible for maintaining the crossing is responsible for reporting all such activation failures to the FRA. Such activation failures are not unique to Amtrak trains. CN and other railroads periodically report activation failures involving their own freight trains and the trains of their tenant railroads to the FRA. [REDACTED]

to a maximum of 70 miles per hour when operating through the approximately 150 grade crossings along the route.¹⁹ In October 2016, CN further restricted Illini/Saluki trains to a maximum of 60 mph when operating through the grade crossings within the 57-mile segment between Kinmundy and Mattoon. These speed restrictions were imposed by CN in addition to an existing, minimum 30-axle count restriction which CN had imposed upon Amtrak's Illini/Saluki trains in 2008 following an earlier series of CN grade crossing activation failures.

The minimum axle count restriction imposed by CN requires Amtrak to operate its Illini/Saluki trains (which would normally have only 4 Amfleet/Horizon passenger cars) with a total of 7 passenger cars in order to meet CN's 30-axle requirement. The cumulative impact of the minimum axle count restriction imposed by CN in 2008 and the speed restrictions imposed by CN in 2014 and 2016 makes the Illini/Saluki trains heavier and slower, which contributes to delays. Amtrak has taken the position that CN (as the party responsible for maintaining the grade crossing warning systems under FRA regulations, and the party responsible under the Operating Agreement to maintain its infrastructure to permit Amtrak to operate at the specified Base Timetable Speeds) is responsible under the existing Appendix V (and under both Amtrak's and CN's proposed revisions to Appendix V) for the delays caused by these speed restrictions.²⁰

¹⁹ Amtrak's maximum authorized speed over CN territory is generally 79 miles per hour. Although the activation failures occurred on the 57-mile segment between Kinmundy and Mattoon, CN imposed the 70 mph speed restriction on the 250-mile segment between Chicago and Centralia. The total route of the Illini/Saluki trains between Chicago and Carbondale is approximately 300 miles. Therefore, a substantial portion of the Illini/Saluki route is subject to this speed restriction. CN did not impose similar restrictions on other trains operating over this corridor.

²⁰ Any delays to Amtrak trains as a result of the speed restrictions are coded by Amtrak as Host Responsible Delays attributable to CN. Any delays attributable to the longer Amtrak consist that Amtrak is required to operate as a result of the minimum axle count requirement imposed by CN are coded by Amtrak as Amtrak Responsible Delays, even though Amtrak believes it should not be required to operate the longer consist because there is no evidence that this requirement is necessary to prevent CN grade crossing activation failures.

CN has taken the position that Amtrak is responsible for such delays. This dispute between the parties remains unresolved.

In October 2015, Amtrak submitted a letter requesting that the FRA investigate CN for potential violations of 49 CFR Part 234 as a result of CN's unilateral and open-ended imposition of the operating speed and axle count restrictions on Amtrak without taking the corrective action required of CN under 49 CFR 234.207 to resolve the underlying CN grade crossing activation failures.²¹ Amtrak is very mindful of the safety implications of these CN grade crossing activation failures, and sought the FRA's assistance in order to ensure that the federal railroad safety regulatory agency was involved directly in the investigation. Since the filing of Amtrak's letter, the FRA, CN and Amtrak have been actively involved in efforts to determine the cause of these CN grade crossing activation failures - which Amtrak seldom has experienced in other host railroad territories with the Horizon/Amfleet equipment used in the Illini/Saluki service.²² The parties have established technical teams which are developing testing protocols to define the grade crossing activation metrics that would allow the speed restrictions and minimum axle count requirements imposed by CN on the Illini/Saluki trains operating between Chicago and Carbondale to be lifted.

At this point in the investigative process, the FRA has not made a determination about causation. However, a technical consultant retained by CN concluded in December 2016 that there are multiple potential causes of these CN grade crossing activation failures. The CN technical consultant concluded that [REDACTED]

²¹ See October 22, 2015 letter from DJ Stadtler of Amtrak to Robert Lauby of FRA, attached hereto as Exhibit 2.

²² [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The Krueger RVS, and other witness statements submitted by CN as part of its Rebuttal Submission, all presume that Amtrak's equipment is the sole cause of the CN grade crossing activation failures described above.²⁵ However, CN presents no evidence other than these conclusory, self-serving assertions to support its claim that Amtrak's equipment is solely responsible. CN's witnesses fail to mention that CN's own technical consultant [REDACTED] [REDACTED] CN's witnesses also fail to acknowledge that the parties are still actively working with the FRA to determine causation. Until such time as the FRA or the parties agree on causation and a potential solution to prevent future CN grade crossing activation failures, it would be speculative to assume (as CN has done in its Rebuttal) that the activation failures are caused solely or even partially by Amtrak equipment. Moreover, until the FRA and the parties reach a definitive conclusion about causation and a solution to eliminating activation failures (which could involve

²³ Although Amtrak's Amfleet/Horizon passenger cars are lighter than Amtrak's Superliner cars, the Amfleet/Horizon cars are heavier than the single-level commuter rail cars that operate over Class I railroad trackage in numerous parts of the country.

²⁴ In all of the CN grade crossing activation failures under investigation involving Illini/Saluki trains, the CN technical consultant concluded that [REDACTED]

²⁵ See, e.g., Krueger RVS at 6 ("...the Illini/Saluki schedules do not account for the slower operating speeds required for safety reasons due to Amtrak's use of Amfleet/Horizon equipment (the so-called "short shunt" issue)); Ladue/Kuxmann RVS at 25, footnote 32 ("...speed restriction is required because Amtrak's preferred equipment fails to reliably shunt grade crossing warning devices when they operate at track speed").

the lifting of CN's minimum axle count and speed restrictions if the testing protocol metrics are satisfied), it would be premature for the Board to determine that adjustments should be made in the Illini/Saluki schedules to account for delays resulting from the operating restrictions imposed on Amtrak unilaterally by CN. The parties are in the best position to determine, once the technical investigation is completed, whether the schedules need to be adjusted and how to allocate responsibility for delays associated with any required changes in the operation.

2. CN Adds Extra PRT to the Schedules Based on Flawed TPC Modeling Assumptions

CN proposes to add between 10 and 13 minutes of additional PRT to the schedules of the Illini/Saluki trains based on the additional TPC modeling described in the Krueger RVS. For the reasons discussed in the Williams/Roberts Surrebuttal Verified Statement ("Williams/Roberts SVS"), this additional TPC modeling²⁶ is based on flawed assumptions about the Amtrak train consist and operating speeds used in the modeling which results in an overstatement of the PRT necessary for the Illini/Saluki trains.

Among other problems, CN assumes in its TPC modeling that the Illini/Saluki trains stop at five interlockings along the Chicago-Carbondale corridor where the Amtrak trains are not scheduled to stop and typically do not stop.²⁷ Amtrak's Operating Department has estimated that the additional time that was likely incorporated into CN's TPC model to account for the deceleration and then reacceleration necessary to make these five fictitious interlocking stops

²⁶ It should be noted that CN is proposing substantial schedule adjustments for the Illini/Saluki trains based on TPC modeling reflected in workpapers that CN has designated as Highly Confidential. Therefore, these CN workpapers (which reflect the detailed results of the TPC runs) are inaccessible to Amtrak personnel.

²⁷ See Exhibits 3 and 4 to the Krueger RVS (noting in the upper right corner of each proposed Illini/Saluki schedule grid that "v-time included Kensington, Tolono, Kinmundy, Odin and Ashley").

would add approximately 15 minutes to the overall PRT calculated by CN for each of the Illini/Saluki trains. Thus, CN's modeling overstates the PRT by at least 15 minutes.

CN also uses a consist of 1 locomotive and 7 Horizon passenger cars in its TPC modeling of the Illini/Saluki service. However, the PRT calculation for the Illini/Saluki service should be based on the consist that Amtrak would typically run in this service – 1 locomotive and 4 Horizon passenger cars – if not for the minimum axle count restrictions that have been imposed on Amtrak unilaterally by CN in response to the CN grade crossing activation failures that are under investigation by the FRA.

Mr. Krueger claims that he used the 1+7 consist because, in his view, Appendix V of the current Operating Agreement defines the “base consist” for the Illini/Saluki service as 1+6 cars and that “Amtrak is required to use an additional car” as a result of “safety issues with the Horizon/Amfleet cars.”²⁸ This is a flawed approach for two reasons. First, Mr. Krueger's interpretation of the “base consist” provision set forth in Appendix V of the current Operating Agreement is erroneous. The purpose of the “base consist” provision in Appendix V is not to define the Amtrak consist that should be used for PRT calculation purposes. Instead, the “base consist” is used solely in the calculation of potential incentive payments to CN under the current Operating Agreement's checkpoint/relief-based system. Specifically, it reflects the threshold above which the Additional Tolerance set forth in Appendix V, Table 4 of the Operating Agreement is employed for purposes of calculating any quality or penalty payment.²⁹

In other words, the parties recognized as of the May 2011 execution date of the current Operating Agreement that, if Amtrak operated its Illini/Saluki trains with more than 1

²⁸ Krueger RVS at 5.

²⁹ See Vilter/Maga RVS at 65, footnote 171.

locomotive and 6 passenger cars,³⁰ CN would receive the additional minutes of relief under the checkpoint system for each additional car as specified in Appendix V, Table 4. This is not equivalent to requiring that an Amtrak consist of 1 locomotive and 6 passenger cars *must be used* for any determination of PRT. Instead, for purposes of both the checkpoint/relief-based system proposed by CN and the delay-based system proposed by Amtrak, the PRT determination for the Illini/Saluki service should be based on the average size of the train consist that Amtrak would operate over the route in the absence of CN's minimum axle requirements.³¹

It is also important to note that Amtrak's proposed delay-based system does not even have a "base consist" table, because the use of Amtrak's delay reporting system obviates the need for a base consist table.³² Therefore, the TPC modeling conducted by CN and described in the Krueger RVS (which was filed as part of CN's Rebuttal to Amtrak's Opening Submission describing Amtrak's delay-based proposal) is premised on a concept that exists only in CN's proposal.

Second, as a result of CN's minimum axle count requirement, Amtrak adds 3 empty Heritage baggage cars (not just one additional car) to the Illini/Saluki trains. Unless and until the FRA reaches a final determination that Amtrak's equipment is solely responsible for the CN grade crossing activation failures, it is not appropriate to incorporate CN's minimum axle count

³⁰ It should be noted that, at the time of execution of the current Operating Agreement in May 2011, CN's minimum axle count requirement (which had been imposed provisionally by CN in 2008 in response to earlier CN grade crossing activation failures) obligated Amtrak to operate its Illini/Saluki trains with at least 1 locomotive and 7 passenger cars.

³¹ Mr. Krueger states, without explanation, that the PRT "should be sufficient for whatever consist the train might actually run with under the schedule." Krueger RVS at 4. This explanation is not consistent with the manner in which PRT is calculated for purposes of Amtrak's schedules.

³² Similarly, Amtrak's proposed changes to the existing relief-based system (in the event the Board orders the parties to continue using the existing system despite its substantial flaws) also does not have a base consist table because the use of Amtrak's delay reporting system negates the need for a base consist table.

limitation (which makes the Amtrak train heavier and therefore slower) into any PRT calculation for the Illini/Saluki service.³³ CN has unilaterally required Amtrak to operate with additional axles despite the fact that there is no conclusive evidence that Amtrak's equipment is the cause of the activation failures.

Amtrak would be running Illini/Saluki trains with only 4 passenger cars if not for the minimum axle count restriction imposed by CN.³⁴ The addition of these extra cars has a substantial impact on the PRT calculations that are reflected in the Krueger RVS.³⁵ Until such time as a cause of the grade crossing activation failures is determined by the FRA and a solution is agreed upon by the parties, any PRT determination should not include CN's unilaterally-imposed minimum axle count and operating speed restrictions (which the FRA may determine to be unnecessary upon completion of its technical evaluation).

3. CN Adds Substantial Amounts of Arbitrary and Duplicative Recovery Time to the Schedules

The Illini/Saluki trains already have between 36 and 40 minutes of recovery time and miscellaneous adjustment time built into their existing schedules to account for potential delays. Instead of merely reallocating that recovery and miscellaneous time to intermediate stations as Amtrak has proposed in response to the Board's recommendation, CN has added between 15 and

³³ It is my understanding that in CN's TPC model, the addition of the 3 extra cars increases the weight of the Amtrak consist, which reduces its overall tractive power and therefore produces a simulation run which results in a slower PRT. See Williams/ Roberts RVS at 70-76.

³⁴ CN's minimum axle count requirement has significant cost implications for Amtrak and the State of Illinois. In addition to the extra fuel, equipment maintenance and higher operating costs associated with adding 3 empty baggage cars to each Illini/Saluki consist, the cars that Amtrak has used for these purposes since approximately 2008 require an overhaul that will result in an estimated capital expenditure of [REDACTED]

³⁵ As described in the Williams/Roberts SVS, CN's most recent TPC modeling for the Illini/Saluki service as described in the Krueger RVS assumes an Amtrak consist of 1 P42 locomotive and 7 Amfleet/Horizon cars with a Horsepower Per Ton ("HPT") ratio of 7.02. If not for the CN operating restrictions imposed as a result of the CN grade crossing activation failures, Amtrak would run a consist of 1 P42 locomotive and 4 Amfleet/Horizon cars with an HPT ratio of approximately 13.

37 minutes of additional recovery time and between 3 and 7 minutes of additional miscellaneous time in its proposed schedules for the Illini/Saluki trains.³⁶ CN's addition of this substantial additional time undercuts the entire purpose of the incentive system, which is to motivate CN to minimize Host Responsible Delay ("HRD") minutes.³⁷

CN's belief that substantial additional recovery time is required for the Illini/Saluki schedules is based on several unreasonable and arbitrary assumptions described in the Krueger RVS. First, Mr. Krueger applied a 5% additive to the existing PRT in the schedules as a so-called "operating allowance." Mr. Krueger provides no evidentiary support for including any operating allowance, much less an arbitrary percentage such as 5%. Mr. Krueger claims that this additional recovery time is required to account for, among other things, "weather (headwinds, heavy rain, cold) and other unpredictable events."³⁸ However, Mr. Krueger fails to provide any explanation for his claim that additional recovery time must be built into the Amtrak schedules for cold weather, heavy rain, and headwinds. He does not quantify or provide any evidence of actual delays occurring due to headwinds, heavy rain, or cold weather, nor any assessment of the frequency or impact (if any) of these events.³⁹ Thus, Mr. Krueger provides no justification for

³⁶ The Krueger RVS states that recovery time and miscellaneous time in Amtrak schedules is designed "to account for *all delays* encountered en route that would increase travel time above PRT." Krueger RVS at 3 (emphasis added). Mr. Krueger seemingly believes that sufficient additional time must be added to Amtrak schedules on a continuous basis to account for "all delays" that might occur, such that CN always would be guaranteed of providing 100% on-time performance (and earning commensurate incentives) under its expanding schedules.

³⁷ CN makes no commitment to provide better service under its proposed schedule adjustments. Thus, nothing would prevent CN from absorbing all of this additional recovery time in its proposed schedules through delays and earning the same amount of incentive payments it earns today (under its proposed checkpoint/relief-based system) for on-time performance at all stations that is significantly worse than it is today.

³⁸ Krueger RVS at 11.

³⁹ Mr. Krueger appears to be suggesting (without any empirical evidence) that heavy rain, headwinds and cold weather would slow down Amtrak trains, and that such delays occur with such frequency that they should be incorporated into Amtrak's schedules throughout the year.

incorporating delay allowances into the Illini/Saluki schedules for such routine weather conditions.

Secondly, Mr. Krueger applies a temporary slow order (“TSO”) allowance equal to 4% of PRT as part of his additional recovery time proposal to account for “delays caused by slow orders imposed as a result of routine track inspections and maintenance.”⁴⁰ This additional recovery time of between 11 and 12 minutes for the supposed TSO allowance in each Illini/Saluki train schedule was added by CN at the midpoint and endpoint of the schedules.⁴¹ CN fails to explain why it believes that temporary slow orders are not within its reasonable control, fails to provide any explanation for why CN should be entitled to additional recovery time for slow orders, and fails to provide any rationale or evidentiary support for why the allowance should be 4% as opposed to some other number. The incorporation of additional delay minutes for TSO’s into the schedules for the Illini/Saluki trains would, once again, conflict with the entire purpose of the incentive system and eliminate another important aspect of CN’s responsibility as host railroad for minimizing delays to Amtrak trains caused by CN’s track and facility conditions.

Third, CN included a “crossover allowance” of 2 additional minutes for P390 and P391 and claims that this proposed additional time in the schedule “was applied in segments in which [an Amtrak] train is typically expected to cross over between main lines.”⁴² As Mr. Krueger

⁴⁰ Krueger RVS at 11.

⁴¹ Mr. Krueger explains that he added the TSO recovery minutes to the midpoint and endpoint of the Illini/Saluki schedules, and that he added the “operating allowance” recovery minutes to specific segments in varying amounts. Krueger RVS at 11. However, Mr. Krueger provides no explanation for this apparently random allocation of recovery time to specific segments of the Illini/Saluki route.

⁴² See Kuxmann Letter attached as Exhibit 2 to the Krueger RVS (“Kuxmann Letter”). For reasons that are not explained, Mr. Krueger did not include this crossover allowance in the proposed schedules for P392 and P393.

himself acknowledges, however, most of the Illini/Saluki route traverses a single main track between Chicago and Carbondale. This means that there are few locations where a train would ever cross over between main lines. Indeed, only 13% of Illini/Saluki trains incur any delays due to crossover moves. Moreover, one of the purposes of existing recovery time in the Illini/Saluki schedules is to allow for such crossover moves if they do occur.

In addition, there is no reason to add an additional 2 minutes of crossover time in the schedule for the northbound P390 in the segment between Homewood and Chicago/16th Street because any crossover moves in that segment can be avoided if CN lines up the Amtrak train to run on Main 2 from Homewood to 16th Street.⁴³ In addition, contrary to CN's assumption, Amtrak trains do not typically cross over between tracks at the midpoint of the southbound P391 route. Mr. Krueger provides no explanation for his addition of 2 minutes to the P391 schedule for a crossover in the vicinity of that midpoint near Leverett Junction, where there is only one main track and therefore no need for trains to "cross over between main lines."⁴⁴

Fourth, CN's additional recovery time includes between 14 and 21 minutes for "freight meets" that CN claims are "likely to occur during the run of the train."⁴⁵ Mr. Krueger added 7 minutes of recovery time to the schedules for each such "scheduled meet" of a CN freight train with an Amtrak train that was included in his modeling. However, he fails to mention that there are no such "scheduled meets" that have been agreed upon by Amtrak and CN. CN is required

⁴³ Although such one or two minute schedule additions might seem immaterial when considered in isolation, these small differences need to be evaluated in the context of CN's overall schedule adjustment proposal, where CN's various additives, rounding of PRT results and other allowances cumulatively add between 32 and 54 minutes of additional time to the Illini/Saluki train schedules.

⁴⁴ Mr. Krueger proposes to add the 2 minute crossover allowance for the northbound P390 in the segment between Homewood and Chicago/16th Street and for the southbound P391 in the vicinity of Leverett Junction.

⁴⁵ Krueger RVS at 11.

to give Amtrak trains preference and is not entitled to delay Amtrak trains for up to 7 minutes each time CN anticipates a meet between Amtrak's Illini/Saluki train and a CN freight train. CN appears to favor an approach in which time would be added to Amtrak schedules when CN unilaterally schedules a freight train to conflict with an Amtrak train and unilaterally decides that the Amtrak train will be delayed by the freight train despite Amtrak's statutory preference.

Finally, CN states that "minor additional adjustments were made as necessary to help trains more reliably achieve 80% ASOTP."⁴⁶ However, CN provides no further explanation for why such "minor additional adjustments" include the addition of 16 minutes of "OTP Adjustment" time to the schedule for P392 (including an unexplained addition of 15 such "OTP Adjustment" minutes in the last segment of the P392 route between 16th Street and Chicago).⁴⁷ These OTP adjustments are another arbitrary addition by CN which only serve to further lengthen the Illini/Saluki schedules.

4. CN Unnecessarily Adds Time to the Schedules As a Result of CN Grade Crossing Activation Failures

CN has added 12 minutes of additional time in each Illini/Saluki train schedule to account for what it claims are the "slower operating speeds required for Amtrak's Horizon/Amfleet coaches."⁴⁸ This additional 12 minutes in each schedule is based on TPC modeling conducted by Mr. Krueger using the heavier Amtrak consist of 7 passenger cars (to meet CN's minimum axle-

⁴⁶ See Kuxmann Letter.

⁴⁷ See the OTP Adjustment Column of the Schedule Skeleton for P392 that is attached as part of Exhibit 2 to the Krueger RVS. The Krueger RVS fails to provide any specific rationale for these OTP Adjustments and fails to explain why CN believes these adjustments are supposedly necessary to achieve 80% ASOTP.

⁴⁸ See Kuxmann Letter.

count requirement) and incorporating speed restrictions unilaterally imposed by CN on the Illini/Saluki corridor.⁴⁹

As described above, the FRA is engaged in an active investigation to determine the cause of the CN grade crossing activation failures involving Illini/Saluki trains that occurred in 2014 and 2015. Despite various unsupported claims in the Krueger RVS and other parts of CN's Rebuttal, the FRA has not made any determination about whether Amtrak's equipment contributed to the activation failures that occurred at certain CN grade crossings along a segment of the Illini/Saluki route. The axle count requirement and speed restrictions have been imposed unilaterally on Amtrak by CN despite the [REDACTED] of CN's own technical consultant. Therefore, it would be improper to incorporate the CN limitations into the Illini/Saluki schedules until the FRA makes a final determination about the cause of the 2014 and 2015 activation failures.

5. CN's Proposal Would Retain Endloaded Recovery Time

Although the Krueger RVS nominally expresses concern about the location of the recovery time in the existing Illini/Saluki schedules, CN's actual schedule proposal is focused on lengthening schedules instead of reallocating recovery time. In fact, CN's proposal leaves substantial amounts of recovery time at the endpoints. This "endloaded" recovery time retained by CN in its schedule proposals would do little to improve ASOTP, because it would affect on-time performance at only one station out of eleven stations on the route (e.g. at the checkpoint station where CN can earn incentive payments from Amtrak under the existing Operating Agreement). Thus, under CN's proposed checkpoint/relief-based incentive system, the

⁴⁹ The existing Illini/Saluki schedules already include between 10 and 14 minutes of "miscellaneous time" to account for anticipated meets between Amtrak trains along the route. CN's proposed schedules include only 5 minutes of miscellaneous time for these scheduled passenger train meets, and then add the 12 additional minutes of what CN refers to as "miscellaneous time" for the CN operating restrictions.

endloaded recovery time preserved by Mr. Krueger in CN's schedule proposals would contribute substantially to additional incentive payments that Amtrak would be required to pay CN.

As explained above, CN proposes to add significant amounts of recovery time to each of the Illini/Saluki train schedules. Although CN also proposes to distribute a portion of its total recovery time to intermediate stations along the route, CN's proposed schedules retain substantial amounts of recovery time in the last segment prior to the checkpoint. For example, CN's proposed schedule for the northbound P390 would add 15 minutes of additional recovery time to the existing 26 minutes (resulting in total recovery time of 41 minutes) but would retain 22 of the current 26 recovery time minutes in the last segment on CN between Homewood and the Chicago/16th Street checkpoint. CN's proposal for the northbound P392 would add 37 minutes of recovery time to the existing 26 minutes (resulting in total recovery time of 63 minutes) but would retain 16 of the current 26 recovery time minutes in that same last segment before the checkpoint. Similarly, CN's proposal for the southbound P393 would add 23 minutes of additional recovery time (resulting in total recovery time of 49 minutes) but would retain 11 of the current 26 recovery time minutes in the last segment on CN between DuQuoin and the Carbondale checkpoint.⁵⁰ Despite CN's claims about the purpose of its schedule adjustment proposal, these proposed changes appear designed to enable CN to earn increased incentives under the checkpoint system from even longer schedules that continue to have substantial amounts of endloaded recovery time.

6. Summary of CN Schedule Proposals

The current Illini/Saluki schedules already contain between 36 and 40 minutes of recovery time and miscellaneous adjustment time to account for passenger train meets and other

⁵⁰ CN's proposal for the southbound P391 is the only one of CN's four schedule adjustment proposals for the Illini/Saluki trains that more evenly distributes recovery time along the route, leaving 8 minutes of recovery time in the last segment before the checkpoint.

delays. Despite this ample time in the existing schedules to account for potential delays, CN proposes to lengthen the scheduled 5 ½ hour trip of the Illini/Saluki trains by between 32 and 54 minutes based on:

- PRT calculations from CN's proprietary TPC software using the wrong Amtrak train consist, incorporating fictitious interlocking stops, and derived from TPC modeling output that Amtrak is not allowed to evaluate because it has been designated as Highly Confidential by CN;
- An arbitrary "operating allowance" of 5% based on no supporting evidence or empirical analysis;
- An arbitrary allowance of 4% for Temporary Slow Orders that are within CN's control to avoid or minimize, and which allowance is again based on no supporting evidence or empirical analysis;
- An allowance for Amtrak crossover moves that rarely occur;
- An allowance for Amtrak meets with freight trains that are unilaterally scheduled by CN and that are subject to Amtrak's statutory preference;
- An allowance for operating speed restrictions unilaterally imposed by CN based on unsubstantiated allegations about Amtrak's equipment; and
- An additional arbitrary "OTP adjustment" without any explanation or empirical analysis.

Amtrak's proposed redistribution of recovery and miscellaneous time from the endpoints to intermediate segments along the Illini/Saluki route was made in response to the Board's recommendation in EP 726 to consider further alignment of existing schedules with the ASOTP standard adopted by the Board in that proceeding. CN essentially ignored this recommendation from the Board in its schedule proposal (despite its claims to the contrary). Instead of seriously evaluating Amtrak's proposal to redistribute recovery time, CN is using the opportunity to propose significantly longer schedules for the Illini/Saluki trains without any supporting justification (while retaining substantial amounts of endloaded recovery time that benefit only CN). The overall impact of CN's schedule adjustment proposal would be a dramatic lengthening of the Illini/Saluki schedules to the detriment of Amtrak, its passengers and the State of Illinois, and would result in CN earning a substantial increase in incentive payments from Amtrak under CN's proposed checkpoint/relief-based system.

II. CN's Proposed Schedule Changes Are Not Necessary to Achieve 80% ASOTP on the City of New Orleans or Illini/Saluki Services

Mr. Krueger claims that the “schedules for the Illini/Saluki and City of New Orleans services must be changed in order to achieve Amtrak’s desired levels of ASOTP.”⁵¹ To support his claim, Mr. Krueger relies principally on the fact that during the period between January 2016 and May 2017 the Illini/Saluki trains (which operate predominantly over CN) did not achieve 80% ASOTP.⁵² However, Mr. Krueger fails to mention that during a period in 2013 when CN made the effort to perform better as an Amtrak host, CN was able to reduce HRD substantially and improve ASOTP on these Amtrak services as described below.

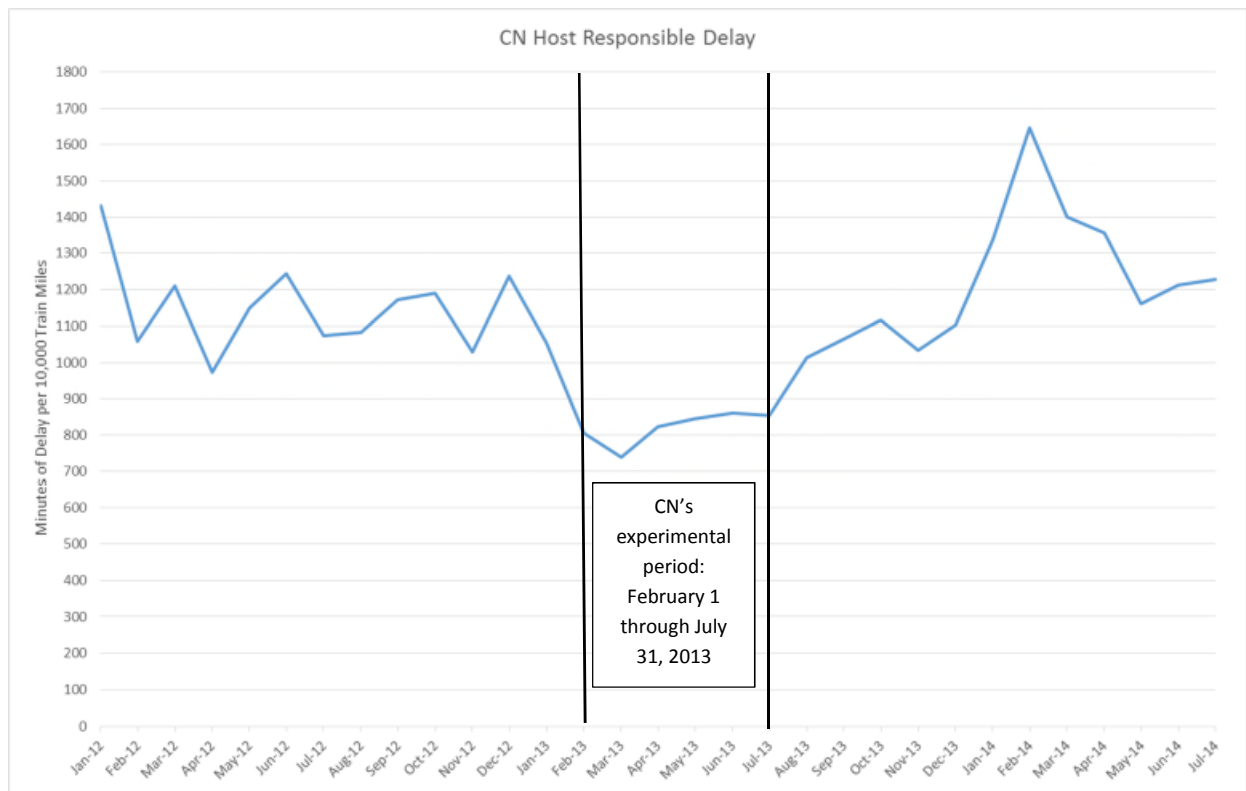
A. ASOTP Has Been Significantly Higher When CN Made the Effort To Perform Better

During the initial part of 2013, CN made what it characterizes in its Rebuttal as a “temporary experimental effort” to improve its performance handling Amtrak trains.⁵³ CN’s improved performance during this period illustrates how HRD can be reduced and ASOTP can be improved without changing schedules. Between February 1 and July 31, 2013, CN reduced HRD per 10K miles for all the relevant Amtrak services by 27% relative to the same period in 2012, as shown in the following graph:

⁵¹ Krueger RVS at 2.

⁵² See Krueger RVS at 7, Table 1. Similarly, the City of New Orleans trains (which also operate predominantly over CN) did not achieve 80% ASOTP during this period between January 2016 and May 2017.

⁵³ See Ladue/Kuxmann RVS at 47, footnote 53 (describing CN’s performance during early 2013 as a “temporary experimental effort to attempt to meet” the 900 HRD/10,000 train mile standard established by PRIIA).



The above graph also demonstrates that, after the D.C. Circuit Court decision in July 2013 that initially invalidated the PRIIA metrics, CN’s performance immediately began to deteriorate again.

During this period in 2013 when CN made the effort to perform better, ASOTP on the City of New Orleans averaged 81% for the first four months and 76% for the entire six-month period. This improved performance occurred without the added recovery time and other schedule changes sought by CN, which demonstrates that such schedule changes are not “required” (as CN claims) to achieve 80% ASOTP on the City of New Orleans service. If recovery time in the City of New Orleans schedules had been redistributed to intermediate stations as recommended by the Board and as proposed by Amtrak, ASOTP would have been even higher during this period. The foregoing evidence from CN’s own performance disproves

Mr. Krueger's claim that CN cannot achieve 80% ASOTP on the City of New Orleans service without CN's proposed schedule changes.

On the Illini/Saluki service, ASOTP during this six-month period also improved significantly. ASOTP for the Illini/Saluki service during this six-month period in 2013 averaged 62%, almost double the ASOTP during the January 2016 through May 2017 period analyzed by Mr. Krueger – a period when CN does not appear to have made the effort to perform as well as it did in the initial part of 2013. Although CN's HRD per 10K Miles improved during the 2013 experimental period, CN could have performed even better. During this same time period, there were a total of 21 Amtrak services on other Class I host railroads that performed better than CN did on the Illini/Saluki service as shown in the Table below. Had CN performed better, ASOTP for the Illini/Saluki service during this period in 2013 would have been even higher.

TABLE 1

Host	Service	HRD per 10K TM Feb-Jul 2013	Route Miles
CN	Illini/Saluki	913	304

Amtrak services on other Class I hosts with HRD less than the level of the Illini/Saluki during the experimental period from February through July 2013

Host	Service	HRD per 10K TM Feb-Jul 2013	Route Miles
BNSF	California Zephyr	898	1027
	Carl Sandburg / Illinois Zephyr	771	257
	Coast Starlight	565	186
	Southwest Chief	521	2206
	Sunset Limited	754	190
CP	Hiawatha	513	53
CSX	Pere Marquette	695	135
	Silver Meteor	853	1152
NS	Carolinian	542	202
	Crescent	859	1141
	Lynchburg	342	166
	Pennsylvanian	521	249
	Piedmont	597	173
	Richmond / Newport News /Norfolk	668	81
	Silver Star	693	28
UP	California Zephyr	724	1381
	Capitol Corridor	498	171
	Cascades	573	125
	Missouri	395	271
	Pacific Surfliner	792	174
	San Joaquins	829	88

Moreover, if recovery and miscellaneous time had been redistributed to intermediate stations in the Illini/Saluki schedules as recommended by the Board and as proposed by Amtrak, ASOTP during this period in 2013 would have been even higher. The foregoing evidence from CN's own performance disproves Mr. Krueger's claim that CN cannot achieve 80% ASOTP on the Illini/Saluki service without CN's proposed schedule changes.

B. Other Amtrak Routes Achieve 80% ASOTP With Endloaded Recovery Time

Mr. Krueger claims that endloaded recovery time in Amtrak’s schedules for the Illini/Saluki and City of New Orleans services precludes the “reliable achievement of high levels of ASOTP.”⁵⁴ However, endloaded recovery time is not unique to the schedules for Amtrak services on CN. Other Amtrak schedules also include endloaded recovery time, while performance on these routes often exceeds 80% ASOTP. The following table compares the proportion of endloaded recovery time in the existing schedules for the Illini/Saluki and City of New Orleans services to the proportion of such recovery time in the schedules of other example Amtrak services that often exceed 80% ASOTP. The Illini/Saluki and City of New Orleans have a similar proportion of endloaded recovery time in the existing schedules as the other services, but dramatically lower ASOTP due to CN’s poor performance.

TABLE 2

Service	Percent Endloaded Recovery and Miscellaneous Adjustment Time*	ASOTP FY17Q4
Heartland Flyer	67%	82%
Hiawatha	87%	97%
Carl Sandberg/Ill Zephyr	61%	91%
City of New Orleans	55%	47%
Illini/Saluki	87%	33%

*Endloaded time is time between the second-to-last station and the last station, plus at the Memphis checkpoint on the City of New Orleans.

⁵⁴ Krueger RVS at 3.

C. Even If Dramatically Longer Schedules Were Implemented As Proposed By CN, CN's Schedule Proposal Offers No Assurance That 80% ASOTP Would Result

Mr. Krueger's claim that CN would be able to reliably achieve 80% ASOTP under CN's dramatically lengthened schedules for the Illini/Saluki trains is premised on the questionable assumption that there would be "no change in delay experience."⁵⁵ However, CN offers no assurance to Amtrak that CN delays will not expand to include the additional recovery and miscellaneous time that CN wants to add to the Illini/Saluki schedules (and presumably would seek to add to the City of New Orleans schedules as well). In fact, because under CN's proposal the schedules for the Illini/Saluki trains would have nearly the same amount of endloaded recovery time that is in the schedules today, and CN's performance would continue to be measured only at route endpoints under the same flawed checkpoint/relief-based incentive system, Amtrak would continue to have poor ASOTP and be forced to pay CN at least the same amount of performance incentives that Amtrak does today if CN delays increased to absorb the additional recovery and miscellaneous time added to the schedules by CN.⁵⁶

In fact, Amtrak has no assurance that adjusting the Illini/Saluki schedules even in the manner proposed by Amtrak (by redistributing existing recovery time to intermediate stations) would lead to improved ASOTP given CN's historical performance. For several years, CN has been the worst performing Class I host railroad in terms of overall HRD and related measures of

⁵⁵ Krueger RVS at 13.

⁵⁶ Amtrak's experience on other routes (including the Sunset Limited) has been that lengthening the schedule does not necessarily improve ASOTP. See Reply Comments of Amtrak, On-Time Performance Under Section 213 of Passenger Rail Investment and Improvement Act of 2008, Docket No. EP 726 (STB filed Mar. 30, 2016). The Sunset Limited's ASOTP has been well below 40% for the most recent quarter, as reflected in the Host Railroad Reports referenced below. VIA has had the same experience from lengthening schedules with CN on its *Canadian* service. See Vilter/Maga RVS at 72.

delay to Amtrak trains operating over CN.⁵⁷ Although Amtrak believes that reallocating recovery time as it has proposed could lead to improved ASOTP, this is only one element of improving performance. CN also needs to be motivated to minimize HRD minutes under an effective incentive system (as Amtrak has proposed in this proceeding).

Although CN's proposed schedule changes offer no assurance that its performance would improve, and in fact CN makes no such commitment to improved performance, there is no doubt that CN's proposed schedule changes would result in substantial financial benefits for CN. If CN's proposed schedule changes for the Illini/Saluki services had been implemented for the current fiscal year period, Amtrak would have had to pay CN an additional incentive payment of approximately [REDACTED] under the current Operating Agreement.⁵⁸ CN would have received even more in incentive payments under its proposed modifications to the checkpoint/relief-based system, given the expanded relief items that CN is seeking in this proceeding.⁵⁹ Meanwhile, Amtrak and the State of Illinois would have experienced lower ridership and revenue, and increased costs, as described above.

D. CN's Claim That FTI Is the Only Type of HRD That CN Can Control Is Contradicted by the Evidence

Mr. Krueger claims that the HRD thresholds proposed by Amtrak are unreasonable because the delay reductions needed to meet these thresholds supposedly must come primarily

⁵⁷ See, e.g., Amtrak's Host Railroad Reports from the last two full quarters of calendar year 2017, which are attached hereto as Exhibit 3. Amtrak's Host Railroad Reports are provided to CN (and Amtrak's other host railroads) on a monthly basis. These reports also are available on Amtrak's public website for 12 months after issuance.

⁵⁸ This additional amount of incentive payment is calculated on an annualized basis based on what CN would have earned in the fiscal year period to date (October 2016 through May 2017), and compares to the zero incentives that CN has earned under the existing schedules in the Operating Agreement because of its poor performance on the Illini/Saluki trains.

⁵⁹ These additional incentive amounts also presume that delays caused by the operating restrictions imposed by CN as a result of its grade crossing activation failures are not relievable items.

from reducing Freight Train Interference (“FTI”).⁶⁰ However, during CN’s “temporary experimental effort” between February and July 2013 when it made the effort to improve its performance, CN reduced overall HRD by reducing delays in numerous delay categories. This reduction included slow orders, signals, and maintenance of way delays which Mr. Krueger claims are “inherent” and “unavoidable.”⁶¹ This reduction also included delays from passenger train meets which Mr. Krueger claims are “largely outside CN’s control.”⁶² CN’s own performance during this period confirms that CN is able to improve performance and reduce all categories of HRD using operational efforts, contradicting Mr. Krueger’s claims that such delay reductions are outside of CN’s control.⁶³

The HRD reductions CN made during its temporary experimental effort in 2013 are shown in comparison to the same time period in the prior year and subsequent year in the following table and graphs. The graphs demonstrate that when CN makes the effort to perform better, it can substantially reduce the slow order delays, signal delays, maintenance of way delays, and other non-FTI delays that the Krueger RVS claims are outside of CN’s control. The graphs also illustrate the outcome when CN is not making a concerted effort to improve its performance, as shown in the large increase in HRD during the same time period of the subsequent year.

⁶⁰ Krueger RVS at 15.

⁶¹ Krueger RVS at 15.

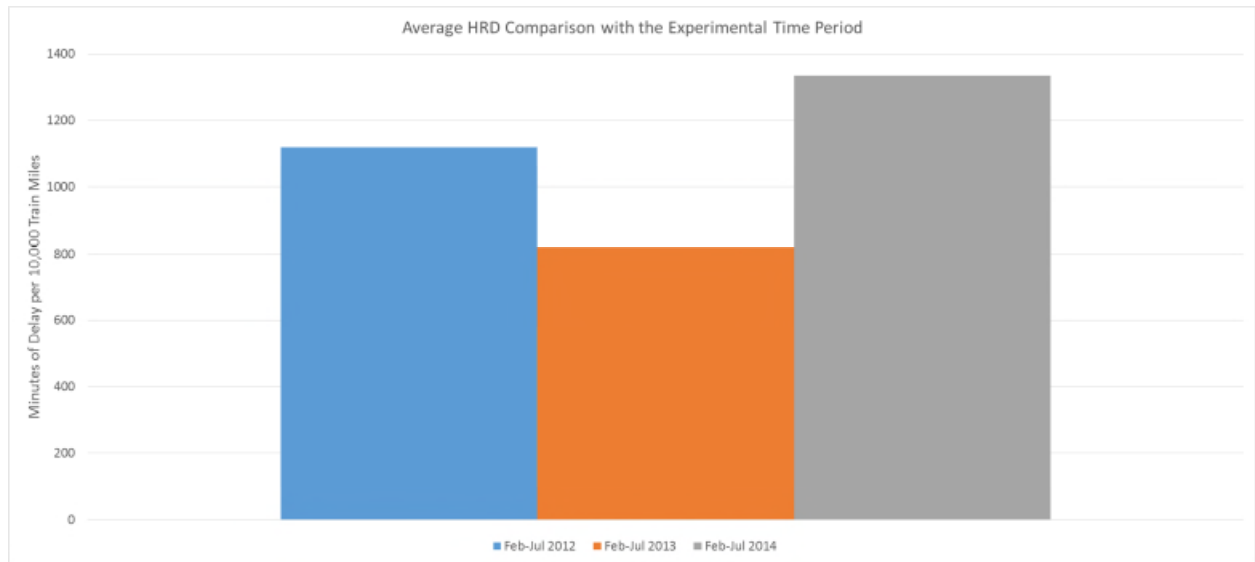
⁶² Krueger RVS at 15.

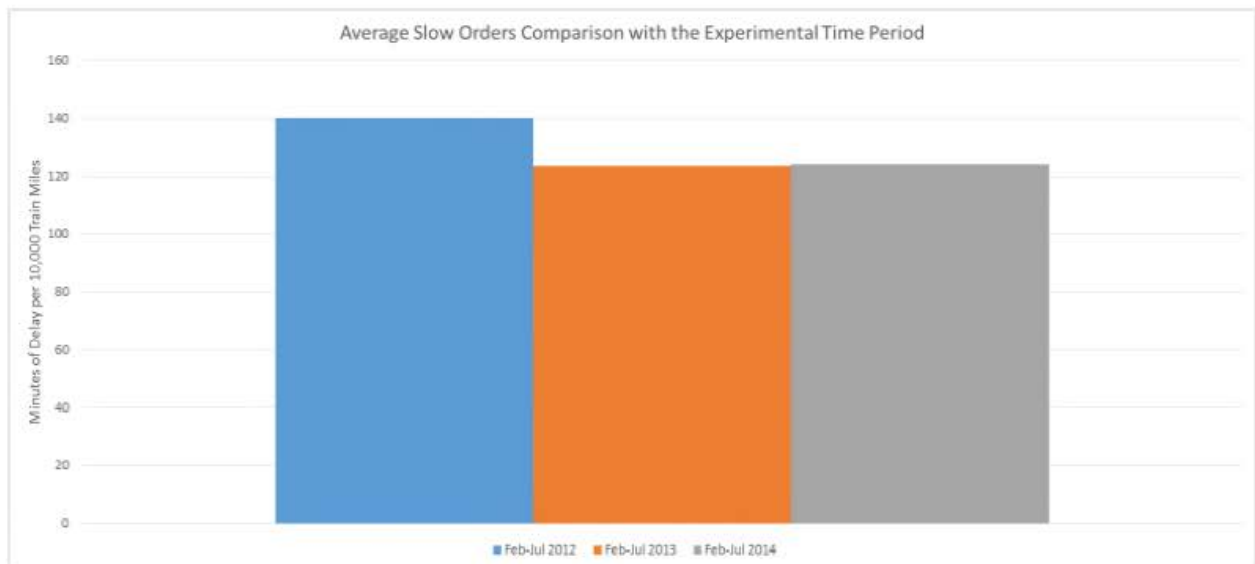
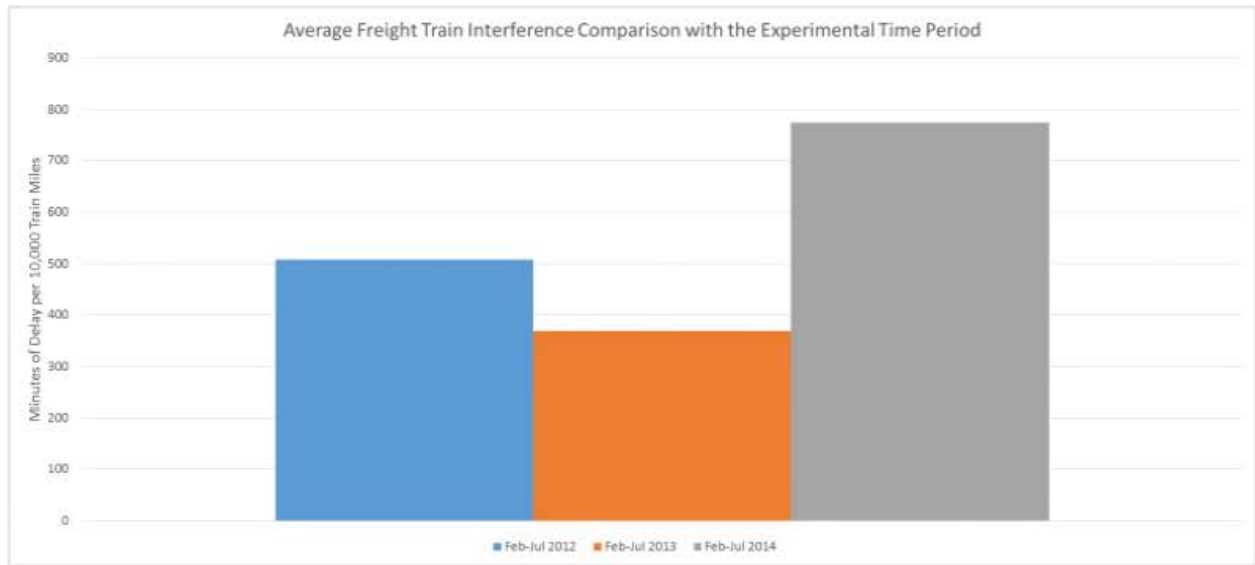
⁶³ The HRD reductions achieved by CN during this period could not have been the result of other factors that CN often blames for its poor performance, such as the performance of other hosts or bad weather.

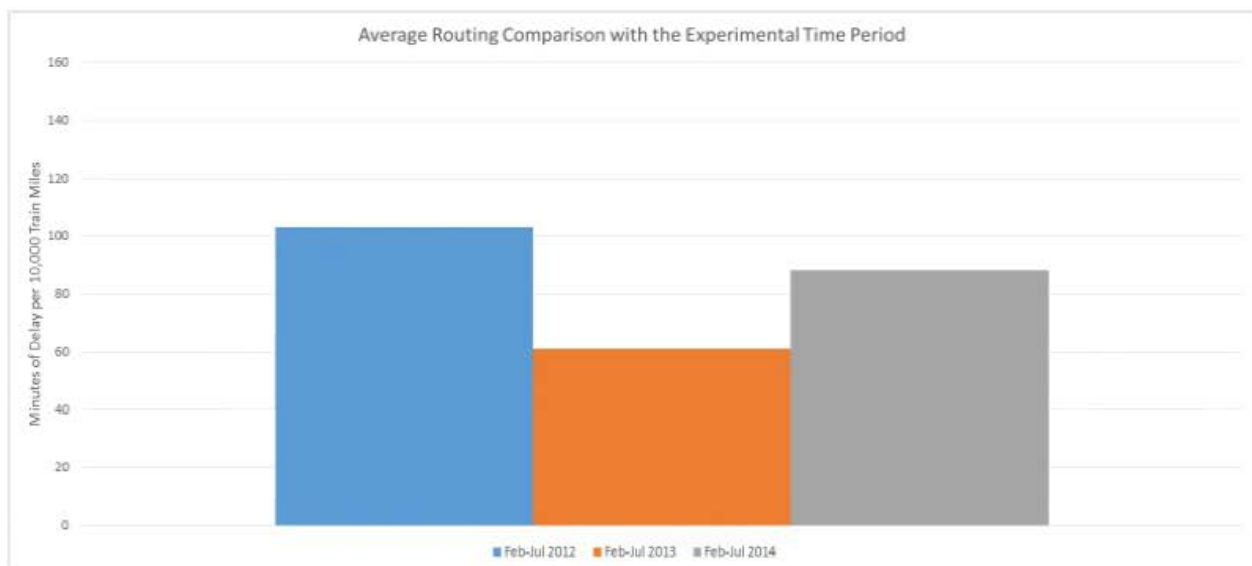
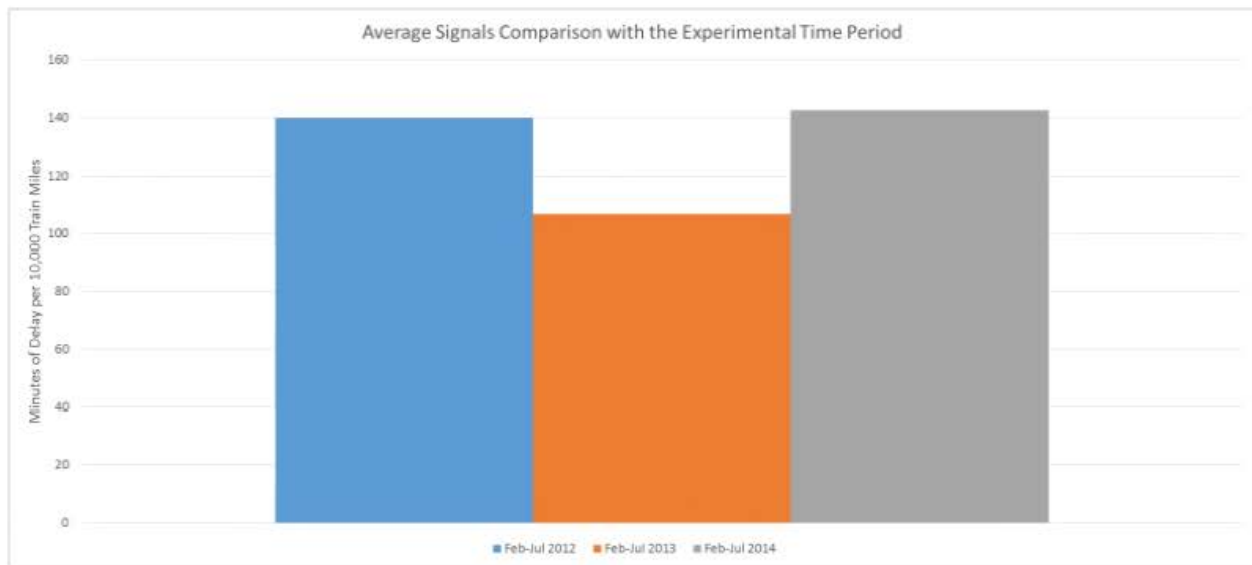
TABLE 3

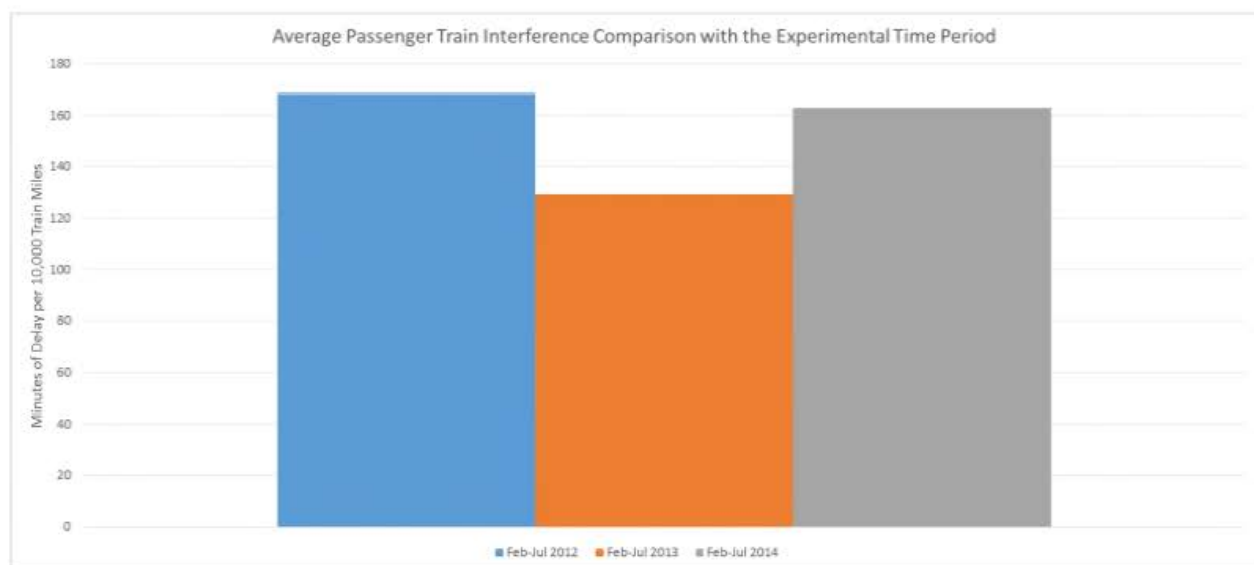
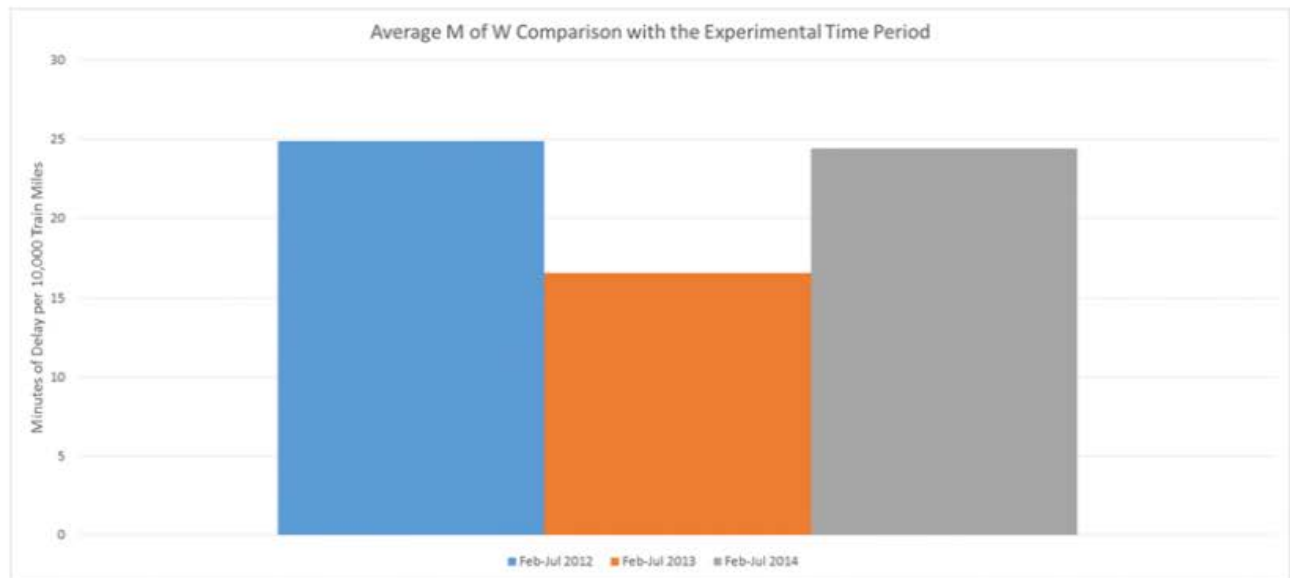
Improvement in CN Host Responsible Delays During Temporary Experimental Effort

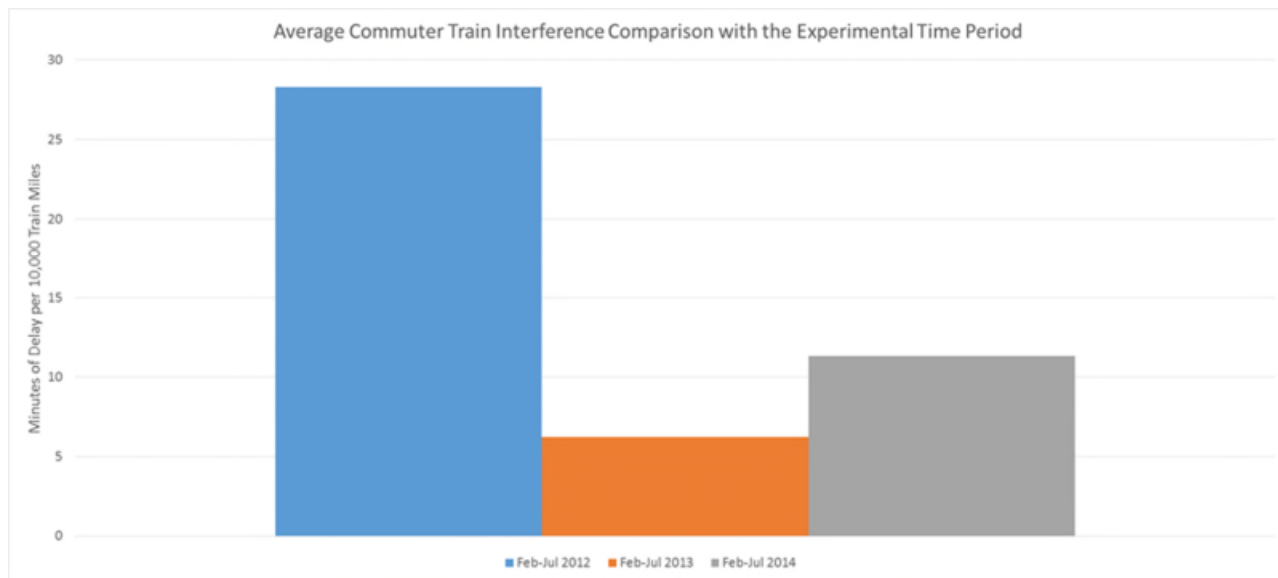
Delay Type	% change from Feb-Jul 2012 to Feb-Jul 2013	% change from Feb-Jul 2013 to Feb-Jul 2014
Host Responsible Delay (Total)	-27%	+62%
Freight Train Interference	-27%	+109%
Slow Orders	-12%	+1%
Signals	-24%	+34%
Routing	-41%	+44%
M of W	-33%	+47%
Passenger Train Interference	-23%	+26%
Commuter Train Interference	-78%	+82%











Other host railroads also have demonstrated the ability to improve performance on non-FTI delay categories as a result of concerted management efforts to reduce such delays. As shown in the graph below [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

E. Other Amtrak Hosts Have Been Able To Meet Similar FTI Thresholds

Mr. Krueger claims that it would be impossible for CN to achieve Amtrak's proposed HRD thresholds due to the "allowable" monthly FTI for each service that he reflects in Table 6 of the Krueger RVS. Mr. Krueger's calculation is based on the assumption that CN has no ability to reduce non-FTI delay, which I have shown above is a false premise. Mr. Krueger's calculation also is based on the false premise that CN should be legally entitled to earn incentives from Amtrak even when CN's performance consistently does not meet Amtrak's expectations. The incentive system should be designed to motivate CN to provide quality performance - it should not be structured so that CN is guaranteed to meet the incentive performance levels. CN's entire criticism of Amtrak's delay-based proposal is based on this false premise.

Even accepting the legitimacy of Mr. Krueger’s “allowable” FTI calculation for purposes of discussion only, CN’s suggestion that other host railroads have not been able to meet similar FTI thresholds is contradicted by the evidence.⁶⁴ The table below shows several other Class I host railroads with Amtrak services of comparable route miles to the Blue Water, City of New Orleans, or Lincoln service that have been able to achieve lower levels of FTI than Mr. Krueger claims CN would need to achieve on these services in order to earn guaranteed incentives.

⁶⁴ See Ladue/Kuxmann RVS at 34.

TABLE 4

Host	Service	"Allowable" monthly FTI (from Table 6 of Krueger RVS)	Route Miles
CN	Blue Water	620	159
	City of New Orleans	131	930
	Lincoln	178	35

Amtrak services on other Class I hosts with FTI comparable to or less than the levels noted in the Krueger RVS (as shown above)

Host	Service	FTI per 10K TM FY17 Q4	Route Miles
BNSF	Carl Sandburg / Illinois Zephyr	202	257
	Coast Starlight	100	186
	Empire Builder	251	2147
	Southwest Chief	181	2206
CP	Adirondack	67	178
	Ethan Allen Express	28	60
	Empire Builder	129	384
	Hiawatha	58	53
CSX	Pere Marquette	176	135
NS	Carolinian	89	202
	Richmond / Newport News /Norfolk	32	81
	Silver Star	85	28
UP	Capitol Corridor	45	171
	Pacific Surfliner	147	174
	San Joaquin	164	88

III. Additional Contractual Language for Amtrak's Delay-Based System Proposal

Amtrak submitted its delay-based incentive system proposal into the evidentiary record in this proceeding in the form of proposed Appendix V to the Operating Agreement, which was submitted as Exhibit 1 to the Verified Statement of Paul Vilter ("Vilter VS") that was filed as part of Amtrak's Opening Evidentiary Submission. Amtrak's proposed Appendix V contains the contractual provisions which would govern the delay-based incentive system that Amtrak is asking the Board to adopt in this proceeding. As explained in the Vilter VS, Amtrak's delay-based incentive system is designed to motivate CN to provide better on-time performance for Amtrak's trains at all stations. The delay-based system establishes Host Responsible Delay ("HRD") thresholds on a route by route basis in order to align the incentive system with the actual impact of CN's performance on Amtrak service – and hence its passengers - at each station.

Amtrak's proposed Appendix V contains a table of HRD per 10K Train Mile Thresholds which determines whether CN would earn quality payments or penalties based on its monthly host performance by Amtrak Route.⁶⁵ The calculation of the Thresholds is explained in the Verified Statement of Benjamin Sacks ("Sacks VS") which was submitted as part of Amtrak's Opening Evidentiary Submission. As explained therein, the Thresholds were determined based on a linear regression analysis of HRD levels which correspond to 80% All-Stations On-Time Performance ("ASOTP") on each Amtrak Route.

Amtrak recognizes that if the parties agree upon adjustments to the schedules for any of the Amtrak routes (pursuant to the schedule adjustment provisions of Section 3.2 of the Operating Agreement, which are not in dispute), such changes could in certain cases impact the

⁶⁵ The capitalized terms "HRD per 10K Train Miles", "Threshold" and "Amtrak Route" are defined in Amtrak's proposed Appendix V to the Operating Agreement.

relevant Threshold under Amtrak's delay-based system.⁶⁶ This is reflected in Section 3.2.C.6 of Amtrak's proposed Operating Agreement, which specifies that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Nonetheless, to provide further clarity about Amtrak's intent in this regard in light of the concerns raised in CN's Rebuttal about potential schedule change impacts on the Amtrak HRD Thresholds, Amtrak is proposing to include the following additional language as new Section IV of its Appendix V proposal:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The adoption of the foregoing contractual provision should clarify that [REDACTED]

[REDACTED]

⁶⁶ For example, if CN were to accept Amtrak's proposal to reallocate the existing recovery time in the Illini/Saluki and City of New Orleans schedules to more intermediate stations, Amtrak would adjust the HRD Thresholds based on such a schedule adjustment (and the HRD Thresholds could increase considerably). However, since CN has outright rejected Amtrak's proposal to reallocate such recovery time (both in 2011 and more recently), Amtrak's proposed HRD Thresholds are based on current schedules with the understanding that a recalculation would occur in the event of a material schedule adjustment.



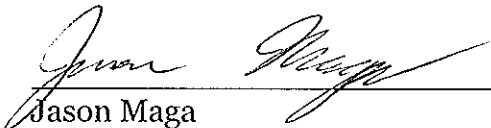
IV. Conclusion

CN's schedule adjustment proposal, and the underlying TPC modeling and related explanations provided in the Krueger RVS about the purported rationale for that schedule adjustment proposal, is based on numerous flawed assumptions about CN's alleged inability to control Host Responsible Delays (which CN proved it was able to reduce when it made the effort in 2013) and other unjustified reasons for adding substantial amounts of additional time to the Illini/Saluki train schedules without any commitment by CN to improve ASOTP. CN's schedule adjustment proposal also incorporates minimum axle count and speed restrictions imposed on Amtrak by CN following grade crossing activation failures that CN blames entirely on Amtrak's equipment, despite contrary evidence from CN's own technical consultant and an ongoing FRA investigation into the cause of those activation failures. Taken together, CN's schedule adjustment proposal appears to be nothing more than a bold attempt by CN to extract additional incentive payments from Amtrak under CN's checkpoint/relief-based system for performance that is no better (and probably will be worse) than CN provides today as the host of the Illini/Saluki trains, to the substantial detriment of Amtrak, its passengers and the State of Illinois.

VERIFICATION

I, Jason Maga, verify under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Surrebuttal Verified Statement.

Executed on October 30, 2017



Jason Maga

EXHIBIT 1



October 27, 2017

Mr. Scott Kuxmann
NRPC Operations Officer
CN North America
17641 South Ashland Ave.
Homewood, Illinois 60430-1345

*Re: Reallocation of Recovery Time
Illini/Saluki and City of New Orleans Services*

Dear Scott:

This letter responds to your August 18, 2017 letter to Amtrak regarding Amtrak's proposals to reallocate recovery time on the Illini/Saluki and City of New Orleans services.

On February 13, 2017, Amtrak proposed schedule adjustments that would reallocate recovery time in the subject services. Amtrak made the proposal in an effort to follow the Surface Transportation Board's recommendation in the PRIIA 213 on-time-performance rulemaking (Ex Parte 726) and Amtrak anticipates that the reallocation would improve All Stations On Time Performance (ASOTP) on both services. Instead of responding to the issue raised by the Board or the proposal made by Amtrak, CN makes no response with respect to the City of New Orleans and proposes to add between 32 and 54 minutes to the Illini/Saluki schedules based upon CN's position on a number of schedule-related issues presently before the Board in the Amtrak/CN terms and compensation proceeding (FD 35743).

Amtrak disagrees with CN on most if not all of the schedule-related issues raised in your letter, but those issues are pending before the Board in the Amtrak/CN terms and compensation proceeding. In the meantime, Amtrak believes the parties should take steps to address the Board's recommendation in Ex Parte 726 and possibly improve ASOTP on both services. Amtrak remains interested in implementing its February 13, 2017 proposals to reallocate recovery time on the Illini/Saluki and City of New Orleans services. Please let me know if CN would like to move forward with those proposals, or with an alternative reallocation of existing recovery time.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Maga".

Jason Maga
Senior Manager, Host Railroads

Cc: J. Blair - Amtrak
M. Azen - Amtrak

EXHIBIT 2



October 22, 2015

Mr. Robert Lauby
Associate Administrator for Railroad Safety & Chief Safety Officer
Federal Railroad Administration
1200 New Jersey Ave SE
Washington, DC 20590-0001

Dear Mr. Lauby:

Please accept this letter as a formal complaint requesting FRA to investigate possible violations of 49 CFR Part 234-Grade Crossing Safety, specifically § 234.103, § 234.105, § 234.207 and § 234.227, by the Canadian National Railway Company and its United States operating subsidiaries (collectively CN).

At a number of highway-rail grade crossings equipped with active warning systems, CN has instituted operating restrictions which apply only to Amtrak trains. As shown on the attached CN Region Quarterly Bulletin Reissue, the operating restrictions are:

All Amtrak trains operating on CN between Clark Street, Chicago Subdivision, MP1.5, and Centralia Subdivision, MP 253.2, are restricted to 70 mph over all crossings at grade unless the trains consist contains a minimum of seven, 7, of the following Superliner series of cars, 30000-39999.

All Amtrak passenger trains are required to operate with a minimum of 30 axles. Except Joliet, Freeport (between Bridgeport and Cermak), Holly, Shoreline and South Bend Subdivisions, a minimum of 24 axles are required.

All Amtrak passenger trains regardless of axle count, must make a minimum brake application at least once every 10 miles in order to keep all wheels properly conditioned.

The most recent restriction, reduced speed for only Amtrak trains, was imposed by CN after an alleged instance of short warning time for an Amtrak train due to insufficient train detection, allegedly caused by failure to shunt. This restriction has been in effect since September 28, 2014. The restrictions on Amtrak trains for additional axle count and braking every 10 miles have been in effect since 2008.

Mr. Robert Lauby
October 22, 2015



Amtrak believes that CN has failed to fulfill its regulatory obligations under Part 234 in several areas:

CN is required by § 234.227 to maintain the train detection apparatus to detect a train or railcar in any part of the train detection circuit, in accordance with the design of the warning system. By instituting the operating restrictions, CN provides evidence of its failure to comply

As the railroad having maintenance responsibility for the warning system, CN is required, pursuant to Sec. 234.103, to promptly investigate, determine the nature of the malfunction, and take appropriate action as required by § 234.207. This necessitates CN determining the cause and effecting the necessary corrective action, not merely instituting an open-ended operating restriction.

When CN has knowledge that any essential component of a highway-rail grade crossing warning system fails to perform its intended function, it is required to take appropriate action under § 234.105, § 234.106, or § 234.107 of this part. These Sections require all train crews to stop and flag the crossing unless appropriate equipped flaggers, or uniformed law enforcement officers are providing warning. The regulation does not provide for the use of operating restrictions in lieu of the federally required warning.

We respectfully request that the Federal Railroad Administration investigate the circumstances described above and take such action as it deems appropriate to promote the safe and efficient operation of trains and compliance with the Federal railroad safety regulations by all parties.

Sincerely,

A handwritten signature in black ink, appearing to read "DJ Stadtler", with a stylized flourish at the end.

DJ Stadtler
EVP/Chief Operations Officer



CN REGION QUARTERLY BULLETIN REISSUE 17

amount of time, notify the ATC and stop the train at the next available location. If airflow does not improve after stopping, the train must be inspected for leaks.

Page 9- ADD New Title and Instruction under EQUIPMENT RESTRICTIONS above Prohibition on Hiding equipment: Key/ Key Crude Trains - Key / Key Crude Trains are restricted as follows: All Key and Key Crude trains are speed restricted to maximum of 35 MPH in all High Threat Urban Area's (HTUA) and population centers exceeding 100,000 residents. These specific restricted locations will be posted in each applicable Timetable footnotes under "Speed Restrictions".

For all other posted speeds within these identified locations, the most restrictive will apply".

Page 10- ITEM 2. EQUIPMENT RESTRICTIONS- Under MAXIMUM SPEEDS list, **DELETE:** Loaded DMIR 24 ft ore cars (except DMIR 70000-70231 and 70500-71203)- 30 MPH, Loaded DMIR 70000-70231 and 70500-71203- 40 MPH, Empty 24 ft. ore cars (except DMIR 70000-70231 and 70500-71203) -40 MPH, DMIR 70000-70231 and 70500-71203 (empty movement only) -50 MPH.

ADD: Loaded DMIR 24 ft ore cars (except DMIR 70000-70231 and 70500-71435) - 30 MPH, Loaded DMIR 70000-70231 and 70500-71435- 40 MPH - Except: (Loaded 79 tons or less)- 50 MPH, Empty 24 ft. ore cars (except DMIR 70000-70231 and 70500-71435)- 40 MPH, DMIR 70000-70231 and 70500-71435 (empty movement only) - 50 MPH

ITEM 2. EQUIPMENT RESTRICTIONS- Under Amtrak Passenger Trains, **ADD** New 2nd sentence to first paragraph: All Amtrak trains operating on CN between Clark Street, Chicago Subdivision, MP 1.5, and Centrella Subdivision, MP 253.2, are restricted to 70 mph over all crossings at grade unless the train consist contains a minimum of seven, 7, of the following Superliner series of cars, 30000-39999.

ADD THE FOLLOWING PARAGRAPHS: All Amtrak passenger trains are required to make a Safety Stop approximately 500 feet prior to a Fixed Signal displaying Stop indication. Once complete, train can pull down to signal and stop to wait for permissive indication.

All Amtrak passenger trains are required to operate with a minimum of 30 axes. Except: Joliet, Freeport (between Bridgeport and Cermak), Holy, Shoreline, and South Bend Subdivisions, minimum of 24 axes are required.

All Amtrak passenger trains regardless of axis count, must make a minimum brake application at least once every 10 miles in order to keep all wheels properly conditioned.

NEW TITLE AND PARAGRAPH- **BELOW "Amtrak Passenger Trains" PARAGRAPHS,** **ADD to the end of first paragraph:** EMPTY CENTER BEAM AND BULK HEAD FLAT CARS – Speed restricted empty Center Beam and empty Bulkhead cars will be identified on "CN" WOPRT/Workorder following line as "Speed Restricted to 45 MPH." . If no restriction appears on the "CN" Train Journal/Work order or specifically by car series in the SSI "Equipment Restrictions" section. The car has no restrictions.

When a WOPRT/Workorder is not available when empty Center Beam or empty Bulkhead Flat cars are picked up unscheduled, these cars are restricted to 45 MPH until the proper authority has determined these car types are unrestricted.

Any train operating without "CN" WOPRT/Workorder on CN trackage must not exceed 45 mph until it is verified there are no empty Center Beam or empty Bulkhead Flat cars in their consist.

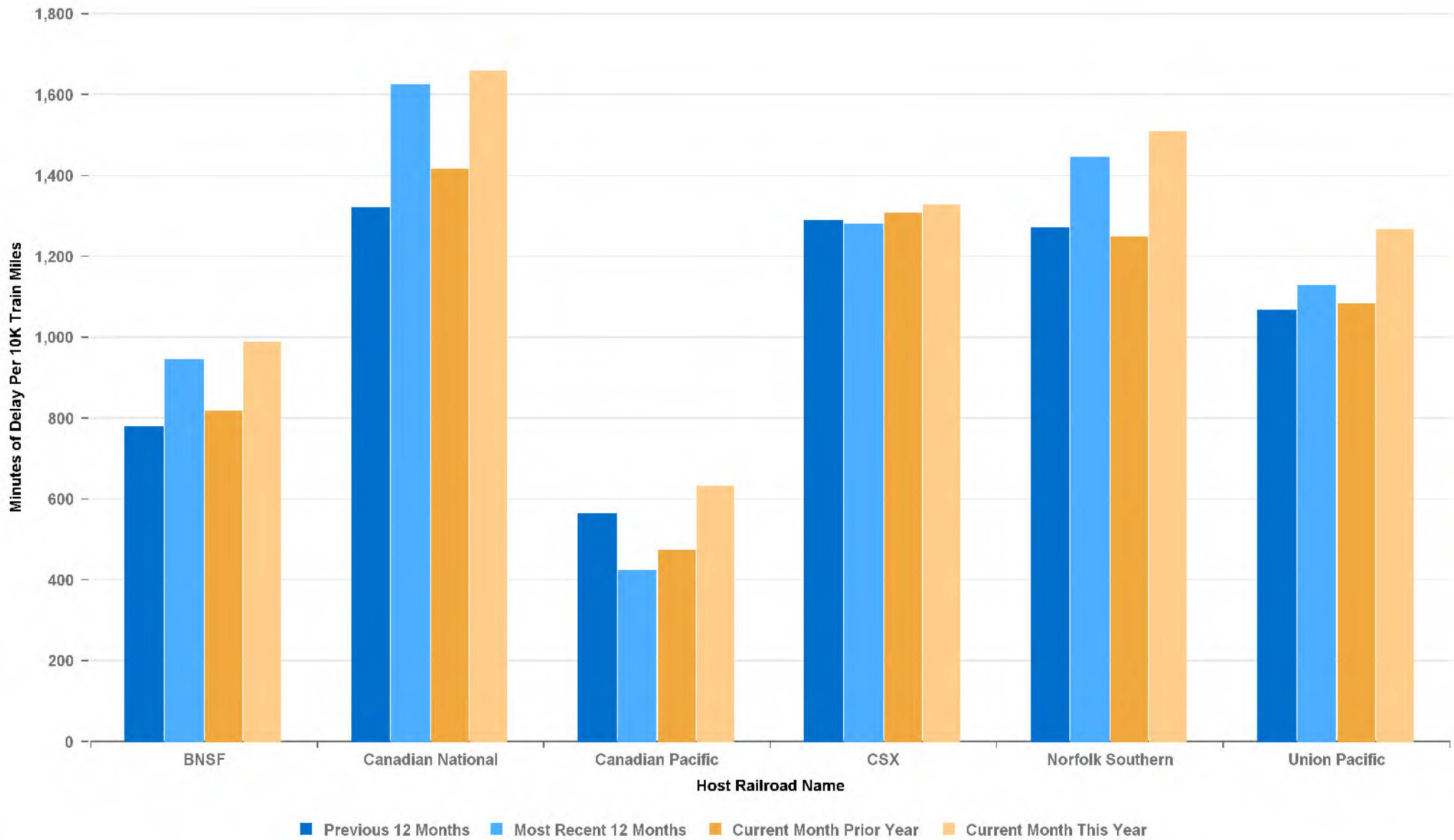
EXHIBIT 3

Host Railroad Report

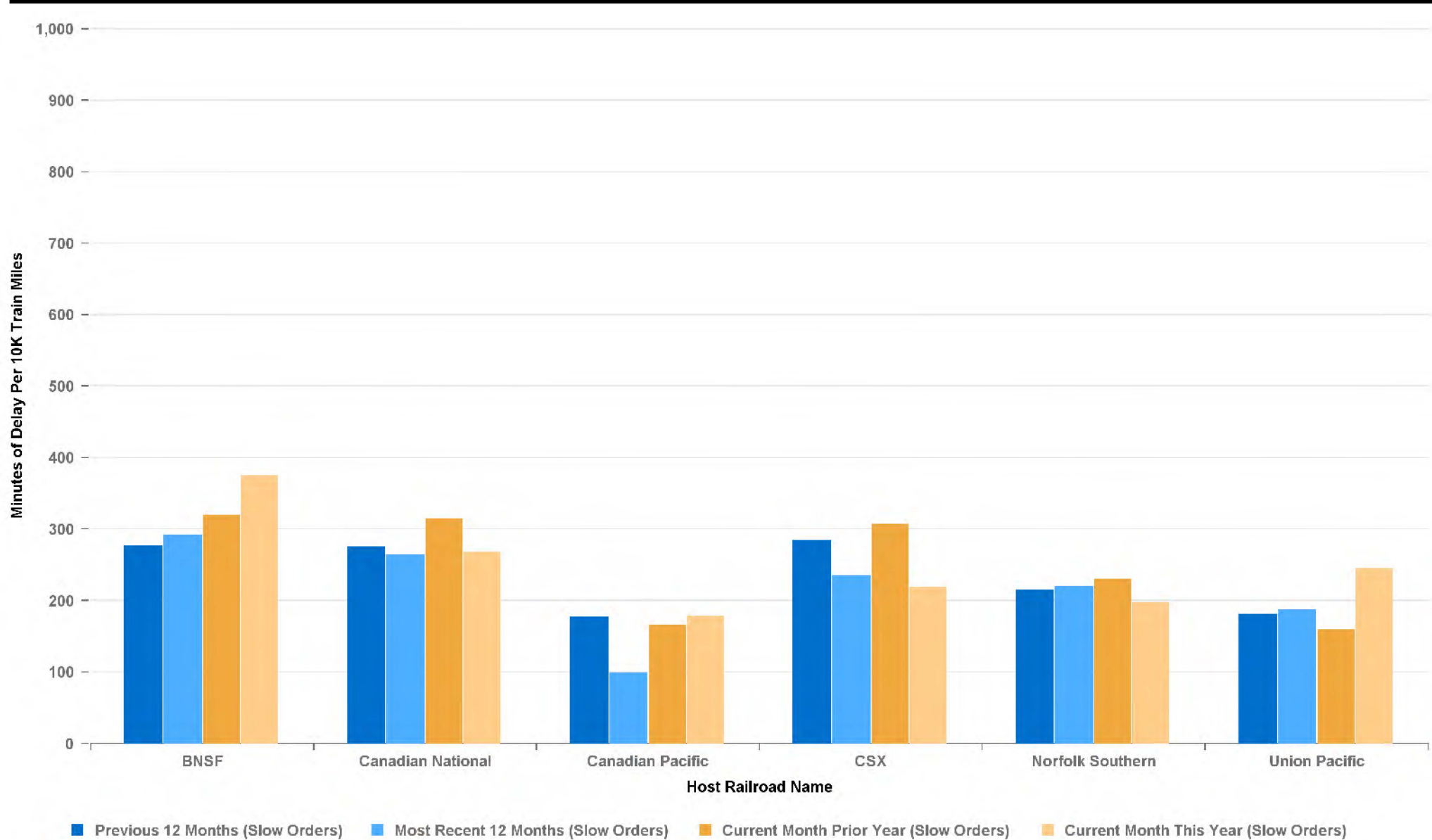


July 2017

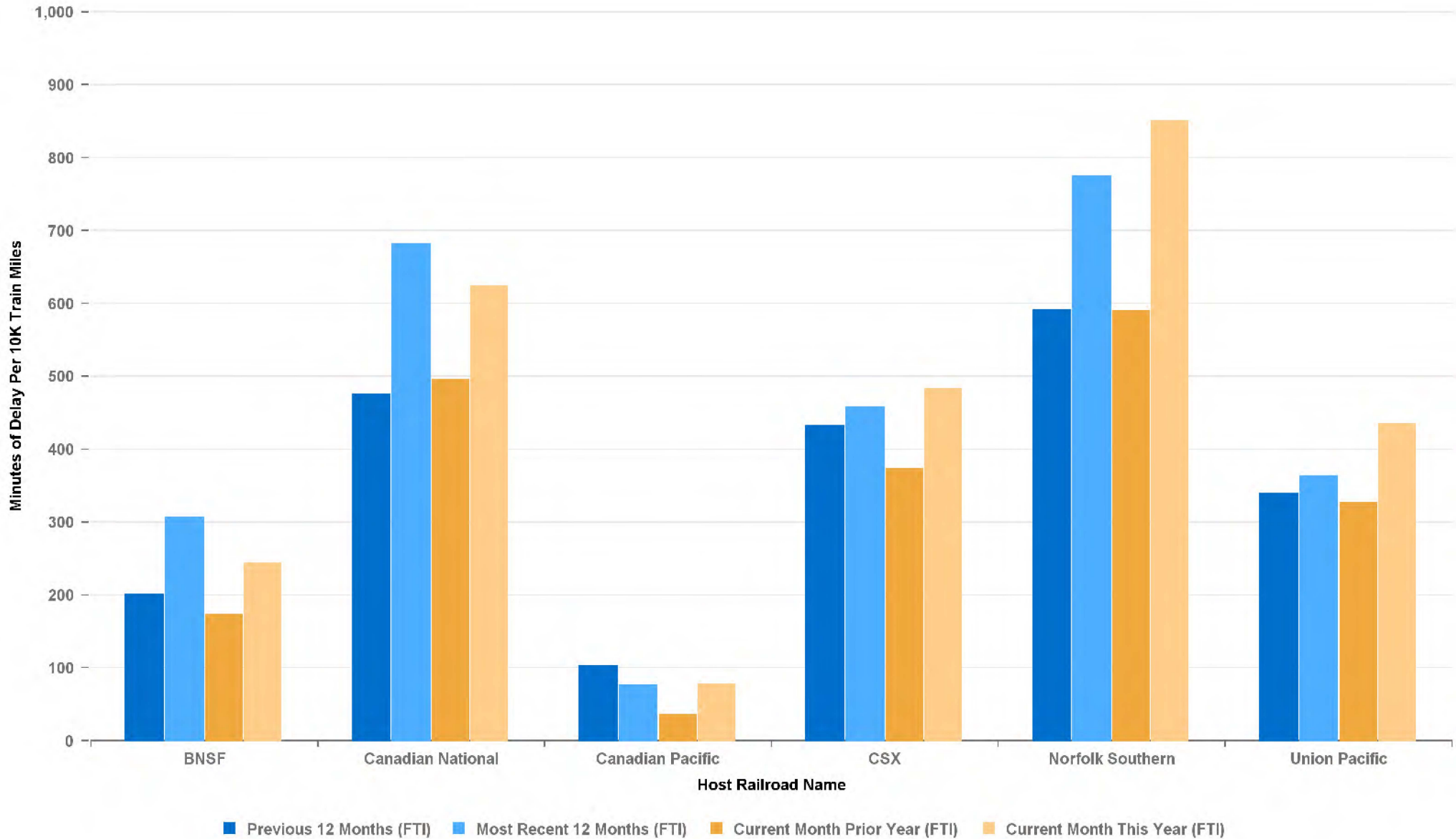
Total Host Responsible Delays by Host Railroad for July 2017



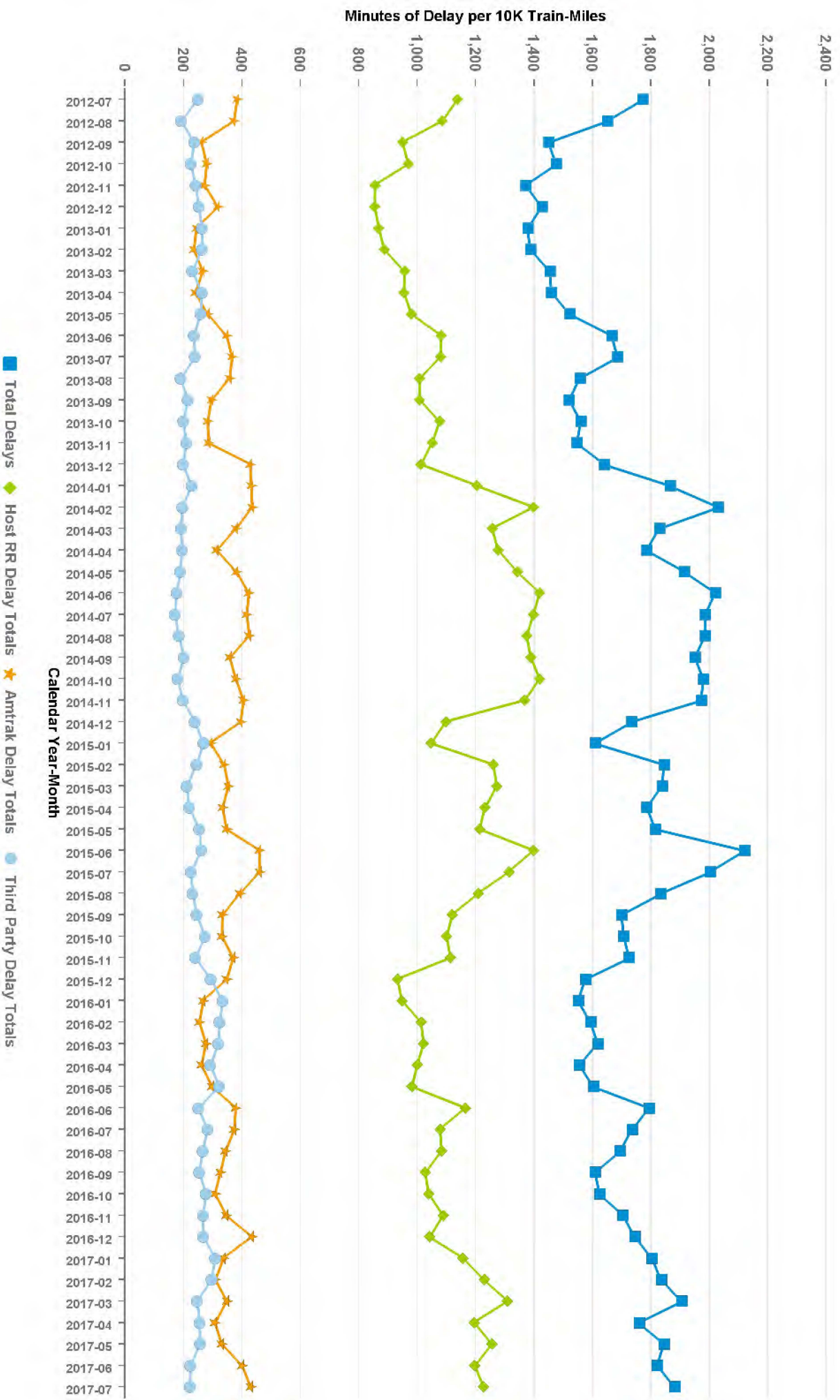
Slow Order Delays by Host Railroad for July 2017



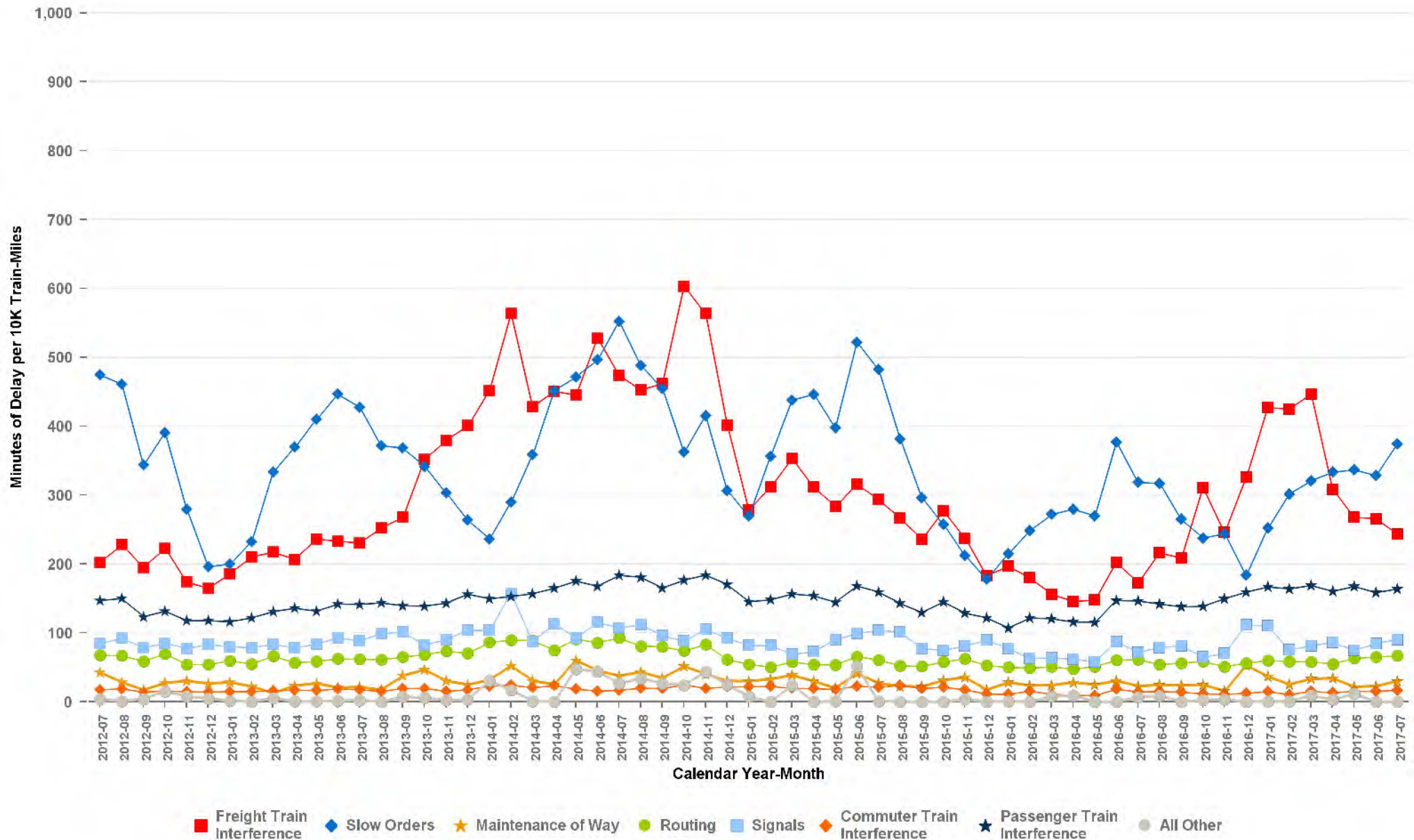
Freight Train Interference Delays by Host Railroad for July 2017



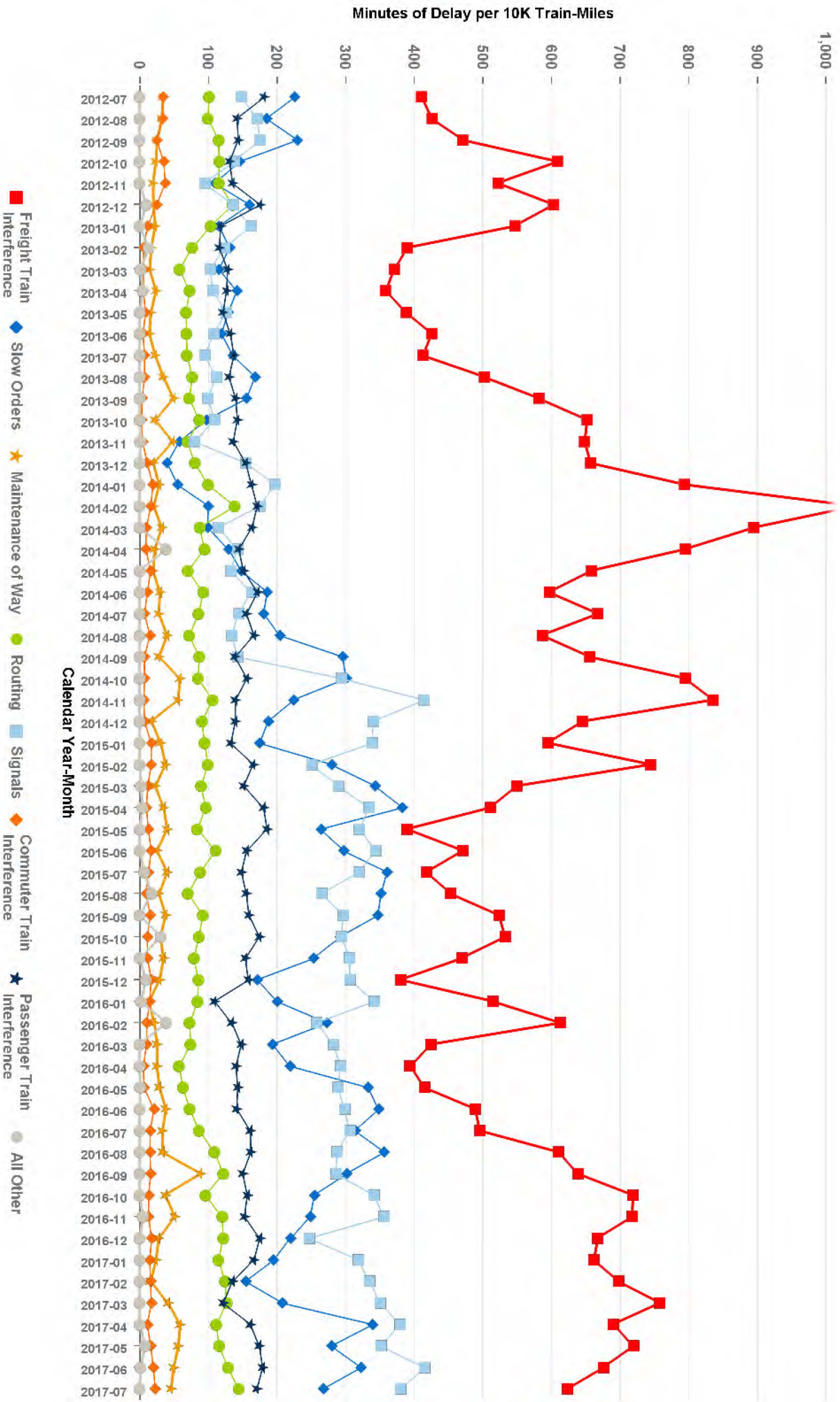
Total Delay Trend by Responsible Party - Six Major Freight Hosts for July 2012 through July 2017



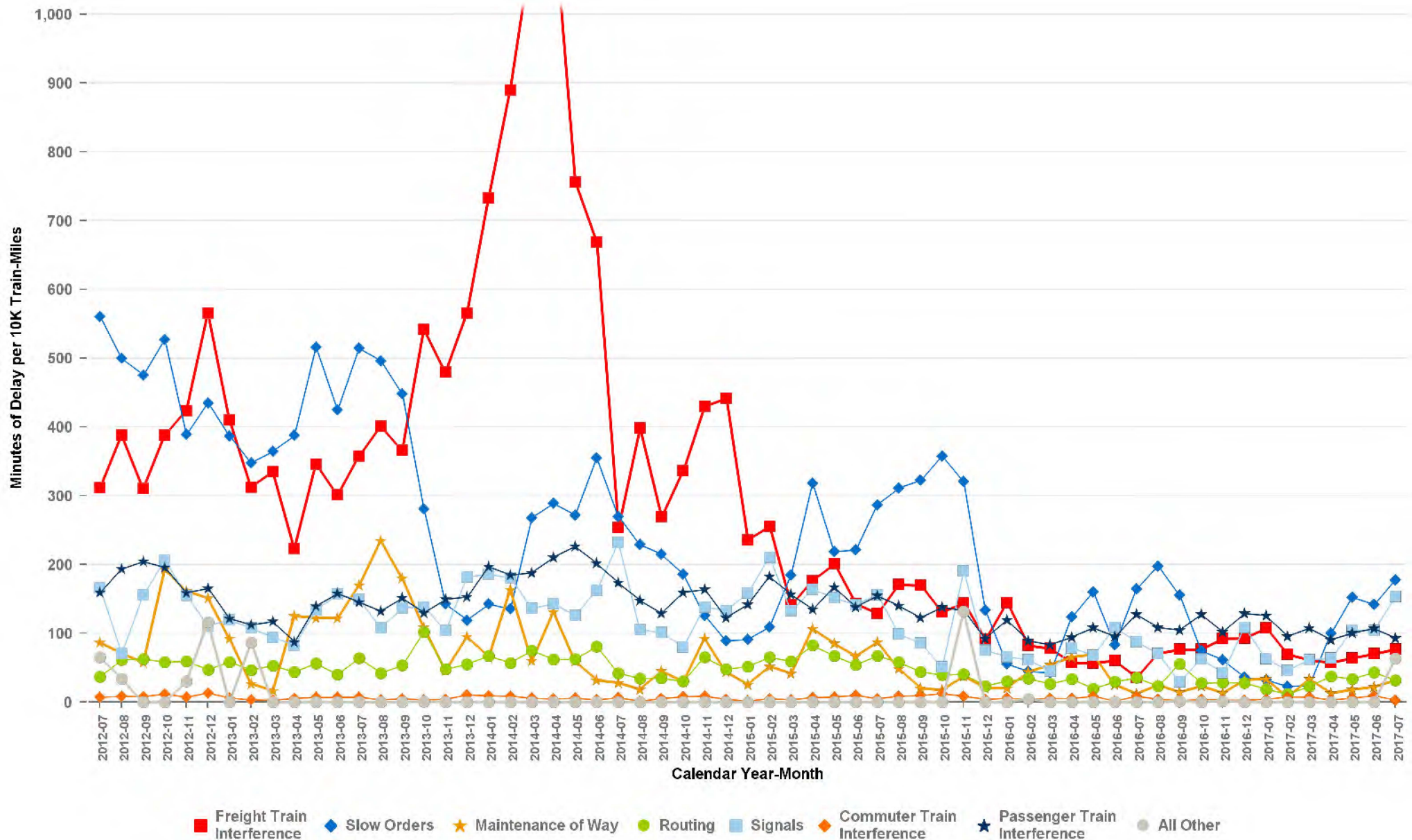
BNSF Responsible Delay Trend by Type of Delay for July 2012 through July 2017



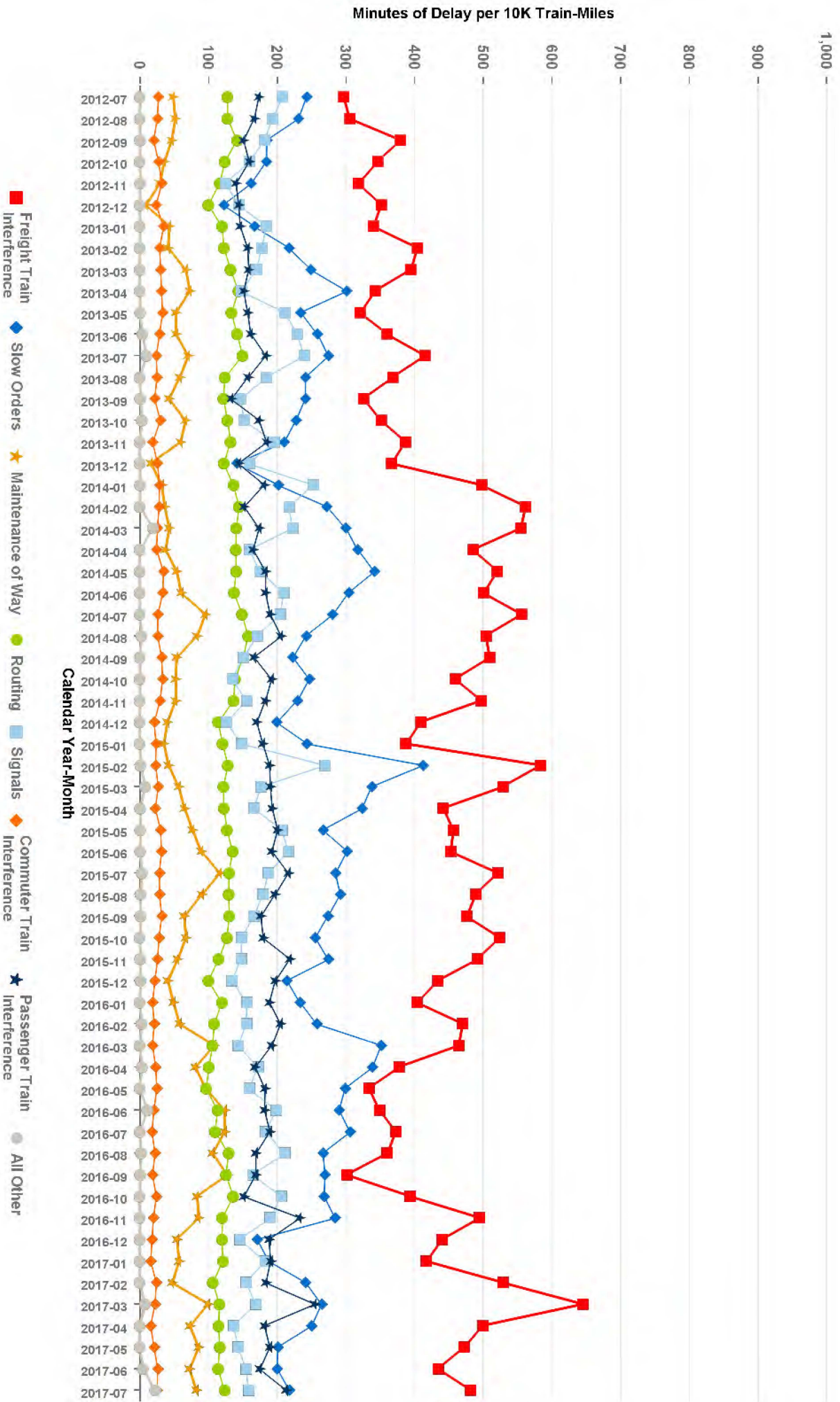
CN Responsible Delay Trend by Type of Delay for July 2012 through July 2017



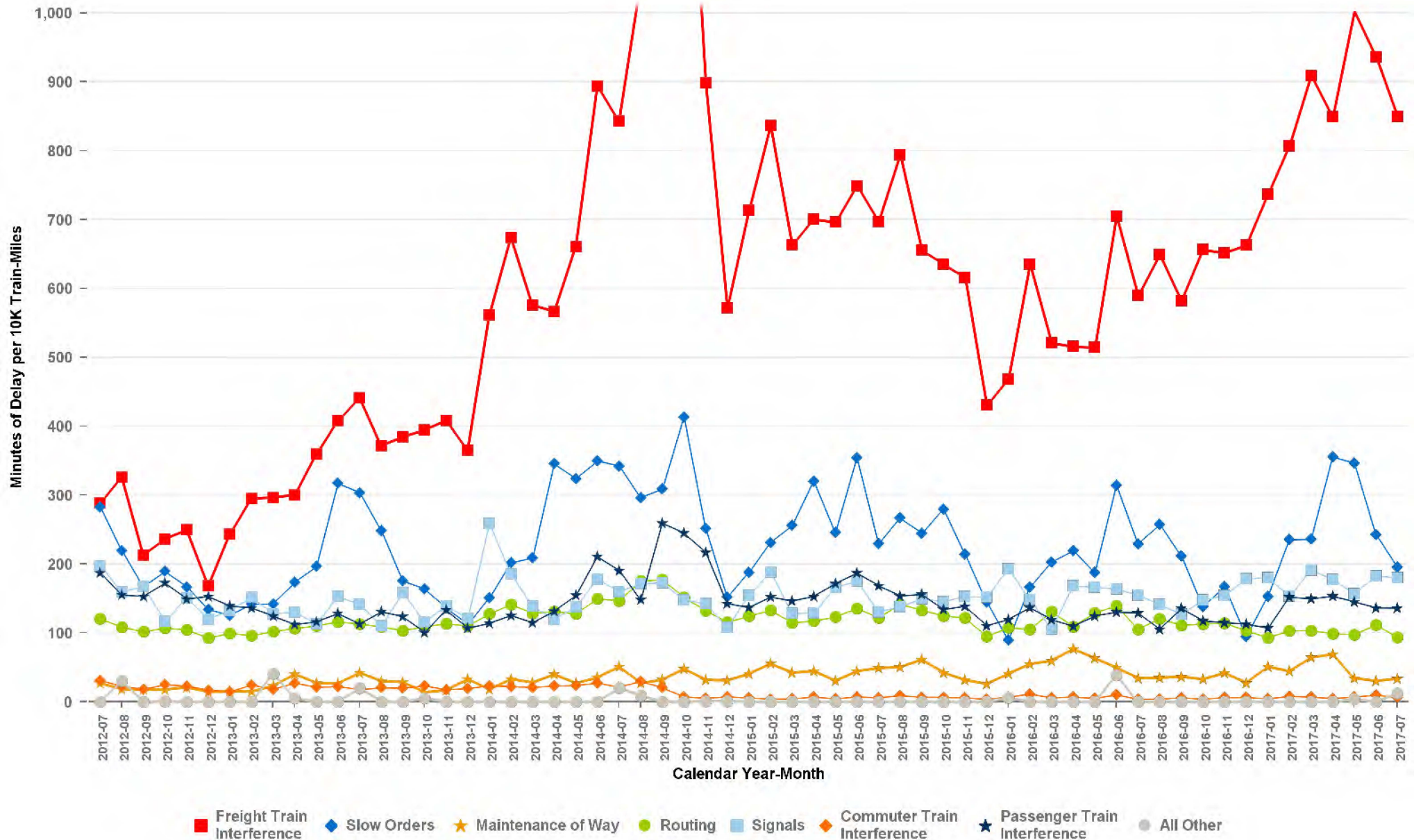
CP Responsible Delay Trend by Type of Delay for July 2012 through July 2017



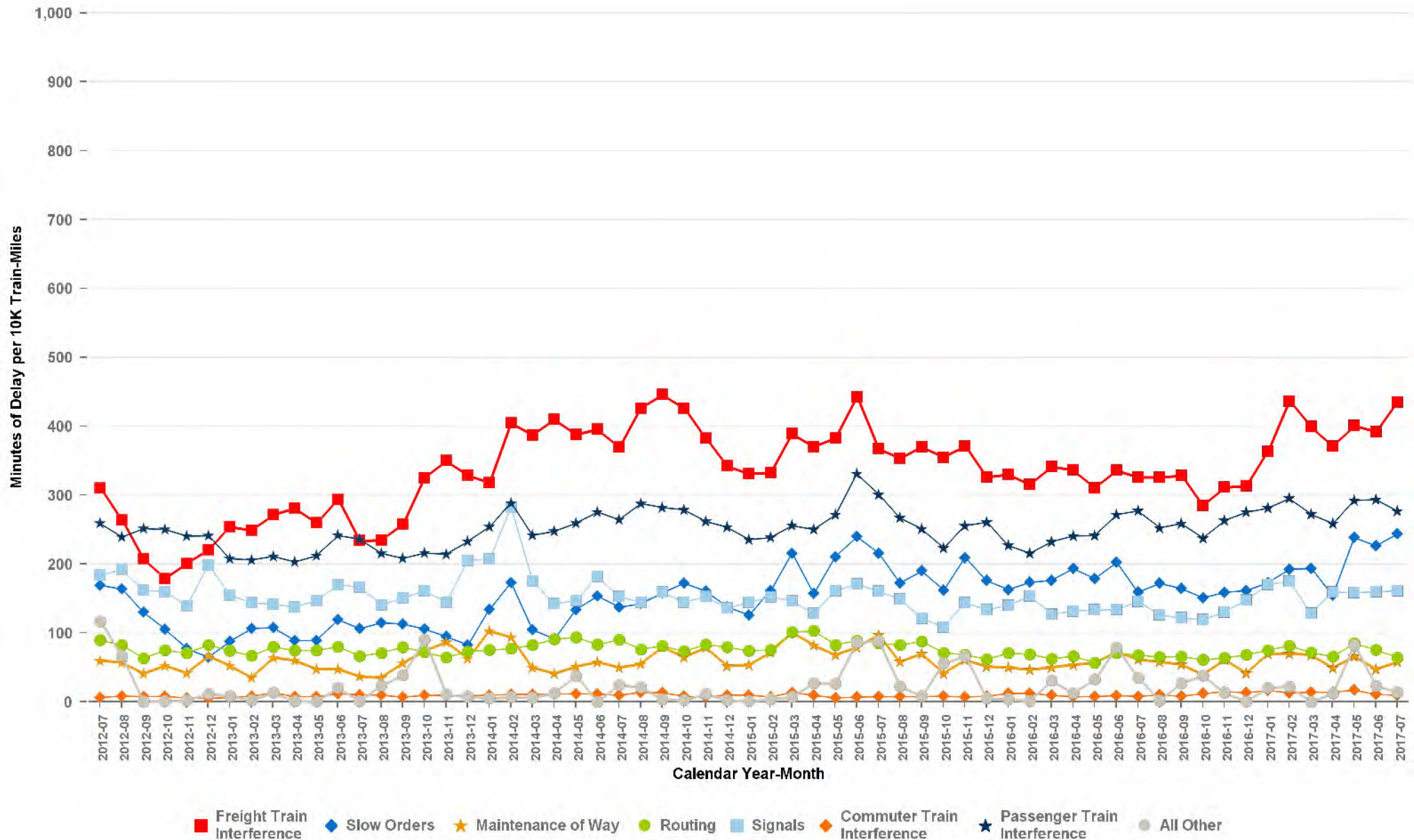
CSX Responsible Delay Trend by Type of Delay for July 2012 through July 2017



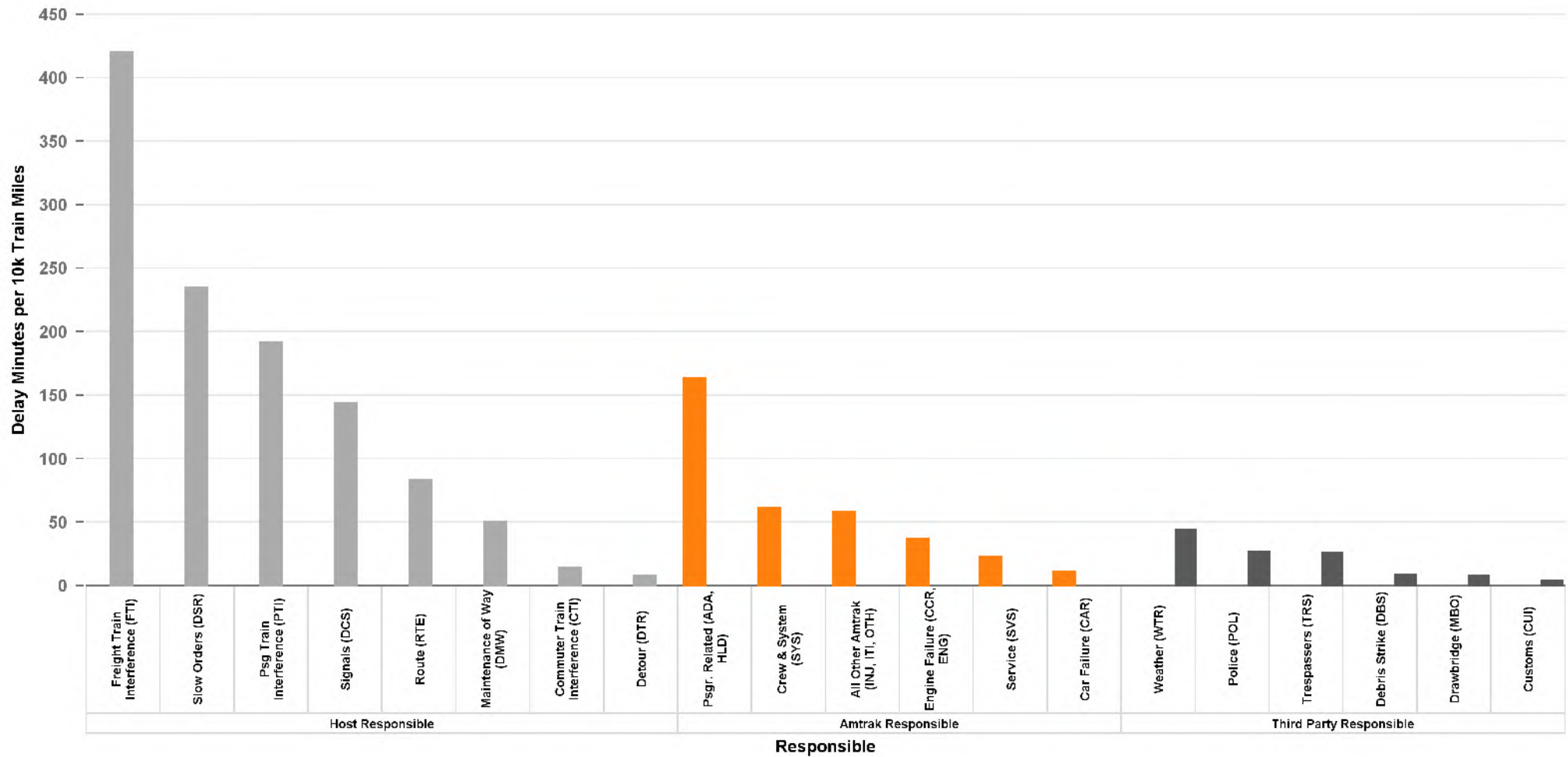
NS Responsible Delay Trend by Type of Delay for July 2012 through July 2017



UP Responsible Delay Trend by Type of Delay for July 2012 through July 2017



Delays to Amtrak Trains by Delay Type and Responsible Party
(Major Hosts Only - BNSF, CN, CP, CSX, NS, UP)
Most Recent Twelve Months through July 2017



Host Responsible	Amtrak Responsible	Third Party Responsible
1147	354	118
70.9%	21.9%	7.3%

Minutes of Delay per 10K Train Miles by Host for July 2017

Host	Service	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
		Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard		900	900					
BNSF	California Zephyr	899	899	DSR	473	FTI	156	1027
	Carl Sandburg / Illinois Zephyr	674	674	FTI	188	DSR	167	257
	Cascades	1657	1657	DSR	605	FTI	350	343
	Coast Starlight	851	851	PTI	256	DSR	198	186
	Empire Builder	794	794	DSR	383	FTI	272	2147
	Heartland Flyer	1164	1164	DSR	826	FTI	173	236
	Pacific Surfliner	1502	1502	DSR	353	DCS	342	22
	San Joaquins	932	932	PTI	362	FTI	323	284
	Southwest Chief	908	908	DSR	443	FTI	151	2206
	Sunset Ltd	1292	1292	DSR	576	FTI	339	190
	Texas Eagle	1632	1632	DSR	1038	FTI	387	116
CN	Adirondack	4475	4475	DSR	1871	FTI	1530	49
	Blue Water	862	862	FTI	653	DCS	141	159
	City Of New Orleans	1337	1337	FTI	562	DSR	251	930
	Illini / Saluki	2074	2074	DCS	923	FTI	555	304
	Lincoln Service	1279	1279	FTI	637	DCS	213	35
	Texas Eagle	2415	2415	FTI	1364	DCS	498	35
	Wolverine	2014	2014	FTI	731	DSR	505	27
CP	Adirondack	890	890	PTI	302	DSR	298	178
	Empire Builder	713	713	DSR	267	DTR	161	384
	Ethan Allen Express	1222	1222	PTI	477	DCS	316	60
	Hiawatha	313	313	DCS	158	FTI	58	53
CSX	Auto Train	1262	1262	FTI	549	PTI	286	898
	Capitol Ltd	1131	1131	FTI	525	DSR	213	307
	Cardinal	1323	1323	FTI	849	DCS	211	703
	Carolinian	1632	1632	FTI	480	PTI	375	295
	Hoosier	1913	1913	FTI	1486	DCS	186	175
	Lake Shore Ltd	1170	1170	FTI	466	DSR	200	741
	Maple Leaf	1738	1738	FTI	832	RTE	324	298
	New York - Niagara Falls	1262	1262	FTI	389	RTE	342	296
	Palmetto	1151	1151	FTI	395	PTI	278	659
	Pere Marquette	300	300	FTI	125	DCS	90	135
	Richmond / Newport News / Norfolk	1918	1918	PTI	449	FTI	412	189
	Silver Meteor	1075	1075	FTI	471	PTI	205	1152
	Silver Star	1326	1326	FTI	356	DSR	260	1209
NS	Blue Water	3537	3537	DCS	1592	FTI	1451	39
	Capitol Ltd	2067	2067	FTI	1313	RTE	259	481
	Cardinal	2376	2376	DCS	812	FTI	507	79
	Carolinian	909	909	PTI	373	DSR	242	202
	Crescent	1497	1497	FTI	972	DSR	221	1141
	Lake Shore Ltd	2212	2212	FTI	1376	DSR	274	339
	Lynchburg	860	860	FTI	298	DCS	235	166
	Pennsylvanian	880	880	FTI	522	RTE	145	249
	Pere Marquette	1804	1804	FTI	700	PTI	371	39
	Piedmont	751	751	FTI	233	DSR	198	173
	Richmond / Newport News / Norfolk	251	251	DCS	145	RTE	74	81
	Silver Star	473	473	DCS	188	PTI	131	28
	Wolverine	2796	2796	FTI	1482	DCS	645	39
	UP	California Zephyr	1001	1001	FTI	324	DSR	273
Capitol Corridor		518	518	PTI	197	DCS	91	171
Cascades		1746	1746	FTI	824	PTI	433	125
Coast Starlight		1597	1597	DSR	519	PTI	423	1162
Lincoln Service		1030	1030	PTI	362	FTI	353	231
Missouri		2001	2001	FTI	855	DSR	576	271
Pacific Surfliner		1219	1219	PTI	780	FTI	165	174
San Joaquins		1271	1271	PTI	456	DCS	233	88
Sunset Ltd		1587	1587	FTI	946	RTE	199	1784
Texas Eagle	1783	1783	FTI	825	DSR	338	1073	

Minutes of Delay per 10K Train Miles by Host for July 2017

Host	Service	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
		Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard		900	900					
Amtrak	Adirondack	859	859	DCS	272	RTE	246	100
	Blue Water	1489	1489	DSR	1029	DCS	246	99
	Ethan Allen Express	1070	1070	DSR	326	DCS	285	100
	Maple Leaf	861	861	DSR	229	RTE	198	109
	New York - Albany	421	421	RTE	130	PTI	92	81
	New York - Niagara Falls	784	784	RTE	225	DSR	210	109
	Wolverine	2015	2015	DSR	1070	PTI	494	99
BBrRR	Cardinal	1455	1455	PTI	567	DCS	506	132
Fla DOT	Silver Meteor	1414	1414	DSR	624	CTI	263	68
	Silver Star	1327	1327	DCS	414	DSR	404	68
FR	Auto Train	2011	2011	DCS	1118	DSR	430	16
	Silver Meteor	2741	2741	DCS	1022	DSR	816	61
	Silver Star	2282	2282	DCS	963	DSR	761	61
MADOT	Vermont	2105	2105	DSR	1756	DCS	349	50
MBTA	Downeaster	2101	2101	CTI	818	DSR	545	38
Metra	Empire Builder	1359	1359	CTI	1153	DCS	153	29
	Hiawatha	1284	1284	CTI	913	DCS	153	29
MIDOT	Blue Water	66	66	DCS	66	N/A	--	22
	Wolverine	462	462	PTI	299	DCS	81	134
MNRR	Acela Express	1946	1946	DSR	876	CTI	805	56
	Adirondack	1800	1800	CTI	1084	DSR	241	64
	All Other Northeast Regional	1957	1957	DSR	988	CTI	680	56
	Ethan Allen Express	1704	1704	CTI	772	DSR	410	64
	Lake Shore Ltd	1904	1904	CTI	853	DMW	448	64
	Lynchburg	3028	3028	DSR	1444	CTI	1147	56
	Maple Leaf	1912	1912	CTI	962	DSR	390	64
	New York - Albany	1623	1623	CTI	798	DSR	341	64
	New York - Niagara Falls	2036	2036	CTI	876	RTE	430	64
	Richmond / Newport News / Norfolk	2230	2230	DSR	1210	CTI	626	56
	Vermont	3497	3497	CTI	1740	DSR	1423	56
NECR	Vermont	1279	1279	DSR	1160	DMW	83	238
NMDOT	Southwest Chief	6482	6482	DSR	3699	CTI	2031	80
PanAm	Downeaster	840	840	PTI	398	DSR	341	77
SCRRA	Coast Starlight	1494	1494	PTI	716	CTI	455	48
	Pacific Surfliner	927	927	PTI	366	CTI	332	95
SDNRR	Pacific Surfliner	1919	1919	CTI	750	PTI	577	60
TRE	Texas Eagle	3275	3275	CTI	2206	DTR	476	33
VTR	Ethan Allen Express	148	148	DMW	67	DCS	61	24

The numbers included in this document are preliminary and are for informational purposes only. Final data regarding compliance with PRIIA Section 207 standards, including any Major Maintenance and Construction Allowances, are published quarterly in the official FRA report.

Excludes hosts with fewer than 15 route miles.

Delays on the Amtrak-owned portion of the Northeast Corridor are shown in a separate report, with tighter delay standards.

Northeast Regional: Lynchburg includes all trains between Lynchburg and points on the NEC; Richmond / Newport News / Norfolk includes all trains between these locations and points on the NEC.

Minutes of Delay per 10K Train Miles by Service for July 2017

Service		Host	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
			Current Month	Quarter to Date	#1	#2			
PRR Section 207 Standard			900	900					
Acela Express									
Acela Express		MNRR	1946	1946	DSR	876	CTI	805	56
All Other NEC Corridor Routes									
Northeast Regional	Richmond / Newport News / Norfolk	CSX	1918	1918	PTI	449	FTI	412	189
		NS	251	251	DCS	145	RTE	74	81
		MNRR	2230	2230	DSR	1210	CTI	626	56
	Lynchburg	NS	860	860	FTI	298	DCS	235	166
		MNRR	3028	3028	DSR	1444	CTI	1147	56
	All Other Northeast Regional	MNRR	1957	1957	DSR	988	CTI	680	56
Non-NEC Corridor Routes									
Capitol Corridor		UP	518	518	PTI	197	DCS	91	171
Carolinian		CSX	1632	1632	FTI	480	PTI	375	295
		NS	909	909	PTI	373	DSR	242	202
Cascades		BNSF	1657	1657	DSR	605	FTI	350	343
		UP	1746	1746	FTI	824	PTI	433	125
Downeaster		MBTA	2101	2101	CTI	818	DSR	545	38
		PanAm	840	840	PTI	398	DSR	341	77
Empire	Adirondack	CN	4475	4475	DSR	1871	FTI	1530	49
		CP	890	890	PTI	302	DSR	298	178
		Amtrak	859	859	DCS	272	RTE	246	100
		MNRR	1800	1800	CTI	1084	DSR	241	64
	Ethan Allen Express	CP	1222	1222	PTI	477	DCS	316	60
		Amtrak	1070	1070	DSR	326	DCS	285	100
		MNRR	1704	1704	CTI	772	DSR	410	64
		VTR	148	148	DMW	67	DCS	61	24
	Maple Leaf	CSX	1738	1738	FTI	832	RTE	324	298
		Amtrak	861	861	DSR	229	RTE	198	109
		MNRR	1912	1912	CTI	962	DSR	390	64
	New York - Albany	Amtrak	421	421	RTE	130	PTI	92	81
		MNRR	1623	1623	CTI	798	DSR	341	64
	New York - Niagara Falls	CSX	1262	1262	FTI	389	RTE	342	296
		Amtrak	784	784	RTE	225	DSR	210	109
		MNRR	2036	2036	CTI	876	RTE	430	64
Heartland Flyer		BNSF	1164	1164	DSR	826	FTI	173	236
Hiawatha		CP	313	313	DCS	158	FTI	58	53
		Metra	1284	1284	CTI	913	DCS	153	29
Hoosier		CSX	1913	1913	FTI	1486	DCS	186	175
Illinois	Carl Sandburg / Illinois Zephyr	BNSF	674	674	FTI	188	DSR	167	257
	Illini / Saluki	CN	2074	2074	DCS	923	FTI	555	304
	Lincoln Service	CN	1279	1279	FTI	637	DCS	213	35
		UP	1030	1030	PTI	362	FTI	353	231
Michigan	Blue Water	CN	862	862	FTI	653	DCS	141	159
		NS	3537	3537	DCS	1592	FTI	1451	39
		Amtrak	1489	1489	DSR	1029	DCS	246	99
		MIDOT	66	66	DCS	66	N/A	--	22
	Pere Marquette	CSX	300	300	FTI	125	DCS	90	135
		NS	1804	1804	FTI	700	PTI	371	39
	Wolverine	CN	2014	2014	FTI	731	DSR	505	27
		NS	2796	2796	FTI	1482	DCS	645	39
		Amtrak	2015	2015	DSR	1070	PTI	494	99
		MIDOT	462	462	PTI	299	DCS	81	134
Missouri		UP	2001	2001	FTI	855	DSR	576	271
Pacific Surfliner		BNSF	1502	1502	DSR	353	DCS	342	22
		UP	1219	1219	PTI	780	FTI	165	174
		SCRRA	927	927	PTI	366	CTI	332	95
		SDNRR	1919	1919	CTI	750	PTI	577	60
Pennsylvanian		NS	880	880	FTI	522	RTE	145	249
Piedmont		NS	751	751	FTI	233	DSR	198	173
San Joaquins		BNSF	932	932	PTI	362	FTI	323	284
		UP	1271	1271	PTI	456	DCS	233	88
Vermont		MADOT	2105	2105	DSR	1756	DCS	349	50
		MNRR	3497	3497	CTI	1740	DSR	1423	56
		NECR	1279	1279	DSR	1160	DMW	83	238

Minutes of Delay per 10K Train Miles by Service for July 2017

Service		Host	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
			Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard			900	900					
Long-Distance Routes									
Auto Train		CSX	1262	1262	FTI	549	PTI	286	898
		FR	2011	2011	DCS	1118	DSR	430	16
California Zephyr		BNSF	899	899	DSR	473	FTI	156	1027
		UP	1001	1001	FTI	324	DSR	273	1381
Capitol Ltd		CSX	1131	1131	FTI	525	DSR	213	307
		NS	2067	2067	FTI	1313	RTE	259	481
Cardinal		CSX	1323	1323	FTI	849	DCS	211	703
		NS	2376	2376	DCS	812	FTI	507	79
		BBrRR	1455	1455	PTI	567	DCS	506	132
City Of New Orleans		CN	1337	1337	FTI	562	DSR	251	930
Coast Starlight		BNSF	851	851	PTI	256	DSR	198	186
		UP	1597	1597	DSR	519	PTI	423	1162
		SCRRA	1494	1494	PTI	716	CTI	455	48
Crescent		NS	1497	1497	FTI	972	DSR	221	1141
Empire Builder		BNSF	794	794	DSR	383	FTI	272	2147
		CP	713	713	DSR	267	DTR	161	384
		Metra	1359	1359	CTI	1153	DCS	153	29
Lake Shore Ltd		CSX	1170	1170	FTI	466	DSR	200	741
		NS	2212	2212	FTI	1376	DSR	274	339
		MNRR	1904	1904	CTI	853	DMW	448	64
Palmetto		CSX	1151	1151	FTI	395	PTI	278	659
Silver Meteor		CSX	1075	1075	FTI	471	PTI	205	1152
		Fla DOT	1414	1414	DSR	624	CTI	263	68
		FR	2741	2741	DCS	1022	DSR	816	61
Silver Star		CSX	1326	1326	FTI	356	DSR	260	1209
		NS	473	473	DCS	188	PTI	131	28
		Fla DOT	1327	1327	DCS	414	DSR	404	68
		FR	2282	2282	DCS	963	DSR	761	61
Southwest Chief		BNSF	908	908	DSR	443	FTI	151	2206
		NMDOT	6482	6482	DSR	3699	CTI	2031	80
Sunset Ltd		BNSF	1292	1292	DSR	576	FTI	339	190
		UP	1587	1587	FTI	946	RTE	199	1784
Texas Eagle		BNSF	1632	1632	DSR	1038	FTI	387	116
		CN	2415	2415	FTI	1364	DCS	498	35
		UP	1783	1783	FTI	825	DSR	338	1073
		TRE	3275	3275	CTI	2206	DTR	476	33

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Excludes hosts with fewer than 15 route miles.

Delays on the Amtrak-owned portion of the Northeast Corridor are shown in a separate report, with tighter delay standards.

Northeast Regional: Lynchburg includes all trains between Lynchburg and points on the NEC; Richmond / Newport News / Norfolk includes all trains between these locations and points on the NEC.

Host Railroad Report - All Stations and End Point OTP for July 2017

Service	All Stations OTP		End Point OTP	
	Current Month	Quarter to Date	Current Month	Quarter to Date
Amtrak System	69.3%	69.3%	67.9%	67.9%
Acela Express				
PRIIA Section 207 Standard	90.0%	90.0%	90.0%	90.0%
Acela Express	75.4%	75.4%	67.8%	67.8%
NEC Corridor Routes				
PRIIA Section 207 Standard	85.0%	85.0%	85.0%	85.0%
Keystone	91.0%	91.0%	81.1%	81.1%
Northeast Regional	75.4%	75.4%	68.1%	68.1%
All Other Northeast Regional	82.0%	82.0%	72.2%	72.2%
Lynchburg	59.6%	59.6%	53.2%	53.2%
Richmond / Newport News / Norfolk	68.1%	68.1%	60.0%	60.0%
Non-NEC Corridor Routes				
PRIIA Section 207 Standard	80.0%	80.0%	80.0%	80.0%
Capitol Corridor	95.1%	95.1%	91.9%	91.9%
Carolinian	40.1%	40.1%	23.3%	23.3%
Cascades	59.1%	59.1%	54.0%	54.0%
Downeaster	86.4%	86.4%	53.6%	53.6%
Empire	67.9%	67.9%	73.2%	73.2%
Adirondack	40.9%	40.9%	32.3%	32.3%
Ethan Allen Express	79.4%	79.4%	79.0%	79.0%
Maple Leaf	48.8%	48.8%	61.3%	61.3%
New York - Albany	88.3%	88.3%	77.6%	77.6%
New York - Niagara Falls	64.0%	64.0%	82.3%	82.3%
Heartland Flyer	80.9%	80.9%	64.5%	64.5%
Hiawatha	97.7%	97.7%	94.2%	94.2%
Hoosier	63.3%	63.3%	54.3%	54.3%
Illinois	68.9%	68.9%	67.1%	67.1%
Carl Sandburg / Illinois Zephyr	88.1%	88.1%	87.1%	87.1%
Illini / Saluki	33.1%	33.1%	19.4%	19.4%
Lincoln Service	78.6%	78.6%	81.0%	81.0%
Michigan	67.8%	67.8%	59.7%	59.7%
Blue Water	66.6%	66.6%	50.0%	50.0%
Pere Marquette	94.4%	94.4%	88.7%	88.7%
Wolverine	65.0%	65.0%	53.2%	53.2%
Missouri	50.7%	50.7%	34.7%	34.7%
Pacific Surfliner	78.2%	78.2%	61.3%	61.3%
Pennsylvanian	73.3%	73.3%	75.8%	75.8%
Piedmont	91.1%	91.1%	74.2%	74.2%
San Joaquins	80.2%	80.2%	78.6%	78.6%
Vermonteer	47.5%	47.5%	67.7%	67.7%
Long-Distance Routes				
PRIIA Section 207 Standard	80.0%	80.0%	80.0%	80.0%
Auto Train	76.6%	76.6%	66.1%	66.1%
California Zephyr	37.8%	37.8%	48.4%	48.4%
Capitol Ltd	30.7%	30.7%	33.9%	33.9%
Cardinal	30.1%	30.1%	23.1%	23.1%
City Of New Orleans	44.0%	44.0%	74.2%	74.2%
Coast Starlight	30.8%	30.8%	43.5%	43.5%
Crescent	32.0%	32.0%	24.2%	24.2%
Empire Builder	55.4%	55.4%	71.8%	71.8%
Lake Shore Ltd	35.2%	35.2%	35.8%	35.8%
Palmetto	50.1%	50.1%	21.0%	21.0%
Silver Meteor	29.9%	29.9%	24.2%	24.2%
Silver Star	28.6%	28.6%	14.5%	14.5%
Southwest Chief	23.6%	23.6%	6.5%	6.5%
Sunset Ltd	37.5%	37.5%	57.7%	57.7%
Texas Eagle	31.3%	31.3%	43.5%	43.5%

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 Northeast Regional: Lynchburg includes all trains between Lynchburg and points on the NEC; Richmond/Newport News/Norfolk includes all trains between these locations and points on the NEC.

Host Railroad Responsible Delays

Code	Code Description	Explanation
CTI	Commuter Train Interference	Delays for meeting or following commuter trains
DCS	Signal Delays	Signal failure or All Other signal delays, wayside defect-detector false-alarms, defective road crossing protection, efficiency tests, drawbridge stuck open
DMW	Maintenance of Way	Maintenance of Way delays including holds for track repairs or MW foreman to clear
DSR	Slow Order Delays	Temporary slow orders, except heat or cold orders
DTR	Detour	Delays from detours
FTI	Freight Train Interference	Delays from freight trains
PTI	Passenger Train Interference	Delays for meeting or following All Other passenger trains
RTE	Routing	Routing-dispatching delays including diversions, late track bulletins, etc.

Amtrak Responsible Delays

Code	Code Description	Explanation
ADA	Passenger Related	All delays related to disabled passengers, wheel chair lifts, guide dogs, etc.
CAR	Car Failure	Mechanical failure on all types of cars
CCR	Cab Car Failure	Mechanical failure on Cab Cars
CON	Hold for Connection	Holding for connections from All Other trains or buses.
ENG	Locomotive Failure	Mechanical failure on engines.
HLD	Passenger Related	All delays related to passengers, checked-baggage, large groups, etc.
INJ	Injury Delay	Delay due to injured passengers or employees.
ITI	Initial Terminal Delay	Delay at initial terminal due to late arriving inbound trains causing late release of equipment.
OTH	Miscellaneous Delays	Lost-on-run, heavy trains, unable to make normal speed, etc.
SVS	Servicing	All switching and servicing delays
SYS	Crew & System	Delays related to crews including lateness, lone-engineer delays

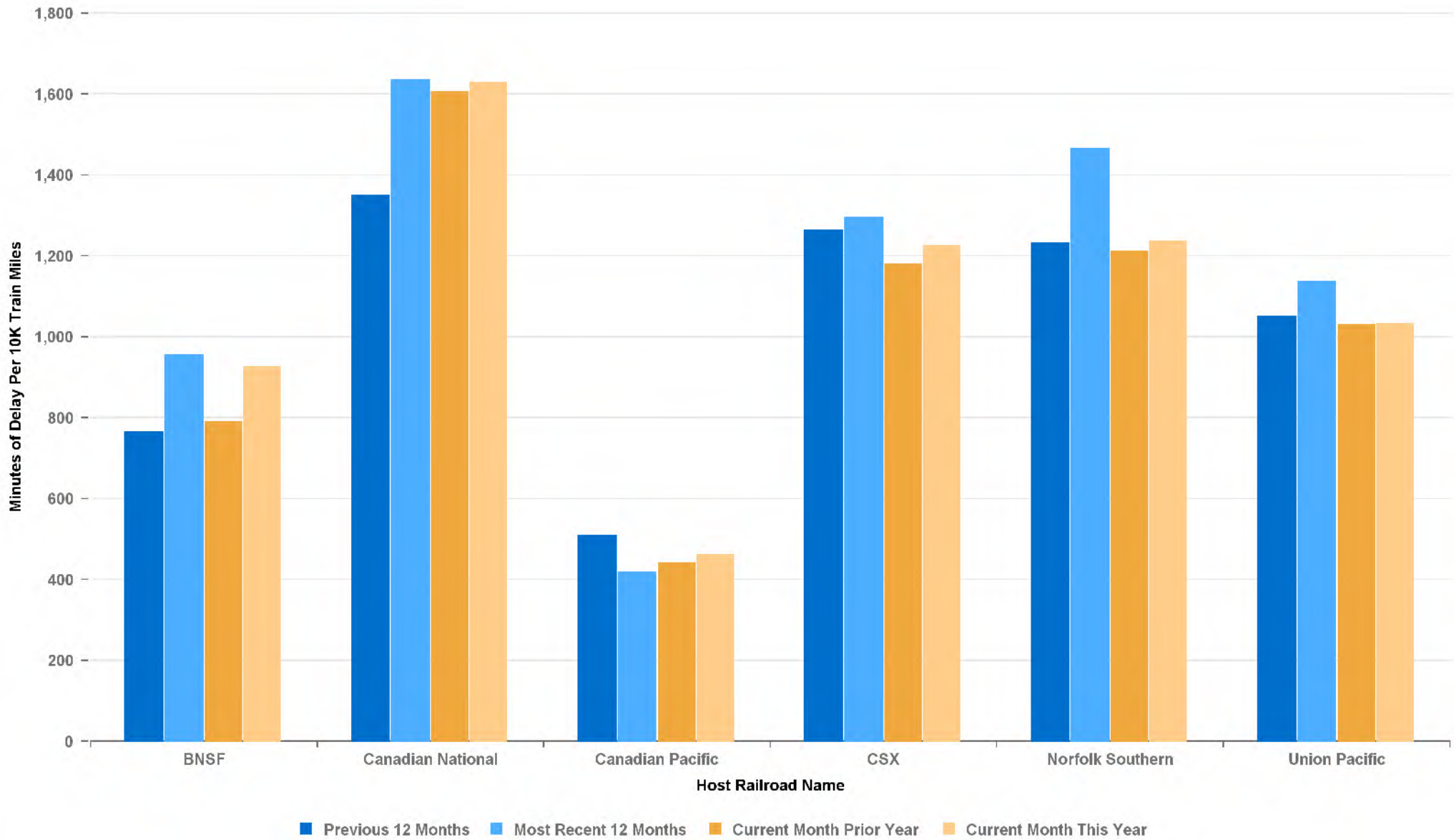
Third-Party Delays

Code	Code Description	Explanation
CUI	Customs	U.S. and Canadian customs delays; Immigration-related delays
DBS	Debris	Debris strikes
MBO	Drawbridge Openings	Movable bridge openings for marine traffic where no bridge failure is involved
NOD	Unused Recovery Time	Wait for departure time
POL	Police-Related	Police/fire department holds on right-of-way or on-board trains
TRS	Trespassers	Trespasser incidents including road crossing accidents, trespasser / animal strikes, vehicle stuck on track ahead, bridge strikes
WTR	Weather-Related	All severe-weather delays, landslides or washouts, earthquake-related delays, heat or cold orders

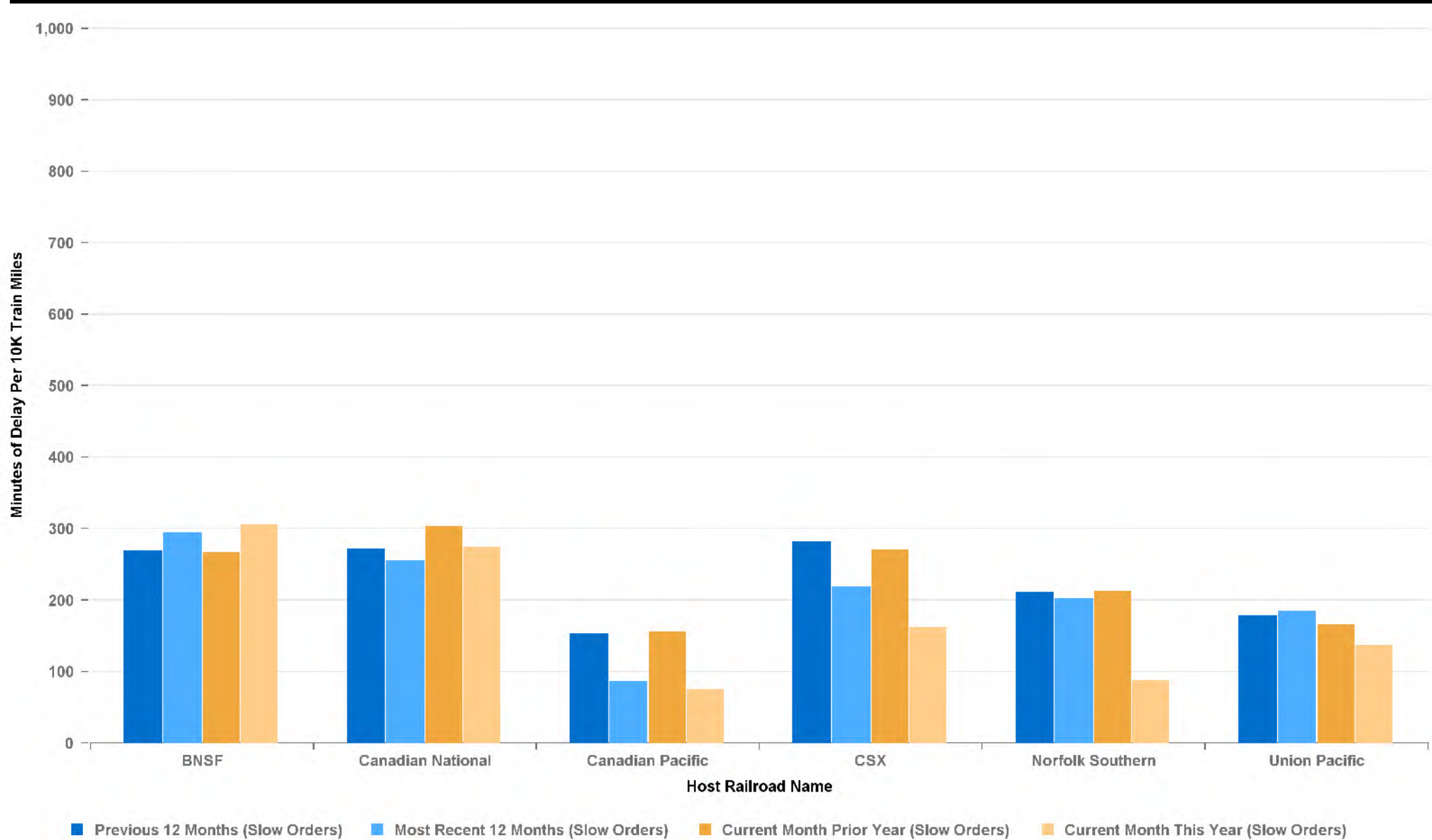
*These delay codes are applicable to Off-NEC routes only.

Host Railroad Report September 2017

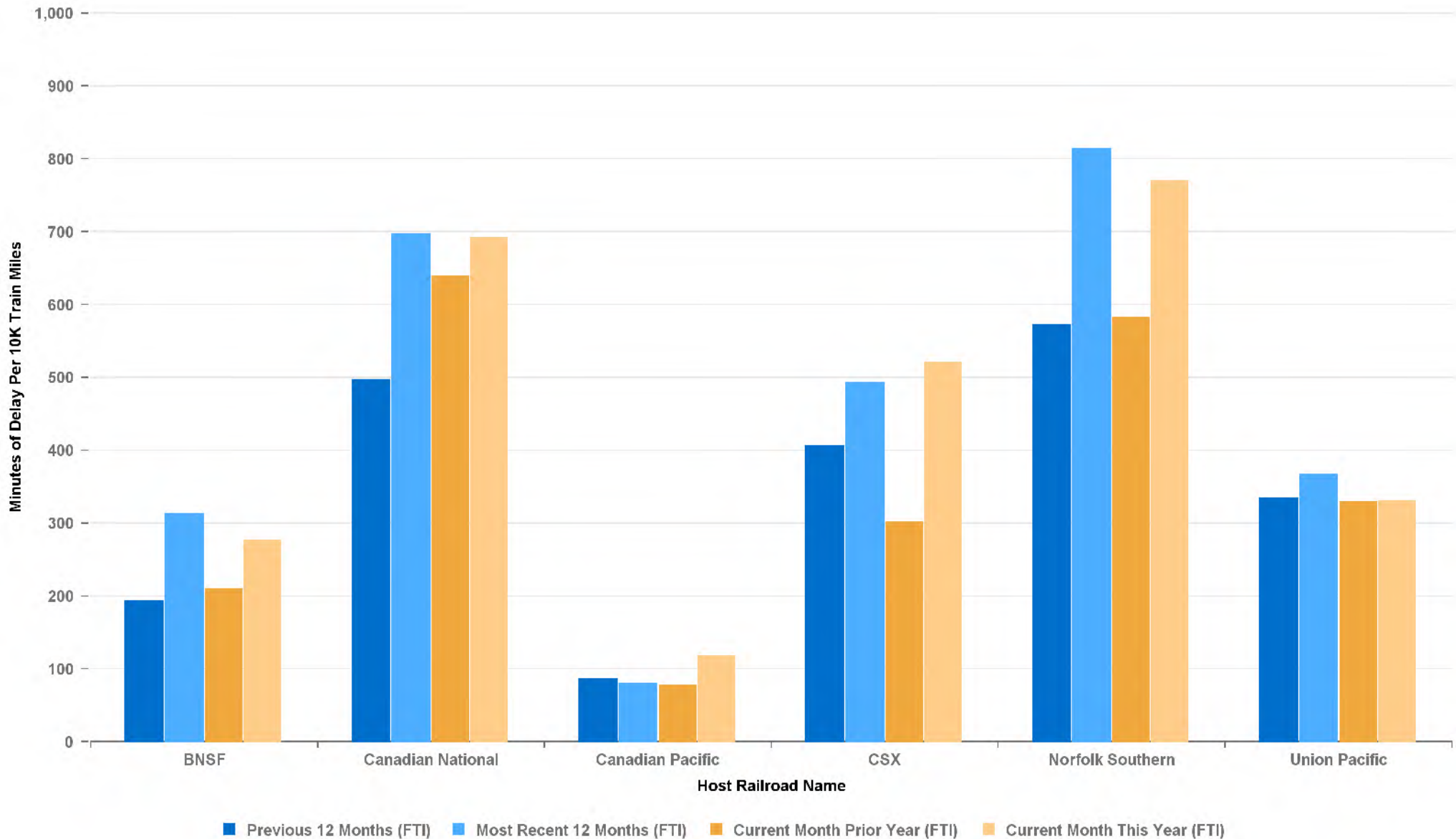
Total Host Responsible Delays by Host Railroad for September 2017



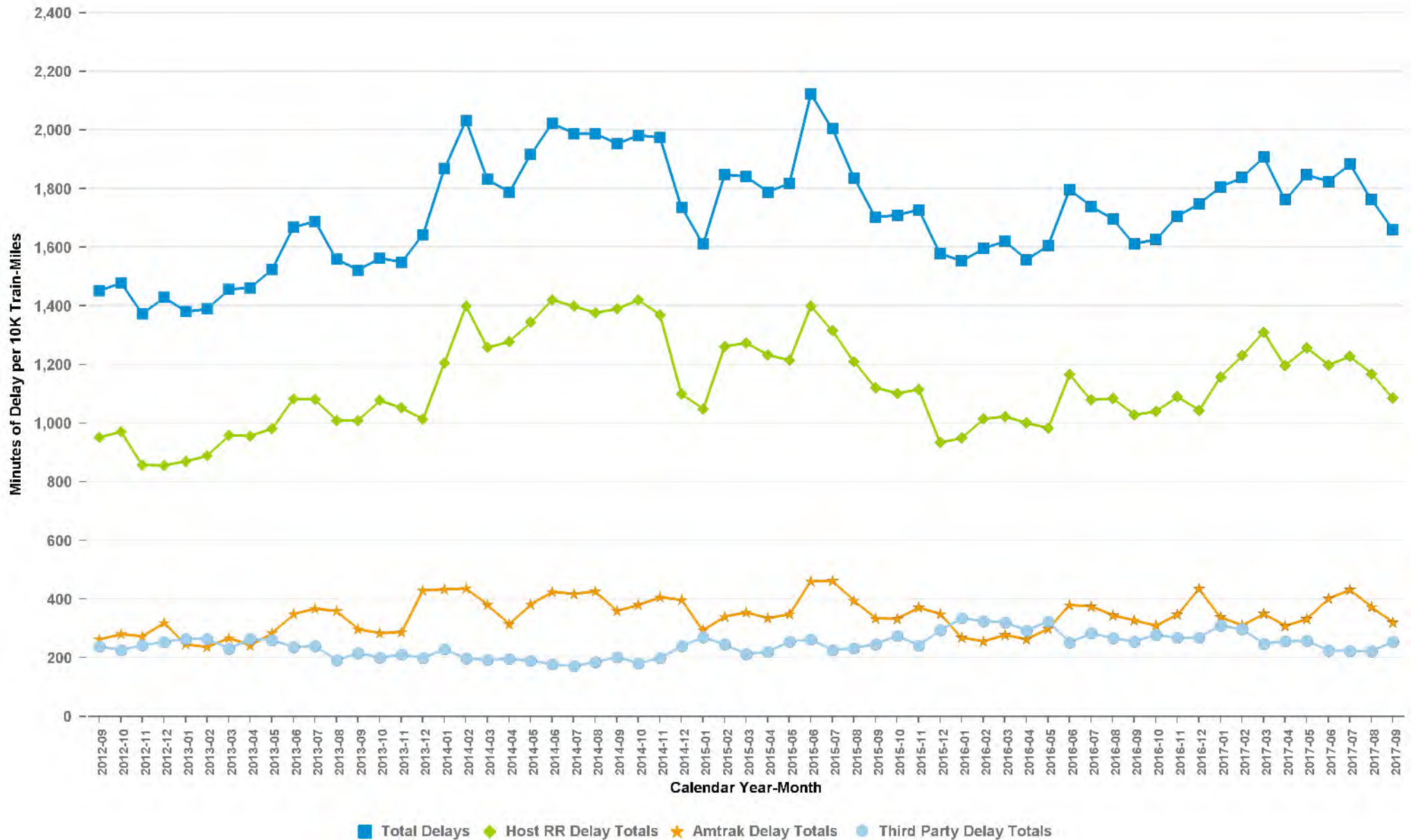
Slow Order Delays by Host Railroad for September 2017



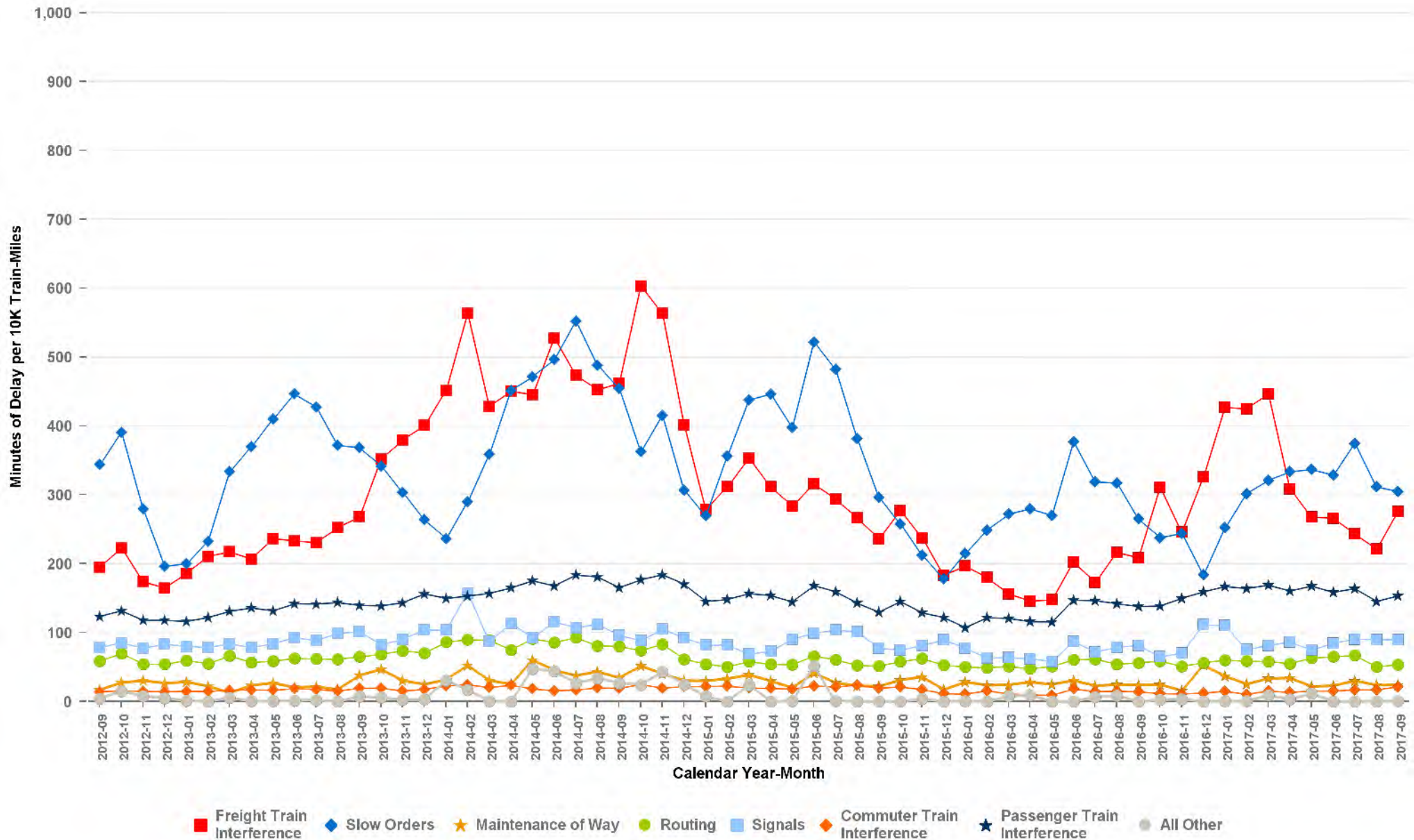
Freight Train Interference Delays by Host Railroad for September 2017



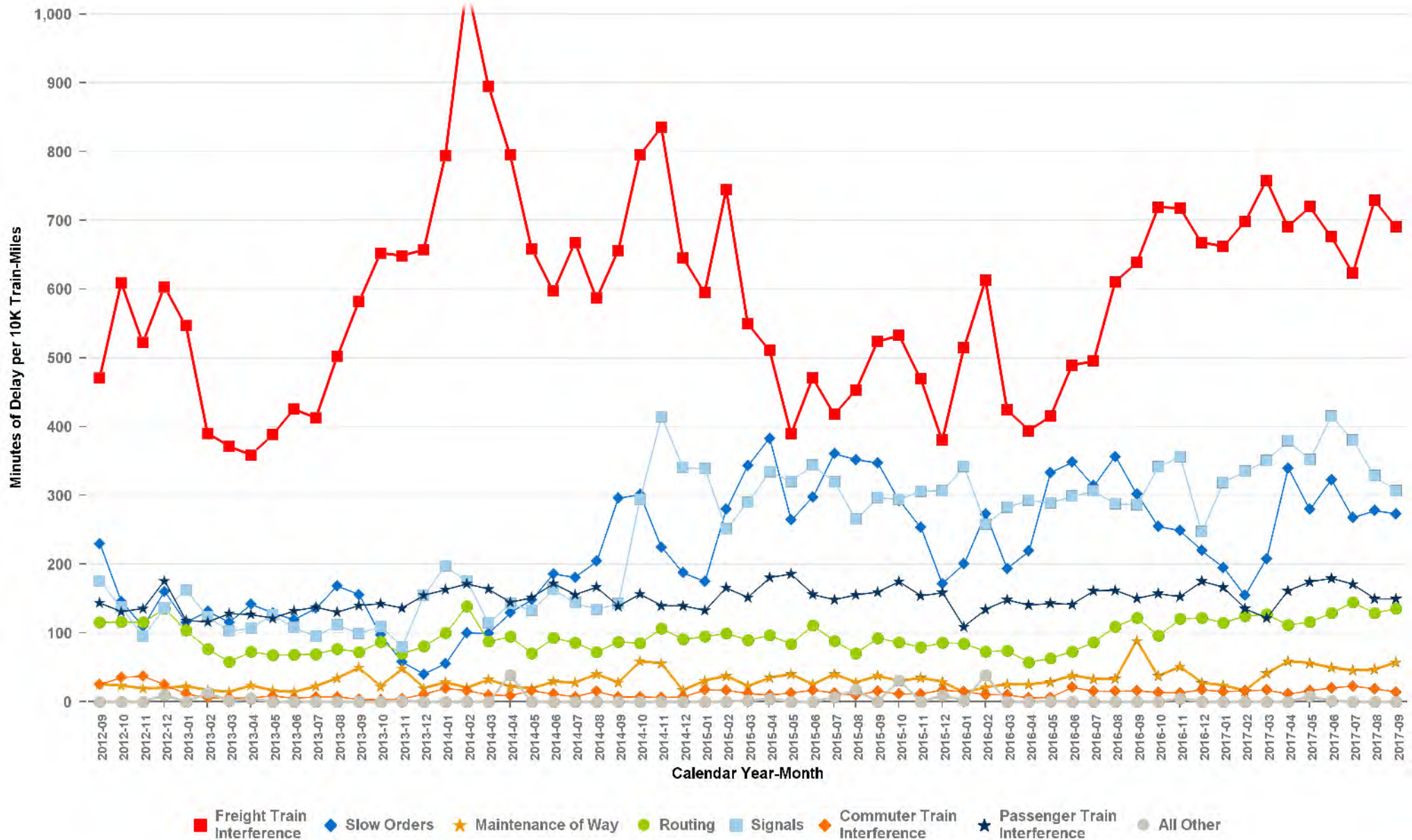
Total Delay Trend by Responsible Party - Six Major Freight Hosts for September 2012 through September 2017



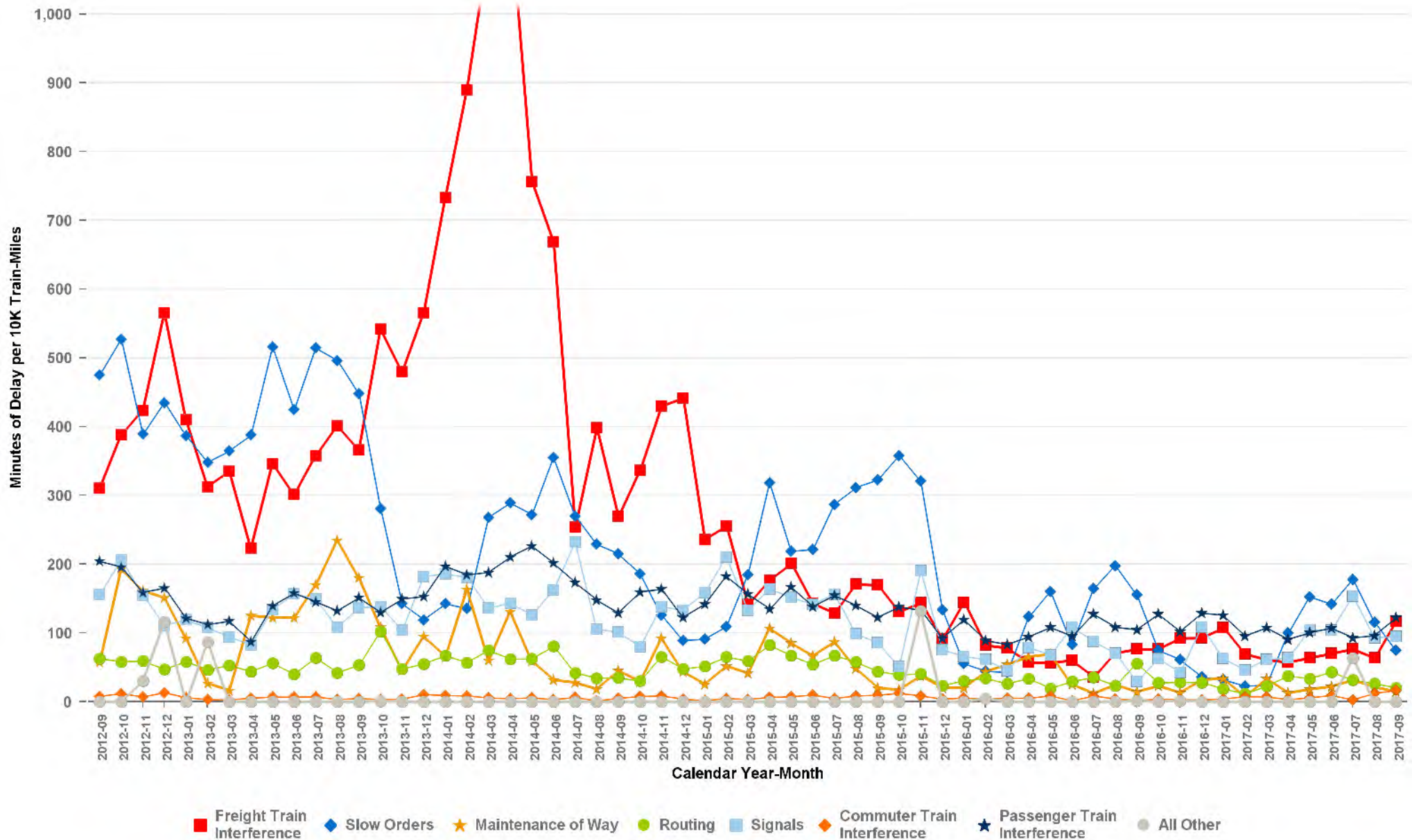
BNSF Responsible Delay Trend by Type of Delay for September 2012 through September 2017



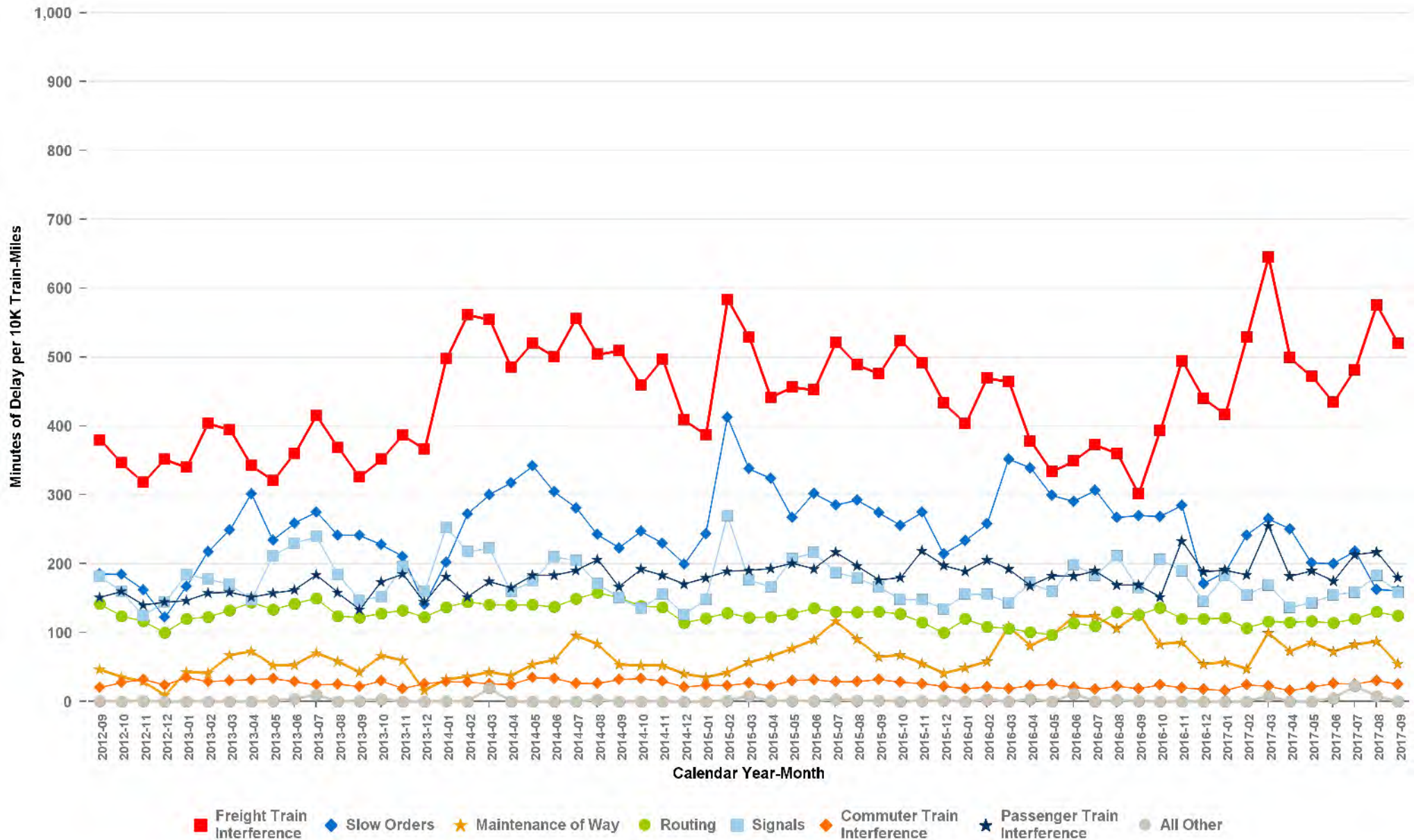
CN Responsible Delay Trend by Type of Delay for September 2012 through September 2017



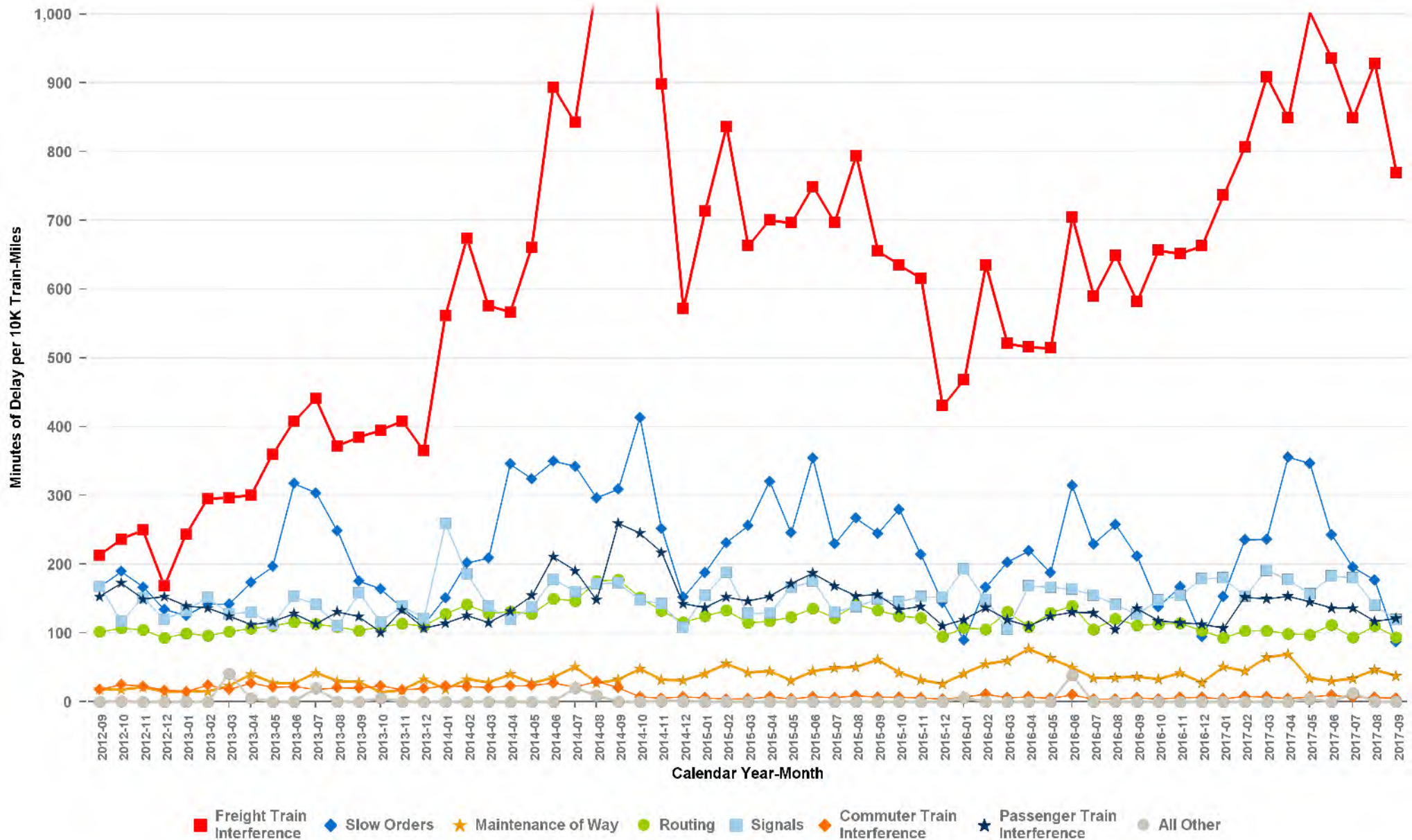
CP Responsible Delay Trend by Type of Delay for September 2012 through September 2017



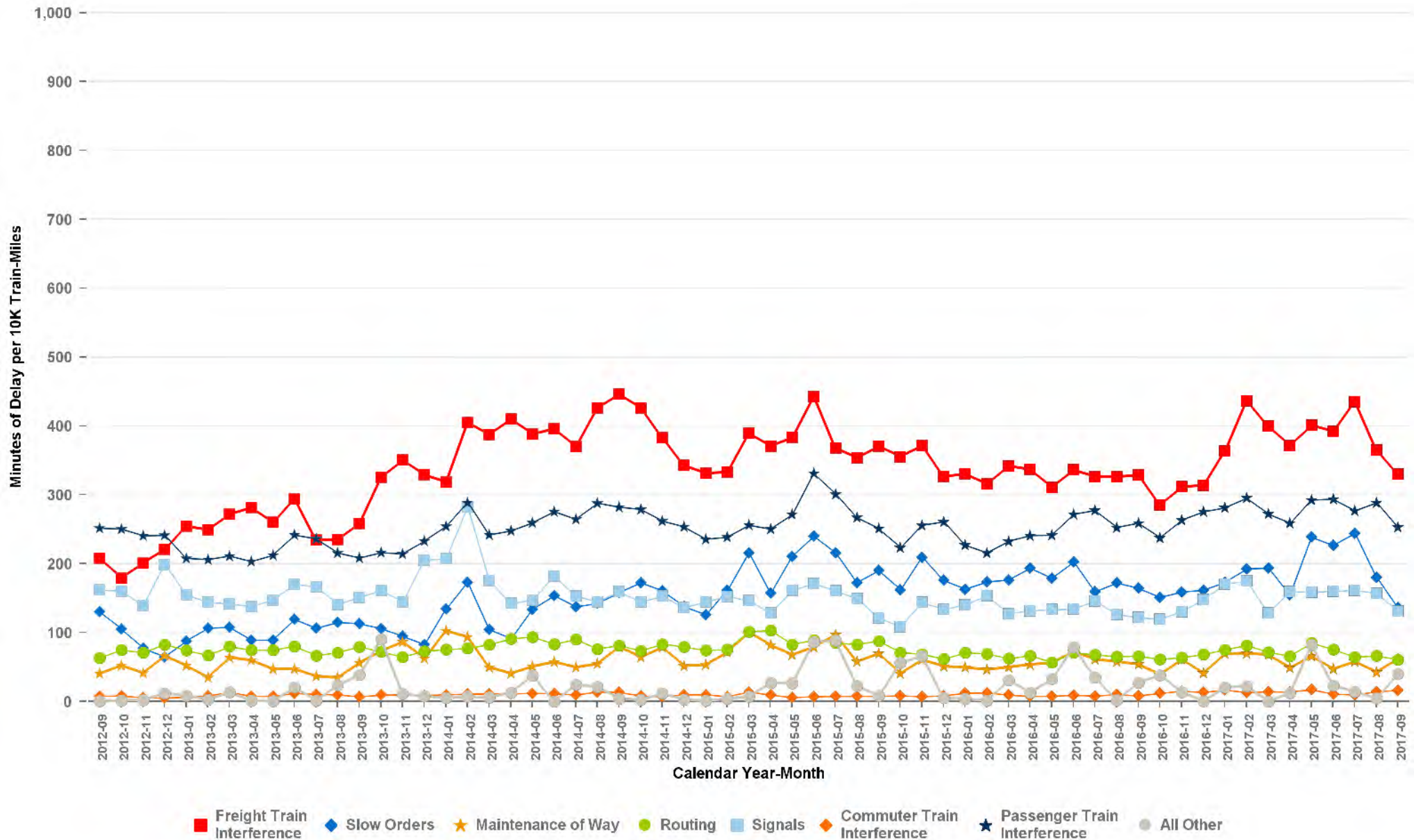
CSX Responsible Delay Trend by Type of Delay for September 2012 through September 2017



NS Responsible Delay Trend by Type of Delay for September 2012 through September 2017

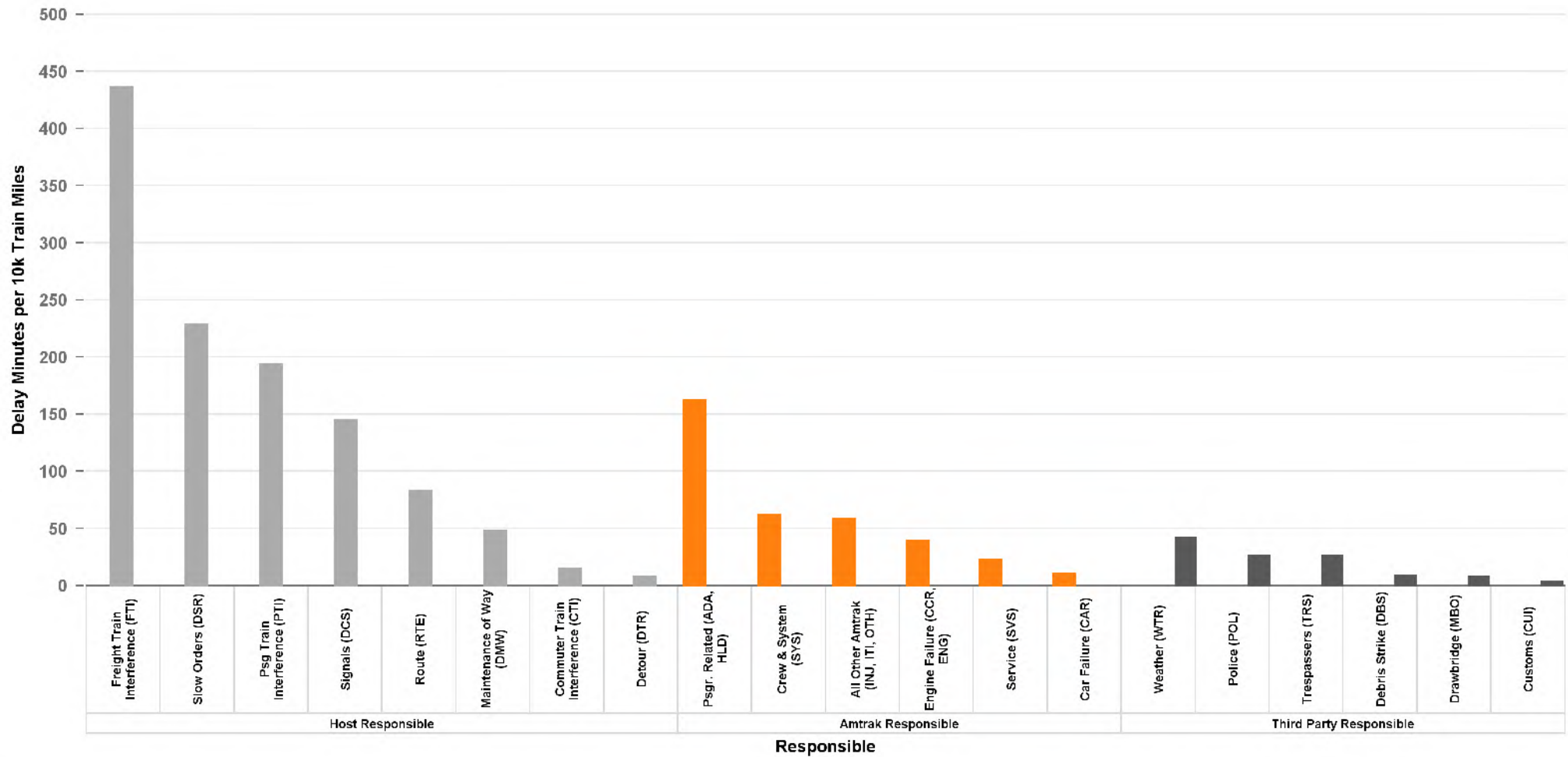


UP Responsible Delay Trend by Type of Delay for September 2012 through September 2017





Delays to Amtrak Trains by Delay Type and Responsible Party
(Major Hosts Only - BNSF, CN, CP, CSX, NS, UP)
Most Recent Twelve Months through September 2017



Host Responsible	Amtrak Responsible	Third Party Responsible
1159	356	115
71.1%	21.8%	7.0%

Minutes of Delay per 10K Train Miles by Host for September 2017

Host	Service	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
		Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard		900	900					
BNSF	California Zephyr	1132	1068	DSR	591	FTI	181	1027
	Carl Sandburg / Illinois Zephyr	626	586	FTI	202	RTE	114	257
	Cascades	1304	1449	DSR	529	FTI	292	343
	Coast Starlight	459	622	PTI	177	DSR	143	186
	Empire Builder	529	665	DSR	295	FTI	251	2147
	Heartland Flyer	1279	1203	DSR	756	FTI	268	236
	Pacific Surfliner	1403	1424	DCS	336	FTI	300	22
	San Joaquins	1321	1006	PTI	383	FTI	337	284
	Southwest Chief	720	765	DSR	277	FTI	181	2206
	Sunset Ltd	988	1390	DSR	829	FTI	269	190
	Texas Eagle	986	1571	DSR	991	FTI	375	116
CN	Adirondack	4311	4078	DSR	1898	FTI	1148	49
	Blue Water	1306	1078	FTI	776	DSR	117	159
	City Of New Orleans	1334	1367	FTI	659	DSR	252	930
	Illini / Saluki	1963	2079	DCS	853	FTI	626	304
	Lincoln Service	1167	1179	FTI	622	DCS	266	35
	Texas Eagle	2148	2283	FTI	1346	DCS	318	35
	Wolverine	2052	1797	FTI	640	DSR	571	27
CP	Adirondack	991	964	PTI	372	DSR	267	178
	Empire Builder	260	441	DSR	147	FTI	129	384
	Ethan Allen Express	1735	1228	PTI	525	DCS	328	60
	Hiawatha	242	242	DCS	89	FTI	58	53
CSX	Auto Train	1233	1279	FTI	572	PTI	283	898
	Capitol Ltd	852	1044	FTI	462	DSR	202	307
	Cardinal	1501	1507	FTI	1038	DSR	178	703
	Carolinian	1632	1738	FTI	463	PTI	430	295
	Hoosier	1934	2174	FTI	1747	DCS	177	175
	Lake Shore Ltd	1004	1231	FTI	580	RTE	153	741
	Maple Leaf	1770	1806	FTI	947	RTE	347	298
	New York - Niagara Falls	1201	1235	FTI	432	RTE	328	296
	Palmetto	1036	1135	FTI	412	PTI	283	659
	Pere Marquette	373	342	FTI	176	DSR	73	135
	Richmond / Newport News / Norfolk	1381	1681	FTI	415	PTI	388	189
	Silver Meteor	1012	1034	FTI	490	PTI	183	1152
	Silver Star	1224	1339	FTI	402	DCS	254	1209
NS	Blue Water	1799	2906	FTI	1146	DCS	1081	39
	Capitol Ltd	1758	1932	FTI	1226	RTE	282	481
	Cardinal	782	1541	DCS	505	FTI	354	79
	Carolinian	399	631	PTI	214	DSR	166	202
	Crescent	1313	1480	FTI	1011	DSR	172	1141
	Lake Shore Ltd	1946	2151	FTI	1464	RTE	184	339
	Lynchburg	520	775	FTI	305	DSR	212	166
	Pennsylvanian	1044	975	FTI	609	RTE	140	249
	Pere Marquette	1461	1801	FTI	792	PTI	378	39
	Piedmont	505	654	FTI	214	PTI	143	173
	Richmond / Newport News / Norfolk	99	186	DCS	68	RTE	60	81
	Silver Star	654	563	PTI	314	FTI	85	28
	Wolverine	1965	2536	FTI	1196	DCS	645	39
UP	California Zephyr	1252	1067	FTI	322	DSR	248	1381
	Capitol Corridor	505	533	PTI	189	DSR	97	171
	Cascades	1317	1551	FTI	678	PTI	481	125
	Coast Starlight	1261	1417	PTI	417	FTI	341	1162
	Lincoln Service	869	1024	PTI	383	FTI	332	231
	Missouri	561	1204	FTI	546	DSR	269	271
	Pacific Surfliner	1081	1167	PTI	728	FTI	147	174
	San Joaquins	926	1217	PTI	493	DCS	224	88
	Sunset Ltd	1163	1318	FTI	723	RTE	188	1784
	Texas Eagle	1448	1588	FTI	750	DSR	280	1073

Minutes of Delay per 10K Train Miles by Host for September 2017

Host	Service	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
		Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard		900	900					
Amtrak	Adirondack	671	809	RTE	229	DCS	209	100
	Blue Water	584	1129	DSR	586	DCS	327	99
	Ethan Allen Express	759	913	DSR	330	DCS	223	100
	Maple Leaf	539	912	PTI	347	DSR	242	109
	New York - Albany	344	378	RTE	120	PTI	92	81
	New York - Niagara Falls	668	757	DSR	264	RTE	191	109
	Wolverine	832	1523	DSR	632	PTI	519	99
BBrRR	Cardinal	1522	1309	PTI	506	FTI	351	132
Fla DOT	Silver Meteor	1914	1577	DSR	516	CTI	460	68
	Silver Star	1132	1249	CTI	444	DSR	342	68
FR	Auto Train	6984	3104	DCS	1815	DSR	731	16
	Silver Meteor	4285	3188	DCS	1387	PTI	796	61
	Silver Star	3231	2409	DCS	1325	DSR	585	61
MADOT	Vermont	1890	1942	DSR	1703	DCS	172	50
MBTA	Downeaster	1910	1883	CTI	798	DSR	454	38
Metra	Empire Builder	1066	1071	CTI	741	DCS	123	29
	Hiawatha	1412	1369	CTI	940	DCS	118	29
MIDOT	Blue Water	114	62	DCS	42	DSR	20	22
	Wolverine	346	409	PTI	281	DCS	72	134
MNRR	Acela Express	1737	1738	DSR	821	CTI	693	56
	Adirondack	1324	1434	CTI	822	DSR	235	64
	All Other Northeast Regional	1729	1796	DSR	916	CTI	632	56
	Ethan Allen Express	1659	1523	CTI	584	DSR	433	64
	Lake Shore Ltd	1525	1578	CTI	669	DSR	474	64
	Lynchburg	2100	2513	DSR	1240	CTI	1031	56
	Maple Leaf	1361	1515	CTI	743	DSR	353	64
	New York - Albany	1495	1469	CTI	724	DSR	323	64
	New York - Niagara Falls	2040	1923	CTI	713	RTE	430	64
	Richmond / Newport News / Norfolk	2196	2165	DSR	1105	CTI	642	56
	Vermont	2682	2943	CTI	1401	DSR	1290	56
NECR	Vermont	1448	1387	DSR	1304	DCS	48	238
NMDOT	Southwest Chief	3440	4039	DSR	1692	CTI	1370	80
PanAm	Downeaster	755	754	PTI	322	DSR	279	77
SCRRA	Coast Starlight	2025	1957	PTI	1027	CTI	532	48
	Pacific Surfliner	932	974	PTI	367	CTI	339	95
SDNRR	Pacific Surfliner	1823	1876	CTI	698	PTI	554	60
TRE	Texas Eagle	1393	2199	CTI	1480	RTE	281	33
VTR	Ethan Allen Express		80	DCS	33	DMW	24	24

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Excludes hosts with fewer than 15 route miles.

Delays on the Amtrak-owned portion of the Northeast Corridor are shown in a separate report, with tighter delay standards.

Northeast Regional: Lynchburg includes all trains between Lynchburg and points on the NEC; Richmond / Newport News / Norfolk includes all trains between these locations and points on the NEC.

Minutes of Delay per 10K Train Miles by Service for September 2017

Service		Host	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
			Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard			900	900					
Acela Express									
Acela Express		MNRR	1737	1738	DSR	821	CTI	693	56
All Other NEC Corridor Routes									
Northeast Regional	Richmond / Newport News / Norfolk	CSX	1381	1681	FTI	415	PTI	388	189
		NS	99	186	DCS	68	RTE	60	81
		MNRR	2196	2165	DSR	1105	CTI	642	56
	Lynchburg	NS	520	775	FTI	305	DSR	212	166
		MNRR	2100	2513	DSR	1240	CTI	1031	56
	All Other Northeast Regional	MNRR	1729	1796	DSR	916	CTI	632	56
Non-NEC Corridor Routes									
Capitol Corridor		UP	505	533	PTI	189	DSR	97	171
Carolinian		CSX	1632	1738	FTI	463	PTI	430	295
		NS	399	631	PTI	214	DSR	166	202
Cascades		BNSF	1304	1449	DSR	529	FTI	292	343
		UP	1317	1551	FTI	678	PTI	481	125
Downeaster		MBTA	1910	1883	CTI	798	DSR	454	38
		PanAm	755	754	PTI	322	DSR	279	77
Empire	Adirondack	CN	4311	4078	DSR	1898	FTI	1148	49
		CP	991	964	PTI	372	DSR	267	178
		Amtrak	671	809	RTE	229	DCS	209	100
		MNRR	1324	1434	CTI	822	DSR	235	64
	Ethan Allen Express	CP	1735	1228	PTI	525	DCS	328	60
		Amtrak	759	913	DSR	330	DCS	223	100
		MNRR	1659	1523	CTI	584	DSR	433	64
		VTR		80	DCS	33	DMW	24	24
	Maple Leaf	CSX	1770	1806	FTI	947	RTE	347	298
		Amtrak	539	912	PTI	347	DSR	242	109
		MNRR	1361	1515	CTI	743	DSR	353	64
	New York - Albany	Amtrak	344	378	RTE	120	PTI	92	81
		MNRR	1495	1469	CTI	724	DSR	323	64
	New York - Niagara Falls	CSX	1201	1235	FTI	432	RTE	328	296
		Amtrak	668	757	DSR	264	RTE	191	109
		MNRR	2040	1923	CTI	713	RTE	430	64
Heartland Flyer		BNSF	1279	1203	DSR	756	FTI	268	236
Hiawatha		CP	242	242	DCS	89	FTI	58	53
		Metra	1412	1369	CTI	940	DCS	118	29
Hoosier		CSX	1934	2174	FTI	1747	DCS	177	175
Illinois	Carl Sandburg / Illinois Zephyr	BNSF	626	586	FTI	202	RTE	114	257
	Illini / Saluki	CN	1963	2079	DCS	853	FTI	626	304
	Lincoln Service	CN	1167	1179	FTI	622	DCS	266	35
		UP	869	1024	PTI	383	FTI	332	231
Michigan	Blue Water	CN	1306	1078	FTI	776	DSR	117	159
		NS	1799	2906	FTI	1146	DCS	1081	39
		Amtrak	584	1129	DSR	586	DCS	327	99
		MIDOT	114	62	DCS	42	DSR	20	22
	Pere Marquette	CSX	373	342	FTI	176	DSR	73	135
		NS	1461	1801	FTI	792	PTI	378	39
	Wolverine	CN	2052	1797	FTI	640	DSR	571	27
		NS	1965	2536	FTI	1196	DCS	645	39
		Amtrak	832	1523	DSR	632	PTI	519	99
		MIDOT	346	409	PTI	281	DCS	72	134
Missouri		UP	561	1204	FTI	546	DSR	269	271
Pacific Surfliner		BNSF	1403	1424	DCS	336	FTI	300	22
		UP	1081	1167	PTI	728	FTI	147	174
		SCRRA	932	974	PTI	367	CTI	339	95
		SDNRR	1823	1876	CTI	698	PTI	554	60
Pennsylvanian		NS	1044	975	FTI	609	RTE	140	249
Piedmont		NS	505	654	FTI	214	PTI	143	173
San Joaquins		BNSF	1321	1006	PTI	383	FTI	337	284
		UP	926	1217	PTI	493	DCS	224	88
Vermont		MADOT	1890	1942	DSR	1703	DCS	172	50
		MNRR	2682	2943	CTI	1401	DSR	1290	56
		NECR	1448	1387	DSR	1304	DCS	48	238

Minutes of Delay per 10K Train Miles by Service for September 2017

Service		Host	Total Host Responsible Delays		Largest Two Delay Categories - Quarter to Date				Route Miles
			Current Month	Quarter to Date	#1		#2		
PRIIA Section 207 Standard			900	900					
Long-Distance Routes									
Auto Train		CSX	1233	1279	FTI	572	PTI	283	898
		FR	6984	3104	DCS	1815	DSR	731	16
California Zephyr		BNSF	1132	1068	DSR	591	FTI	181	1027
		UP	1252	1067	FTI	322	DSR	248	1381
Capitol Ltd		CSX	852	1044	FTI	462	DSR	202	307
		NS	1758	1932	FTI	1226	RTE	282	481
Cardinal		CSX	1501	1507	FTI	1038	DSR	178	703
		NS	782	1541	DCS	505	FTI	354	79
		BBrRR	1522	1309	PTI	506	FTI	351	132
City Of New Orleans		CN	1334	1367	FTI	659	DSR	252	930
Coast Starlight		BNSF	459	622	PTI	177	DSR	143	186
		UP	1261	1417	PTI	417	FTI	341	1162
		SCRRA	2025	1957	PTI	1027	CTI	532	48
Crescent		NS	1313	1480	FTI	1011	DSR	172	1141
Empire Builder		BNSF	529	665	DSR	295	FTI	251	2147
		CP	260	441	DSR	147	FTI	129	384
		Metra	1066	1071	CTI	741	DCS	123	29
Lake Shore Ltd		CSX	1004	1231	FTI	580	RTE	153	741
		NS	1946	2151	FTI	1464	RTE	184	339
		MNRR	1525	1578	CTI	669	DSR	474	64
Palmetto		CSX	1036	1135	FTI	412	PTI	283	659
Silver Meteor		CSX	1012	1034	FTI	490	PTI	183	1152
		Fla DOT	1914	1577	DSR	516	CTI	460	68
		FR	4285	3188	DCS	1387	PTI	796	61
Silver Star		CSX	1224	1339	FTI	402	DCS	254	1209
		NS	654	563	PTI	314	FTI	85	28
		Fla DOT	1132	1249	CTI	444	DSR	342	68
		FR	3231	2409	DCS	1325	DSR	585	61
Southwest Chief		BNSF	720	765	DSR	277	FTI	181	2206
		NMDOT	3440	4039	DSR	1692	CTI	1370	80
Sunset Ltd		BNSF	988	1390	DSR	829	FTI	269	190
		UP	1163	1318	FTI	723	RTE	188	1784
Texas Eagle		BNSF	986	1571	DSR	991	FTI	375	116
		CN	2148	2283	FTI	1346	DCS	318	35
		UP	1448	1588	FTI	750	DSR	280	1073
		TRE	1393	2199	CTI	1480	RTE	281	33

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Excludes hosts with fewer than 15 route miles.

Delays on the Amtrak-owned portion of the Northeast Corridor are shown in a separate report, with tighter delay standards.

Northeast Regional: Lynchburg includes all trains between Lynchburg and points on the NEC; Richmond / Newport News / Norfolk includes all trains between these locations and points on the NEC.

Host Railroad Report - All Stations and End Point OTP for September 2017

Service	All Stations OTP		End Point OTP	
	Current Month	Quarter to Date	Current Month	Quarter to Date
Amtrak System	74.2%	71.0%	77.0%	73.0%
Acela Express				
PRIIA Section 207 Standard	90.0%	90.0%	90.0%	90.0%
Acela Express	77.0%	75.0%	77.1%	75.6%
NEC Corridor Routes				
PRIIA Section 207 Standard	85.0%	85.0%	85.0%	85.0%
Keystone	93.4%	92.5%	88.5%	86.3%
Northeast Regional	76.3%	73.4%	79.5%	74.4%
All Other Northeast Regional	74.8%	74.8%	78.8%	76.8%
Lynchburg	77.8%	67.1%	76.7%	63.0%
Richmond / Newport News / Norfolk	78.8%	72.3%	82.4%	70.1%
Non-NEC Corridor Routes				
PRIIA Section 207 Standard	80.0%	80.0%	80.0%	80.0%
Capitol Corridor	95.4%	95.2%	93.3%	92.6%
Carolinian	63.3%	48.5%	68.3%	45.1%
Cascades	70.9%	63.5%	66.9%	59.9%
Downeaster	90.0%	89.5%	65.3%	63.5%
Empire	73.0%	69.7%	77.8%	77.0%
Adirondack	55.6%	43.2%	55.0%	44.0%
Ethan Allen Express	83.1%	84.5%	85.0%	84.8%
Maple Leaf	55.9%	48.7%	75.0%	63.6%
New York - Albany	92.8%	91.5%	82.6%	82.4%
New York - Niagara Falls	64.4%	64.8%	71.7%	78.8%
Heartland Flyer	78.3%	82.0%	66.7%	66.8%
Hiawatha	97.2%	96.8%	93.2%	93.7%
Hoosier	61.3%	58.5%	55.9%	49.0%
Illinois	71.0%	69.5%	71.9%	68.4%
Carl Sandburg / Illinois Zephyr	91.5%	91.2%	90.8%	90.5%
Illini / Saluki	32.6%	32.5%	23.3%	21.2%
Lincoln Service	81.4%	78.7%	86.7%	81.0%
Michigan	85.3%	74.7%	84.7%	69.7%
Blue Water	81.2%	71.4%	76.7%	60.3%
Pere Marquette	93.3%	93.9%	86.7%	87.5%
Wolverine	85.5%	73.2%	86.7%	66.8%
Missouri	87.6%	69.3%	86.7%	63.2%
Pacific Surfliner	82.5%	79.3%	71.2%	64.0%
Pennsylvanian	80.6%	76.4%	81.7%	76.6%
Piedmont	95.5%	91.6%	87.5%	79.4%
San Joaquins	71.1%	79.2%	66.3%	77.0%
Vermont	56.1%	51.6%	71.7%	71.7%
Long-Distance Routes				
PRIIA Section 207 Standard	80.0%	80.0%	80.0%	80.0%
Auto Train	50.0%	67.1%	66.7%	68.1%
California Zephyr	32.6%	35.5%	35.0%	41.3%
Capitol Ltd	54.0%	41.0%	61.7%	44.6%
Cardinal	59.3%	41.8%	57.7%	40.5%
City Of New Orleans	51.2%	47.3%	78.3%	75.5%
Coast Starlight	58.8%	41.6%	66.7%	52.7%
Crescent	46.1%	36.8%	34.5%	29.1%
Empire Builder	79.9%	67.3%	89.8%	82.0%
Lake Shore Ltd	49.3%	38.7%	52.3%	39.4%
Palmetto	50.2%	51.0%	55.1%	36.4%
Silver Meteor	24.5%	27.8%	28.2%	25.8%
Silver Star	23.8%	27.8%	31.9%	19.9%
Southwest Chief	43.5%	36.7%	43.3%	32.6%
Sunset Ltd	37.1%	32.2%	73.1%	65.4%
Texas Eagle	53.7%	40.8%	60.0%	54.3%

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Host Railroad Responsible Delays

Code	Code Description	Explanation
CTI	Commuter Train Interference	Delays for meeting or following commuter trains
DCS	Signal Delays	Signal failure or All Other signal delays, wayside defect-detector false-alarms, defective road crossing protection, efficiency tests, drawbridge stuck open
DMW	Maintenance of Way	Maintenance of Way delays including holds for track repairs or MW foreman to clear
DSR	Slow Order Delays	Temporary slow orders, except heat or cold orders
DTR	Detour	Delays from detours
FTI	Freight Train Interference	Delays from freight trains
PTI	Passenger Train Interference	Delays for meeting or following All Other passenger trains
RTE	Routing	Routing-dispatching delays including diversions, late track bulletins, etc.

Amtrak Responsible Delays

Code	Code Description	Explanation
ADA	Passenger Related	All delays related to disabled passengers, wheel chair lifts, guide dogs, etc.
CAR	Car Failure	Mechanical failure on all types of cars
CCR	Cab Car Failure	Mechanical failure on Cab Cars
CON	Hold for Connection	Holding for connections from All Other trains or buses.
ENG	Locomotive Failure	Mechanical failure on engines.
HLD	Passenger Related	All delays related to passengers, checked-baggage, large groups, etc.
INJ	Injury Delay	Delay due to injured passengers or employees.
ITI	Initial Terminal Delay	Delay at initial terminal due to late arriving inbound trains causing late release of equipment.
OTH	Miscellaneous Delays	Lost-on-run, heavy trains, unable to make normal speed, etc.
SVS	Servicing	All switching and servicing delays
SYS	Crew & System	Delays related to crews including lateness, lone-engineer delays

Third-Party Delays

Code	Code Description	Explanation
CUI	Customs	U.S. and Canadian customs delays; Immigration-related delays
DBS	Debris	Debris strikes
MBO	Drawbridge Openings	Movable bridge openings for marine traffic where no bridge failure is involved
NOD	Unused Recovery Time	Wait for departure time
POL	Police-Related	Police/fire department holds on right-of-way or on-board trains
TRS	Trespassers	Trespasser incidents including road crossing accidents, trespasser / animal strikes, vehicle stuck on track ahead, bridge strikes
WTR	Weather-Related	All severe-weather delays, landslides or washouts, earthquake-related delays, heat or cold orders

*These delay codes are applicable to Off-NEC routes only.

PUBLIC VERSION - REDACTED

BEFORE THE
SURFACE TRANSPORTATION BOARD

FINANCE DOCKET NO. 35743

APPLICATION OF THE NATIONAL RAILROAD PASSENGER CORPORATION UNDER
49 U.S.C. § 24308(A) – CANADIAN NATIONAL RAILWAY COMPANY

**JOINT SURREBUTTAL VERIFIED STATEMENT OF
JOHN H. WILLIAMS AND JUDITH H. ROBERTS**

Table of Contents

	<u>Page</u>
I. Introduction and Overview	1
II. CN's Additional TPC Modeling of the Illini/Saluki Service.....	2
III. Capacity Bubble Analysis and Blackout Periods.....	8
IV. Conclusion	22

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**JOINT SURREBUTTAL VERIFIED STATEMENT OF
JOHN H. WILLIAMS AND JUDITH H. ROBERTS**

I. Introduction and Overview

My name is John H. Williams. I am President of The Woodside Consulting Group, a firm which specializes in railroad transportation consulting. I am also President of the Northwestern Pacific Railroad Co. My name is Judith H. Roberts. I am Vice President of The Woodside Consulting Group and also Vice President of the Northwestern Pacific Railroad Co. We are the co-authors of the Rebuttal Joint Verified Statement of John H. Williams and Judith H. Roberts (“Williams/Roberts RVS”), which was filed in evidence on September 14, 2017 as part of Amtrak’s Rebuttal Evidentiary Submission in this proceeding.¹

In this Surrebuttal Verified Statement, we have been asked to provide our professional opinion regarding the additional Train Performance Calculator (“TPC”) modeling of Amtrak’s Illini/Saluki service that is described in Section I of the Rebuttal Verified Statement of Harald

¹ Further details about our background, experience and qualifications are provided in Attachment A to the Williams/Roberts RVS.

Krueger (“Krueger RVS”)² and CN’s schedule adjustment proposal for the Illini/Saluki service that is also described in that same section of the Krueger RVS. We also have been asked to provide our professional opinion regarding the capacity “bubble” analysis that is described in Section II of the Krueger RVS.

II. CN’s Additional TPC Modeling of the Illini/Saluki Service

In his Rebuttal Verified Statement, Mr. Krueger describes Pure Run Time (“PRT”) as “the theoretical minimum amount of time a train can traverse a segment under ideal operating conditions.”³ He claims that PRT “can be established easily and objectively using a Train Performance Calculator (“TPC”).”⁴ Mr. Krueger then proceeds to describe several important input variables to his TPC calculations of PRT, including “maximum authorized track speed” and “the train’s consist characteristics (tractive effort, weight, length, rolling resistance, etc.), which varies by the number and type of locomotives and the number and type of cars.”⁵

As we described in the Williams/Roberts RVS, any TPC modeling conducted to calculate PRT is largely dependent on the inputs and assumptions that are used in the TPC model with respect to the train consist and its maximum authorized operating speed.⁶ The additional TPC modeling of the Illini/Saluki service that is described in the Krueger RVS uses different inputs and assumptions than the initial TPC modeling described in the Krueger VS. It also illustrates

² Mr. Krueger was also a co-author of the Joint Verified Statement of Harald Krueger, Brian Doyle, and Nikola Rank (“Krueger VS”), which was filed as part of CN’s Opening Evidentiary Submission in this proceeding.

³ Krueger RVS at 3.

⁴ Krueger RVS at 4.

⁵ Krueger RVS at 4.

⁶ See Williams/Roberts RVS at 71-72.

that CN's TPC modeling exercise does not and cannot establish new PRT's "easily and objectively" without mutual agreement between the parties on the underlying inputs that are incorporated into the model and without additional verification of the TPC results through field tests.⁷

For the most recent round of TPC modeling conducted by CN of the Illini/Saluki service between Chicago and Carbondale, IL, Mr. Krueger uses an Amtrak consist of 1 P42 locomotive and 7 Amfleet/Horizon cars (sometimes referred to as a "1+7 consist"). This is the same consist that CN used in the initial round of TPC modeling for the Illini/Saluki service that is described in the Krueger VS. As explained in the Surrebuttal Verified Statement of Jason Maga ("Maga SVS") that is being filed simultaneously herewith, Amtrak would operate a consist of 1 P42 locomotive and 4 Amfleet/Horizon cars for the Illini/Saluki service if CN had not imposed the minimum axle count restrictions prompted by the CN grade crossing activation failures.⁸

In fact, Amtrak's preferred consist of 1 P42 locomotive and 4 Amfleet/Horizon cars has a Horsepower Per Ton ("HPT") ratio of approximately 13,⁹ which is almost double the 7.02 HPT ratio that was used by Mr. Krueger for the additional TPC modeling that he conducted of the Illini/Saluki trains using the 1+7 consist. Although we do not have access to CN's proprietary TPC model to conduct our own PRT calculations for the Illini/Saluki trains using the 13 HPT ratio associated with Amtrak's preferred consist, we know from CN's own various TPC modeling runs that the PRT calculations would be substantially lower using the Amtrak HPT

⁷ We reached this same conclusion in the Williams/Roberts RVS after evaluating the initial TPC modeling conducted by CN that was described in the Krueger VS.

⁸ Maga SVS at 16, n.35.

⁹ Id.

ratio.¹⁰ Therefore, Mr. Krueger's claim of any shortfall in the PRT of the Illini/Saluki trains is based entirely on his flawed assumption about the appropriate Amtrak consist to use (and its associated HPT ratio) in the TPC modeling that he conducted for the Krueger VS and Krueger RVS.

In addition, one version¹¹ of CN's TPC simulation runs includes the 70 mph operating speed restrictions at grade crossings that CN has imposed on Amtrak's Illini/Saluki trains operating between Chicago/Clark Street and Centralia, and the additional 60 mph operating restriction that CN has imposed at grade crossings on the approximately 55-mile segment between Mattoon and Kinmundy. These operating speed restrictions (which are incorporated into CN's TPC model for the relevant version of CN's simulation) relative to the predominant 79-mph passenger train speed limit along this route further increase the overall PRT that is calculated by CN's TPC for the Chicago-Carbondale route.

Mr. Krueger's additional TPC modeling for the Illini/Saluki service also assumes that the Amtrak trains stop at five specified interlockings (which Mr. Krueger has referred to as "v-

¹⁰ The PRT shown in Table 2 of the Krueger RVS for southbound Illini/Saluki trains between Chicago/Clark St. and Carbondale (278 minutes) correlates with the TPC runs reflected in his workpapers for an Illini/Saluki train with one P42 locomotive and 7 Amfleet/Horizon cars, but the PRT shown for northbound Illini/Saluki trains (281 minutes) is higher than the [REDACTED] minutes reflected in his workpapers for the same consist. In comparison to these results, PRT results reflected in his workpapers for an Illini/Saluki train with one P42 locomotive and 4 Amfleet/Horizon cars are [REDACTED] minutes southbound and [REDACTED] minutes northbound, about [REDACTED] less in each direction than the PRT results for the longer trains. See Krueger RVS workpaper: [REDACTED].

¹¹ This version is described in the Krueger RVS workpapers and in Exhibit 4 of the Krueger RVS as "WITH Crossing Shunt Speed Restrictions."

stops”) that are not scheduled Illini/Saluki station stops.¹² These interlocking stops should not be part of the PRT modeling for the Amtrak trains, which are not scheduled to stop at these interlockings and do not typically stop at these interlockings. The inclusion of these interlocking stops in the TPC model (which forces the Amtrak train to reduce speed down to zero at each such interlocking and then reaccelerate from zero following these stops) results in a slower overall PRT for the Amtrak trains. In fact, Amtrak has estimated that each such fictitious interlocking stop that has been incorporated by CN into its TPC model results in approximately 3 additional minutes (and 15 total minutes) of extra run time for the Illini/Saluki trains that do not reflect real-world operations.¹³

The additional TPC modeling of the Illini/Saluki trains that is described in the Krueger RVS also contains different assumptions from the initial TPC modeling described in the Krueger VS.¹⁴ Although the basis for these different assumptions is not fully explained by CN, some of the differences may be attributable to use of a different timetable, perhaps with track speed changes.¹⁵ The impacts of the various changes on the Illini/Saluki trains in the TPC model vary

¹² See Exhibits 3 and 4 to the Krueger RVS (referring in the notes section of each page in the upper right corner to the “v-time” included at Kensington, Tolono, Kinmundy, Odin and Ashley).

¹³ See Maga SVS at 13-14.

¹⁴ Side-by-side comparisons, by direction and milepost, that note differences between CN’s TPC runs for the Krueger VS and the TPC runs for the Krueger RVS (both the version with and without the operating speed restrictions imposed by CN as a result of its grade crossing activation failures) are contained in our workpapers. See Workpaper: [REDACTED].

¹⁵ We were unable to locate within Mr. Krueger’s workpapers the April 1, 2017 timetable referenced in Exhibits 3 and 4 to the Krueger RVS.

over the corridor, with some increases and some decreases in relative run time along portions of the route.

One example of such a change that increases the relative run time is CN's use of a slightly lower HPT ratio (7.02) for the 1+7 consist in the additional TPC modeling of the Illini/Saluki service that is described in the Krueger RVS than in the initial TPC modeling underlying his earlier testimony, which assumed an HPT ratio of [REDACTED].¹⁶ Mr. Krueger provides no explanation for why he decided in this round of TPC modeling to use a lower HPT ratio, which contributes to a slower overall PRT than if the higher HPT ratio were used.

There also appear to be slight discrepancies between the TPC modeling results reflected in the Krueger RVS workpapers and the TPC modeling results reflected in the Krueger RVS itself. For example, although the PRT shown in Table 2 of the Krueger RVS for southbound Illini/Saluki trains between Chicago/Clark Street¹⁷ and Carbondale (278 minutes) correlates with results of the TPC runs reflected in his workpapers for an Illini/Saluki train with one P42 locomotive and 7 cars, the PRT shown in Table 2 of the Krueger RVS for northbound

¹⁶ Based on our review of Exhibits 3 and 4 to the Krueger RVS, it appears that the discrepancy in the HPT ratio for the 1+7 consist results from a different Head-End Power ("HEP") assumption used by Mr. Krueger in this round of TPC modeling for the Illini/Saluki service. For some unexplained reason, Mr. Krueger assumes the HEP of the 1+7 consist is 275kw, while he previously assumed the HEP of the 1+7 consist was [REDACTED]. This difference appears to account for the difference in the HPT ratio because it lowers the net horsepower of the train, which is divided by the total weight of the train to determine its HPT ratio (which reflects the tractive power of the consist).

¹⁷ Chicago/Clark Street, the point south of which Amtrak operates the Illini/Saluki and City of New Orleans trains on CN's tracks (and which location is sometimes also referred to as 16th Street), is approximately 2.63 miles south of Chicago Union Station. See Krueger RVS workpaper: [REDACTED]

Illini/Saluki trains (281 minutes) is higher than the [REDACTED] minutes found in his workpapers for the same consist.¹⁸

Mr. Krueger's TPC modeling results were used to develop CN's proposed schedules for the Illini/Saluki trains that are described in the Krueger RVS. Mr. Krueger explains that he added 12 minutes of "miscellaneous time" to CN's proposed schedules to account for the operating speed restrictions imposed by CN as a result of CN's grade crossing activation failures.¹⁹ The difference in TPC run time calculated by Mr. Krueger for those trains with and without the operating speed restrictions is [REDACTED] [REDACTED] for southbound Illini/Saluki trains and [REDACTED] for northbound Illini/Saluki trains. Even assuming for purposes of analysis only that such schedule adjustments for the CN operating speed restrictions were appropriate (which we understand that Amtrak disputes), the increment added by Mr. Krueger to CN's proposed schedules is, once again, higher than indicated by CN's own TPC analyses.

Moreover, CN's proposed schedule adjustment that purportedly accounts for the operating speed restrictions imposed by CN is based on TPC modeling runs for a 7-car Illini/Saluki consist with an HPT ratio of 7.02. This means that the base PRT in those proposed schedules is higher than it would be if the PRT were calculated using a 4-car consist for the Amtrak trains (with a much higher HPT ratio). Mr. Krueger claims that, in the event the grade crossing activation failure issue is resolved, the 12-minute schedule allowance proposed by CN

¹⁸ Mr. Krueger explains that he employed certain rounding techniques in connection with the PRT results from his TPC runs because Amtrak's schedules use whole minute increments. The discrepancy noted above may reflect the results of such rounding techniques, although the cumulative impact of rounding up these PRT results can have a material impact on the overall PRT reflected in the schedule.

¹⁹ Krueger RVS at 12-13.

could readily be eliminated to produce an appropriate schedule.²⁰ However, were Amtrak to adopt its preferred 4-car consist for the Illini/Saluki service in the event of resolution of the grade crossing activation failure issue, the PRT for the 7-car consist would remain in the schedules proposed by CN without justification.

III. Capacity Bubble Analysis and Blackout Periods

In a purported attempt to demonstrate that CN could not minimize delays to Amtrak trains in the Chicago-Carbondale corridor without shutting down CN's freight network, Mr. Krueger has postulated a theory that "Amtrak's proposed heightened service levels would require surrounding their trains with a large exclusive operating zone, or 'bubble.'"²¹ He claims that such a bubble is required in order to protect Amtrak trains from all freight train interference ("FTI") that would otherwise interfere with Amtrak's achievement of its on-time performance goals. However, the entire construct reflected by Mr. Krueger's bubble analysis boils down to a theoretical exercise based on extreme assumptions (as described herein) that do not reflect real-world operations.

Mr. Krueger's capacity bubble analysis falls short for a number of reasons, as described further in this section:

- The freight trains that are integral to his analysis are entirely hypothetical, with no relevance to real-world operations on the Chicago-Carbondale corridor.
- There is no evidentiary support within CN's workpapers for certain assumptions in Mr. Krueger's analysis, such as the 15-minute dispatcher Risk Factor.

²⁰ Krueger RVS at 13.

²¹ Krueger RVS at 17. Mr. Krueger further defines the concept of a "bubble" as "an area of track in which no other train may operate..." Using his terminology, and notwithstanding our disagreement with the accuracy of his analysis, we refer to Mr. Krueger's claims about the purported exclusive operating zones as the "bubble analysis".

- Key assumptions, such as the presumed freight train length and HPT ratio for the “typical” freight train on the Chicago-Carbondale corridor (two consist factors that affect TPC speed and run time results), are refuted by CN’s own workpapers.
- An unrealistic assumption as to freight train length would prevent use of shorter sidings on the Chicago-Carbondale corridor that are actually accessible to most CN trains, thereby reducing the perceived capacity on the corridor.
- Exclusive operating zones estimated by Mr. Krueger are exceedingly long in relation to single track mileage in the Chicago-Carbondale corridor.
- With the availability of double track and multiple sidings on the corridor, it is not at all apparent that a CN dispatcher could not readily advance a freight train to the next siding without detrimental effect on the approaching Amtrak train to accommodate a meet or pass of a freight train by an Amtrak train.
- Even without regard to available double track and multiple sidings on the Chicago-Carbondale corridor, the hours of freight availability in Mr. Krueger’s blackout period estimates are understated, while the availability of such double track and multiple sidings further undermines Mr. Krueger’s conclusions.
- Due to differences in Amtrak train volumes and other factors, any conclusions reached by Mr. Krueger with regard to his analysis of capacity on the Chicago-Carbondale corridor cannot be extrapolated to other locations where Amtrak operates on CN track.
- CN workpapers underlying key conclusions relating to Mr. Krueger’s capacity bubble analysis and blackout periods have not been made available for review by Amtrak and the Board.

In the Krueger RVS, Mr. Krueger describes the rather convoluted methodology and extreme assumptions he used to estimate the size of the purported exclusive operating zone that he claims would be required around each of the six daily Amtrak trains in the Chicago-Carbondale corridor to eliminate FTI. His methodology focuses on each so-called gauntlet, which Mr. Krueger defines as an “individual piece of single track within the corridor,”²² and the relationship between each Amtrak train and a following or opposing freight train in the vicinity of the Amtrak train. For each single track gauntlet between Chicago and Carbondale²³, and

²² Krueger RVS at 18.

²³ As Mr. Krueger further describes in the Krueger RVS, his analysis for the Chicago-Carbondale corridor was actually separated into three geographic segments: Chicago-Champaign, Champaign-Edgewood Junction, and Edgewood Junction-Carbondale. He presents his results separately for each geographic segment. Krueger RVS at 18.

separately for each of the six daily Amtrak trains that operate over each such gauntlet, Mr. Krueger claims that separate calculations were made to determine both a “Clearance Point”²⁴ and a “Decision Point”²⁵ for both a (hypothetical) freight train meeting an Amtrak train and a (hypothetical) freight train being overtaken by an Amtrak train.²⁶

After determining these two points for a hypothetical freight train, Mr. Krueger added to his analysis a “dispatcher Risk Factor” of 15 additional minutes that he describes as “modest”.²⁷

²⁴ Mr. Krueger provides the following explanation of the “Clearance Point”: “First, I determined the location at which a meet or overtake could occur and where a freight train clears the end of a single track gauntlet. I then determined the time at which the freight train must clear that location so that all signals seen by the approaching Amtrak train would have just switched to a favorable indication.... In other words, the Clearance Point is both a geographic location (a specific milepost where the freight train can stop clear and permit Amtrak to move unimpeded) and a point in time (when the freight train must get to that milepost in order to avoid any delay to Amtrak).” Krueger RVS at 18.

²⁵ Mr. Krueger provides the following explanation of the “Decision Point”: “Working backwards from [the Clearance Point], and using the freight train’s TPC run, I then calculated the time of the freight train at the previous location at which the dispatcher would have had to make the decision to either stop the freight train in the clear before the single track gauntlet, or permit it to proceed through the gauntlet. I call this location and time the ‘Decision Point’. Like the Clearance Point, the Decision Point is both a geographic location (a specific milepost) and a point in time (the last time at which the freight train could traverse and clear the single track gauntlet without delaying Amtrak.” Krueger RVS at 19.

²⁶ We emphasize that the bubble analysis described by Mr. Krueger is based on a hypothetical freight train of a fixed train length and fixed horsepower per ton ratio and subject to the run pattern associated with those variables, as determined through a TPC simulation conducted by CN. There is no reference in Mr. Krueger’s analysis to actual CN freight trains operating in the corridor, either by train ID, train characteristics, or even freight train schedules or hours of operation.

²⁷ Mr. Krueger’s explanation for this step is as follows: “To estimate the beginning of the exclusive operating zone realistically, it is necessary to add a ‘dispatcher Risk Factor’ to account for the time a real-world dispatcher would stop the freight train in advance of the theoretical Decision Point in order to completely avoid FTI and eliminate any potential risk of delay to the Amtrak train. For the purposes of this analysis, I have assumed a modest dispatcher uncertainty

In other words, he postulates that a CN dispatcher must make decisions to clear the path for an Amtrak train based on the presumed Clearance Point and Decision Point and with an additional 15 minutes of buffer to avoid any delay to the Amtrak train resulting from a potential meet or pass between the Amtrak train and the CN freight train in proximity to a single track segment. The results of this analysis are summarized, for northbound and southbound freight trains, respectively, in Tables 8 and 9 of the Krueger RVS, which purport to show the estimated exclusive operating zone (in miles).

Mr. Krueger's bubble analysis rests on a critical assumption about CN freight train length and power that Mr. Krueger describes as follows: "My analysis was based on a typical CN freight train on the Chicago-to-Carbondale corridor, which I assumed was 11,000 feet long with 0.8 horsepower per ton."²⁸ However, he has offered no evidence to support the claim that this freight train consist is "typical" for the corridor.

On the contrary, Mr. Krueger's own workpapers from the Krueger VS supply ample evidence that this representation is inaccurate. The CN "lawnchair" data file of actual freight trains traversing the relevant Chicago to Carbondale corridor in 2013 that CN used in designing the capacity modeling described in the Krueger VS presents a very different profile of the CN freight trains in this territory.²⁹ Our analysis of CN's 2013 lawnchair data for the Chicago-

factor of 15 minutes." Krueger RVS at 19. Mr. Krueger has provided no evidentiary basis for this assumption, which in our opinion appears excessive and is unlikely to reflect actual CN dispatching practices. At full track speed, such an additional 15 minutes of cushion before the dispatcher makes a decision translates into as much as an additional 35 miles of separation between opposing Amtrak and freight trains and that much less information as to where the trains will actually be at any given time.

²⁸ Krueger RVS at 17.

²⁹ Krueger VS workpaper entitled [REDACTED]. CN's lawnchair file is a record of historical data [REDACTED]

Carbondale portion of the IC Corridor, shown in Attachment A, demonstrates that the percentage of CN freight trains within any particular segment on that corridor that are at least 11,000 feet in length ranges from [REDACTED] of all trains within that particular segment. CN's own data illustrates that CN freight trains of 11,000 feet and longer are more of an anomaly than "typical" for the Chicago-Carbondale corridor.

In the same IC Corridor capacity simulations conducted by the CN modelers and summarized in the Krueger VS, which simulations were described by CN as incorporating data from actual CN freight train operations, only train type [REDACTED] (that is, one freight train per day) was defined as being as long as [REDACTED] feet in length.³⁰ All other freight train types were defined as [REDACTED] feet or shorter, as shown in Attachment B. Thus, within Mr. Krueger's own capacity modeling simulations, an 11,000-foot freight train could not be considered typical for the Chicago-Carbondale corridor.

A summary of IC Corridor infrastructure between Chicago and Carbondale, showing the locations and lengths of single track, double track, and sidings, is provided in Attachment C.³¹ As shown in Attachment C, of the 14 sidings between Chicago and Carbondale, two are shorter than 11,000 feet. These two sidings are at Peotone (10,519 feet) and Tolono (9902 feet). The CN 2013 lawnchair data summarized in Attachment B demonstrate that about [REDACTED] of the CN freight trains operating near Peotone, located between Matteson and Bradley, IL, were short

[REDACTED] for trains passing certain mileposts along the given route. The referenced file shows trains by date within specified segments of the Illinois Central corridor between Chicago and New Orleans ("IC Corridor").

³⁰ Krueger VS workpaper entitled [REDACTED]

³¹ The information in Attachment C, drawn from timetables for CN's Chicago and Central Divisions, is a subset of Attachment C-3 to the Williams/Roberts RVS.

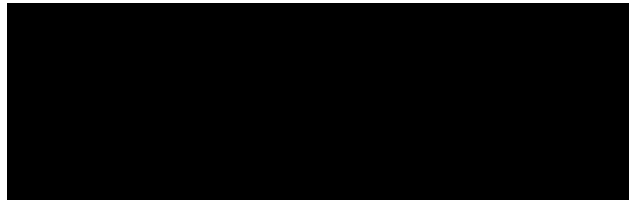
enough to fit into the Peotone siding and approximately [REDACTED] of the CN freight trains operating near Tolono, located between Thomasboro and Arcola, IL, were short enough to use the Tolono siding. In contrast, the 11,000-foot long hypothetical freight train that is the basis for Mr. Krueger's bubble analysis and that Mr. Krueger claims is "typical" on this corridor would be too long to utilize either of these two sidings.

In addition to Mr. Krueger's flawed assumption about the "typical" CN freight train length on the relevant corridor, another underlying assumption in his bubble analysis that is suspect is the 0.8 horsepower per ton ("HPT") assumption for the hypothetical 11,000 foot CN freight train that was used in his analysis. As the CN consist data in Attachment A also show, the average HPT ratio for the [REDACTED] (as noted above, the longest of the freight trains in the CN capacity simulations) and other [REDACTED] was about [REDACTED] not 0.8. This is a significant difference that affects TPC-calculated train speed and run time. In fact, [REDACTED] of the CN freight train speed classes in that CN consist data file for the Chicago-Carbondale corridor had HPT ratios [REDACTED]

Mr. Krueger's own workpapers demonstrate that train speed and run time in CN's TPC modeling output are affected by both train length and horsepower per ton. Workpapers [REDACTED] and [REDACTED], which are inputs to the computer program used in Mr. Krueger's bubble analysis, contain output data for a variety of freight train length/HPT combinations. The "typical" CN freight train on the Chicago-to-Carbondale corridor, which Mr. Krueger assumed was 11,000 feet long with 0.8 horsepower per ton, is identified in these workpapers as

[REDACTED].³² The two workpapers reveal a significant range of freight train run times for different train length/HPT combinations. Several examples are shown in Table 1 below:

Table 1
CN's Chicago-Carbondale TPC Run Times (in Minutes)
For Differing Train Lengths and HPT Levels

A large black rectangular box redacting the content of Table 1.

For example, CN's TPC data reflected in these workpapers show that the 11,000-foot freight train with 0.8 HPT that was the basis for Mr. Krueger's capacity bubble analysis has a northbound run time over the Chicago-Carbondale corridor of [REDACTED] and a southbound run time of [REDACTED], while a [REDACTED] with [REDACTED] has a northbound run time of [REDACTED] and a southbound run time of [REDACTED]. Such differences in run time can substantially affect the length of time required for a freight train to traverse a single track segment, which in turn would affect (and, in the case of the atypical consist assumed by Mr. Krueger for his analysis, tend to overstate) the calculations of time and distance purportedly required to avoid FTI delay to Amtrak trains in Mr. Krueger's bubble analysis.

The bulk of Mr. Krueger's bubble analysis and his associated conclusions as to freight train blackout periods are contained in a number of computer files within his workpapers. In addition to the two TPC output files discussed above are four files identified as Python scripts.³³

³² Krueger RVS workpapers entitled [REDACTED] and [REDACTED] contains TPC results for a variety of train length/HPT configurations for southbound trains and [REDACTED] contains TPC results for similar train length/HPT configurations for northbound trains.

³³ [REDACTED]
[REDACTED]

The four files purportedly were used by CN to read and analyze the route, Amtrak schedules, and TPC results for hypothetical freight trains and produce output data that relate to the conclusions identified in Tables 8 and 9 of the Krueger RVS. [REDACTED]

[REDACTED] and we would have expected to see such results within Mr. Krueger’s workpapers. However, aside from TPC results used as input data, we have not found within the Krueger RVS workpapers any output from this program or any other output results relevant to Mr. Krueger’s bubble analysis. This glaring omission impedes thorough assessment by Amtrak and the Board of the actual study results that underlie the very minimal summary included in Tables 8 and 9 of the Krueger RVS.

Even absent such pivotal CN workpapers, however, the extent of CN’s exaggerated claims and extreme assumptions with regard to the bubble analysis is readily apparent through a critical review of Tables 8 and 9 of the Krueger RVS. These tables present the “average exclusive operating zone” (described by Mr. Krueger as the bubble across all single track in the segment). The exclusive operating zones estimated through Mr. Krueger’s bubble analysis vary depending on the track segment, the direction of the hypothetical freight train movement, and whether the potential Amtrak/freight train relationship is a passing move (i.e., following) or a

[REDACTED]

meet (i.e., opposing). Tables 8 and 9 show the length of the “average” zone³⁴ ranging from 20.4 miles for a northbound following meet on the Edgewood-Carbondale segment to 72.4 miles for a northbound opposing meet on that same segment. The minimum exclusive operating zone shown in Tables 8 and 9 is a southbound following meet on the Edgewood-Carbondale segment and the maximum exclusive operating zone, also on the Edgewood-Carbondale segment, is 80.7 miles for a southbound opposing meet.³⁵

Mr. Krueger states that the length of the purported exclusive operating zone for each piece of single track has been calculated separately for each individual Amtrak train and an individual (theoretical) freight train.³⁶ He then summarizes his findings as follows:

The results of the analysis shown in Table 8 and 9 identify that the separation between Amtrak and freight prior to a meet or overtake that would generate an FTI delay, ranges from 7.5 miles to 80.7 miles. On this corridor, CN sidings are generally 10-15 miles apart, which means that even in this simplified, conservative scenario, in order to avoid an FTI delay, CN would have to keep anywhere from two to five sidings clear between a freight train and an Amtrak train. Requiring such lengthy exclusive operating zones for each of Amtrak’s 6 trains would have a major detrimental effect on freight operations.” [Emphasis added]³⁷

Mr. Krueger’s summary statement makes clear that the bubble analysis he has fashioned would leave up to five sidings clear between an Amtrak train and a (presumably opposing) freight train, but provides no explanation for why such an expansive clearance would be required

³⁴ Without access to CN’s output results for the bubble analysis, it is not possible to know the details and composition of the numbers that went into the averages shown in Tables 8 and 9 of the Krueger RVS.

³⁵ As noted earlier, Mr. Krueger’s definitions of Clearance Point and Decision Point have both a geographic component and a time component. Mr. Krueger’s Tables 8 and 9 summarize the geographic component (distance), but include no mention of the elapsed time that these distances imply.

³⁶ Krueger RVS at 20.

³⁷ Krueger RVS at 20-21.

from an operational perspective. With more than one open siding ahead, and with sidings generally 10-15 miles apart on the corridor,³⁸ it is not at all apparent that a CN dispatcher could not readily advance a freight train to the next siding without detrimental effect on the approaching Amtrak train. Moreover, each of the three segments contains sections of double track that could also accommodate a meet or pass of a freight train by an Amtrak train.

Table 2 below provides some context for the findings in Tables 8 and 9 of the Krueger RVS and illustrates that the size of the purported “operating bubbles” estimated by Mr. Krueger are not reasonable in light of the double track and sidings available within each of the three segments of the Chicago-Carbondale corridor that are defined in the Krueger RVS:

³⁸ Krueger RVS at 20.

Table 2
CN's Chicago/16th Street³⁹ - Carbondale Infrastructure
And CN's Bubble Analysis Findings (Distances in Miles)⁴⁰

	Track	Existing Track Infrastructure				Krueger RVS Exclusive Operating Zones							
Segment	Type	Segs.	Miles	% of Seg.	Max.	Following	NB	SB	Opposing	NB	SB		
Chicago/16 th St.-													
Champaign	ST	9	68.1	53.9%	13.4	Min.	17.6	15.8	Min.	47.2	49.5		
	DT	2	36.3	28.7%	30.1	Max.	28.3	34.6	Max.	68.9	74.8		
	Sdgs	7	<u>21.9</u>	<u>17.3%</u>	5.9	Avg.	23.0	24.0	Avg.	58.8	59.6		
	Total		126.3	100.0%									
Champaign-													
Edgewood Jct.	ST	7	68.5	78.7%	12.8	Min.	17.3	15.6	Min.	52.6	56.3		
	DT	2	8.1	9.3%	4.3	Max.	32.4	28.4	Max.	79.9	72.7		
	Sdgs	4	<u>10.4</u>	<u>12.0%</u>	3.6	Avg.	25.1	23.1	Avg.	63.7	63.7		
	Total		87.0	100.0%									
Edgewood Jct.-													
Carbondale	ST	5	65.0	69.5%	16.3	Min.	8.0	7.5	Min.	62.6	36.4		
	DT	3	18.9	20.2%	11.4	Max.	31.7	30.4	Max.	79.5	80.7		
	Sdgs	3	<u>9.6</u>	<u>10.3%</u>	3.8	Avg.	20.4	21.6	Avg.	72.4	56.5		
	Total		93.5	100.0%									

Table 2 shows that the total length, respectively, of the Chicago/16th St.-Champaign, the Champaign-Edgewood Jct., and the Edgewood Jct.-Carbondale segments are 126.3, 87.0, and 93.5 miles. The longest exclusive operating zone, or bubble, estimated by Mr. Krueger for each of the three segments is 74.8 miles for the Chicago/16th St.-Champaign segment, 79.9 miles for the Champaign-Edgewood Jct. segment, and 80.7 miles for the Edgewood Jct.-Carbondale segment, all of which are for opposing moves and each of which represents a significant share of

³⁹ As noted above, Chicago/16th Street is located approximately 2.65 miles south of Chicago Union Station and is the point at which Amtrak's Illini/Saluki trains enter and exit CN territory in the Chicago area.

⁴⁰ In Table 2, the abbreviations in the Track Type column signify the following: "ST" means single track, "DT" means double track, and "Sdgs" means sidings. Under the heading of "Existing Track Infrastructure," the abbreviation "Segs." refers to segments and the abbreviation "Max." refers to the longest section of single track, double track or sidings (as applicable) within the referenced segment.

the total mileage for the segment. For each of the three separate segments, the length of the maximum bubble estimated by Mr. Krueger (and, in most cases, even the average bubble length) far exceeds the length of the longest section of single track within the segment (at 13.4, 12.8, and 16.3 miles, respectively). In fact, the length of the maximum exclusive operating zones estimated by Mr. Krueger within each segment is greater than the total mileage for all single track within the relevant segment (at 68.1, 68.5, and 65.0 miles, respectively), despite the fact that those single track totals are each comprised of from 5 to 9 individual single track segments of obviously shorter length.

Within the existing track infrastructure between Chicago/16th St. and Carbondale, single track comprises a large portion of each of the three segments, but all three of the segments defined by Mr. Krueger contain multiple sections of either double track or sidings where Amtrak trains can meet or pass freight trains without incurring FTI delay. In view of the existing double track and sidings available in each of the three segments, Mr. Krueger's claim that lengthy exclusive operating zones are needed is highly questionable.

According to Mr. Krueger, an alternative approach to conceptualizing the impact of Amtrak's on-time performance standards is "to consider the amount of time that Amtrak trains would effectively have exclusive occupancy of CN trackage."⁴¹ Mr. Krueger's alternative theory is to view the situation as though there is a blackout period during which "a section of the corridor is totally unavailable for a period of time for freight to operate."⁴² In Table 10 of the Krueger RVS, Mr. Krueger attempts to quantify these purported blackout periods, separately by

⁴¹ Krueger RVS at 21.

⁴² Krueger RVS at 21.

freight train direction, for each of the three segments he has defined within the Chicago-Carbondale corridor.

Mr. Krueger’s blackout period analysis is an extension of the bubble analysis process and, similarly, [REDACTED]. [REDACTED]. As with other parts of Mr. Krueger’s Python-based analysis, CN has provided no workpapers that show the relevant output, including the purported amount of blackout time for each Amtrak train, leading to the figures reflected in Table 10 of the Krueger RVS.

Table 10 of the Krueger RVS (“Hours of Freight Availability Given Daily Amtrak Trains and Amtrak Proposed HRD”) shows his blackout analysis summary separately for each of the three Chicago-Carbondale segments defined by Mr. Krueger: Chicago-Champaign, Champaign-Edgewood Jct., and Edgewood Jct.-Carbondale.

The simple stringline diagram of Amtrak’s scheduled operations between Chicago and Carbondale over the course of a day, which is shown in Attachment D, indicates the availability of larger operating windows than stated in Table 10 of the Krueger RVS, even without considering use of double track⁴³ and sidings – that is, looking only at the open space (referred to herein as a “gap”) between each pair of lines on the diagram.⁴⁴ Table 3 below summarizes our findings relative to the “hours of availability” in Table 10 of the Krueger RVS:

⁴³ Our analysis of the Chicago-Champaign segment looks at the portion of the segment south of Stuenkel, the end of the double track to/from Chicago Union Station.

⁴⁴ Although the passenger train speed limit over much of the corridor between Chicago and Carbondale is 79 mph, freight speed limits over much of the corridor are 60 mph; therefore, the slopes of the freight train lines shown on a stringline diagram are only slightly less than the slopes of the Amtrak train schedules.

Table 3
Freight Available Gaps (Hours) Compared With Krueger RVS Table 10
(Before Consideration of Double Track and Sidings)

	<u>Chicago-Champaign</u>		<u>Champaign-Edgewood Jct.</u>		<u>Edgewood Jct.-Carbondale</u>	
	<u>NB</u>	<u>SB</u>	<u>NB</u>	<u>SB</u>	<u>NB</u>	<u>SB</u>
Freight Available Gaps	14.0	13.0	14.5	14.5	12.5	12.5
Freight Available Hours						
per Krueger RVS Table 10	10.7	10.35	10.53	11.63	7.35	10.2

As shown in Table 3, our review of the freight available gaps indicates that a greater number of hours are available to freight train operations than those shown in the Krueger RVS Table 10, even before consideration of double track and sidings.

Moreover, Mr. Krueger's blackout analysis appears to ignore the utility of double track and sidings within the three track segments he has defined in the Chicago-Carbondale corridor. Mr. Krueger has premised his bubble analysis and blackout period estimates on the perceived need for CN to eliminate all FTI delays to Amtrak trains. However, the use by freight trains of double track and sidings within the corridor would allow CN dispatchers to advance CN freight train movements within each segment without causing any FTI delay to Amtrak trains. This is something that CN dispatchers are trained to do on a daily basis across CN's entire network. For example, as can be seen in Attachment D, a northbound CN freight train that reaches the 11.4-mile double track between Sandoval Jct. and Irvington (within the Edgewood Jct.-Carbondale segment) as southbound Amtrak train #391 approaches could, in effect, advance from the gap between Amtrak trains #390 and #391 to the adjacent gap between Amtrak trains #391 and #392 without associated delay to the Amtrak train. Other double track and sidings within the Edgewood Jct.-Carbondale segment and the other two segments provide similar opportunities for Amtrak train meets or passes without delay to the Amtrak train. Thus, the actual blackout periods caused by Amtrak's operations, if any, would be very limited.

The flaws in Mr. Krueger's blackout period theory in this context also are illustrated by his strained attempt to analogize the blackout period to the exclusion period that is created by commuter train operations over a diamond crossing during rush hour. The attempt by Mr. Krueger to analogize a diamond crossing situation (which is static and limited to one particular interlocking on the freight corridor) with the "rolling blackout" theory that he postulates will occur across the CN corridor illustrates the absurdity of his claims.

It should be noted that Mr. Krueger's analysis of exclusive operating zones and blackout periods was limited only to the Chicago-Carbondale corridor, where Amtrak operates 6 daily trains per day. Amtrak operates fewer trains per day over other parts of the CN network. For example, only one Amtrak train is initiated per day in each direction on the over 600-mile stretch of the IC Corridor between Carbondale and New Orleans. Attachment E, a simple stringline diagram of scheduled Amtrak operations within the portion of the IC Corridor between Carbondale and New Orleans, shows large gaps between the two Amtrak trains, #58 and #59, during which (and across which, at locations where double track or sidings are present) there are no apparent limitations on freight train operations.

Similarly, other Amtrak services operate over short segments of CN's network (such as the Wolverine service over the 1.2-mile segment between Baron and Gord). Thus, the impact of Mr. Krueger's bubble capacity theory is clearly overstated.

IV. Conclusion

Both the additional TPC modeling conducted by CN of the Illini/Saluki service that underlies CN's proposed changes to Amtrak schedules for that service and Mr. Krueger's capacity bubble analysis, as described in the Krueger RVS, contain inaccurate assumptions that undermine CN's conclusions.

CN's additional TPC modeling of the Illini/Saluki service overstates the PRT for those Amtrak trains and leads to unnecessary additional time in the schedules proposed by CN for the following reasons:

- CN's modeling of a "1+7" Amtrak consist, rather than the "1+4" consist that Amtrak would operate if CN had not imposed the minimum axle count restrictions prompted by the CN grade crossing activation failures, lead to overstatement of PRT for the service.
- CN's imposition of additional speed restrictions between Mattoon and Kinmundy further increase the overall PRT that is calculated by CN's TPC for the Illini/Saluki trains.
- CN's TPC modeling of Illini/Saluki train stops at five specified interlockings at which Amtrak trains typically do not stop results in a slower overall PRT for the Amtrak trains and does not reflect real-world operations.
- CN's additional TPC modeling includes different assumptions from the initial TPC modeling described in the Krueger VS, such as a slightly lower HPT ratio, that are not fully explained and some of which increase PRT.
- Slight discrepancies between the Krueger RVS workpapers and the PRT results reflected in the Krueger RVS itself contribute to longer run times in CN's proposed schedules.
- Future resolution of the CN grade crossing activation failure issue and elimination of the 12-minute schedule allowance proposed by CN as an interim solution, coupled with Amtrak's change to a "1+4" consist, would not reduce the PRT in CN's proposed schedules for Illini/Saluki trains, which are based on a "1+7" consist.
- CN's TPC modeling exercise does not and cannot establish new PRT's "easily and objectively" without mutual agreement between the parties on the underlying inputs that are incorporated into the model and without additional verification of the TPC results through field tests.

Flaws in the CN capacity bubble analysis that is described in the Krueger RVS lead to CN's overstatement of the impact of Amtrak trains on the available capacity of CN's Chicago-Carbondale corridor for the following reasons:

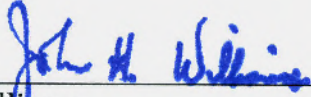
- The freight trains that are integral to Mr. Krueger's bubble analysis are entirely hypothetical, with no relevance to real-world operations on the Chicago-Carbondale corridor.
- There is no evidentiary support within CN's workpapers for certain assumptions in Mr. Krueger's analysis, such as the 15-minute "dispatcher Risk Factor."
- Key assumptions, such as the presumed train length and HPT ratio for the "typical" freight train consist on the Chicago-Carbondale corridor (two consist factors that affect TPC speed and run time results), are refuted by CN's own workpapers.

- An extreme and unrealistic assumption as to freight train length would prevent use of shorter sidings on the Chicago-Carbondale corridor that are actually accessible to most CN trains, thereby reducing the perceived capacity on the corridor.
- CN workpapers underlying key conclusions relating to Mr. Krueger's capacity bubble analysis and blackout periods have not been made available for review by Amtrak and the Board.
- Exclusive operating zones estimated by Mr. Krueger that are exceedingly long in relation to single track mileage in the Chicago-Carbondale corridor raise significant doubts about the accuracy of his estimates.
- With the availability of double track and multiple sidings on the corridor, it is not at all apparent that a CN dispatcher could not readily advance a freight train to the next siding without detrimental effect on the approaching Amtrak train to accommodate a meet or pass of a freight train by an Amtrak train.
- Even without regard to available double track and sidings on the Chicago-Carbondale corridor, the hours of freight availability in Mr. Krueger's blackout period estimates are understated, while the availability of double track and multiple sidings further undermines Mr. Krueger's conclusions.
- Due to differences in Amtrak train volumes and other factors, any conclusions reached by Mr. Krueger with regard to his analysis of capacity on the Chicago-Carbondale corridor cannot be extrapolated to other locations where Amtrak operates on CN track.

VERIFICATION

I, John H. Williams, verify under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Surrebuttal Verified Statement.

Executed on October 30, 2017

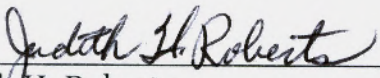


John H. Williams

VERIFICATION

I, Judith H. Roberts, verify under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this Surrebuttal Verified Statement.

Executed on October 30, 2017



Judith H. Roberts

ATTACHMENT A

[REDACTED]

ATTACHMENT B

[REDACTED]

ATTACHMENT C

[REDACTED]

ATTACHMENT D

[REDACTED]

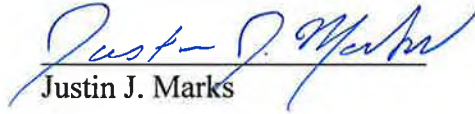
ATTACHMENT E

[REDACTED]

CERTIFICATE OF SERVICE

I certify that on October 30, 2017, a Highly Confidential and Public version of the foregoing National Railroad Passenger Corporation's Surrebuttal Submission was served electronically upon the following counsel for Canadian National Railway Company:

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