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January 19, 2010

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Rachel D. Campbell.
Director
Office of Proceedings
Surface Transportation Board
395 E Street, SW
Washington, DC 20423

Re: Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., STB Docket No. 42110

Dear Ms. Campbell:

Enclosed for filing in the above-referenced matter is Defendant CSX Transportation Inc.'s ("CSXT's") Reply Evidence. The filing includes:

1) An original and twenty-four copies of the Highly Confidential version of CSXT's Reply Evidence. Each copy consists of one volume of Narrative, one volume of Exhibits, and an Executive Summary. Material that is designated highly confidential pursuant to the Board's October 22, 2008 Protective Order is marked with braces (*e.g.*, "{{}}"). CSXT notes that Reply Exhibits II-B-1, III-B-4, and III-B-5 are on DVDs that are enclosed in the Exhibits volume.

2) Twenty-five copies of the Public version of CSXT's Reply Evidence. Each copy consists of one volume of Narrative, one volume of Exhibits, and an Executive Summary. Material that is designated Highly Confidential pursuant to the Board's October 22, 2008 Protective Order is redacted.

3) CSXT's Reply Narrative contains some color images integral to the arguments made therein. CSXT is submitting ten black-and-white copies of the Highly Confidential version of its Reply Narrative and ten black-and white copies of the Public version of its Reply Narrative.

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4) CSXT is submitting three sets of the workpapers for its Reply Evidence on DVDs.

5) For the Board's convenience, CSXT is also submitting four oversize copies of CSXT Reply Exhibit III-B-1, and we are providing Complainants with an equal number. An 8½ by 11 version of Reply Exhibit III-B-1 is included in CSXT's Exhibit volume.

6) CSXT is submitting three electronic copies of both the Public and Highly Confidential versions of its Reply Evidence in pdf format.

Please stamp one copy of each version of CSXT's Reply Evidence to indicate that it has been received and filed, and return the stamped copies with our messenger for our files. Thank you for your assistance in this matter.

If you have questions, please contact the undersigned.

Very truly yours,



G. Paul Moates

Enclosures

cc: Kelvin J. Dowd, Esq.

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BEFORE THE
SURFACE TRANSPORTATION BOARD

SEMINOLE ELECTRIC COOPERATIVE, INC.	)	
Complainant,	)	
	)	**Docket No. 42110**
v.	)	
CSX TRANSPORTATION, INC.	)	
Defendant.	)	

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REPLY EVIDENCE OF CSX TRANSPORTATION, INC.

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Dated: January 19, 2010

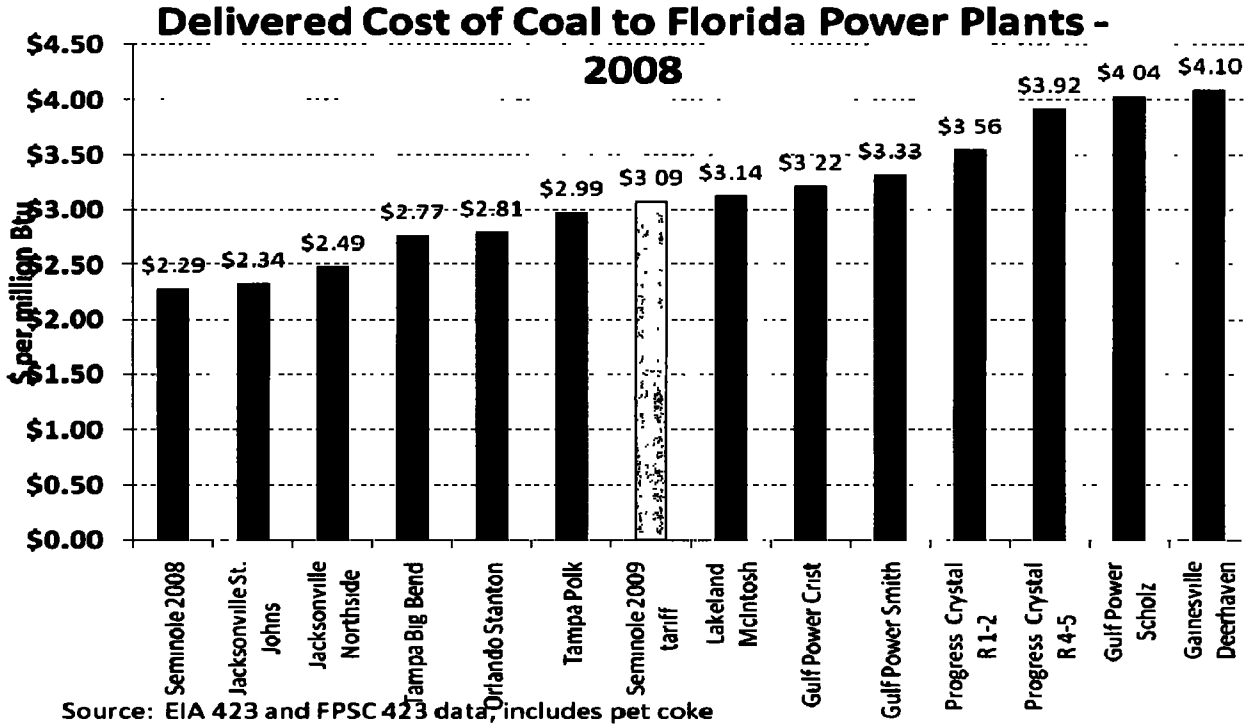
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EXECUTIVE SUMMARY

This rate case should never have been filed. But now that the case is before the Board, CSXT's Reply Evidence demonstrates that it must be dismissed.

In 1981, Seminole Electric Cooperative, Inc. ("SECI") chose the site for the electric generating facility at Bostwick, Florida, that is the sole destination covered by this Complaint. In significant measure, this site was selected by SECI because it has water access. Indeed, for the first seven years of the plant's operation, SECI took essentially all of its coal requirements via barge transportation to a transload point on the Gulf of Mexico for short-haul rail delivery. However, in 1998 SECI and CSXT entered into a 10-year contract for the all-rail transportation of SECI's coal needs. When that contract expired in 2008, CSXT proffered new contract rates and terms to SECI and sought to negotiate an agreement for the utility's traffic. However, SECI elected instead to seek rate prescriptions from the Board and accordingly filed its Complaint against CSXT's scale rates for the SGS traffic. CSXT then established (as it had told SECI it would) the specific common carrier rates from the origins named in SECI's Complaint that are the subject of both parties' evidence.

It is important to note that even after establishment of the rates at issue in this case, SECI enjoys a delivered cost of coal that leaves it well-situated to compete in the wholesale electric market with other utilities in North and Central Florida, as the following Table depicts:



Source: EIA 423 and FPSC 423 data; includes pet coke
Note: Seminole 2009 data is 2008 cost of coal delivered at CSX tariff rate for 2009

As CSXT's Reply Evidence demonstrates, the Board does not have jurisdiction to entertain SECI's Complaint because CSXT does not possess market dominance over the traffic at issue. But even if the Board were to reach the issue of rate reasonableness, CSXT's Reply Evidence convincingly demonstrates that the challenged rates are below a reasonable maximum as measured by the Stand-Alone Cost test of the Board's Constrained Market Pricing Guidelines.

. . . . . .

CSXT simply does not possess market dominance over the SECI traffic at issue. The railroad faces real, feasible and economically effective competition on movements from each of the Complaint origins to SECI's plant at Bostwick, Florida, from rail-water and truck-water alternatives.

In its Complaint, SECI makes the patently untenable claim that "[t]here are no navigable waterways by which coal feasibly could be delivered to the [Bostwick] station" (Complaint at

¶ 12). That assertion is flatly incorrect. CSXT's evidence shows in detail that the Bostwick plant is located directly on the St. Johns River, which is a commercially navigable waterway, and that there exist effective water routings by which the issue traffic can be delivered at prices that genuinely constrain CSXT's rail rates.

So fundamental is this issue, and so blatantly misleading is SECI's claim that water delivery to its plant is infeasible, that CSXT's Reply Evidence also includes a video presentation on DVD. *See* CSXT Reply Exhibit II-B-1. This video presentation clearly depicts the feasibility of the water delivery option to SECI's Bostwick plant. It graphically demonstrates the absurdity of the Complaint's claim that the St. Johns River is not navigable to (and well beyond) the location of SECI's plant. This fundamental competitive reality, and the detailed evidence of the comparative costs of the alternatives to CSXT's rail service included in Section II.B. of CSXT's Reply Evidence, support the Board's dismissal of the Complaint on grounds of no market dominance and should obviate the need for delving into the voluminous evidence on rate reasonableness.

In addition, three of the eight origins named in the Complaint shipped no coal or petcoke to SECI during the two years preceding filing of the Complaint, and SECI's own evidence shows that it does not project any traffic moving from those origins at any point during the ten year DCF period. Accordingly, those origins – Bailey Mine, Gibcoal and Charleston, SC[1] – must be dismissed for that reason alone.

[1] In practical and in economic terms Charleston is not really an "origin" in any event. Rather it is merely a point of transfer for petcoke from ocean vessel to rail or truck. Petcoke from the Caribbean or from Gulf of Mexico origins could be transferred at least as readily at Jacksonville as at Charleston, and barged or moved by truck from Jacksonville to Bostwick.

The preponderance of CSXT's Reply Evidence is necessarily directed to the proper application of the stand-alone cost constraint of the CMP Guidelines to the challenged rates.[2] CSXT demonstrates that the costs to design, construct, operate and maintain the "Seminole Florida Railroad" (SFRR) exceed the revenues that that stand-alone railroad system would generate by more than $830 million in year one of the DCF analysis; by amounts ranging from $746 million to $850 million in every other year of the DCF analysis; and on a total cumulative present-value basis, by approximately $5 Billion over the 10-year DCF period. *See* CSXT Reply at III-H. Those results conclusively support a finding that the challenged rates are well below a maximum reasonable level, and therefore the Complaint should be dismissed on that basis as well.

What is the explanation for such a wide disparity in the SAC results of the parties? The short answer is that SECI's SAC presentation is based upon a total distortion and misapplication of the Board's stand-alone cost methodology and established standards for implementing that methodology. SECI proffers a 2,100 mile stand-alone rail system that would handle not just coal traffic – which constitutes barely one-third of the SFRR's selected traffic – but the most massive volume of merchandise, intermodal, and automotive traffic ever included in a SAC case. Yet amazingly, it claims that this Class I railroad of unprecedented SAC case complexity would generate $1.2 Billion of revenues in its first year of operations, while incurring a mere $264 Million of expenses – that is, the SFRR as conceived by SECI would have an operating ratio of only 35 percent![3]

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[2] Although it shouldn't be necessary for the Board to reach the issue, CSXT also shows that SECI has miscalculated the jurisdictional threshold. *See* CSXT Reply at II.A.

[3] For purposes of calculating this ratio, CSXT added the $263.9 Million of claimed operating expenses (Table III-D-1 in SECI's Opening at III-D-3) to estimated annual book depreciation of the SFRR's assets of $128.3 Million. *See* CSXT Reply Ex. I-1, "Calculation of Estimated SFRR

However, upon examination it quickly becomes apparent that SECI accomplishes this miracle of railroading only by omitting the extensive physical facilities and supporting infrastructure required to handle the general freight (merchandise) and intermodal traffic that SECI elected to include in the SFRR's traffic base. That failure completely belies SECI's claim that the SFRR would provide adequate service to all of the customers whose freight it would handle to "various local origins and destinations, including coal mines, power plants, intermodal ramps, water/rail transfer facilities, and industrial facilities" SECI Opening at III-C-2. That boast is wholly without merit because SECI has violated the basic tenet of the SAC test that it must design and construct a stand-alone railroad that "meet[s] the transportation needs of the traffic in the group by providing service that is equal to (or better than) the existing service for that traffic." *Texas Mun. Power Agency v. BNSF*, 6 S.T.B. 573, 589 (2003).

Rather than developing the actual costs of building the physical facilities, acquiring the equipment, and performing the operations necessary to serve the SFRR's general freight and intermodal customers, SECI simply applied CSXT's 2008 system-average I&I switching costs (and the terms of certain agreements between CSXT and its affiliate CSXI) as "surrogates" for those costs. SECI Opening at III-D-108. In short, SECI's consultants substituted for rigorous analysis of the forward-looking costs of properly designing, constructing, and operating the SFRR in a manner that would appropriately serve the SFRR's customers, a mathematical exercise based upon historical costs. This is a totally impermissible departure from proper implementation of the SAC constraint of CMP – one that the Board must forcefully reject. Equally astonishing, although SECI's Opening Evidence contains what it styles an "operating

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Annual Book Depreciation Based on SECI Opening SFRR Investment". That total ($392.2 Million) divided by the SFRR's claimed year-one revenues of $1.116.1 Billion (Table III-H-1 in SECI Opening at III-H-10) equals 35%.

plan" (SECI Opening at III-C.), that "plan" contains no evidence whatsoever detailing how the SFRR would handle the approximately 3.5 Million cars per year and 2 Million switches per year that would be required to accommodate the traffic SECI claims the SFRR would haul. This is a complete failure of proof that, in itself, supports dismissal of the Complaint.

It is well-established Board precedent that a Complainant must present an operating plan that proves that the SARR would be able to provide all of the services necessary to meet the needs of its selected traffic group.[4] Yet SECI does not even attempt to construct the physical facilities or to demonstrate the SFRR's ability to perform the operations required to handle the unprecedented (in SAC cases) volumes of merchandise and intermodal traffic included in the SFRR's traffic base. Among the most glaring deficiencies in SECI's track configuration and operating plan, and the expenses associated with those items, are the following:

- SECI contemplates that more than 592,000 loaded cars of "selected" general freight traffic and an additional 1.3 million loaded and empty "non-revenue" merchandise cars would move in SFRR trains, and that the SFRR would interchange traffic with CSXT and other carriers at 51 different locations.[5] Yet, SECI takes the absurd position that the SFRR would not need to perform freight classification anywhere on its 2,100-mile system, and SECI's proposed track configuration does not include any general freight classification facilities. (SECI Opening at I-29)

- SECI contemplates that approximately 800,000 units of "selected" and "non-revenue" intermodal traffic would move in SFRR trains.[6] Yet, SECI did not

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[4] *See, e.g., Public Service Co. of Colo. d/b/a Xcel Energy v. BNSF*, STB Docket No. 42057, at 23 (June 8, 2004) ("The operating plan must be able to meet the transportation needs of the traffic the SARR proposes to serve."); *Texas Mun. Power Agency v. BNSF*, 6 S.T.B. 573, 589 (2003) ("[T]he SARR must meet the transportation needs of the traffic in the group by providing service that is equal to (or better than) the existing service for that traffic."); *Duke Energy Corp. v. CSX Transportation, Inc.*, STB Docket No. 42070, at 28 (February 4, 2004)("[Complainant] carries the burden of demonstrating that its operating plan would meet the needs of the traffic group it selected," citing *Guidelines*, 1 I.C.C.2d at 543.)

[5] *See* SECI WP "Base_Year_2008_TrainList_final.xls".

[6] *See* SECI WP "Base_Year_2008_TrainList_final.xls".

include the costs to construct a single intermodal facility anywhere on the SFRR system.

- SECI claims that, despite the unprecedented complexity of its SARR operations, the SFRR would incur general and administrative ("G&A") expenses amounting to barely 2% of revenues, an absurdly low figure. Comparably sized regional railroads incur G&A expenses in the range of 15-20% of revenues.

- SECI develops maintenance of way expenses for the SFRR using arbitrary assumptions, not real-world analysis. For example, it claims that each track crew would be responsible for a block of approximately 100 route miles – regardless of terrain, traffic density, weather, or the existence of second main or passing tracks – resulting in purported track crew districts that far exceed what a track crew could maintain in the real world.

- SECI's arbitrary approach to estimating maintenance of way expenses for the SFRR led it to ignore the need to maintain nearly **one-thousand miles** of second main tracks, passing sidings, interchange and yard tracks, and setout tracks.

- SECI significantly understates the maintenance challenges and related maintenance expenses posed by the SFRR's terrain. Nearly half of the SFRR – 47% of the East Division and 46% of the West Division – lies in the mountainous regions of northern and southern Appalachia. And the low-lying coastal plains, with their soft, often swampy subgrade, in which much of the remainder of the SFRR is located, present maintenance challenges nearly equal to those in Appalachia.

- SECI's track configuration does not include spur tracks, industry tracks or switch connections at any of the customer locations at which SFRR would be required to perform pick-ups or set-offs of local, interline forwarded and interline received general freight traffic. (SECI Opening, Exh. III-B-3)

- In order to meet the requirements of all of the traffic moving in SFRR trains, the SFRR would need to perform more than <u>two million</u> switches for general freight traffic annually. Neither SECI's operating plan nor its capacity analysis account in any way for the <u>time</u> required to perform those local switching operations, nor for the impact of such operations on the SFRR's line capacity, train transit times, cycle times and locomotive, car and crew requirements.

- SECI's proposed locomotive fleet for the SFRR includes only eight (8) locomotives to handle all switching and work train service across the entire 2,100-mile SFRR system (SECI Opening Table III-C-3.)

- The traffic selected by SECI includes more than 6,000 carloads of merchandise commodities that are transloaded from rail to truck at intermediate points along the SFRR system, for delivery to off-rail destinations. However, SECI's proposed SFRR configuration does not include <u>any</u> transloading facilities – indeed, neither

SECI's evidence nor its workpapers give any indication that SECI even considered the service requirements for this traffic.

- The traffic selected by SECI includes PIH/TIH commodities that collectively involve movements across more than 70 percent of the SFRR's lines. Yet, SECI does not equip the SFRR with the Positive Train Control ("PTC") capability mandated by Congress for trains carrying such hazardous commodities. Why not? Because its operating expert "believes it quite possible" that the legally-mandated dates for implementation of PTC will be delayed. (SECI Opening at III-C-63).

- SECI's RTC Model simulation – upon which SECI relies to "confirm" the feasibility of its operating plan (SECI Opening at III-C-52) – does not account for the time required to perform pick-ups and set-offs at intermediate points. To the contrary, yard and local train activities are intentionally excluded from SECI's RTC simulation. (SECI Opening at III-C-24) Moreover, the RTC Model utilized by SECI did not contain any inputs for train or vehicle crossings, nor did it include the signals which are an integral part of the Centralized Train Control system posited by SECI itself for the SFRR.

- These (and other) fatal deficiencies in SECI's operating plan are compounded by its bizarre (and unprecedented) assumption that SFRR trains would carry not only SFRR's "selected" traffic but also approximately 1.4 million cars of so-called "non-revenue" general freight and intermodal traffic annually, traffic that SECI chose not to include in the SFRR's traffic base (but which moved in the real-world CSXT trains upon which SECI based its operating plan).[7] SECI's operating plan does not even attempt to identify – much less account for -- the local switching, pick-up and/or set-off activities required to serve these so-called non-revenue loads.

Similarly, SECI violated fundamental SAC methodological requirements in its generation of traffic to be handled by the SFRR. Among the more egregious departures from the Board's

[7] SECI attempts to justify its inclusion of "non-revenue" cars in SFRR trains on the grounds that the data provided by CSXT in discovery made it "impossible to tell . . . whether the cars were SFRR revenue cars or other cars." (SECI Opening at III-C-23.) SECI's claim that the data furnished by CSXT were not sufficient to enable it to identify the origin, destination and shipper of cars characterized by SECI as "non-revenue loads" is specious. As CSXT demonstrates in detail (CSXT Reply Ex. I-2), the data produced by CSXT in discovery are more than sufficient to determine the operating characteristics of both SFRR's "selected" traffic and those cars classified by SECI as "non-revenue loads." SECI's failure to do so, whether based on a willful decision to avoid making the effort required or on the failure of its consultants to understand the data produced in response to their discovery requests, cannot justify this unprecedented departure from the Board's SAC rules.

established SAC rules and unsupported assumptions that SECI made in this area are the following:

- SECI selected coal traffic for the SFRR whose routes in the real world do not touch any line replicated by the SFRR. CSXT corrects this blatant violation of SAC rules by removing 4.7 million tons from SFRR base year coal traffic volumes.

- SECI's presentation totally ignores the most severe economic downturn since the Great Depression. In fact, SECI insisted on using CSXT's January 2009 coal volume forecast to estimate 2009 coal volumes, notwithstanding CSXT's repeated warnings to SECI prior to the date for filing opening evidence that the forecast was indisputably optimistic in light of the unexpectedly severe decline of coal volumes as the recession deepened (and as EIA's extraordinary updated April 2009 forecast further demonstrated). CSXT corrects this indefensible attempt to inflate volumes and revenues by substituting actual 2009 traffic data. (Specifically, CSXT uses data for the first three quarters of the year annualized using an EIA index).

- SECI made numerous **undisclosed** off-SARR reroutes. Despite representing in its narrative evidence that it engaged in no such rerouting, SECI actually rerouted traffic between 170 O-D pairs. These reroutes are not allowed under the rules governing SAC cases. CSXT corrects these inappropriate reroutes, substantially reducing the distance such traffic travels on the SFRR, and concomitantly reducing the amount of revenue generated.

- SECI used the materially overstated CSXT January 2009 coal forecast for projecting future volumes on the SFRR. CSXT corrects this error by using the April 2009 EIA AEO projections, and urges the Board to substitute the 2010 AEO when it is released (likely in March 2010).

- SECI overstated the SFRR's revenues through a number of errors which CSXT explains and corrects in Section III.A. of its Reply Evidence. SECI overstated SFRR revenues by approximately $175 million in year one of the SARR's operations, escalating that amount to $257 million in the final year of the DCF analysis.

Additionally, SECI made other significant errors in its road property investment evidence, resulting in a major understatement of such expenses totaling approximately $4.5 Billion. These errors (which are discussed in CSXT Reply III-F) included the following:

- SECI failed to recognize and properly cost major SFRR bridge structures over navigable waterways. It understated these costs by approximately $1 billion (even

after CSXT corrected an SECI arithmetical error that resulted in a $300 million **overstatement** of SECI's estimate).

- SECI failed to follow well-established practices for determining the significant costs of earthwork. Instead, SECI inappropriately extrapolated earthwork unit costs from a single 7,000 foot railroad line relocation project in rural Tennessee and applied them to the entire 2,100 mile SFRR system without regard to terrain. CSXT uses appropriate unit costs derived from the Means Manual (used in virtually every SAC case in recent years), increasing common excavation earthwork costs by approximately $300 million.

- SECI greatly underestimated the land acquisition costs for its right-of-way by using several unreasonable assumptions. SECI used post-real estate market crash figures for 2009 rather than values from 2006 when the land would have had to be acquired for construction of the SFRR. It further added an unprecedented (and totally unsupported) 15-20% so-called "market condition discount." To make matters worse, SECI greatly undervalued land costs in urban areas by creating inappropriately large valuation segments and failing to adhere to standard appraisal practices. *See* CSXT Reply at III-F-1.

- For land south of Atlanta all the way to Cordele, GA, and in portions of Chattanooga and Savannah, SECI's real estate expert **appraised the wrong right-of-way.** Property valuations based upon appraisal of Norfolk Southern's right-of-way rather than that of CSXT makes that evidence entirely worthless. *See* CSXT Reply at III-F-1.

- SECI failed to provide for any road property ownership costs for the SFRR's access to the Monongahela Railroad, notwithstanding having been provided with the data necessary to reflect those costs, which CSXT incurs today. *See* CSXT Reply at III-B.

- CSXT's Reply Evidence demonstrates that SECI's land values for the SFRR were understated by fully $1.487 Billion. *See* CSXT Reply at III-F-1.

And last but far from least, SECI made very significant errors in the implementation of its DCF calculations, most notably the following:

- SECI truncated its DCF analysis as of year 10 and then computed the terminal value as of year 10, rather than as of year 20 as the Board instructed in *Major Issues*. The result is that SECI overstated the amount of the implicit interest and depreciation tax deductions by **more than three-quarters of a billion dollars!**

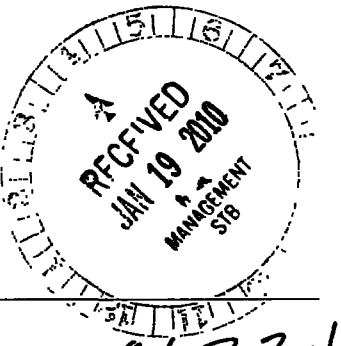
- SECI improperly included over **$1.3 billion** in bonus depreciation for investments made in 2006 and 2007, **overstating year one bonus depreciation by $662 million**. This error also results in an significant overstatement of tax

carryforwards in the first several years of the SFRR's existence. *See* CSXT Reply at III-G.

This Executive Summary merely highlights the more egregious and significant errors in SECI's Opening Evidence. Much greater detail and explanation of the numerous instances of SECI's overreaching and unsupported efforts to generate a favorable result for its Complaint is found in CSXT's Reply Evidence and Argument.

This Reply Evidence and Argument supports a finding by the Board that it lacks jurisdiction over the rates at issue, and the Complaint should be dismissed on that basis alone. But should the Board proceed to the issue of the properly calculated stand-alone costs and revenues of the SFRR, CSXT respectfully submits that the Board must conclude that the evidence convincingly demonstrates that the challenged rates are below a reasonable maximum and that SECI is entitled to no relief whatsoever.

PUBLIC VERSION



BEFORE THE
SURFACE TRANSPORTATION BOARD

226321

SEMINOLE ELECTRIC COOPERATIVE, INC.	
Complainant,	
	Docket No. 42110
v.	
CSX TRANSPORTATION, INC.	
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REPLY EVIDENCE OF CSX TRANSPORTATION, INC.

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Dated: January 19, 2010

Filing Contains Color Images

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I. COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

A. Introduction and Summary of Argument

The Opening Evidence in this case constitutes an unprecedented distortion of the stand-alone cost standard of the Board's Constrained Market Pricing Guidelines. Complainant Seminole Electric Cooperative, Inc. ("SECI") has proffered a stand-alone railroad ("SARR"), the "Seminole Florida Railroad" ("SFRR"), that is approximately 2,100 miles in length and that is projected to enjoy annual revenues in excess of $1.2 billion. This would make it a very respectably sized Class I carrier. Yet Seminole would have the Board believe this railroad would require only four yards, would handle intact trainloads and unit trains of coal, intermodal, general freight (including TIH hazmat chemicals, auto parts, farm products, and military shipments), and would conduct virtually no switching, pickup or delivery operations (leaving all such essential, resource-intensive and costly realities of railroad operations to CSXT). But somehow this hypothetical railroad would purportedly provide adequate service to "various local origins and destinations, including coal mines, power plants, intermodal ramps, water/rail transfer facilities, and industrial facilities." (SECI Opening at III-C-2). Moreover, this miraculous SARR would require a mere 715 operating and non-operating personnel to conduct its extensive operations. And its General & Administrative requirements would be handled by a number of employees far below that of any remotely comparably-sized railroad in the industry (including regional and shortline operators).

In short, the Board is presented in this case not with a " least cost, most efficient" alternative to CSXT's services and operations, but rather with a fantasyland concoction by consultants and lawyers that would be (i) infeasible in the real-world and (ii) completely incapable of serving the requirements of the traffic SECI selected and the needs of its customers. Indeed, the SFRR – whose "West Division" stretches from the upper Midwest to Florida,

traversing major metropolitan areas like Nashville and Atlanta, and whose "East Division" stretches from West Virginia and Pennsylvania to southern Georgia, traversing Washington, D.C., Richmond, Charleston and Savannah – would, according to SECI, have an operating ratio of only 35%,[1] a facially absurd contention. Of course, SECI could achieve this wholly theoretical result only by systematically ignoring "the underlying realities of real-world railroading" that SAC theory demands SECI recognize. *Public Serv. Co. of Colorado d/b/a/ Xcel Energy v. Burlington No. & Santa Fe Ry.*, STB Docket No. 42057, at 12 (Jan. 19, 2005).

There is a reason for the pattern of invalid assumptions and distortions of the SAC standard in SECI's evidence: without these invalid tactics, SECI cannot prevail.

In the first place, SECI is unable to satisfy the fundamental prerequisites for the Board to have jurisdiction over this case. Unlike nearly every previous SAC complainant, SECI has access to a viable intermodal alternative to CSXT's rail service. SECI's SGS plant is located on a major navigable waterway, and barge transportation is a realistic option that provides effective competition to CSXT's rail service from each of the challenged origins. Because of these competitive transportation options, the Board does not have jurisdiction over this case, and it should be dismissed, obviating the need for a SAC analysis.

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[1] For purposes of calculating this ratio, CSXT added the $263.9 Million of claimed operating expenses (Table III-D-1 in SECI's Opening at III-D-3) to estimated annual annual book depreciation of the SFRR's assets of $128.3 Million. *See* CSXT Reply Ex. I-1, "Calculation of Estimated SFRR Annual Book Depreciation Based on SECI Opening SFRR Investment". That total ($392.2 Million) divided by the SFRR's claimed year-one revenues of $1.116 Billion (Table III-H-1 in SECI's Opening at III-H-10) equals 35%.

More than that, SECI's own SAC evidence does not contemplate that *any* coal will be shipped from three of the Complaint origins during the SAC analysis period. This is a further reason why the Board lacks jurisdiction over rates from those origins.

But even if the Board had jurisdiction over the challenged rates, a straightforward application of the SAC test demonstrates that they are reasonable. When SECI's patently unreasonable assumptions are discarded – as they must be – the revenues generated by the SFRR would fall far short of the real-world costs required to design, construct, operate and maintain that stand-alone railroad. In fact, CSXT took an extremely conservative approach in developing its Reply evidence, often assuming that the SFRR could realize efficiencies that a real-world railroad would be hard-pressed to achieve. Even with these conservative assumptions, the SAC test shows that the challenged rates are reasonable by a wide margin.

B. Background

SECI has operated the Seminole Generating Station ("SGS") in Bostwick, Florida since 1984. SGS has two units that primarily burn coal; on occasion SGS burns a blend of coal and petroleum coke ("petcoke"). While SGS had obtained regulatory and environmental approval to construct a third unit at SGS, SECI recently announced that it was cancelling plans to build Unit 3.[2] Since 1998, CSXT has transported coal to SGS via all-rail service. Historically, CSXT has also transported some petcoke to SGS from the Port of Charleston, although none has moved within the past two years. This petcoke does not "originate" in Charleston – rather, it is offloaded from oceangoing vessels at the port. In the past CSXT has transported coal to SGS from some – but not all – of the Complaint origins. Significantly, CSXT has never transported

[2] Neither SECI's nor CSXT's issue traffic projections for SGS include tonnage for Unit 3.

coal to SGS from the Port of Charleston, the Bailey Mine, or the Gibcoal Mine – all of which are named origins in SECI's Complaint. Moreover, SECI's own SAC analysis does not contemplate that SGS would receive coal from any of these origins during the 10-year DCF period.[3]

Between 1998 and 2008, CSXT's all-rail service to SGS was governed by a long-term contract (the "1998 Contract"). {{

.}} When SGS began operations it received solid fuel via rail-barge service, not all-rail service. SECI admits that before 1998 it shipped coal to SGS from West Kentucky and Illinois by barge (via the Ohio and Mississippi Rivers and the Gulf of Mexico) to Port St. Joe, Florida. There, it was transloaded into railcars for short-haul rail delivery to SGS. *See* SECI Opening at I-7-8. Coal was moved by the Apalachicola Northern Railroad from Port St. Joe to Chattahoochee, where it was interchanged to CSXT for delivery over the remaining short haul to Bostwick. These movements took place under tariff, until 1991 when CSXT and SECI entered into a long-term contract for the traffic.

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[3] {{

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{{

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{{

.}} Instead, it chose to bring this rate challenge in an attempt to convince the Board to preserve {{ .}}

SECI's suggestion that CSXT inappropriately delayed quoting a SECI-specific common carrier rate is incorrect, and its purported description of the parties' negotiations omits critical facts.[4] {{

[4] CSXT provided a detailed summary of the parties' negotiations in its Petition for Stay. *See* CSXT Petition for Stay, V.S. Sullivan (filed Oct. 10, 2008), incorporated by reference herein. While SECI claims to take "great issue with a number of CSXT's prior statements" (SECI Opening at I-10), it does not identify any statement that was inaccurate.

}}

CSXT developed SECI-specific common carrier rates in November 2008, which were based on the current market for coal rates. Those rates were published in CSXT Tariff 32531 on November 14, 2008 and are the only rates that have applied to SECI's traffic since the 1998 Contract expired.[5]

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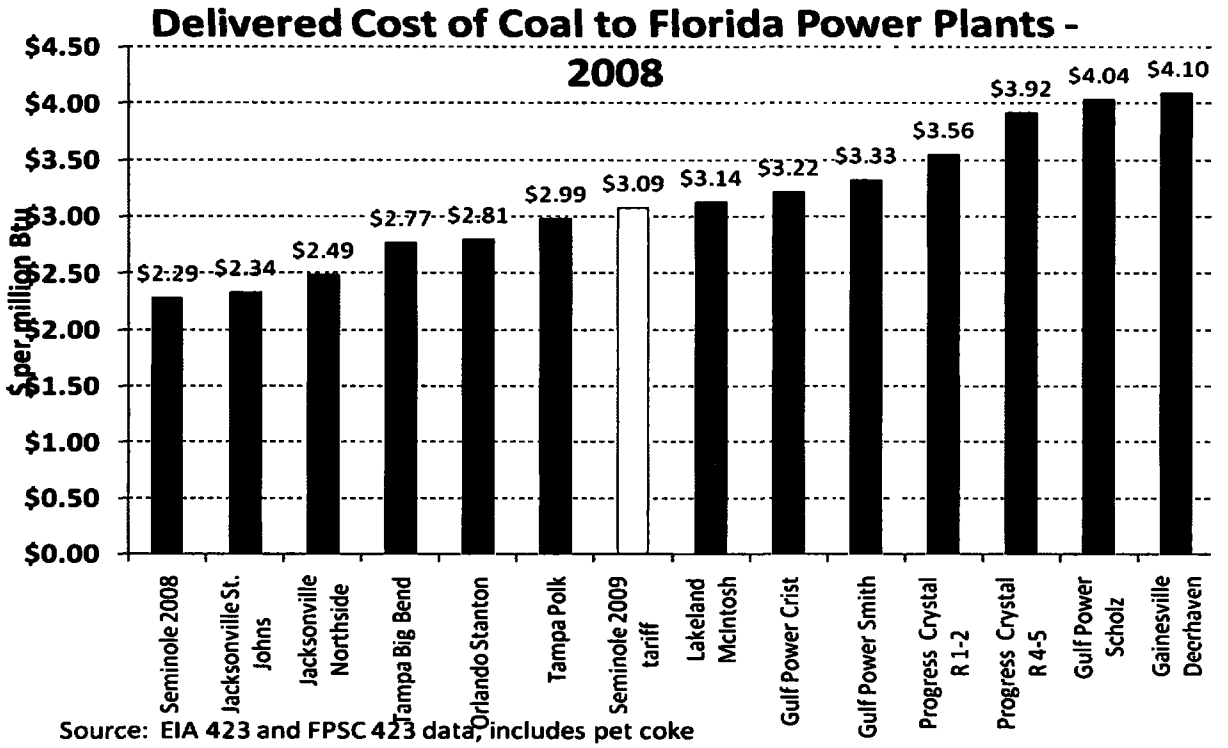
[5] Tariff CSXT-32531 had a one-year term and expired on December 31, 2009. A revised version of CSXT-32531 was published on February 11, 2009. In anticipation of the expiration of the tariff, on December 2, 2009 CSXT published a new tariff with the same rate terms as the prior tariff and with an expiration date of December 31, 2010.

C. CSXT's Tariff Rates Are Consistent With Market Rates.

SECI's assertion that CSXT's tariff rates are unreasonable is predicated on a simple misapprehension of the market rates for transporting coal many hundreds of miles from Illinois Basin and Western Kentucky coal fields to Florida. The reality is that the challenged rates are in accordance with the market and are commensurate with rates agreed to by other Florida utilities. In fact, SECI enjoys a delivered cost of coal lower than that of many of its competitors. Table I-A compares the delivered cost of SECI's coal at both 2008 contract rates and the challenged tariff rate to the delivered costs of coal for other Florida power plants.[6] It demonstrates that SECI's 2008 delivered cost of coal was the lowest of all thirteen power plants located in Florida – including plants that receive nearly all their coal via water. It further demonstrates that under the challenged tariff rate SECI's delivered cost of coal is well in line with those of other utilities.

[6] The information in Table I-A was derived from data on coal purchases filed by Florida utilities with the Florida Public Service Commission and the Energy Information Administration.

Table I-A



Source: EIA 423 and FPSC 423 data, includes pet coke
Note: Seminole 2009 data is 2008 cost of coal delivered at CSX tariff rate for 2009

In light of Table I-A, SECI's claims of "monopoly pricing" ring hollow. On the contrary, it is well-positioned to compete in the wholesale electric market.

D. SECI Has Not Met Its Burden To Prove That The Board Has Jurisdiction Over The Rates at Issue in This Case.

Most of the evidence CSXT submits in this Reply responds to SECI's assertion that CSXT's rates are unreasonable under the stand-alone-cost constraint set forth in *Coal Rate Guidelines*, 1 I.C.C.2d 520 (1985). As CSXT's SAC evidence demonstrates, a proper application of SAC principles shows that its rates are reasonable. But the Board need not and should not consider the parties' competing SAC evidence because SECI has failed to present

evidence demonstrating that CSXT has market dominance over the issue traffic.[7] On the contrary, the evidence is definitive that CSXT does not have market dominance. As detailed below in Section II-B and summarized *infra* at pages I-16 through I-20, there is effective competition from (non-CSXT) rail-barge and truck-barge alternatives to CSXT's all-rail transportation from all of the challenged origins. Because of this effective intermodal competition, the Board does not have jurisdiction to determine the reasonableness of CSXT's rates and the case should be dismissed.

In addition, the Board should dismiss SECI's claims with respect to CSXT's rates for coal and petcoke from the Port of Charleston, and for coal from Bailey and Gibcoal, because no traffic has moved from those points during the Complaint period or the two years preceding the filing of the Complaint, and SECI's own evidence demonstrates that no traffic is projected to move under those rates for the duration of the SAC analysis period. The Board's power to prescribe a maximum rate is limited to a "rate charged or collected by a rail carrier for transportation subject to the jurisdiction of the Board." 49 U.S.C. § 10704(a)(1). Here, the challenged rates from Charleston, Bailey and Gibcoal have never been "charged or collected," and – since SECI does not project moving a single carload from any of these origins throughout the 10-year SAC analysis period – none of these rates will be "charged or collected" during the SAC analysis period. As such, the Board lacks jurisdiction over these rates.

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[7] It is well settled that market dominance is a threshold jurisdictional inquiry that the Board must resolve before it reaches the question of whether a rate is reasonable. *See Coal Trading Corp. v. Baltimore & Ohio R.R. Co.*, 6 I.C.C. 2d. 361, 372 n.11 (1990); *Westmoreland Coal Sales Co. v. Denver & Rio Grande W. R.R. Co.*, 5 I.C.C.2d 751, 753-54 (1989) ("[B]oth the controlling statute and our judicially-approved interpretations of it establish that we must determine that market dominance exists before we address the question of rate reasonableness.").

The ICC long recognized that there was no basis upon which to exercise jurisdiction over a "paper rate" that never moved traffic. *West Texas Utils. Co. v. Burlington N. R.R. Co.*, I.C.C. Docket No. 41191, 1994 WL 559317, at *2 (Served Oct. 14, 1994) ("Congress of course recognized that shippers had no basis on which to challenge rates for service they had never used"). Even before passage of the Staggers Act, in an era of expansive regulatory supervision of rail rates, the ICC regularly declined to order prospective rate relief when there were no shipments planned under the challenged rates. *E.g.*, *Fed. Chem. Co. v. Baltimore & Ohio R.R.*, 210 I.C.C. 577, 578 (1935); *Capitol City Monument Works v. Baltimore & Ohio R.R.*, 161 I.C.C. 13, 18 (1930); *S. Ga. Traffic Bureau v. Fla. E. Coast Ry.*, 153 I.C.C. 725, 726 (1929).

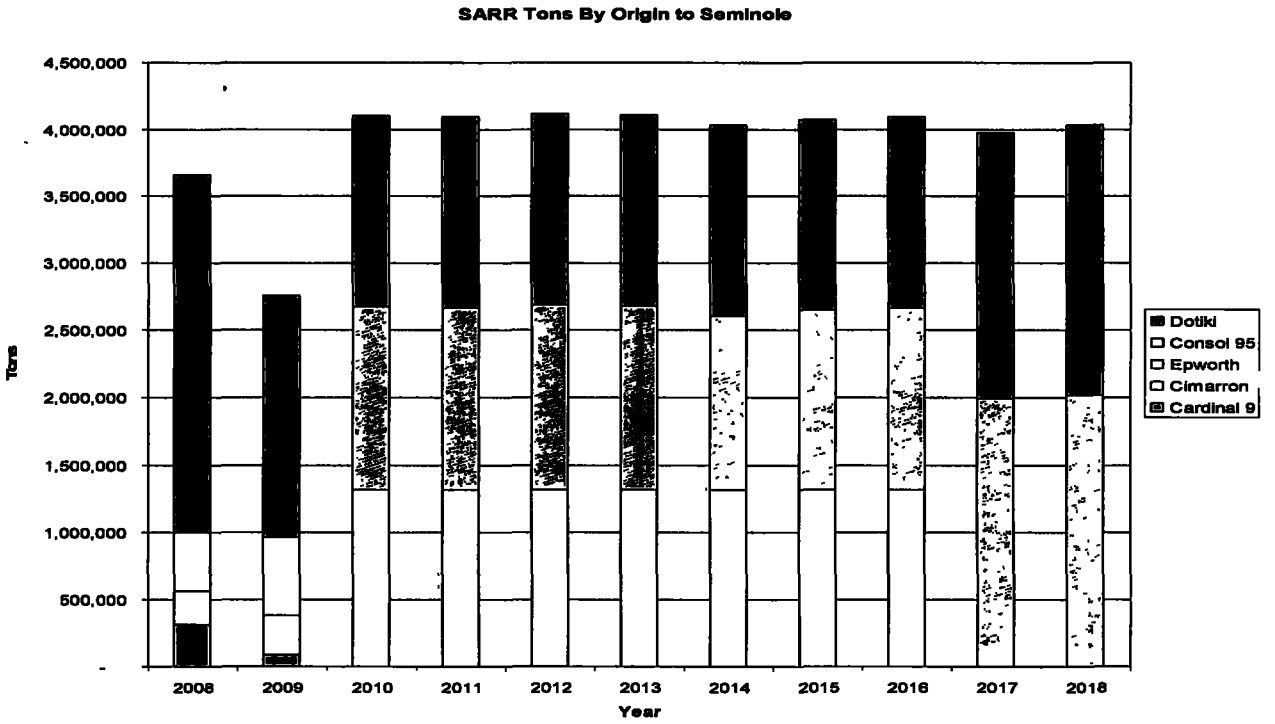
Stated simply, a shipper that has never shipped traffic under a rate has no basis to challenge the reasonableness of that rate, as the rate has not been "charged or collected." § 10704(a)(1). A shipper does not have to actually pay the challenged rate, but at a minimum a shipper must use the transportation service in order to be "charged" the challenged rate. *See AEP Tex. N. Co. v. Burlington N. & Santa Fe Ry. Co.*, STB Docket No. 41191 (Sub-No. 1), slip op. at 3 (served March 19, 2004). From these three origins, SECI has done neither.

SECI's statement that all origins in the Complaint have been past sources of fuel for SGS is not accurate. *See* SECI Opening at I-6. In fact, SECI has never shipped coal from Bailey, Gibcoal, and Charleston, and has not shipped petroleum coke from Charleston since 2007. Furthermore, SECI does not forecast any coal moving from these origins to SGS at any point during the 10-year SAC analysis period. SECI Opening Exhibit III-A-2 at 1. SECI did not present any explanation for including these origins in its Complaint. On the contrary, SECI anticipates that the entirety of its coal supply needs will be fulfilled by shipments from Dotiki,

Consol 95, Epworth, Cimarron, and Cardinal 9. SECI Opening at I-6; SECI Opening Exhibit III-A-2 at page 1. According to SECI, its projections that it will not take any shipments from Bailey, Gibcoal, or Charleston are predicated on an internal "long-term SECI coal delivery forecast." SECI Opening at III-A-11.

SECI's projections of the coal shipped from each origin to SGS from 2008 to 2018 are illustrated below in Table I-B.

Table I-B



As shown in SECI's Opening Evidence, and illustrated in Table I-B, no issue traffic has moved – or is forecast to move – from Charleston, Bailey or Gibcoal in the DCF period. SECI Opening Exhibit III-A-2 at 1.

CSXT could find no other rate cases where the Board prescribed a rate that the complainant neither used nor forecast using during the DCF period. In *AEPCO*, the Board refused to dismiss a complaint challenging rates from origins in the Powder River Basin ("PRB") under which the complainant had not shipped coal when the complaint was filed; however, the complainant had recently "moved at least one trainload of coal from the PRB, and [stated] that it intend[ed] to acquire PRB coal." *Az. Elec. Power Coop. v. Burlington N. & Santa Fe Ry. Co.* ("*AEPCO*"), STB Docket No. 34041, slip op. at 2 (served Dec. 31, 2001). Unlike the PRB rates at issue in *AEPCO*, SECI has neither shipped issue traffic under the Charleston, Bailey, and Sullivan rates, nor forecast future issue traffic from these origins.

This case also presents different circumstances from those presented in *TMPA*, where the Board's rate prescription covered several mines in the Powder River Basin ("PRB"), from which the complainant had not shipped coal. *Texas Mun. Power Agency v. Burlington N. & Santa Fe Ry. Co.* ("*TMPA*"), STB Docket No. 42056, slip op. at 28-29 (served Sept. 27, 2004) (reconsideration). TMPA presented forecasts that reflected the end of its current PRB-mine contract, and all mines in the complaint envisioned as replacement sources were located in the same general area; all complaint origins would require transportation over the same single route set out by the complainant in its SARR. *Id.*; *Texas Mun. Power Agency v. Burlington N. & Santa Fe Ry. Co.*, 6 S.T.B. 573, 602 (2003). In this case, however, SECI does not forecast shipping any coal or petcoke from Charleston, Bailey, or Gibcoal. The Board simply does not have

jurisdiction to prescribe a rate where SECI's own evidence belies any future intent to utilize that rate.[8]

As the rates from Charleston, Bailey, and Gibcoal have not been "charged or collected," and SECI does not forecast any future traffic from these origins, the Board has no jurisdiction to prescribe a rate for these origins. Therefore, SECI's claims with respect to those rates should be dismissed outright.

SUMMARY OF CSXT'S REPLY EVIDENCE

CSXT's evidence demonstrates both that CSXT is not market dominant over the transportation at issue and that the challenged rates do not exceed maximum reasonable levels for the issue traffic generated by sound Constrained Market Pricing analysis. This Reply Evidence explains the flaws and defects in SECI's case-in-chief, and describes the corrections and adjustments necessary to generate a sound SAC model based on a least-cost, efficient, feasible SARR for the origins, destinations, and traffic selected by SECI. *See* CSXT Reply Narr. at III. Based on that feasible SARR and on supportable, real world cost and revenue inputs and assumptions, CSXT presents a rigorous SAC analysis. *Id.* Throughout the analysis, CSXT has used conservative assumptions and methods, selecting from among a range of reasonable options those assumptions and methods that tend to favor the Complainant.[9]

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[8] Nor should the Board, as a matter of sound regulatory policy and administrative efficiency, consider complaints asking for rate prescriptions under those circumstances.

[9] Where feasible and consistent with real world conditions and constraints, CSXT's SAC analysis follows and adopts the information, data, assumptions, and approach posited by SECI's

The results of CSXT's SAC analysis – which is the only logically and legally sufficient analysis available for the Board's consideration in this proceeding – demonstrate that the challenged rates are well below the maximum reasonable limits imposed by the CMP Guidelines. *See* CSXT Reply at III.H.

Below, CSXT summarizes some of the significant evidence and arguments that support the conclusion that the challenged rates are reasonable. This evidence, as well as substantial additional evidence, is developed and described in detail in the individual narratives and supporting exhibits and workpapers that comprise the bulk of this Reply Evidence. See CSXT Reply Narr. Parts II – III.

II. Market Dominance

A. Quantitative Market Dominance

CSXT does not contest that, using the challenged rates and URCS system average variable costs, each of the issue movements generates revenue-to-variable-cost ("R/VC") in excess of the 180% jurisdictional threshold specified by 49 U.S.C. § 10707(d)(1). Because the R/VC of the issue movements is an important factor in the MMM calculation, however, CSXT's evidence addresses four significant errors in SECI's proposed inputs to the URCS Phase III movement costing program. While CSXT believes that SECI's erroneous variable cost calculations are moot because the Board will not need to apply MMM, out of an abundance of caution CSXT has corrected SECI's errors. Each of these errors is addressed in Section II.A. and is summarized briefly below.

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presentation – even though, in many instances, CSXT believes the approach SECI selected would be unwise, inappropriate, or ill-advised.

First, SECI used mileages different from the mileages agreed to by the parties. SECI claims to have used agreed-upon mileage inputs, and the parties did in fact agree on mileages for movements from all eight origins at issue. *See* SECI Opening at I-15. But SECI's Table II-A-1 only uses the agreed mileages for three of the eight origins. It is not clear whether SECI's departure from the agreed-upon mileages was intentional or inadvertent. What is clear is that the Board should hold SECI to its agreement and use the mileages stipulated to by the parties.

Second, SECI asserts that shipments from Epworth to SGS should be classed as "local" moves and not interline movements – even though the movements originate on the Evansville Western Railroad ("EVWR") and are transported by EVWR to Evansville, where they are interchanged with CSXT for transportation to SGS. These are plainly interline movements and CSXT treats them as such for reporting purposes. SECI's attempt to classify them as local movements is a thinly-disguised argument for a movement-specific adjustment to URCS costs that is forbidden by the Board's decision in *Major Issues* and should be rejected. *See Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1), at 60-61 (served Oct. 30, 2006).

Third, SECI overestimates rail car lading weights for movements from Charleston, Robinson Run, and Bailey. SECI unreasonably assumed that the lading weight for each origin would equal the average 2008 lading weights *from other origins*. SECI's approach ignores the fact that rail car lading weight is driven by the specific loading practices, characteristics, and capabilities of individual mines and port loading facilities. Lading weight for shipments from these origins can most reliably be estimated from pre-2008 SECI shipments from these origins or

– in the case of origins from which SECI has never shipped coal – by using average lading weight for other coal cars loaded for other customers at those origins.

Fourth, SECI's variable cost calculations substitute the actual rates charged by CSXT – which are equally applicable to movements in private cars and movements in CSXT system cars – for a concocted "private car rate" purportedly derived from the mileage allowance that would apply to movements in private cars. This attempt to usurp CSXT's statutorily guaranteed ratemaking authority by making up a rate to be challenged is plainly impermissible and must be rejected. And even if SECI were permitted to engage in such tactics, it based that rate on faulty data (its erroneous lading weight assumptions) and calculated it in a way that is directly contrary to Board precedent.

B. Qualitative Market Dominance

Although CSXT does not contest that the revenue to variable cost ratio of the challenged rates meet the threshold of 49 U.S.C. § 10707(d)(1), the evidence in Section II-B demonstrates that SECI has utterly failed to meet its burden to prove "an absence of effective competition from other . . . modes of transportation for the transportation to which a rate applies." 49 U.S.C. § 10707(a). SECI's claim in the verified complaint that "[t]here are no navigable waterways by which coal feasibly could be delivered to the station" is just flat wrong. Compl. ¶ 12. Indeed, the availability of water-borne alternatives is so demonstrable that CSXT has submitted video evidence to underscore this absolutely fundamental fact. *See* CSXT Ex. II-B-1.

The SGS Plant is located on the St. Johns River, a major navigable waterway, and the prospect of barge delivery to the SGS Plant is a real and effective constraint on CSXT's rates. Traffic from every one of the issue origins could effectively move to the SGS Plant via (non-

CSXT) rail-barge or truck-barge routings. CSXT's evidence demonstrates that bi-modal competition is economically viable and SECI's claimed "obstacles" to barge service do not pose any serious impediment to SECI's ability to substitute barge service for CSXT's rail service. SECI's decision that it would rather explore what rates it can obtain through the regulatory process than utilize its modal alternatives certainly does not make CSXT market dominant. Far from being "captive" to CSXT's rail service, SECI has access to the sort of viable competitive option that the Board has rarely, if ever, seen in prior SAC proceedings.

CSXT's evidence demonstrates that SECI has a long history of taking advantage of its modal alternatives to all-rail service. The SGS Plant location was selected in part because of its location on a navigable waterway. Over the years, the SGS Plant has received millions more tons via rail-barge service than via all-rail service. Similarly situated utilities such as the JEA St. Johns and JEA Northside plants receive coal and pet coke by water in volumes similar to those received at SGS. {{

}} It appears that, despite its transportation options, SECI has decided that it prefers receiving coal via all-rail service at this time – particularly if it can obtain lower rates from the STB than it can negotiate in the marketplace. But this decision does not change the fact that there are feasible alternatives to CSXT's rail service that provide effective competition for the transportation at issue. SECI has failed to meet its statutory burden to prove that CSXT is market dominant, and as such the Board does not have jurisdiction over the traffic at issue.

As detailed in Section II-B, CSXT's experts Seth Schwartz, President of Energy Ventures Analysis, Inc. ("EVA") and John Stamberg, Vice President of EVA, concluded that there are

economically feasible alternatives to CSXT's all-rail service from each of the Complaint origins. Coal could be transported to SGS from all of the mine origins in the Complaint via competitive (non-CSXT) rail-water and truck-water routings that would utilize SGS's location on the St. Johns River to barge coal to a site already owned by SECI. Mr. Schwartz's and Mr. Stamberg's analysis shows that the low cost of barge deliveries easily could justify the expense of constructing a dock and conveyor at SECI's river site. As for Charleston – which is a port, not a true coal origination point – waterborne coal or petcoke that SECI chooses to route through Charleston could just as readily be routed to the Port of Jacksonville for transportation to SGS via barge or truck.

None of SECI's proffered reasons for the supposed infeasibility of alternatives to CSXT's service has any merit. First, its suggestion that the St. Johns River is not sufficiently navigable to accommodate barge shipments is just flat wrong. The evidence is overwhelming that the St. Johns is a large and commercially navigable waterway that is regularly traversed by inland waterway barges. *See* CSXT Reply at II-B. CSXT's exhibit II-B-1 is a video that dramatically illustrates the navigability of the St. Johns, and indeed shows large barges moving past SGS. Businesses near SGS use the St. Johns for barge shipments of materials ranging from fuel to bridge sections. There is no doubt that SECI, too, could receive coal at SGS via barge if it so chose.

Second, SECI's claims that barge delivery would not be cost-effective or that appropriate fuel for SGS could not be received via barges are demonstrably wrong. Mr. Schwartz analyzed alternative routings from the Complaint origins – making SECI's "fuel availability" objection moot. And Mr. Schwartz's and Mr. Stamberg's detailed analysis demonstrates that the rail-barge

or truck-barge options would be competitive and cost-effective. {{

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Third, SECI implies that there are significant environmental obstacles to water delivery. There are not. SECI itself disproves this litigation-generated assertion.[10] {{

}} SECI's suggestions that special environmental obstacles might be erected by the St. Johns' designation as an American Heritage River or by the potential presence of certain protected species are similarly meritless, and disproven by the evidence in Section II-B.

SECI's assertion that CSXT is market dominant over movements from Charleston is particularly incredible. Charleston is not a mine or a petcoke generating facility – it is a port. Charleston is only a waystation for movements that could easily be routed to other ports equally accessible – or more accessible – to SGS, such as the Port of Jacksonville. There is no precedent for finding that a railroad could be market dominant over a commodity that "originates" via water delivery at a particular port. By definition, such a waterborne commodity that readily

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[10] Carefully read, SECI's filings speak not of "impediments" or "obstacles" – only about "concerns"; a word that does not foreclose SECI from further environmental permits for future projects it might want to undertake.

could be delivered to destinations via alternative water-ground transfer locations is not characterized by the absence of competition that is necessary for a railroad to have market dominance. *See* 49 U.S.C. § 10707(a). CSXT's Evidence demonstrates that waterborne coal or petcoke delivered to the Port of Jacksonville could be transported to SGS economically and efficiently via barges on the St. Johns River or by trucks.

In short, SECI has not satisfied the essential jurisdictional prerequisite of demonstrating that CSXT has market dominance over the subject traffic, and this case should be dismissed.

III. Summary of Stand Alone Cost Evidence

SECI's SAC presentation falls far short of its obligation to present a feasible stand-alone railroad. While a complainant has wide discretion in designing an optimally efficient, lowest cost SARR, the complainant "must show that the alternative is feasible." *Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520, 543 (1985). Here, SECI has failed in multiple respects to present a feasible SAC model, relying instead upon unsupported assumptions and faulty methods to produce a stand alone railroad that would not – and could not – exist in the real world. But "SAC principles do not permit shippers to construct hypothetical railroads whose operations are predicated on assumptions that would simply not be feasible in the real world." *TMPA* at 37 (Morgan, concurring). Instead, the SFRR must be modeled using assumptions that are "realistic, *i.e.*, consistent with the underlying realities of real-world railroading." *Xcel* at 12.

Despite these directives, throughout SECI's SAC evidence it makes assumptions that are impossible in the real world. Some examples:

- Assuming that the SFRR could operate a vast merchandise network without a single classification yard.

- Failing to design any local train service to serve merchandise and intermodal customers.
- Failing to design a plan to provide switching services to the SFRR's non-coal customers.
- Assuming that the SFRR would incur G&A costs amounting to only 2% of its revenues, a level never even approached in the real world.

None of the foregoing is remotely "consistent with the underlying realities of real-world railroading." *Xcel* at 12. In the real world, SECI's version of the SFRR would not be "least-cost, most-efficient." It would be inoperative. The SFRR, as proposed by SECI, would be unable to serve its customers, comply with basic federal laws and regulations, or even function as a railroad.

The primary aim of CSXT's SAC presentation is to replace SECI's improper and infeasible assumptions with feasible, real-world assumptions.[11] The corrected SFRR is still a highly efficient railroad, but it is one that would work. And after making essential corrections that include a realistic operating plan and the facilities, resources, and personnel necessary for the SFRR to operate in the real world, the SAC test demonstrates that the costs to design, construct, operate and maintain the railroad required to handle the traffic designated by SECI far

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[11] Although CSXT believes that when a Complainant has failed to carry its burden of proof on one or more of the central elements of the SAC analysis as SECI has done here, the appropriate response is for the Board to dismiss the Complaint. However, CSXT has presented a detailed SAC submission that makes the numerous essential corrections to SECI's failed case in recognition of the fact that the Board has indicated that "When the plan presented in a SAC case by the complainant is infeasible, it is generally incumbent on the defendant railroad to present a realistic alternative so that the SAC analysis may be completed." *Duke Energy Corp. v. CSXT*, Docket No. 42070, Decision served February 4, 2004, citing *Duke Energy Corp. v. Norfolk Southern Ry. Co.*, at 14-15; *AEPCO* at 2.

exceed the revenues that the SFRR would generate, confirming that the challenged rates are reasonable.

Indeed, SECI's presentation is so flawed that it fails to meet its burden as a Complainant to make a prima facie SAC presentation in its opening evidence. *See General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases*, 5 S.T.B. 441, 445 (2001) ("[T]he party with the burden of proof on a particular issue must present its entire case-in-chief in its opening evidence."). Two flaws are particularly glaring:

1. SECI fails to present any operating plan for handling the substantial pick-up, delivery, switching and classification operations necessary for it to handle the general freight traffic it assumes for the SFRR.

2. SECI adopts an unprecedented contrivance for "reducing its costs." It claims entire blocks of CSXT traffic on many trains, not as SFRR traffic, but rather as "non-selected" traffic which it claims it would transport for CSXT. (This, despite SECI's abject failure to present any evidence that CSXT would even consider – let alone accept -- any such an arrangement, which would only serve to erode further the density on CSXT's lines.) Then, SECI takes an imagined "linehaul credit" for so doing. This forensic sleight-of-hand trick effectively claims that CSXT (not the customer) would pay SFRR to do something of no value to CSXT, and that the cost of doing it would disappear as an accounting "credit."

The Board has repeatedly held that "[i]n SAC cases, the complaining shipper has the responsibility for designing the stand-alone railroad and has the initial burden of supporting the feasibility of all components of its design and cost estimates." *FMC Wyoming Corp. v. Union Pacific R.R. Co.*, 4 S.T.B. 699, 723 (2000). Because SECI's inadequate SAC presentation fails

to carry its threshold burden of proof in its opening evidence, SECI's case fails as a matter of law, and the Complaint should be dismissed for failure of proof.[12]

Because SECI's opening submission is so profoundly flawed, it is possible that SECI plans to introduce its principal SAC evidence in its rebuttal submission. Such tactics are strictly prohibited by the Board's rules. *See General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases*, 5 S.T.B. at 445-46 ("Rebuttal may not be used as an opportunity to introduce new evidence that could and should have been submitted on opening"). If the Board does not dismiss this case for failure of proof, CSXT urges it not to allow SECI to submit new, additional evidence in an attempt to revive its deficient case-in-chief in rebuttal, or in any subsequent filing.[13]

A. Traffic Group

The traffic group designated by Complainant Seminole is unprecedented, consisting of a complex mix of cross-over coal, intermodal, and general freight traffic. In a variety of ways, Seminole's SAC evidence has ignored the complexity introduced by its diverse traffic mix, and tried to wedge its presentation into an ill-fitting template designed for a SARR handling coal

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[12] *See, e.g., Agrico Chemical Co. v. Seaboard Coast Line R.R. Co.*, 361 I.C.C. 333 (1979) (dismissing rate complaint because complainant's evidence failed to meet its burden of proof); *Potomac Elec. Power Co. v. Penn Cent. Transp. Co.*, 356 I.C.C. 815 (1977) (same).

[13] Much has been said in many forums about the complexity and expense of Stand Alone Cost cases. The Board has grappled with the balance between allowing litigants in high-stakes rate cases to fully and fairly present the best case they can and, on the other hand, constraining the degrees of freedom of the parties to limit the raising of unnecessary issues and re-litigation of issues long decided. *Major Cases* marks a milestone in that regulatory challenge. CSXT respectfully submits that the Board should not countenance many of the tactics employed by SECI in this proceeding, and respectfully submits that it would be helpful for future administrative proceedings if the Board were to admonish future litigants against similarly ignoring Board precedent.

unit trains that make round-trip cycles.[14] If the Board does not dismiss this case for failure of proof – and CSXT submits that such a result is justified – it must accept the very substantial changes to SECI's SAC evidence submitted by CSXT in this Reply Evidence filing in order to conform the analysis to the data and actual evidence and to SAC rules and principles. Below, CSXT highlights some of the significant flaws, errors, and violations of SAC rules and requirements contained in the Complainant's traffic and revenue evidence, which result in a substantial overstatement of SFRR revenues.

First, Seminole engaged in widespread external ("off-SARR") re-routing of cross-over traffic, without accounting for the effects of such re-routing on service to customers, on the operations of the residual CSXT, or on revenue allocations between the SARR and CSXT. For one hundred eighty-three (183) separate origin-destination pairs, SECI depends on the assumption that CSXT's portions of hypothetical crossover traffic would be diverted to a different route than their actual route(s) of movement on the CSXT system. But Complainant denies it engaged in any such re-routing, and it makes no attempt to present evidence to satisfy the indispensable pre-requisites established by the Board for allowable off-SARR re-routes. This total failure of proof compels rejection of all crossover traffic between those 183 O-D pairs.

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[14] Many of SECI's non-coal traffic volume and revenue errors appear to result from SECI's failure to recognize and properly account for the substantial, material differences between intermodal and general freight carload traffic on one hand, and coal unit train traffic on the other. This fundamental failure, repeated in various forms throughout the opening SAC presentation, is perhaps the biggest single source of error and failures of proof in SECI's SAC evidence. The analytical approaches and templates used by complainants in nearly every previous SAC case (in which coal or other bulk commodity unit trains constituted the overwhelming majority of SARR traffic) – round holes into which SECI attempted to force the square pegs that are this case – are simply not adequate for the task of modeling, analyzing, and accounting for more complex general freight and intermodal traffic.

Elimination of the impermissible re-routed crossover traffic alone significantly invalidates SECI's entire SAC presentation.

Second, SECI's estimation of SFRR traffic volumes contains several material errors and misapplications of traffic data and forecasts. SECI relied on an outdated, materially erroneous coal volume forecast to overstate coal volumes for 2009 (the initial year of SFRR operations), despite overwhelming evidence that, during the historic recession of 2009, coal traffic volumes were substantially lower than predicted in the obsolete forecast. CSXT's Reply uses actual 2009 traffic volumes, and an updated EIA forecast to correct SECI's substantial overstatement of SFRR coal traffic volumes.

Moreover, SECI misapplied the forecast in several important ways. SECI substantially inflated January 2009 forecast volumes by "aggregating" traffic volumes projected to originate from other, distant mines from which the SFRR did not select traffic in the base year (2008). SECI selected its traffic -- including the SARR O-D pairs and routings upon which it based its SARR configuration, SARR operations and all stand-alone expenses and investment costs – from 2008 CSXT traffic and event data. SECI then used the 2009 forecast to add to the 2008 traffic volumes additional traffic projected to originate in 2009 from entirely different, geographically distant mine origins served by different CSXT lines and facilities. Effectively, SECI assumed that tons originating at mines not included in its SARR traffic group or operating plan would simply materialize at other distant mines (in some instances hundreds of miles away) that SECI

included in its SFRR traffic selection.[15] Neither the laws of physics nor SAC principles allow such fantastic notions, and SECI's infeasible volume inflating gambit must be rejected.

Third, SECI overstated likely issue traffic volumes by assuming that, in every year from 2010 through 2018, it will take coal shipment volumes that are equal to or greater than the highest annual volume it has shipped in the last decade. Despite compelling evidence that carbon emissions limits, low natural gas prices, and other factors make it very likely that coal fired power generation will decline in the coming decade, SECI relies on the implausible assumption that shipments to the SGS/Bostwick facility will increase by approximately 41 percent in 2010, and stay at that historically high level for the remaining nine years of the SAC analysis period.

Fourth, SECI misapplied CSXT forecasts for general merchandise and intermodal traffic in several different ways, most of which erroneously inflated SFRR traffic volumes. For example, for both intermodal and general freight traffic, SECI added new traffic that the forecast projected would come on to lines replicated by the SFRR in 2009, while simultaneously failing to remove all of the 2008 traffic that the forecasts projected would be lost in 2009.

Fifth, SECI overstated projected rate and revenue growth for SFRR traffic by misapplying existing transportation contracts and by making unreasonable and unsupported projections. Most surprisingly, SECI significantly overstated the revenues *for its own traffic*, by

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[15] SECI's entire support for this contrivance is an *ad hoc* remedy the Board applied due to the peculiar circumstances of a single case, *CP&L v. Norfolk Southern Ry.*, STB Docket No. 42072. As CSXT demonstrates in Section III.A., *infra*, *CP&L* does not support SECI's unprecedented origin shifting/volume aggregation tactic. Indeed, contrary to SECI's suggestion, *CP&L* did not involve origin shifting at all.

applying higher rates than it actually paid in 2009. That error alone resulted in a nearly $400 million overstatement of issue traffic revenues.

Sixth, SECI significantly overstated SFRR revenues for intermodal traffic by projecting a growth rate based upon comparison of net CSXI revenues for 2008 traffic with gross interline revenues (revenues generated by both CSXI and its interline partners) for 2009.

Seventh, Complainant substantially overstated fuel surcharge revenues for both general freight and intermodal traffic through a number of erroneous extrapolations, mistaken assumptions, and misapplications of its own stated methodology. Finally, due partly to SECI's very substantial, undisclosed off-SARR re-routes, its ATC revenue divisions mis-allocate cross-over traffic revenues, thereby inflating SFRR revenues.

If the Board does not dismiss this case for failure to satisfy SAC rules and requirements and other failures of proof, CSXT submits that it should accept the corrections proposed in Section III.A which result in reduction of SFRR revenues by $175 million in 2009. That revenue correction increases each year of the SFRR analysis, reaching $257 million in 2018.

B. Stand-Alone Railroad System

SECI's proposed configuration for the SFRR comprises a 2,092 mile system with two divisions laid out in a wishbone shape. The West Division extends from Princeton, IN to Bostwick, FL. It replicates parts of CSXT's Nashville, Atlanta and Jacksonville Divisions. The East Division extends from northeastern West Virginia to Folkston, GA, where it connects with the West Division. It replicates parts of CSXT's Huntington East, Baltimore, Florence and Jacksonville Divisions. The East Division also includes a portion of the former Monongahela Railway ("MGA") lines now owned by Norfolk Southern Railway Company ("NS"), over which

CSXT (and thus the SFRR) acquired operating rights. SECI has included a total of ten branch lines for the SFRR, three on the West Division and seven on the East Division. These branch lines serve coal mines, power plants and other industrial destinations, water/rail transfer terminals, and interchange points.

Although SECI determined that SFRR will route issue traffic originating on the West Division differently than CSXT routes that traffic today, CSXT accepts the general configuration of the SFRR as defined by SECI. However, because SECI omitted from the Robinson Run Branch route mileage 0.6 miles of the Haywood Industrial Track, which is currently owned by CSXT and connects the Short Line Sub to the Robinson Run Industrial Track, CSXT added this distance to the SFRR route miles.

SECI assumes that the two legs of the Monogahela Railroad – totaling just over 135 miles – from which the SFRR originates traffic will be accessed under the terms of the Monongahela Usage Agreement between CSXT and NS. However, by failing to construct the portions of the MGA included in the SFRR configuration, SECI has failed to account for the road ownership costs associated with CSXT's equal access to MGA under the MGA Operating Agreement—costs which the SFRR would also incur in order to access MGA traffic. In its reply, CSXT has developed the costs to build the portions of the MGA lines used by the SFRR and included 50 percent of those costs – representing CSXT's share of equal access to the MGA assets – as part of the required SFRR investment. With the inclusion of these two branch lines, the SFRR will have a total of 12 branch lines – three on the West Division and nine on the East Division.

SECI assumes that the SFRR will require a total of 3,037.04 miles of main, interchange, helper pocket and setout tracks and yard tracks. Although SECI cited an electronic workpaper as the detailed source for its calculations, SECI did not actually include the file and failed to provide supporting detail after repeated requests from CSXT. [16] Without access to the file that created the SFRR track miles, or other supporting detail, CSXT has been unable to replicate the track miles for any of the track categories identified by SECI.

As a result, on reply, CSXT developed the SFRR yard track and helper pocket track requirements from its own detailed operating plan. For interchange and set out tracks, where CSXT could confirm the location and configuration of SECI proposed track miles from SECI exhibits and work papers, CSXT accepted SECI's proposed track lengths. In those situations in which new interchanges were deemed necessary, CSXT applied SECI's standard interchange track layout to the new location. Additional bad order and maintenance of way setout tracks for the MGA were sized and placed consistent with SECI's opening criteria.

In addition to correcting obvious errors and omissions in SECI's route mileage calculations, CSXT witness Don Bagley determined the minimum track configurations required to serve the feasible operating plan created by CSXT witness John Gibson. CSXT witness David Wheeler then analyzed the ability of the SFRR's proposed physical plant to accommodate the projected traffic volumes given the operating characteristics determined by CSXT witness Gibson, using an RTC Model simulation. As described in detail in Section III-C below, in order to provide even a minimally acceptable level of service to the selected shipper group, the SFRR

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[16] See CSXT Workpapers "2009 Nov 12 - track miles workpaper request.pdf" & "2009 Oct 19 - workpaper request.pdf."

would be required to build the following yard and other facilities in addition to the physical plant included in SECI's Opening Evidence:

13 regional and local switching yards

7 new interchange locations

6 new intermodal facilities

11 new Transflo transload facilities

With these additional facilities, the SFRR would have a total of 3,410.15 miles of track, consisting of 2,227.47 miles of main line track, 750.13 miles of second main line track, 159.40 miles of interchange track, 22.39 miles of set out track and 250.76 miles of yard track. Table I-C below summarizes the difference between the parties' estimates of constructed track miles.

Table I-C
SFRR CONSTRUCTED TRACK MILES

	SECI	CSXT
Main line track – Single first main track	2,092.40	2,228.07
– Other main track[1/]	750.13	*750.13*
Total main line track	2,842.53	2,977.60
Interchange tracks	75.62	*159.40*
Helper pocket and setout tracks	13.03	*22.39*
Yard tracks[2/]	105.86	*250.76*
Total track miles	**3,037.04**	**3,410.15**

[1/] Equals total miles for constructed second main tracks and passing sidings.

[2/] Includes all tracks in yards, such as locomotive inspection tracks and MOW equipment storage tracks.

C. Operating Plan

"A core SAC principle is that the SARR must meet the transportation needs of the traffic it would serve." *Duke Energy Corp. v CSX Transportation, Inc.*, STB Docket No. 42070, at 24 (February 7, 2004) ("*Duke-CSXT*"). *See also Public Service Co. of Colo. d/b/a Xcel Energy v. BNSF*, STB Docket No. 42057, at 23 (June 8, 2004) ("The operating plan must be able to meet the transportation needs of the traffic the SARR proposes to serve."); *Texas Mun. Power Agency v. BNSF*, 6 S.T.B. 573, 589 (2003) ("[T]he SARR must meet the transportation needs of the traffic in the group by providing service that is equal to (or better than) the existing service for that traffic."). At the same time, "the assumptions used in the SAC analysis, including the operating plan, must be realistic, *i.e.*, consistent with the underlying realities of real-world railroading." *WFA/Basin* at 15. The operating plan set forth in SECI's Opening Evidence utterly fails to comply with these well-established standards, and should be rejected in its entirety.

SECI does not even attempt to provide for the physical facilities, or to demonstrate the SFRR's ability to perform the operations, required to serve the SFRR's traffic (particularly the unprecedented volumes of general freight (merchandise) and intermodal traffic that SECI selected for the SFRR's traffic group. The operating plan proffered by SECI suffers from numerous glaring deficiencies, including the following:

SECI posits a SARR that would carry nearly 600,000 loaded cars of "selected" general freight traffic and an additional 1.3 million loaded and empty "non-revenue" merchandise cars. The SFRR would interchange this traffic with CSXT and other carriers at 58 different

locations.[17] Yet, SECI asserts that the SFRR would not need to perform freight classification anywhere on its 2,092-mile system. SECI Opening at I-29. Indeed, SECI's proposed track configuration does not include any general freight classification facilities. *See* SECI Opening Ex. III-B-3. SECI likewise contemplates that nearly 800,000 units of "selected" and "non-revenue" intermodal traffic would move in SFRR trains.[18] Yet, SECI did not construct a single SFRR-owned intermodal facility anywhere on the stand-alone system, thereby rendering the SFRR's intermodal operations totally dependent upon facilities owned by third party vendors – a situation that does not comport with real-world practice.

The "selected" and "non-revenue" traffic moving in SFRR trains includes cars that originate or terminate at 884 unique customer locations on the SFRR system. SECI's track configuration does not include spur tracks, industry tracks or switch connections at any of those locations (*see* SECI Opening Exh. III-B-3), making it physically impossible for the SFRR to perform pick-ups or set-offs of local, interline forwarded and interline received general freight traffic.

In order to handle its general freight traffic in accordance with customer requirements, the SFRR would need to perform more than two million switches annually. *See* CSXT WP "Seminole Block and Yard Volumes 01-08-10.xls" Neither SECI's operating plan nor its capacity analysis account in any way for the time required to perform those local switching operations, nor does SECI's evidence consider the impact of such operations on the SFRR's line

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[17] While SECI's narrative evidence states that the SFRR would interchange traffic with other carriers at 51 locations, its workpapers indicate a total of 58 interchange points. *See* SECI WP "Base_Year_2008_TrainList_final.xls."

[18] *See* SECI WP "Base_Year_2008_TrainList_final.xls."

capacity, train transit times, cycle times and locomotive, car and crew requirements. Moreover, SECI's claim that the SFRR would need only eight (8) SW1500 locomotives to perform all switching and work train service across its 2,092-mile system (*see* SECI Opening Table III-C-3) is ludicrous.

The traffic selected by SECI includes 6,324 base year carloads that are currently transloaded from rail to truck at various CSXT intermediate points replicated by the the SFRR system. SECI's proposed SFRR configuration does not include any transloading facilities – indeed, neither SECI's narrative nor its workpapers give any indication that SECI was even aware of the service requirements relating to this traffic. Likewise, the SFRR's "selected" traffic includes PIH/TIH commodities that move across more than 70 percent of the SFRR's lines. However, SECI's SARR does not have the Positive Train Control ("PTC") capability mandated by Congress for trains carrying such hazardous commodities.

SECI's RTC Model simulation – upon which SECI relies to "confirm" the feasibility of its operating plan (SECI Opening at III-C-52) – does not account for the local operations (including pick-ups and set-offs at intermediate points) that the SFRR would be required to perform. Indeed, SECI intentionally excluded all local train and yard train activity from its RTC Model. *See* SECI Opening at III-C-24. The RTC Model utilized by SECI also does not contain any inputs for foreign railroad crossings, vehicle road crossings, or the the signals that are a critical element of the CTC communications system that SECI posited for the SFRR.

These fatal deficiencies in SECI's operating plan are compounded by SECI's unprecedented assumption that SFRR trains would carry not only SFRR's "selected" traffic but also 1.4 million cars/units of so-called "non-revenue" general freight and intermodal traffic

annually (for which SECI took more than $108 million in so-called "merchandise line-haul credits"). SECI's operating plan does not even attempt to identify – much less account for – the local switching, pick-up and/or set-off activities required to serve shippers of this "non-revenue" traffic.

In Section III-C, CSXT presents an operating plan for the SFRR that properly accounts for the services (including switching, pick-ups and set-offs at intermediate points) required to serve both SFRR's "selected" traffic and "non-revenue loads" in a manner consistent with customer needs. It is important to note that CSXT developed its operating plan utilizing the very same data sources that it provided to SECI in discovery.[19]

D. Operating Expenses

SECI manufactured artificially low operating expenses for the SFRR by using several significant and unprecedented contrivances that have never before been attempted in a Stand Alone Cost presentation. Rather than design a detailed operating plan to accommodate the SFRR's selected traffic and develop the necessary forward-looking stand alone costs to perform required switching, SECI arbitrarily assumed a certain level of train and switching activity and applied historic URCS costs to those activities. Rather than designing local and yard services and intermodal facilities necessary to serve the SFRR's customers, SECI guessed at the number of switches and intermodal lifts to be performed and applied an internal transfer price methodology as a surrogate for stand-alone costs. And rather than taking the time to determine the origin, destination, and customer service requirements of the majority of the merchandise

[19] SECI's suggestions that it was forced to use its impermissible assumptions because it was unable to develop a proper SAC presentation using the data CSXT provided in discovery is meritless. CSXT addresses SECI's "data insufficiency" claims in CSXT Reply Ex. I-2.

cars handles by SFRR trains, SECI classified them as "non-revenue" traffic and awarded the SFRR a reduction to operating expenses that it calls a "manifest line-haul credit." In none of these cases did SECI demonstrate that the surrogate "costs" it used were a reliable measure of the stand-alone costs that a hypothetical least-cost competitor would incur in providing the services. SECI simply asserted the costs.

In Part III.D, CSXT demonstrates that each of these contrivances is unsupported and inconsistent with SAC theory and Board precedent. CSXT also develops least-cost operating expenses predicated on the operating plan explained in Part III-C. Because SECI's operating expense calculations were based on an "operating plan" that was infeasible and failed to meet the service requirements of the SFRR's customers, CSXT's operating expenses include substantially more units of labor, material, and equipment than SECI projected. *See* CSXT Reply at III.D.

In addition, SECI substantially underestimated the general and administrative ("G&A") costs required to adequately manage and administer the SFRR. SECI postulates that the SFRR could minimize G&A costs to levels that are totally unprecedented in the real world – it claims that the SFRR could function with a mere 71 G&A employees and with G&A spending at only 2% of revenues. But even the most efficient peer railroads are unable to achieve G&A expenses of less than 10 percent of revenue for a standalone operation. SECI is only able to posit such understated G&A expenses by systematically ignoring the need for functions that the SFRR must perform in order to operate. For example, SECI does not provide any personnel for security or to develop and administer the SFRR's federally-required security plan – despite the fact that the SFRR would carry substantial amounts of hazardous materials (including TIH materials) and would operate through eight cities that have been designated as High Threat Urban Areas. It

posits that a mere two employees could manage the preparation of hundreds of annual tax returns for the SFRR. It proposes that another Assistant Controller and a clerk could handle all billings and collections for a railroad with over a million carloads per year. It provides virtually no human resources personnel for the SFRR, claiming that the function would be "outsourced" – but its proposed outsource vendor is a software company that does not do such outsourcing.

By contrast, CSXT's evidence is firmly grounded on real world experience and industry standards. CSXT assumes that the SFRR is optimally efficient and capable of achieving high levels of productivity and economic efficiency in every area. But CSXT also assumes – as SECI does not – that the SFRR complies with the minimum legal, regulatory, commercial, and administrative requirements that would apply to it. Ensuring that the SFRR has sufficient resources to satisfy these requirements is an essential element of demonstrating that it would be a feasible railroad. SECI's skeletal G&A staffing plan is plainly not capable of satisfying the requirements that the SFRR would have to meet in the real world. CSXT's evidence corrects those deficiencies by assigning the minimum G&A expenses that would be necessary for the SFRR to operate given the size and scale of the SFRR network.

Additionally, in Section III.D.4 CSXT corrects the flaws in SECI's evidence on maintenance-of-way operating costs. SECI adopted a "one-size-fits-all" approach to maintenance-of-way costs, assuming that each roadmaster territory will consist of approximately 200 route miles and that each four-person track crew will be responsible for 100 route miles – regardless of terrain, weather conditions, accessibility, traffic levels, or even the number of track miles in each route mile segment. The result of SECI's one-size-fits-all approach is a wholly unrealistic maintenance-of-way plan in which many roadmasters and track crews would have

maintenance responsibilities far greater than they could manage in the real world. CSXT's maintenance-of-way plan – which is based in part on direct observations of the terrain over which the SFRR would operate and facilities that the SFRR would replicate – accounts for the unique features of the SFRR and is therefore a far more realistic assessment of the SFRR's maintenance needs. CSXT's maintenance-of way plan also accounts – as SECI does not – for the increased remedial and preventive maintenance required for tracks handling a mix of heavy coal, general freight and high-speed intermodal trains at FRA Class 4 standards. CSXT's Evidence corrects these and other flaws in SECI's maintenance-of-way expenses and develops a maintenance-of-way plan that provides the minimum maintenance necessary for the SFRR to function safely and efficiently.

Finally, CSXT's Reply Evidence corrects several additional errors in SECI's calculation of SFRR operating expenses, including its underestimate of the SFRR's insurance costs and significant understatement of the ad valorem taxes that the SFRR could expect to pay.

E. Non-Road Property Investment

CSXT addresses the SFRR's non-road property investment in locomotives and railcars in Part III-E.

F. Road Property Investment

Seminole made large and substantial errors in its road property investment evidence, resulting in a major understatement of those costs totaling approximately $2.3 billion. These errors are discussed and explained in detail in Section III.F and accompanying exhibits. Some of SECI's most significant errors pertain to land costs, roadbed preparation costs, and bridge costs, including the following:

First, SECI greatly underestimated the land acquisition costs for its right-of-way. Initially, SECI erred by using post-real estate market crash values from 2009 rather than values from 2006 when the land would have been acquired for construction. Complainant's superficial, non-standard real estate valuation approach also greatly underestimated SFRR land costs, particularly in major urban areas traversed by the SFRR such as Washington, D.C., Atlanta, Nashville, and Richmond. Seminole made myriad other land valulation errors, including use of inordinately large valuation segments and failure to adhere to standard appraisal practices. And incredibly, its appraisal valuations for lines south of Atlanta all the way to Cordele, GA, and in portions of Chattanooga and Savannah, were for **the wrong railroad!** In those areas SECI's valuation expert mistakenly valued the Norfolk Southern right-of-way, not that of CSXT. Correction of SECI's land valuation and cost errors increases land investment costs by approximately $2.4 Billion.

Second, SECI failed to recognize and properly account for SFRR bridge costs, including costs of major bridge structures over navigable waterways. As a result of numerous errors detailed in Section III.F by CSXT's experts, SECI's total bridge cost estimate understated bridge costs by approximately $666 Million.

Third, SECI's evidence understated roadbed preparation costs by approximately $882 million. A significant portion of Complainant's understatement of these costs is due to its inappropriate extrapolation of earthwork costs from a small construction project in rural Tennessee – which involved territory and conditions that are not representative of the diverse and challenging conditions that would confront the builders of the SFRR -- to a entire 2,100 mile

SFRR system that would cross much of the Eastern United States. In contrast, CSXT's Reply uses methods and costs that follow established Board precedent.

Fourth, Complainant underestimated tunnel costs by approximately $168 Million. Significant errors contributing to this understatement of SFRR tunnel costs include SECI's failure to include a significant tunnel at Point of Rocks, Maryland, failure to account properly for double-tracked tunnel costs, and use of tunnel unit costs that would be inadequate to comply with modern construction and safety standards.

G. Discounted Cash Flow Analysis

SECI's discounted cash flow model departs from the Board's standard discounted cash flow (DCF) application in a number of key respects. Two of SECI's errors are particularly egregious. First, SECI ignores the well-settled rule that SARR capital requirements should be based on the industry cost of capital and instead uses a debt rate for SFRR locomotive capital costs derived from CSXT 2007 Secured Equipment Notes. This approach was rejected by the Board in *Public Service Co/XCel v. BNSF*, and it should be rejected again here. Moreover, SECI's claim that the proceeds from these notes were used to purchase locomotives is supported by nothing but sheer speculation. Second, SECI violated *Major Issues* by truncating the DCF analysis and computing the terminal value as of year 10 – not year 20 as the Board concluded was proper in *Major Issues*. CSXT addresses and corrects these and other errors in SECI's DCF model in Section III.G.

H. Results of SAC Analysis

In Section III.H. CSXT explains errors in SECI's SAC analysis, and makes appropriate modifications. CSXT then calculates appropriate SAC results. Properly developed and

supported SAC analysis shows that stand alone costs exceed stand alone revenues by a significant margin in each year in which the SFRR operates during the 10-year analysis period; and that the cumulative present-value of the revenue shortfall over the entire 10-year DCF analysis period is approximately $5 Billion. Therefore, CSXT's SAC presentation demonstrates that the rates do not exceed a reasonable maximum and no rate reductions or reparations are warranted.

IV. SECI's Collateral Attack on the Established Regulatory Interest Rate Should Be Rejected[20]

For the second time in this litigation, SECI attempts to make a collateral attack on the Board's regulation prescribing the interest rate on prejudgment interest. 49 C.F.R. § 1141.1 establishes that the interest rate for any award of reparations in a rate case shall be "the coupon equivalent yield (investment rate) of marketable securities of the United States having a duration of 91 days (3 months)" – otherwise known as the 91-day Treasury bill yield. But here, SECI again asks the Board to ignore § 1141.1 and instead award it interest "equal to CSXT's average return on investment." SECI Opening at I-41. SECI's demand for an unprecedented departure from the Board's regulations is unjustified and should be rejected.[21]

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[20] As clearly explained *supra*, CSXT believes that the Board must dismiss this Complaint for lack of jurisdiction, and further believes that, even if the Board entertains the SAC evidence, it will find that such evidence requires a finding that the challenged rates are not unreasonably high. Nonetheless, CSXT provides this response to SECI's request that the Board depart from its established interest rate regulations to ensure a complete record on all disputed issues.

[21] SECI is unable to point to a single instance where the Board set aside § 1141.1 in favor of a different interest rate. Indeed, the Board has used § 1141.1 for recent reparations awards. *See Western Fuels Ass'n v. BNSF Ry. Co.*, Docket No. 42088 (Sub-No. 1) (Oct. 21, 2009).

The Board regularly refuses to consider collateral attacks on rules adopted after a notice-and-comment rulemaking. *See, e.g., Western Fuels Ass'n, Inc. v. BNSF Ry. Co.*, STB Docket No. 42088, at 5 (Feb. 17, 2009). Indeed, earlier in this very case the Board rejected SECI's claim in its Petition for Injunctive Relief that a § 1141.1 interest rate on reparations would be not be sufficiently compensatory. The Board found that SECI's "argument amounts to an improper collateral attack on the interest rate we prescribe when reparations are awarded." *Seminole Elec. Coop., Inc. v. CSX Transp., Inc.*, STB Docket No. 42110, at 4 (Dec. 22, 2008). Here, too, SECI's collateral attack should be rejected out of hand. The Board has a detailed regulation, adopted after notice-and-comment rulemaking, prescribing the method for calculating interest in rate reasonableness cases. It would be unprecedented and would violate fundamental APA due process standards for the Board to reverse that regulation in this adjudication.[22]

SECI's suggestion that the Board can lawfully ignore § 1141.1 in favor of SECI's favored interest rate is wrong. While the Board certainly has the power to revise and even repeal its regulations in a notice-and-comment rulemaking, that does not mean that it is free to ignore its regulations in an individual adjudication at a party's behest. Indeed, "it is hornbook administrative law that an agency need not—indeed should not—entertain a challenge to a regulation, adopted pursuant to notice and comment, in an adjudication." *Tribune Co. v. FCC*, 133 F.3d 61, 68 (D.C. Cir. 1998); *see Marseilles Land & Water Co. v. FERC*, 345 F.3d 916, 920

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[22] SECI's claim that it is merely proposing a "modification of the Board's typical damages formula" significantly understates the gravity of what it asks the Board to do. SGS Opening at I-38. SECI is proposing that § 1141.1 be set aside to permit SECI to propose alternative interest rate models that it claims would be more compensatory. To adopt SECI's position is to abandon the settled rule of § 1141.1 in favor of a case-by-case approach where the parties would re-litigate the appropriate level of interest in each individual case.

(D.C. Cir. 2003) ("[A]n administrative agency may not slip by the notice and comment rule-making requirements needed to amend a rule by merely adopting a *de facto* amendment to its regulation through adjudication."). Neither of the cases relied on by SECI is to the contrary. One simply reiterates the fundamental *State Farm* principle that an agency may change course so long as it provides a reasoned analysis for the change. *See AAR v. ICC*, 978 F.2d 737, 740 (D.C. Cir. 1992). But the issue is not whether the Board has the power to repeal its regulations through an appropriate rulemaking – it is whether it can choose to ignore a regulation in an adjudication. The other is a five-sentence summary ICC order waiving a minor technical requirement prescribing the time for filing contract amendments – certainly not authority for the proposition that the Board can revise a settled rule without notice and comment. *See CSX Transp., Inc. (Reinstatement of Contracts and Contract Summaries)*, ICC Special Contract Auth. No. 95-19 (Mar. 17, 1995).

Moreover, it should not go unmentioned that arguments nearly identical to those SECI raises here were considered and rejected in the rulemaking that adopted § 1141.1. *See Procedures to Calculate Interest Rates*, 9 I.C.C.2d 528, 531-34 (1993). After the ICC proposed using the 91-day Treasury bill yield to measure interest in all rate cases, the National Industrial Transportation League ("NITL") argued in comments that the 91-day Treasury bill yield was too low to represent "the opportunity cost of capital" and suggested that the ICC instead use the railroad cost of capital rate. *Id.* at 530-31. The ICC disagreed, finding that the 91-day Treasury bill yield had "compelling" advantages over the cost of capital rate. *Id.* at 534. For one thing, the short-term Treasury bill yield "is a universally-accepted short-term baseline opportunity cost rate for all companies, regardless of industry"; for another, it is a more "up-to-date" measure of

interest. *Id.* Each of these reasons is just as valid now as it was when § 1141.1 was adopted. The 91-day Treasury bill yield continues to be a universally-accepted short-term baseline opportunity cost rate, and it continues to be a regularly updated measure of interest that is not affected by the inherent lag of other indices.

Furthermore, SECI's implication that § 1141.1 is somehow out of step with prevailing "principles" governing prejudgment interest is wrong. SECI Opening at I-39. As the secondary sources SECI cites make clear, different jurisdictions have taken widely divergent approaches to prejudgment interest. Some jurisdictions do not permit it; others do. *See* Michael S. Knoll, *A Primer on Prejudgment Interest*, 75 Tex. L. Rev. 293, 297-98 (1996) ("[T]he requirement that a losing defendant pay prejudgment interest to a successful plaintiff remains far from universal."). Some set prejudgment at a predetermined rate – others determine the amount of interest on a case-by-case basis. *See id.* at 299-30 & nn. 34, 38-40, 42. Some only permit simple interest; others permit interest compounding. *See id.* at 299 n.35. The Board's regulation is a reasonable approach among the many conflicting models for measuring interest, and even if it were permissible for the Board to reconsider it in this proceeding, there is no reason to do so.[23]

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[23] SECI's claim that using § 1141.1 to set interest rates creates the risk that railroads "would use unreasonable rate increases as a source of cheap capital" is ludicrous. SECI Opening at I-40. No rational railroad would willingly incur the significant expense, distraction, and uncertainty of a SAC case – including millions of dollars of attorney and consultant fees and thousands of person-hours of railroad personnel required to respond to discovery and evidence – merely to secure a supposedly advantageous interest rate. Here again, CSXT would respectfully submit that SAC cases could be streamlined in the future if the Board were to refuse to countenance these kinds of tactics.

V. CONCLUSION

As summarized above and demonstrated in detail below, SECI has failed to establish that CSXT is market dominant over the transportation at issue. Moreover, SECI's SAC presentation is so fundamentally inadequate and deficient that it constitutes a failure of proof, and the Board should dismiss SECI's Complaint on that basis alone. In the event that the Board decides not to summarily dismiss the Complaint, CSXT's Reply Evidence demonstrates that the challenged rates are well below maximum reasonable levels. CSXT's Reply corrects errors in SECI's evidence and makes necessary adjustments which together demonstrate that, even employing conservative assumptions favoring SECI, a rigorous and well-supported SAC presentation compels the conclusion that the challenged rates are well below a reasonable maximum and that SECI is entitled to no relief whatsoever.

Respectfully submitted,



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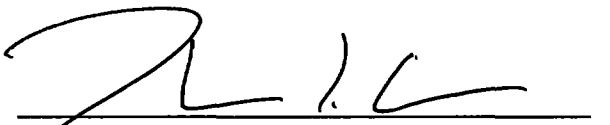
Counsel to CSX Transportation, Inc.

Dated: January 19, 2010

CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of January, 2010, I caused copies of CSX Transportation, Inc.'s Reply Evidence, including the Narrative, Exhibits and electronic workpapers, to be served by hand-delivery on the following counsel for Complainant Seminole Electric Cooperative, Inc:

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II. MARKET DOMINANCE

A. QUANTITATIVE EVIDENCE

CSXT does not contest that, using the challenged rates and 2008 URCS system average variable costs, each of the issue movements generates revenue-to-variable-cost ("R/VC") ratios in excess of the 180% quantitative market dominance threshold specified by 49 U.S.C. § 10707(d)(1). However, because the R/VC ratio of the issue movements is an important factor in other calculations that may be necessary in this case,[1] CSXT addresses several errors in SECI's R/VC calculations.[2]

1. Traffic and Operating Characteristics

The Board established in *Major Issues* that the system average variable costs of the issue movements are to be calculated by using the unadjusted URCS Phase III movement costing program. *See Major Issues in Rail Rate Cases*, STB Ex Parte No. 657 (Sub-No. 1), at 60 (Oct. 30, 2006) ("The variable costs used in rate reasonableness proceedings will be the system-average variable cost generated by URCS, using the nine movement-specific factors inputted into Phase III of URCS."). The nine operating characteristics required for the URCS variable cost calculation are (1) the railroad; (2) loaded miles; (3) shipment type; (4) cars per train; (5) car type; (6) car ownership; (7) tons per car; (8) commodity; and (9) movement type. *See Kansas City Power & Light v. Union Pac. R.R. Co.*, STB Docket no. 42095, at 6 (May 16, 2008).

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[1] For example, although CSXT's evidence demonstrates both that CSXT lacks market dominance over the traffic at issue and that the challenged rates are reasonable in any event, this is the only point at which CSXT is permitted to address variable costs. Such costs would become relevant only in the event that the Board would determine that the rates are unreasonable, at which point variable costs would be required for use in the MMM rate prescription process.

[2] As discussed above at I-C, SECI has never moved coal from three of the complaint origins and does not propose to move coal from these origins over the ten-year SAC analysis period addressed in its opening evidence. These origins therefore should be dismissed from the case.

Here, the parties have reached agreement on all operating characteristics except for (1) car ownership; (2) the shipment type for movements from Epworth, IL; and (3) tons per car for movements from four origins. In addition, while the parties reached agreement on mileages to the destination plant from all eight issue origins, SECI inexplicably failed to use the agreed-upon mileages in its opening evidence.

a. Mileage

SECI is correct that the parties agreed on the mileage inputs for movements from all eight origins at issue. *See* SECI Opening at I-15. But SECI inexplicably did not use all of the agreed-upon mileages for its variable cost calculations. Indeed, five out of the eight mileages in SECI's Table II-A-1 are different from the mileages to which the parties agreed.

The Board's order establishing a procedural schedule for this case directed the parties "to meet and seek to resolve any disputes over operating characteristic inputs into URCS prior to filing any evidence." *Seminole Electric Cooperative, Inc. v. CSX Transp., Inc.*, Docket No. 42110, at *2 (Dec. 11, 2008). In accordance with the Board's order, the parties filed their Joint Submission of Operating Characteristics on May 11, 2009 ("Joint Submission"). The Joint Submission stated that the parties had agreed on mileage for all origins except Dotiki, Epworth, and Gibcoal. That Joint Submission included both the agreed-upon mileage and the parties' respective positions on mileage for Dotiki, Epworth, and Gibcoal. After further discussions, SECI and CSXT were able to agree to use 849.8 loaded miles for Dotiki, 911.3 loaded miles for Epworth, and 904.0 miles for Gibcoal.[3]

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[3] The agreement was reached in a May 29, 2009 letter from SECI counsel that also contains other statements made for the purpose of resolving other issues relating to operating characteristics. Because the letter contains statements that could be considered to be for the purpose of compromise, CSXT has not included it in this submission. CSXT will provide the letter upon the

Despite the parties' agreement and the Board's instruction that the parties seek to resolve any disputes over operating characteristics before filing evidence, SECI's Table II-A-1 (on page II-3) does not use the agreed-upon mileages for Dotiki, Epworth, and GibCoal. The table lists the mileage for Dotiki as 847.1 instead of 849.8; the mileage for Epworth as 904.3 instead of 911.3, and the mileage for GibCoal as 958.9 instead of 904.0.[4] The mileages for movements originating at the Cimarron and Cardinal 9 mines are also wrong. The Joint Submission states that the mileage for Cimarron is 832.0 (SECI lists it as 826.4) and that the mileage for Cardinal 9 is 835.0 (SECI shows 834.3). To make matters worse, SECI's workpapers indicate that the mileages that it used for its URCS calculations are in some cases different from the mileages in Table-II-A-1. *Compare* SECI WP "gibcoal private 2008 URCS AAR CoC.pdf" with SECI Opening at II-3.

The Board should reject SECI's failure to adhere to the agreed-upon mileages. In their place, the Board should use the mileages specified by the Joint Submission for Cardinal 9, Cimarron, Charleston, Robinson Run,[5] and Bailey, and the Board should use the mileages agreed by the parties for Dotiki, Epworth, and Gibcoal. The correct mileages appear in CSXT Reply Table II-A-1. As the Board considers the remainder of SECI's evidence, CSXT asks that the

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Board's request. CSXT also reserves its right to submit the letter for the Board's consideration in the event that SECI denies that it agreed to these loaded miles.

[4] It is worth noting that shipments from Dotiki and Epworth alone account for two-thirds of SECI's projected coal volume over the SAC analysis period.

[5] CSXT agrees that the Robinson Run mileage input is 1,113.8 for quantitative market dominance purposes. However, the SFRR does not replicate the track necessary to route Consol 95 over the CSXT route on which it currently travels, and as a result the mileage to move traffic from Robinson Run to SGS over the SFRR is 1,264.0. *See* SECI WP "SECI_SARR_FixedCosts.xlsx," worksheet "Mileage_Seg" As discussed below in section III-H, this is the SFRR mileage that should be used in the event that it becomes necessary to calculate the Robinson Run R/VC in the MMM model.

Board bear in mind the unreliability of SECI's basic numerical data reporting of items previously stipulated to by the parties.

Table II-A-1

Origin	Miles
Dotiki, KY	849.8
Pattiki, IL (Epworth)	911.3
Warrior, KY (Cardinal 9)	835.0
Elk Creek, KY (Cimarron)	832.0
Gibcoal, IN (Sullivan)	904.0
Charleston, SC	316.7
Robinson Run, WV (Consol 95)	
-Actual CSXT Routing	1,113.8
-SFRR Routing	1,264.0
Bailey Mine, PA	1,188.4

b. Epworth Is an Interline Move

SECI is also wrong to characterize shipments from Epworth as "local," rather than interline, movements. *See* SECI Opening at II-3 n.1. The issue movements from Epworth originate on the lines of the Evansville Western Railroad ("EVWR") and are transported by the EVWR for approximately 34.5 miles to Howell Yard in Evansville, where they are interchanged with CSXT for transportation to SGS. Plainly, this is an interline movement—not a local movement.

SECI's claim that an interline movement should be treated as a CSXT local move is nothing more than an argument for a movement-specific adjustment to URCS costs. *Major Issues* unequivocally disallows such movement-specific adjustments. *See Major Issues* at 60-61. Even though the Epworth movement is indisputably an interline move, SECI claims that URCS should be adjusted to account for the fact that CSXT has certain indirect ownership interests in

EVWR. This is precisely the sort of movement-specific adjustment that *Major Issues* forbids, and the Board should therefore reject it.

Even if the Board were to consider SECI's argument for a movement-specific adjustment – and it should not – the argument should be rejected on the merits for several reasons. First, CSXT treats the Epworth movements as interline for reporting purposes. CSXT reports EVWR traffic as interline received in its Freight Commodity Statistics reports. *See* CSXT Annual Freight Commodity Statistics Report (2008), *available at* http://www.stb.dot.gov/stb/industry/econ_reports.html. Accordingly, CSXT-EVWR interchange events are included in the URCS calculations, which assign costs to these interchanges. EVWR-received traffic must be costed as interline traffic for CSXT to recover these costs.

SECI ignores the fact that movements from Epworth are reported as interline moves (and operate like interline movements in the real world). Instead, SECI claims that they should be treated as local moves for URCS costing purposes. This strained interpretation is apparently based on the financial relationship between EVWR and CSXT. *See* SECI Opening at I-14. EVWR is a subsidiary of Four Rivers Transportation, Inc. ("Four Rivers"), and CSXT owns a minority interest in Four Rivers. But CSXT's indirect corporate connection with EVWR does not alter the fact that when coal is shipped from Epworth to SGS it originates in EVWR trains that are operated by EVWR crews and is transported over EVWR lines until it is interchanged with CSXT. Nor does CSXT's relationship with EVWR affect the fact that these movements are properly reported as interline received traffic and included as such in the URCS calculations. Nor does it change the fact that cars are interchanged to the account of EVWR, which then bears all responsibility for car compensation and for car damage under AAR Interchange Rules. By

definition, movements involving two carriers are not "local CSXT" moves – they are interline moves involving interchange with a second carrier, and they should be costed accordingly.

SECI's argument that certain EVWR statistics are included in CSXT's annual report Form R-1 is beside the point.[6] Whether or not an entity is included on a Class I railroad's R-1 report is a function of the Board's regulations on consolidated reporting – not an indicator that the Class I and the included entity should be considered a single railroad for all purposes, nor that any shipments between the two railroads occur without an interchange. Here, because the EVWR is a subsidiary of an entity in which CSXT owns a financial interest, CSXT has chosen to include the EVWR in its R-1 for reporting purposes. *See* 49 C.F.R. § 1201.1-1(b)(1). This certainly does not mean that EVWR and CSXT are the same railroad or that an interline movement with an EVWR-CSXT interchange is somehow a "local" movement with no interchange costs for URCS purposes. Indeed, the Board has consistently recognized that EVWR is a Class III carrier.[7] In fact, § 1201.1-1 makes clear that affiliated carriers are only grouped "for purposes of accounting and reporting." § 1201.1-1(a). For the very different

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[6] Seminole cites CSXT's 2007 Annual Report Form R-1, which erroneously stated that all entities included in CSXT's consolidated financial statement (including Four Rivers) were majority-owned subsidiaries. Although Four Rivers' financial results are consolidated with the financial statements for CSXT for accounting purposes, the designation of Four Rivers as a majority-owned subsidiary in the 2007 Annual Report Form R-1 was inadvertent. CSXT has a minority voting interest in Four Rivers. In its 2008 R-1, CSXT updated and clarified the list of entities included in the consolidated financial statement by omitting the reference to majority ownership and making clear that the listed entities were consolidated "subsidiaries" and not necessarily majority owned. *See* CSX Transportation, Inc. 2008 Annual Report Form R-1, as amended June 18, 2009, at 4. Moreover, these financial arrangements have nothing to do with the reality that EVWR and CSXT operate as separate railroads that interchange traffic, which is the only fact relevant to proper costing of the interchange between EVWR and CSXT.

[7] *See, e.g., Four Rivers Transp., Inc.—Control Exemption—Appalachian & Ohio R.R., Inc.*, Fin. Docket No. 34856, at 1 (May 23, 2006) (describing EVWR as "a Class III rail carrier"); *Paducah & Louisville Ry., Inc. – Acquisition – CSX Transp., Inc.*, Fin. Docket No. 34738, at 2 (Nov. 18, 2005) (stating that EVWR "will become a Class III railroad").

purpose of assigning URCS variable costs, EVWR-CSXT shipments should be recognized for what they are in the real world: interline shipments interchanged between separate carriers.

Similarly irrelevant is SECI's assertion that CSXT has "control over the establishment of all line-haul rates from Epworth to SGS." CSXT was able to establish a joint rate from Epworth to SGS not because it has "control" over EVWR, but because CSXT and EVWR have entered into an agreement that establishes revenue divisions for certain traffic originating on the EVWR. This agreement to revenue divisions between two carriers for their respective segments of an interline movement does nothing to change the fact that the Epworth-SGS movement is an interline movement. All interline movements require some agreement on how the revenues will be divided.[8] For these reasons, the EVWR-originated Epworth movement should be classified as an interline movement for URCS Phase III purposes.

c. Tons Per Car

SECI has overestimated rail car lading weights for movements from Charleston, Robinson Run, and Bailey. SECI's error may arise from the fact that it has not moved traffic from these origins in recent years. For lanes over which SECI moved traffic in 2008 or the first quarter of 2009, CSXT and SECI agree that the average tons per car for the actual CSXT shipments to SGS is an appropriate basis for determining lading weights for URCS purposes. But SECI did not ship *any* coal to SGS from Charleston, Robinson Run, or Bailey during 2008 or 2009. Lading weights for shipments from these origins can be estimated most reliably by looking at previous SECI shipments from these origins and/or average tons per car for other

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[8] Indeed, a logical extension of SECI's argument would be that on a UP-CSXT move, if CSXT gave a revenue requirement to UP and deferred to UP to quote a rate to the customer (a common practice), then a complainant could treat the UP-CSXT interline movement as a "local" UP movement for variable costs purposes. Such an argument has no merit.

shipments from those locations. SECI has rejected these appropriate and reliable methodologies in favor of an unreasonable and simplistic approach that overstates lading weights for cars loaded at these origins.

SECI's approach erroneously assumes that the average lading weight for all of the disparate origins from which SECI took coal during the first quarter of 2009 is an appropriate estimate of the 2008 and 2009 lading weights for cars loaded at Robinson Run, Bailey, and the port of Charleston (for both coal and petcoke).[9] *See* SECI Opening at I-14. This crude approach ignores the fact that lading tons per car is largely a function of the specific loading practices, characteristics, and capabilities of individual mines and port loading facilities. Accordingly, the best evidence of the average lading weight for cars loaded at a particular location is the lading weight of other, similar cars loaded *at that location.* But here, SECI ignores that best evidence in favor of an average derived from lading weights of cars loaded *at other origins.*

The fallacy of SECI's approach is illustrated by considering how its all-origin average compares to actual lading weights at specific origins. For example, while SECI did not ship coal from Robinson Run in 2008, it did ship approximately 434,000 tons from that origin in 2006. CSXT's 2006 traffic records (which were produced to SECI during discovery) show an average tons per car of 111.2 for SECI cars originating at Robinson Run. This 111.2 is considerably less than the 119.5 average from other origins SECI proposes to extrapolate to Robinson Run. Similarly, SECI's shipments of petcoke out of the Port of Charleston in 2006 and 2007 averaged a lading weight of 114.0 – five-and-a-half tons per car less than the all-origin average SECI

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[9] SECI proposes a single set of operating characteristics for movements of both coal and petcoke from the Port of Charleston. While many of the movement parameters are the same, coal and petcoke are different commodities that (as demonstrated below) have different densities and average lading weights. CSXT therefore has proposed a separate set of operating characteristics for petcoke movements from Charleston.

seeks to impose. Here, too, SECI could have used data that CSXT provided in discovery to develop an accurate average lading weight based upon actual shipments of petcoke to SGS. SECI's decision to ignore the actual lading weights provided in discovery and instead use an inflated average is a transparent attempt to artificially reduce the URCS costs of the issue traffic.[10]

Developing URCS costs for movements of coal from Bailey and Charleston presents a different challenge because CSXT has never transported coal to SGS from either origin.[11] However, traffic records that CSXT provided to SECI in discovery contain data on the tons per car for other gondola shipments of coal loaded at Bailey and Charleston. These actual lading weights of coal cars loaded at these origins in the same type of car used for SGS shipments is the best evidence of what the lading weight would be for shipment to SGS. The average lading weights for all 2008 gondola shipments from Bailey was 110.3 tons per car; the average from Charleston was 107.0 tons per car. *See* CSXT WP "Lading Weights.xls." These estimates are the best evidence in the record and plainly superior to SECI's crude approach.

d. Car ownership

SECI presents one set of variable cost calculations for CSXT system cars and one for private cars, claiming that Tariff CSXT-32531 "specifies different rates for each category of ownership." SECI Opening at II-2. This assertion is not accurate – Tariff CSXT-32531 only established one set of rates, which are the only rates at issue in this case. SECI's car ownership cost calculations are predicated on an impermissible attempt to usurp CSXT's statutorily

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[10] SECI provides virtually no evidence to support any of its proposed operating characteristics – including lading weights – other than an empty assertion that its "approach with respect to these disputed points is sound, and represents the better evidence of record." SECI Opening at I-15.

[11] And, SECI's SAC evidence postulates that no coal or petcoke would move to SECI from either origin during the 10-year DCF period.

guaranteed ratemaking authority by devising a separate "private car rate." See 49 U.S.C. § 10701(c); *Arizona Pub. Serv. Co. v. BNSF Ry. Co.*, STB Docket No. 42077 (Oct. 14, 2003) (observing that one purpose of ICCTA was to "facilitate[] railroads' rate-making initiative"). Even if CSXT had established a separate rate for private car shipments – which it did not – SECI further miscalculated and misapplied that hypothetical rate in a way that contravenes the Board's precedent. The resulting miscalculated "private railcar R/VC" – which is the only R/VC that SECI uses in its MMM calculations – is improper and should be rejected.

CSXT did not create a separate "private railcar rate" in Tariff CSXT-32531. Tariff CSXT-32531 establishes a single CSXT rate from each origin to SGS. These rates are for transportation in CSXT system cars. While Tariff CSXT-32531 permits use of private railcars, the rates in Tariff CSXT-32531 were designed to cover CSXT's costs of providing service in CSXT system cars. CSXT's decision to establish a single rate from each origin to SGS was well within its ratemaking discretion. It is well established that a railroad is not required to establish a rate for transportation in private cars if it has its own system cars available to handle traffic. *See Texas Municipal Power Agency v. Burlington No. & Santa Fe Ry. Co.*, STB Docket No. 42056, at 9 (Mar. 24, 2003) (holding that carrier had "no obligation to provide rates for transportation in privately owned cars" where it was capable of providing service using its own rail cars); *Shippers Comm., OT-5 v. Ann Arbor R.R.*, 5 I.C.C.2d 856, 859 (1989), *aff'd* 968 F.2d 75 (D.C. Cir. 1992) ("[B]ecause carriers have a duty to provide cars necessary for the transportation they hold themselves out to provide, they have a corresponding right to use their own cars in preference to private cars in fulfilling this obligation.").[12] Here, CSXT has ample coal car

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[12] *See also Atchison, Topeka & Santa Fe Ry. v. United States*, 232 U.S. 199, 214 (1914) ("Whatever transportation service or facility the law requires the carrier to supply they have the

capacity to serve SECI's needs – indeed, during 2009 CSXT had an average of over 4,000 coal cars in storage. *See* CSXT WP "2009 Coal car storage.xls." Accordingly, CSXT was not obligated to publish a private car rate.

While CSXT would have been well within its rights to require that any coal CSXT transported to SGS be moved exclusively in CSXT system cars, CSXT recognizes that SECI leases a number of cars. Despite this litigation, SECI remains an important CSXT customer. And CSXT knows that SECI has viable alternatives to CSXT's rail service for transportation to SGS. *See infra* at II.B. CSXT therefore promulgated a common carrier rate authority that offered SECI an option to use private cars instead of the CSXT system cars specified by the challenged tariff. In order to account for the cost savings to CSXT that would result from the use of private cars, the rate authority provides that CSXT will pay SECI a mileage allowance in the event SECI elects to use private cars. *See* SECI Opening Ex. I-1 at 3. CSXT established a mileage allowance of $0.19 per loaded car-mile based on CSXT's actual costs in operating its system equipment. SECI does not question the adequacy of the mileage allowance established by Tariff CSXT-32531. Indeed, SECI's decision to utilize private cars and to receive CSXT's payment of the allowance throughout 2009 indicates that it recognizes that the allowance of $0.19 per loaded car-mile is appropriately compensatory. Had SECI sought to challenge the private car allowance, it could have done so, but the governing statute would be 49 U.S.C. § 11122, not § 10704. *See, e.g., LO Shippers Action Comm. v. Aberdeen & Rockfish Ry. Co.*, 4 I.C.C.2d 1, 9-11 (1987).

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right to furnish. They can therefore use their own cars, and cannot be compelled to accept those tendered by the shipper on the condition that a lower freight rate be charged.").

The so-called "private railcar rates" that SECI includes in Tables I-3 and II-A-2 do not appear in Tariff CSXT-32531, and no other applicable CSXT tariff has established those rates. Rather, they are "rates" that SECI itself has created, based partly on the mileage allowance established in Tariff CSXT-32531. This putative "private rail car rate" is further flawed because it is predicated on a contrived "per-ton" mileage allowance that SECI cobbled together from its erroneous lading weight assumptions.[13] (As demonstrated, the lading weights SECI uses for this calculation are incorrect.) SECI's attempt to create its own rate to challenge is entirely inappropriate under the Board's rules and governing law. The only rates properly at issue in this case are the rates CSXT unambiguously set forth in Tariff CSXT-32531 – not hypothetical rates that SECI impermissibly attempted to derive based on its erroneous assumptions, including incorrect lading weights. Indeed, SECI's attempts to "adjust" the R/VC produced from the actual rates and URCS costs to a hypothetical private car R/VC is forbidden by *Major Issues*. *See Major Issues* at 58-59 (in decision generally forbidding movement-specific adjustments to URCS, Board specifically held that adjustments would not be permitted for mileage allowances).

The only rates that should be considered for purposes of R/VC calculations in this case are those set forth in Tariff CSXT-32531. Because these rates are applicable in either system cars or private cars, the appropriate car ownership input to URCS is railroad ownership. This approach appropriately accounts for the use of either system cars or private cars. If SECI uses railroad-owned cars, the URCS input will reflect the relatively higher cost of system cars. If

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[13] *See* SECI WP "CSXT 1Q 2Q 2009 Common Carrier Rates.xls." SECI does not use its erroneous mileage estimates for this calculation, relying instead upon the allowance mileages set forth in the Tariff.

SECI continues to elect using private railcars, then the marginally higher URCS costs generated must be offset by the payment of the mileage allowance.[14]

Even if SECI were permitted to create a separate "private car rate" – a rate not established or offered by CSXT, the only entity with authority to establish local rates on the CSXT system – that it chooses to challenge in this proceeding, it did not calculate that hypothetical private car rate in a way permitted by Board precedent. SECI calculated its "private car rate" by deducting its claimed per-ton mileage allowance from the rate published in the challenged tariff.[15] *See* SECI WP "CSXT 1Q 2Q 2009 Common Carrier Rates.xls." To calculate its proffered R/VC, SECI deducts the mileage allowance paid by CSXT from the carrier's revenue for the issue movements, rather than including it in the variable costs. But it is well established that private car allowances are variable costs that should be accounted for as such. As common carriers, railroads "have an obligation to provide cars necessary to transport the commodities that they hold themselves out to carry." *General Am. Transp. Corp. v. Indiana Harbor Belt R.R. Co.*, 3 I.C.C.2d 599, 599 (1987). Fulfilling this obligation is part of the variable costs of common carrier service, whether a railroad does so by furnishing its own railcars, by paying for use of another railroad's cars, or by paying an allowance for use of a customer-furnished car. For this reason, the Board has recognized that mileage adjustments should be treated as variable costs and not as revenue deductions. *See, e.g., FMC Wyoming Corp. v. Union Pac. R.R. Co.*, 4 S.T.B. 699, 760 (2000). In *FMC Wyoming*, the complainant

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[14] Not only are the URCS system-average costs for shipments in private cars lower than those for railroad-supplied equipment, they are a tiny fraction of the mileage allowance that CSXT pays SECI. 2008 CSXT URCS costs for shipments in private gondolas include only $0.008 per car mile in car costs. This translates to $0.016 per loaded mile, which is *less than 10 percent* of the $0.19 per loaded mile expense that CSXT incurs when SECI substitutes its own cars for CSXT's.

[15] There is no precedent or legal basis for setting private car mileage allowances based on lading weights.

attempted to treat the railroad's payments to the owners of private cars as deductions from movement revenues rather than variable costs. The Board rejected this approach, holding that "when the railroad is responsible for supplying and/or paying for the car, the cost of supplying the car is properly incorporated into the movement's variable costs. Indeed, mileage allowance payments are appropriately recorded as an expense in the R-1 and have consistently been treated as variable costs in prior decisions." *Id.* Here, too, CSXT accounts for the allowance payments to SECI as an operating expense. Therefore, any adjustment to the issue rates to account for the mileage allowance would have to account for it as a cost, not as a revenue deduction.

The Board has now prohibited movement-specific adjustments for R/VC purposes, and CSXT does not ask the Board to revisit that policy here. The appropriate approach is to reject SECI's attempt to deprive CSXT of its statutory rights by creating a "private car rate" that CSXT did not establish and does not offer. But even if the Board were to depart from *Major Issues* and permit SECI to craft a "private car rate" that accounts for mileage allowance, it certainly must require the allowance to be treated appropriately as a part of the variable costs of the movement – not as a deduction to revenue.

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Table II-A-2 sets forth the appropriate operating characteristics for each of the issue movements.

Table II-A-2
Summary of Operating Characteristics

Origin	Dotiki KY	Pattiki, IL (Epworth)	Warrior, KY (Cardinal 9)	Elk Creek, KY (Cimarron	Gibcoal, IN (Sullivan)	Charleston, SC	Charleston, SC	Robinson Run, WV (Consol 95)	Bailey Mine, PA
Railroad	CSXT	East & CSXT	CSXT	CSXT	CSXT	CSXT	CSXT	CSXT	CSXT
Traffic Class	Local	2 Road Interline	Local	Local	Local	Local	Local	Local	Local
Miles	849.8	911.3 (34.5/876.8)	835	832	904	316.7	316.7	1,113.8 / 1,264.0	1,188.4
Cars/Train	98.6	97.7	99.5	99.6	98.6	98.6	98.6	98.6	98.6
Tons/Car	119.6	118.3	120.4	119.4	119.5	107.0	114.0	111.2	110.3
Car Type	Gondola	Gondola	Gondola	Gondola	Gondola	Gondola	Gondola	Gondola	Gondola
Car Owner	RR	RR	RR	RR	RR	RR	RR	RR	RR
Commodity	Coal	Coal	Coal	Coal	Coal	Coal	Petcoke	Coal	Coal
Move Type	Unit Train	Unit Train	Unit Train	Unit Train	Unit Train	Unit Train	Unit Train	Unit Train	Unit Train

2. Variable Costs

Table II-A-3 presents the variable costs and resulting R/VC ratios for the 4th quarter 2009 that CSXT calculated based on the above operating characteristics from Table II-A-2 and the newly received STB 2008 URCS, which was not available at the time SECI filed its opening evidence.

Table II-A-3
4Q 2009 Variable Costs and R/VC Ratios[16]

	Rate per ton	Variable Cost per ton	R/VC
Dotiki, KY	$41.68	$12.33	338%
Pattiki, IL (Epworth)	$44.18	$13.79	320%
Warrior, KY (Cardinal 9)	$41.68	$12.08	345%
Elk Creek, KY (Cimarron)	$41.68	$12.08	345%
Gibcoal, IN (Sullivan)	$44.93	$13.07	344%
Charleston, SC	$28.48	$5.33	535%
Charleston, SC (petcoke)	$28.48	$5.17	551%
Robinson Run, WV (Consol 95)	$49.71	$16.45	302%
Bailey, PA	$51.66	$17.56	294%

B. QUALITATIVE MARKET DOMINANCE

SECI has utterly failed to meet its jurisdictional burden of demonstrating that CSXT has market dominance over the transportation at issue. SECI did not meet its burden because it cannot. It cannot escape the fundamental commercial realities that the SGS Plant is located on a major navigable waterway and that the prospect of barge delivery to the SGS Plant is a real and effective constraint on CSXT's rates. In fact, SECI strategically located the SGS Plant on a navigable waterway – the St. Johns River – in order to secure the commercial benefits of having a water delivery option. And that strategy has been quite successful – SECI historically has enjoyed particularly favorable transportation rates because of its modal options, and its transportation costs have been far lower than those for other Florida utilities who lack SECI's options.

Now SECI has chosen a different strategy: to explore the regulatory process in an attempt to obtain a better rate from the Board than it can receive in the marketplace. But SECI's disingenuous claims that "[t]here are no navigable waterways by which coal feasibly could be

[16] *See* CSXT WP "STB 2008 URCS Costs.xls."

delivered to the station" (Compl. ¶ 12) cannot alter the reality that SECI does have feasible alternatives that provide effective competition for the transportation at issue. In short, this is precisely the sort of case Congress had in mind when it made market dominance a jurisdictional prerequisite – a case where the shipper's access to alternative modes of transportation ensures that market competition will effectively constrain rail rates. *See Potomac Elec. Power Co. v. Consolidated Rail Corp.*, 367 I.C.C. 532, 536 (1983) (statutory market dominance requirement "gave substance to the overall congressional intent that 'competition be recognized as the best control on the ability of railroads to raise rates'" (quoting H. Rep. 96-1430, at 89 (1980)).

Section 10707(a) defines "market dominance" as "an absence of effective competition from other rail carriers or modes of transportation for the transportation to which a rate applies." 49 U.S.C. § 10707(a). CSXT does not maintain that it faces all-rail competition for the traffic moving between the origins and destinations covered by the challenged rates, but it most assuredly faces effective competition from rail-water and truck-water alternative routings from all of the Western Kentucky/Illinois Basin/Monongahela origins covered by the Complaint. Moreover, such competition is both physically possible – SECI's claim of "no navigable waterways" being laughably inaccurate – and economically viable. And CSXT is certainly not market dominant over traffic from Charleston, which is not a true coal origination point at all, but rather a port. Any waterborne coal or petcoke that SECI chooses to route through the Port of Charleston could just as readily be routed to the Port of Jacksonville, where it could be transported easily and economically to SGS by either barge or truck.

1. SECI Historically Has Benefited From Its Modal Options.[17]

At the outset, it is important to recognize that SECI has a 25-year history of taking advantage of its modal alternatives to all-rail service. SECI has shown itself to be a sophisticated and aggressive purchaser of transportation services. Its history demonstrates a willingness to make investments in transportation alternatives and utilize modes other than rail both for significant portions of its solid fuel delivery and for deliveries of limestone aggregates used in the plant's flue gas desulfurization system. For many years SECI used rail-barge service for its coal transportation needs, {{

}} Indeed, over the years SECI has shipped millions more tons of coal and petroleum coke via rail-barge service than it has via all-rail service. In addition, SECI has used non-rail options for all of its limestone aggregate deliveries over the past quarter of a century accounting for millions of tons of truck deliveries.

In the late 1970s SECI selected a site for a coal plant in Bostwick, Florida adjacent to the St. Johns River. The site was selected from several alternatives due to its location along a navigable waterway and its proximity to rail service. A table in SECI's Environmental Impact Statement for the new plant that compared the advantages and disadvantages of four potential sites indicated that a primary advantage of the Putnam site was that it was "[a]djacent to water transportation – St. Johns River barge channel."[18] The other three sites each listed "[n]o access to water transportation" as a disadvantage – in fact, the lack of access to water transportation was

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[17] The facts set forth in Section II-B-1 are verified by Michael P. Sullivan, Assistant Vice President-Utility Coal South for CSXT.

[18] *See* CSXT WP "Final Environmental Impact Statement for SGS Units 1 and 2," at Table 4.1.

the only disadvantage for two of the other sites.[19] The fact that SGS was located in order to take advantage of water transportation is further confirmed by the fact that the impact of "possible coal barge traffic in the St. Johns estuary" was studied at the time SGS was built.[20]

When SECI began operations at SGS in 1984, it did not receive coal via all-rail service. Instead, SECI shipped coal to the SGS Plant from West Kentucky and Illinois by barge via the Ohio and Mississippi Rivers and the Gulf of Mexico to Port St. Joe in Gulf County, Florida for transload to short haul rail delivery.[21] At least as early as 1986, the coal then was transferred to the Apalachicola Northern Railroad, which interchanged with CSXT at Chattahoochee, Florida for delivery to SGS. Until 1991, these movements were by tariff; in 1991 CSXT and SECI entered into a contract for the Chattahoochee-Palatka movement with a term from October 1, 1991—December 31, 2004.[22] CSXT faced competition on two segments of the movement. At the origins CSXT negotiated with the coal supplier, Alliance (Mapco) that held a coal sales contract with the point of sale on the river with SECI for a portion of SECI's requirements. In addition, CSXT competed with a variety of port options to secure the last leg of the trip once the coal was in a barge moving along the Gulf of Mexico.

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[19] *See id.*

[20] *See* CSXT WP "Florida Regional Planning Council Study."

[21] *See* CSXT WP "1981 Central Gulf Lines SECI Contract."

[22] *See* CSXT WP "ICC-CSXT-C-59067."

[23] *See* CSXT WP "September 20, 1996 SECI Letter."

}} After negotiations over CSXT's offer, CSXT and SECI agreed to a 10-year, all-rail transportation contract in December 1998 (the "1998 Contract").[25] The 1998 Contract governed CSXT's transportation of coal and petroleum coke to SGS from multiple origins, {{

[24] *See* CSXT WP "March 17, 1997 CSXT Letter."

[25] *See* CSXT WP "1998 SECI Contract."

}}[26]

In short, over the life of SGS SECI has employed alternative routes for the majority of the coal delivered by CSXT for all but the last segment of the trip. {{

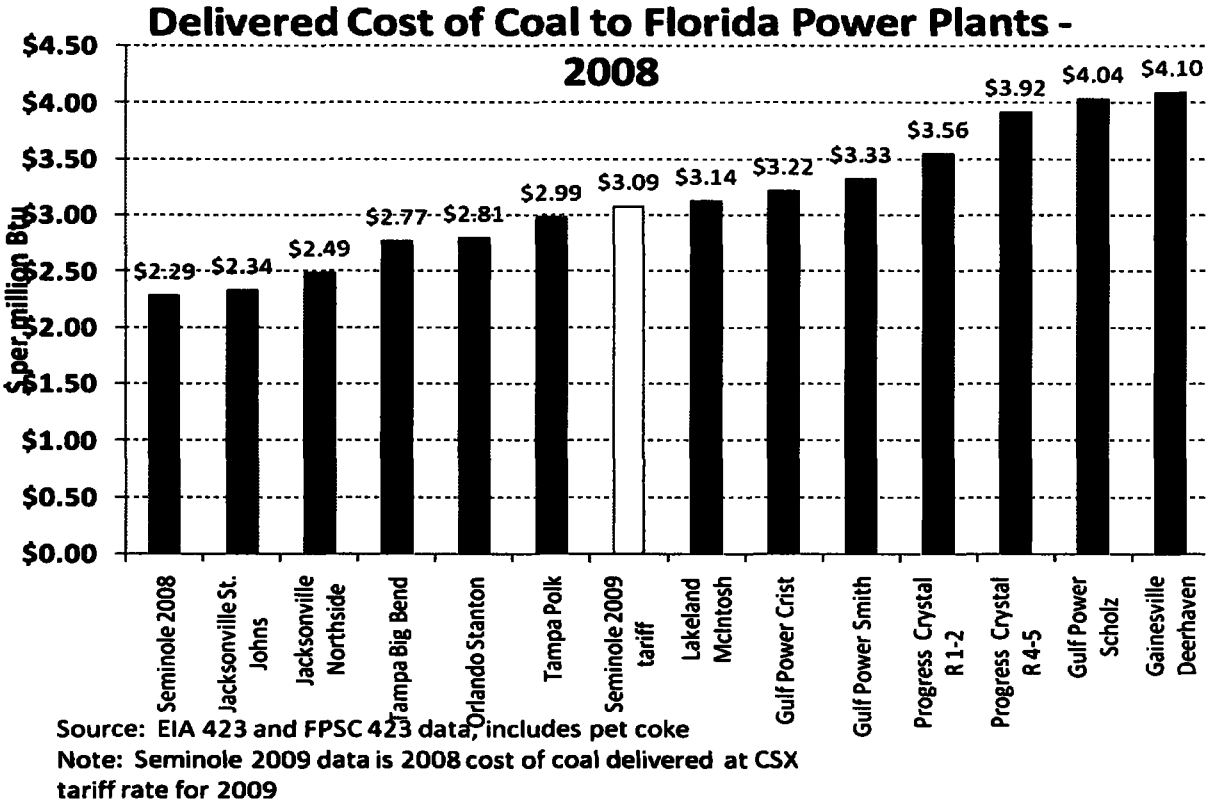
}} According to the data on coal purchases (including petcoke) filed by Florida utilities with the Florida Public Service Commission and with the Energy Information Administration, SECI's delivered cost of coal was the lowest of all 13 power plants located in Florida. SECI's average cost for its 3.7 million tons was $2.287 per million Btu ($55.64 per ton at 12,167 Btu per pound), compared to the average delivered price of $2.974 per million Btu, an advantage of $16.72 per ton at the SECI average Btu content.[27] Further, the identity of the next two lowest-cost plants is instructive. Both plants are operated by Jacksonville Electric Authority and take the vast majority of their coal and petcoke by water delivery in Jacksonville Harbor, the same alternate delivery mode available to SECI, as CSXT explains below.

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[26] *See* CSXT's Reply to Petition for Injunctive Relief, V.S. Fisher at 6-7 (filed Oct. 17, 2008).

[27] *See* CSXT WP "Cost of coal in Florida 2008.xlsx."

Table II-B-1



Source: EIA 423 and FPSC 423 data, includes pet coke
Note: Seminole 2009 data is 2008 cost of coal delivered at CSX tariff rate for 2009

While some of these plants use lower-sulfur coal than SECI (and thus may pay more for coal at the mine), the Big Bend plant purchases almost all of its coal from the Illinois Basin and Northern Appalachia, just like SECI (including some coal from the same Pattiki mine that is one of the Complaint origins in this case), and delivers all of its coal by water using U.S. flag ocean barges. Adjusted to the same Btu value, the delivered cost of high-sulfur coal to Big Bend by barge in 2008 was $17.19 per ton more than for SECI. If CSXT's tariff rate for 2009 had been in effect in 2008, SECI would have paid virtually the same delivered price as Tampa Electric for the same coal which Tampa received by water, and would have delivered costs the same as the average delivered price of coal to Florida, as shown below.

Table II-B-2

Total Delivered Cost of Coal to Florida Utilities - 2008
Seminole Deliveries at 2009 Tariff Rates

Utility	Plant	Tons	Btu/lb	Sulfur	$/Ton	$/mmBtu
Jacksonville	St. Johns River	4,551,332	10,997	0.59	$51.39	$2.337
Jacksonville	Northside	1,357,183	13,668	4.38	$68.05	$2.490
Tampa Electric	Polk	584,316	13,434	3.39	$74.54	$2.774
Orlando Utilities	Stanton	2,310,604	12,429	1.20	$69.76	$2.806
Tampa Electric	Big Bend	3,658,541	11,680	2.92	$69.91	$2.993
Seminole	***Seminole***	***3,674,676***	***12,167***	***2.95***	***$75.10***	***$3.086***
Lakeland	McIntosh	1,070,098	12,470	1.10	$78.25	$3.138
Gulf Power	Crist	2,479,140	11,796	0.84	$75.97	$3.220
Gulf Power	Lansing Smith	1,149,913	11,813	0.82	$78.75	$3.333
Progress Florida	Crystal River 4&5	4,187,543	12,024	0.64	$85.55	$3.558
Progress Florida	Crystal River 1&2	2,012,978	12,253	0.96	$96.12	$3.922
Gulf Power	Scholz	192,082	12,424	1.02	$100.42	$4.041
Gainesville	Deerhaven	519,953	12,773	0.69	$104.78	$4.102
Total		**27,748,358**	**11,994**	**1.60**	**$73.91**	**$3.081**

Sources: EIA Form 923 data from EIA web site
Florida PSC Form 423 data for Gulf Power, Tampa, and Progress Florida
Seminole data recalculated using the private aluminum car rates
in CSXT-C-68681 and Tariff CSXT-32531

The published common carrier rates at issue in this case were constructed to be consistent with current prices for alternative transportation options available to SECI. {{

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After negotiations for a replacement to the 1998 Contract broke down, SECI chose to seek relief from the Board in hopes of obtaining a regulatory prescription more favorable than a market rate. But the Board cannot overlook SGS's twenty-five year history of reaping substantial commercial benefits from its advantageous location, or the fact that potential barge competition has long been – and continues to be – an effective constraint on CSXT's rates.

2. SECI Has Access to Alternatives to CSXT Service That Effectively Constrain CSXT's Rail Rates

SECI claims in its evidence that "there is no effective, feasible form of intermodal competition available to SECI for shipments of coal to SGS." SECI Opening at II-10. This is simply not the case. Water delivery to SGS is eminently feasible and constitutes a real and effective constraint on CSXT's rail rates. CSXT's expert witnesses, Seth Schwartz, President of Energy Ventures Analysis, Inc. ("EVA"), and John Stamberg, Vice President of EVA, conducted an analysis of water delivery options to SGS and concluded that there are multiple feasible alternatives to CSXT's all-rail service. *See* CSXT Reply Ex. II-B-2. All of the options deemed feasible and effective by Mr. Schwartz and Mr. Stamberg involve barge delivery from the Port of Jacksonville to an unloading dock on the St. Johns River at a site already owned by SECI near its facility at Palatka. And very tellingly, CSXT obtained from SECI during discovery in this case {{

}} – but SECI designated that report as "Highly Confidential," meaning that its contents cannot be shared with CSXT in-house counsel and marketing personnel. {{

.}} There is nothing inherently proprietary or confidential about the contents of the {{ }} report, as the Board itself may confirm.[28] Rather it appears that SECI's motivation in classifying the report as "Highly Confidential" is a desire to keep CSXT's marketing personnel

[28] The study is included as CSXT WP "SECI-004777" {{ .}}

from appreciating that the utility has made a corporate decision to embrace the rail option, notwithstanding {{

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[29] This case presents the converse of the scenario where a shipper might "bluff" about the viability of an option to rail transportation to obtain a more favorable rail rate. *Cf. E.I. du Pont de Nemours & Co. v. CSX Transportation, Inc.*, STB Docket No. 42099. Here, SECI commissioned a confidential report {{ }}, and has acted in this litigation to keep the results of the report secret from CSXT personnel.

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SECI's Opening Evidence gave five reasons to support its claim that the prospect of water delivery was not an effective constraint on CSXT's rates. None has merit. First, it suggested in both its Complaint and its evidence that the St. Johns River is not a navigable waterway that could accommodate barge shipments. *See* Compl. ¶ 12; SECI Opening at I-17. Second, it claimed that the cost of constructing facilities for barge service would be prohibitive. *See id.* at II-12. Third, SECI suggested that there was insufficient fuel available for barge transport. *See id.* at II-12-13. Fourth, it argued that the need for environmental permitting created an unacceptable risk of "project disapproval or significant cost increases." *Id.* at II-13. Finally, SECI claimed that the difference between CSXT's tariff rates and the rates in the 1998 Contract demonstrates that CSXT possesses market dominance over the traffic. *See id.* at II-19-20. Not one of these reasons withstands scrutiny, and SECI has failed to carry its burden of demonstrating that CSXT possesses market dominance over the traffic at issue.

a. SECI Is Located on an Active, Navigable Waterway That Readily Handles Barge Traffic.

Despite the fact that the SGS Plant's location was specifically chosen to take advantage of potential water transportation, SECI now claims that "[t]here are no navigable waterways by which coal feasibly could be delivered to the station." Compl. ¶ 12. SECI's assertion that there "are no navigable waterways by which coal could feasibly be delivered" is both plainly wrong

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[30] SECI's claim that inland barge service is not viable because SECI might not be able to procure 1.3 million tons of fuel per year from foreign sources is irrelevant to the issue here. *See* SECI Opening at II-13. As Mr. Schwartz and Mr. Stamberg demonstrate, the entirety of SECI's fuel needs can be barged from the mines at issue in the complaint.

and contradicted by its own public statements, not to mention its submissions in this case. *Compare* Compl. ¶ 12 ("no navigable waterways by which coal feasibly could be delivered to the station"); SECI Opening at I-17 ("SGS [not] directly accessible to any navigable waterways") *with id.* at II-11 ("The City of Palatka and SGS are geographically proximate to the St. Johns River, *a navigable waterway* that flows north to Jacksonville, where it meets the Atlantic Ocean.") (emphasis added).

The simple truth is that the St. Johns River is a large and commercially navigable waterway all the way from that river's mouth near Jacksonville to – and beyond – the Plant at Palatka.[31] The St. Johns River between Jacksonville and Palatka is a navigable inland waterway with a nominal 13 foot deep by 200 feet wide channel for inland waterway barges. *See* House Document No. 523, 55th Congress, 2nd Session; {{ .}} Indeed, when SGS was constructed the Army Corps of Engineers confirmed to SECI that the "St. Johns River is a navigable river of the United States in that reach [*i.e.*, in the vicinity of SGS]."[32] The channel is deep enough to handle the largest commercial inland barges—known as "super jumbo" barges. And, the channel is wide enough for two super jumbo barges to pass each other in different directions. CSXT's exhibits include a video that demonstrates its navigability of the St. Johns River in the vicinity of the Plant and the feasibility of barge service. *See* CSXT Reply Ex. II-B-1 ("Market Dominance Video") at 2:40-4:50; *see also* CSXT Reply Ex. II-B-3 at 2, 3 (photos of St. Johns River in vicinity of SGS). Indeed, *SECI itself* has admitted time and time again that the SGS Plant has water access. The original Environmental Impact Statement for SGS recognized

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[31] *See* CSXT WP "St. Johns River Water Management District Map."

[32] *See* CSXT WP "June 22 1978 letter from Army Corps of Engineers."

that it was "[a]djacent to water transportation—St. Johns River barge channel."[33] As recently as 2006 SECI submitted testimony to the Florida Public Service Commission confirming the existence of "water delivery alternatives" at SGS.[34]

SECI's passing comment that there is "considerable uncertainty regarding the adequacy of the river's channel draft from Jacksonville to Palatka" is utterly groundless. The St. Johns is regularly used for barge traffic from Jacksonville to Palatka and points south. *See* Market Dominance Video at 4:50—7:14. The Jacksonville Port Authority confirms that the St. Johns could accommodate daily barge traffic from Jacksonville to Sanford – 75 miles south of Palatka.[35] And the coast pilot survey for the St. Johns River acknowledges that the river is regularly used to transport "oil barges . . . loaded at Jacksonville and towed to Palatka and Sanford."[36] The dependence of other nearby businesses on water access further demonstrates the viability of barging coal to SGS. The Georgia Pacific paper mill adjacent to SGS regularly receives fuel by barge.[37] PDM Bridge, LLC, a Palatka bridge manufacturer located south of SGS on the St. Johns, regularly ships to customers by barge.[38] In fact, PDM Bridge was a contractor for the Woodrow Wilson Bridge reconstruction project over the Potomac River, and it

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[33] *See* CSXT WP "Final Environmental Impact Statement for SGS Units 1 and 2," at Table 4.1.

[34] *See* CSXT WP "2006 PSC Testimony" at 14 ("In addition to its CSX relationship, Seminole is also looking at other rail, as well as water, delivery alternatives."); *see also* CSXT WP "SECI 2007 Annual Report" ("[SGS] is located in Putnam County, near the St. Johns River.").

[35] *See* CSXT WP "JaxPort presentation" at 16.

[36] *See* CSXT WP "Coast Pilot 4" at 329, 335.

[37] *See* CSXT WP "Georgia Pacific's Palatka Mill Claims Exemption to Gun Law" (containing statement from Georgia Pacific spokesman that "barges come down the St. Johns River, into Rice Creek, through a man-made barge slip, and unload fuel into the facility several times a month").

[38] *See* CSXT WP "PDM Bridge Strives for Zero Defects" at 2.

transported the 466-ton leaves of the bascule for the new bridge from Palatka via barge.[39] And a growing shipbuilder, St. John's Shipbuilding, is located south of SGS in Palatka.[40]

Nor is there any doubt that SECI has access to the St. Johns River. *See* CSXT Reply Ex. II-B-3 (photos demonstrating proximity of St. Johns River to SGS). SGS owns a 4.5 acre parcel south of its plant and directly on the river, which SGS currently uses to access water for cooling and other purposes at SGS.[41] *See id.* at 4-6. The St. Johns River parcel could accommodate a dock to receive barge shipments. Moreover, SECI could construct a conveyor to transport coal between the dock and its plant. SGS possesses an easement over the intervening property for road access and for several large pipelines transporting water to the plant.[42] The easement has been amended on several occasions to accommodate SECI's needs at SGS. There is no reason to doubt that SECI could not acquire an easement over the property to construct a conveyor system (or acquire the land outright). {{

}} In the unlikely event that the property owner should refuse to sell an appropriate easement for its fair market value, under

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[39] *See id.* at 1.

[40] *See* CSXT WP "G&G now short-sea shipbuilder." St. John's Shipbuilding recently was awarded over $2.3 in federal stimulus funds to expand its operations. *See* CSXT WP "MARAD announces $98 million in shipyard grants."

[41] *See* Market Dominance Video at 7:15—8:53; Florida Department of Environmental Protection, Dec. 5, 2006 Siting Board Agenda at 2 (CSXT WP "FL DEP Siting Board Agenda") (describing pump house operations and water pipelines from St. Johns River to SGS); Final Order Approving Certification, *In re Seminole Elec. Coop. Seminole Generating Station Unit 3 Power Plant Siting Application No. PA 78-10A2*, OGC Case No. 06-1780, at 12 (Aug. 18, 2008) (CSXT WP "Final DEP Order") (describing proposal to use "existing river water intake structure system with minor upgrades" to supply water to proposed new unit).

[42] *See* CSXT WPs "SECI Road Easement," "SECI Amended Pipeline Easement."

Florida law SECI has the power as a utility to acquire property via eminent domain. *See* Florida Stat. Ann. § 425.04.

b. Water Delivery to SECI's Plant From the Mine Origins at Issue Is a Viable and Cost-Effective Alternative to CSXT's Rail Service.

SECI further argues that barge service would not be cost-effective. This claim is entirely refuted by the analysis of CSXT expert witnesses Schwartz and Stamberg, who have convincingly demonstrated the viability of the barge option to Seminole from all the complaint origins. {{

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There is effective rail-water competition to CSXT's all-rail service from the various coal mine origins named in SECI's Complaint. The five mines in the Illinois Basin/Western Kentucky region whose rates are challenged by SECI are all owned by Alliance Resources Partners ("Alliance"), {{

}} Four of these mines are also served by a railroad other than CSXT. Specifically, Cardinal 9 and Cimarron are also served by the Paducah and Louisville Railroad ("PAL"), which accesses several barge terminals, including Grand River Terminals and Calvert City Terminal, both on the Tennessee River near its junction with the Ohio River, and the Port of Louisville Terminal on the Ohio River. *See* CSXT Ex. II-B-2 at 4 (EVA Report). The Pattiki Mine (listed as "Epworth, Illinois" in CSXT-32531 and referred to herein as "Epworth") is served by the Evansville Western Railroad ("EVWR"), which accesses Alliance's own Mt. Vernon, Indiana transloading facility. And the Gibson County mine ("Gibcoal, IN" in CSXT-32531) is also served by the Norfolk Southern Railway ("NSR"), which serves a number of transloading facilities, including the Port of Louisville Terminal and Peabody

Coal's Yankeetown Dock in southern Indiana. *Id.* CSXT is the only railroad serving the Dotiki mine, although significant coal volumes have moved from Dotiki by truck.

The two remaining origins, Consol 95 (also known as "Robinson Run") and Bailey Mine (part of Consolidation Coal's large Bailey/Enlow Fork Complex), both have rail rates to the deepwater Port of Baltimore where vessel transloading facilities are available to float that traffic to Jacksonville for midstream loading into river barges. In addition, the Bailey Mine, located on the MGA, is jointly served by CSXT and Norfolk Southern. That means that there already exists an alternative rail-water service via NS to Baltimore for traffic from that origin.

As Exhibit 1 to the EVA Report reflects, 2.75 million tons can be shipped from Epworth on the EVWR to the SGS Plant for a delivered cost of $36.43 per ton. This alternative would involve an initial move on the EVWR to Mt. Vernon ($1.80 per ton), loading into river barges ($2.64 per ton), and then towing down the Ohio and Mississippi Rivers to a midstream transload facility in the New Orleans area ($12.19 per ton) where the coal would be transferred onto a 35,000 ton self-unloader vessel ($1.55 per ton) for movement to Jacksonville ($12.73 per ton). The coal would then be transferred to river barges and towed to a newly constructed unloading dock and conveyor system at Palatka for movement to the SGS Plant's stockpile ($5.52 per ton). And while essentially all of SECI's coal requirements supplied from the Illinois Basin could be handled for less than $37-$38 per ton by such a delivery chain, a combination of approximately 2.75 million tons of coal from this rail-water logistics system and approximately 1 million tons of petcoke from the all-water routing via Jacksonville as described above, would produce an even lower average delivered cost to SECI for the totality of its existing requirements at the SGS Plant.

Tonnage that SECI might opt to originate from any of the Western Kentucky mines served by the PAL or from the Gibson County mine, which is also served by NS, could be hauled to a river terminal and transloaded into barges for movement in the same manner as described above. PAL has a tariff rate (published in 2007) for movements from the Cardinal and Cimarron mines to river terminals at Jessup, Kentucky and at Calvert City, Kentucky of $4.05 per ton for a delivered cost at the SGS Plant for tonnage from the Cardinal and Cimarron Mines of approximately $38.68 per ton. *See* CSXT WP "PAL Tariff.pdf." Coal from the West Kentucky mines (Dotiki, Cardinal, and Cimarron) can also be delivered by truck to the Sebree dock on the Green River, a movement of under 30 miles.

In short, there exist alternative rail-barge routings that do not require CSXT's participation from all five of the Western Kentucky/Illinois Basin origins challenged in SECI's Complaint that produce delivered costs in the $36-40 per ton range, well within a close bound of CSXT's challenged common carrier rates (which significantly contain no minimum annual volume requirements). In fact, the SECI-Alliance supply agreement, which has been in effect since SGS began operations in 1984, has seen more tons move via inland river and Gulf of Mexico routings to Port St. Joe for transloading and delivery than by CSX all-rail. SECI has shipped over 40 million tons of volume to the river via barge for transloading at Port St. Joe to rail for delivery to the plant over the life of the contract. [43]

Further, this analysis exaggerates the true cost for SECI to deliver Illinois Basin coal to SGS. In keeping with the Board's decision in *Market Dominance Determinations – Product and Geographic Competition*, 3 S.T.B. 937, 950 (1998), CSXT's market dominance evidence presents the cost-effective alternatives to deliver coal to SGS from the specific origins named in

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[43] *See* CSXT WP "SECI Historical Coal Receipts"

the Complaint. But it should not go without mention that SECI admits in its Complaint that SGS could use coal from other mines.[44] If SECI were to purchase coal from non-CSXT origin mines in the Illinois Basin, it would be able to do so from mines with much lower transportation costs from the mine to the river. In fact, SECI's own long-term contract coal supplier, Alliance, has just renegotiated its large (4 mm tpy) long-term contract with Louisville Gas & Electric to give the buyer the right to purchase the coal FOB barge at a price no more than $1.13 per ton more than the FOB rail price. *See* CSXT Reply Ex. II-B-2 at 11-12 (EVA Report). This market-based transportation differential of $1.13 per ton would reduce the cost to SECI for waterborne transportation to SGS from the Illinois Basin to $33.12 per ton.

As for shipments from the Consol 95 and Bailey mines, CSXT's existing rate for movement to Baltimore for transloading into vessels for tidewater delivery is $28.02 per ton from the former mine, and $26.56 from the latter (CSXT Common Carrier Rate 4735-D, including the fuel surcharge at the average diesel fuel price for 2009). This coal can be transferred to ocean barge at the Chesapeake Bay Piers at a rate of $4.50 per ton (tariff CSXT-8200-J, Supplement 3). EVA's analysis shows that movement via coastwise vessel to Jacksonville would cost $9.32 per ton. Added to the approximately $5.52 per ton cost of midstream transloading at Jacksonville and subsequent movement in river barges to the SGS Plant for unloading to the stockpile, total delivered cost of this option would be $45.89 - $47.36 per ton, slightly lower than the challenged rates from Consol 95 and Bailey and certainly low enough to constitute an effective competitive constraint.

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[44] *See* Compl. at ¶ 5 ("SGS could burn coal that originates on railroads other than CSXT and its regional railroad connections. However, the closest that any other railroad's lines come to Palatka is Jacksonville, Florida, some 60 mile to the north, where Norfolk Southern Railway ("NS") service from various eastern coal mines terminates.").

c. Water Delivery of Coal to Florida Utilities Is a Common and Well-Established Practice

Delivery by water is a well-accepted and well-utilized method of transportation to Florida utilities. *See* Market Dominance Video at 19:06—19:35; *id.* at 21:43—22:15. In fact, out of the 27.9 million tons of coal and petcoke delivered to utilities in Florida in 2008, 17.4 million were by water delivery (including 0.9 million tons transferred from water to truck for final delivery. Virtually all of the Illinois Basin coal delivered to other Florida utilities moves via water; only SECI delivers coal from this region by rail.[45]

Florida utilities with access to navigable waterways have taken advantage of both water and rail delivery modes to reduce the cost of coal transportation with competition between the delivery options. The following examples show that utilities in Florida in situations similar to that facing SECI have chosen to deliver coal from origins similar to those identified by SECI using water delivery which has been an economic alternative:

Tampa Electric ("TECO"): TECO ships 4.6 million tons per year of coal to its Big Bend and Polk stations using water delivery. TECO originates coal from many different coal supply regions. In 2008, the Big Bend plant used coal from the Illinois Basin, Northern Appalachia (Pittsburgh seam), and the Powder River Basin. This coal was shipped by rail to river barge (some of this coal originated by barge directly), river barge to a dock in New Orleans, and ocean barge to the Big Bend power plant in Tampa Bay. These deliveries included 488,686 tons from the Alliance Pattiki and Elk Creek mines at issue in this case. The Polk plant uses 600,000 tons per year of petroleum coke and coal from the Rockies coal region.[46] These fuels

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[45] *See* CSXT WP "SECI Historical Coal Receipts".

[46] *See* Tampa Electric Company's monthly Forms 423 filed with the Florida Public Service Commission for calendar year 2008.

are shipped by river barge to New Orleans (with the Rockies coal shipped by rail to river), transferred in New Orleans to ocean barge, unloaded in Tampa Bay and shipped by truck 33 miles to the Polk plant. The ocean barge shipments for both Big Bend and Polk are in U.S. flag vessels. TECO is installing a rail unloader at the Big Bend plant to provide rail competition options as well.[47]

Progress Energy Florida ("Progress"): Progress uses about 6 million tons per year of coal at its Crystal River station. In 2008, it originated coals from the Central Appalachia, Illinois Basin, and Rockies supply regions, as well as import coal tonnage. Crystal River takes coal by both CSXT rail and ocean barge delivery. In 2008, about 2.9 million tons were delivered by rail and 3.1 million tons by water.[48] For coal shipped by water, the domestic coals originate by rail or truck for delivery to the Ohio and Mississippi Rivers, ship by river barge to New Orleans, and transfer to ocean barge for final delivery. Imported coal ships by vessel to ports in New Orleans and Mobile and transfers to ocean barge for final delivery. The ocean barges are U.S. flag vessels. Progress is adding scrubbers to Crystal River units 4 and 5 in 2010 and plans to increase its use of Illinois Basin coal. It has contracted to have a new U.S. flag ocean barge vessel constructed to increase its delivery capability from New Orleans to Florida.[49]

JEA: JEA operates the Northside and St. Johns River Power Park ("SJRPP") plants (Florida P&L co-owns St. Johns), both located in Jacksonville Harbor. JEA delivers about

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[47] *See* Tampa Electric Company, Testimony of Joann T. Wehle, Florida Public Service Commission Docket No. 080001-EI (CSXT WP "Tampa Electric Testimony of Joann Wehle").

[48] *See* Progress Energy Florida's monthly Forms 423 filed with the Florida Public Service Commission for calendar year 2008.

[49] *See* Progress Energy Florida Integrated Clean Air Compliance Plan filed with the Florida Public Service Commission, Docket No. 060007-EI, March 31, 2006 (CSXT WP "Progress Florida Clean Air Plan March 2006").

5.4 million tons per year of coal and pet coke to these plants.[50] SJRPP can take delivery by CSXT rail and by ocean vessel at its Blount Island terminal, which is connected to the plant by a 4-mile overland conveyor. In most years, SJRPP has taken about 1 million tons of Central Appalachia coal by rail and 3 million tons per year of imported coal and petroleum coke by water.[51] The Northside plant takes coal and petroleum coke exclusively by water. Northside is designed for most of its fuel to be petcoke, which is delivered by U.S. flag ocean barges from the Gulf Coast and New Orleans as well as imported pet coke in ocean vessels. Northside supplements its petcoke with 0.2 – 0.3 million tons per year of coal (for combustion reasons). In 2007 and 2008, it purchased imported coal delivered by ocean vessel. In prior years (2002 – 2006) Northside used Northern Appalachia coal shipped by rail to Baltimore and then by U.S. flag ocean barge from Baltimore to Jacksonville – just as SECI could do with coal from Bailey and Consol 95.[52]

Gulf Power: Gulf Power delivers about 3.5 million tons per year of coal by river barge on the intra-coastal waterway to its Crist and Smith plants and about 0.2 million tons of coal by CSXT rail to its small Scholz plant.[53] The coal delivered by barge is shipped from domestic sources from the Illinois Basin, Central Appalachia and Rockies coal supply regions, and also includes imported coal. The domestic coal is shipped by rail or truck to docks on the Ohio and Mississippi Rivers or by rail to a dock in Mobile, Alabama. It is transferred to river barges for

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[50] *See* F423 data base available at http://www.eia.doe.gov/cneaf/electricity/page/eia423.html

[51] *See* SNL Energy, "JEA solicits coal for St. Johns River," April 10, 2007 (CSXT WP "JEA St. Johns article").

[52] *See* SNL Energy, "JEA set to take bids at Northside," March 16, 2006 (CSXT WP "JEA Northside article").

[53] *See* Gulf Power Company's monthly Forms 423 filed with the Florida Public Service Commission for calendar year 2008.

delivery to the plants. Imported coal is delivered to the Mobile dock and transferred to barge for delivery to the plants.[54]

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As the Board and its predecessor have long recognized, it is not necessary to demonstrate that an alternative to the existing rail service of the carrier whose rates are at issue in a maximum reasonable rate case has actually been used in the past: "We emphasize again that whether transportation alternatives, other than the one in question, have actually been used in the past is of little use for purposes of gauging the absence of competitive pressures. Furthermore, for such competitive pressures to be present, a competing mode would not have to be capable of handling substantially all or even a majority of the subject traffic." *Aluminum Assoc. v. Akron, Canton & Youngstown R.R. Co.,* 367 I.C.C. 475, 483 (1983). Nor is it necessary to demonstrate that the alternative would cost the shipper exactly the same as the challenged rail rates – indeed, such a claim would defy credulity. But "[t]he determination of effective competition typically requires a comparison of the total costs of using alternative modes." *E.I. DuPont de Nemours & Co. v. CSX Transp., Inc.*, STB Docket No. 42100, at 5 (served June 30, 2008). In this case, CSXT's evidence shows that very significant portions of SECI's traffic – and in fact all of it should the Complainant so choose – could be feasibly and cost-effectively moved via rail-water alternatives to CSXT's rail service, taking into account all appropriate capital and operating costs of such alternatives.

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[54] *See* Gulf Power Company Risk Management Plan for Fuel Procurement filed with the Florida Public Service Commission, Docket No. 070001-EI, April 5, 2007 (CSXT WP "Gulf Power Risk management docket 070001-E1").

d. SECI's Fuel Availability Objection Is Irrelevant.

SECI further claimed that barging coal was not feasible because "[a]ny hypothetical coal or petcoke that could be delivered via vessel to Jacksonville would have to come from foreign sources" and therefore might not have ideal sulfur content. SECI Opening at II-12. But, as demonstrated above, SECI could obtain coal via barge *from the origins in the complaint.* Fuel from those origins is certainly available.

SECI dismisses in a footnote the possibility of delivering any U.S. source coal (including the origins at issue in this case) via vessel, claiming that "[t]he costs of such an operation were recognized as being so high that it was not investigated." SECI Opening at II-12 n.12. This claim is disproven by {{

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While CSXT's evidence clearly demonstrates the existence of effective competition from the mine origins named in the complaint, CSXT is nonetheless compelled to point out that SECI has grossly misrepresented its contractual obligations to ship coal from these origins. {{

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In its opening evidence, SECI contended that its existing coal supply contract commitment with Alliance Coal, LLC required delivery of two-thirds of its coal requirements through 2016 from mines served exclusively by CSXT, thus preventing effective competition from Norfolk Southern for most of its coal supply. *See* Compl. ¶ 12; Opening Evid. at I-10. This contention is directly contradicted by the plain language of the {{

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[55] Furthermore, SECI repeatedly refers to its "contract" with Alliance in ways that very strongly imply that SECI has had only one contract with Alliance dating from 1979. *See* SECI Opening at I-6. In fact, SECI has entered into numerous separate contracts with Alliance over the years – the most recent was signed {{ }}. SECI's repeated implication that it has only one long-

If SECI were to pursue a water delivery option, it would no longer have to purchase coal from mines with CSXT origin, and thus in the real world the fact that two of the mine origins in the complaint have no rail service other than CSXT does not constrain SECI's ability to create effective competition.

The five mines named in the complaint in the Illinois Basin (the states of Illinois, Indiana and West Kentucky) are all owned by Alliance Coal, LLC. In 2008, coal production in the Illinois Basin totaled 99 million tons,[56] of which Alliance's five mines produced 20.3 million tons.[57] Thus, there is 79 million tons of production available from mines in the same geographic region accessible to other carriers and other modes which SECI could purchase coal. For water shipment, there are many mines which load directly onto a barge. In West Kentucky, except for Alliance, most of the coal is originated directly via barge. Alliance itself has started production at a massive new mine called River View, which will originate 6.4 million tons per year directly by barge. Mines in Illinois routinely ship coal by rail or truck to barge for delivery to customers. According to the most recent annual statistical report of the Illinois Division of Mines, out of 33.1 million tons of total shipments, 17.3 million tons were shipped by rail or truck to barge (including more than a half-million tons from the Pattiki mine named in the complaint).[58]

SECI's Complaint also names two mines which produce Pittsburgh seam coal in the Northern Appalachia region, Bailey and Robinson Run (Consol 95). In 2008, there were thirteen

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term contract with Alliance no doubt is intended to avoid revealing that SECI's commitments to CSXT-served mines were made at a time when SECI knew its contract with CSXT would be soon expiring.

[56] US Energy Information Administration, "Annual Coal Report 2008", DOE/EIA-0584 (2008)

[57] Alliance Resource Limited Partners, "Annual Report on Form 10-K" filed with the Securities and Exchange Commission.

[58] State of Illinois Department of Natural Resources, Office of Mines and Minerals, 2008 Annual Statistical Report (CSXT WP "Illinois Coal Annual Report 2008.pdf").

large mines, producing 79.5 million tons of coal of similar quality characteristics in the Pittsburgh seam. Of these mines, six were located on the MGA railroad (joint origin of NS and CSXT) and produced 41.3 million tons; three were located exclusively on the Norfolk Southern and produced 14.5 million tons (most of which was shipped rail-to-barge); three were located directly on barge-accessible waterways and produced 18.1 million tons; and only one (Robinson Run) was located exclusively on CSXT, producing 5.6 million tons (of which 3.7 million tons was shipped by conveyor belt to the adjacent Harrison power plant). Thus, the vast majority of Pittsburgh seam coal is available to SECI from mines not exclusively served by CSXT.

e. There Are No Significant Environmental Obstacles to Barge Service to SECI.

SECI further claims that the need to obtain permits from various governmental agencies makes barge service infeasible. Permitting is a cost of doing business for any proposed new construction, and Seminole has presented no evidence that the permitting process would be unduly costly or that there is a significant risk that necessary permits would be disapproved. In fact, all the evidence is to the contrary. SECI itself recently received regulatory approval for construction of a new coal-fired unit at SGS – a project requiring at least as much regulatory scrutiny as construction of barge unloading facilities. And, a shipbuilding facility near SGS has received regulatory approval on multiple occasions for activities on the St. Johns, including dredging and bulkhead construction and repair.[59]

Indeed, SECI's own workpapers confirm that the environmental permitting process would not be unduly complex or costly. {{

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[59] *See, e.g.*, CSXT WPs "SJS Construct_Bulkhead.pdf"; "SJS Maintenance_Dredge.pdf"; "SJS Restore_Existing_Bulkhead.pdf"; "SGS Dredge_East-West_Cross-Cut_Canal.pdf."

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Documents SECI produced in discovery further demonstrate that obtaining environmental approval would not be a significant obstacle to constructing a dock and conveyor. {{

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SECI's claim that the St. Johns River's designation as an American Heritage River "mean[s] enhanced state and local scrutiny of any activity that would alter the riverbank or affect recreational access and use" is demonstrably wrong. SECI Opening at II-13. The American Heritage Rivers initiative is a program designed to facilitate cooperation between the federal government and local communities on issues relating to important waterways. An American Heritage River designation does not create any special procedural or substantive rights or erect

any obstacles to environmental permitting. *See Federal Support of Community Efforts Along American Heritage Rivers*, Exec. Order No. 13,061, § 7 (Sept. 11, 1997) (executive order creating American Heritage Rivers initiative states that it "does not create any right or benefit, substantive or procedural"). The American Heritage River Initiative Partnership Agreement for the St. Johns River makes clear that "[t]his agreement shall not constitute any change in the existing land use, water use or water and air quality controls enacted by federal, state, or local governments with jurisdiction over or along the St. Johns River" and that "the American Heritage Rivers designation of the St. Johns River does not bring any new federal regulations."[60] Moreover, American Heritage River designation has certainly not affected the continued use of the St. Johns River for commercial barge traffic.[61] In short, SECI's reliance on the St. Johns River's designation as an American Heritage River is a red herring.

Nor is there any indication that the construction would impact protected species in a manner that might preclude obtaining any necessary environmental approvals. Indeed, the State of Florida Department of Environmental Protection's Final Order approving certification of SECI's construction application for its planned Unit 3 expressly found that "[n]o changes to wildlife populations on adjacent properties are expected including listed species." *In Re: Seminole Electric Cooperative Seminole Generating Station Unit 3 Power Plant Siting Application No. PA 78-10A2*, OGC Case No. 06-0789, DOAH Case No. 06-0929EPP, issued

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[60] *See* American Heritage Rivers Initiative Partnership Agreement between the St. Johns River Community, State, Regional and Federal Agencies, § I (Dec. 15, 1999) (CSXT WP "American Heritage River Partnership Agreement").

[61] It is worth noting that the American Heritage Rivers initiative is intended to preserve the economic use of waterways as well as environmental protection. *See Federal Support of Community Efforts Along American Heritage Rivers*, Exec. Order No. 13,061, § 1(a) (Sept. 11, 1997) ("The American Heritage Rivers initiative has three objectives: natural resource and environmental protection, *economic revitalization*, and historic and cultural preservation." (emphasis added)).

August 8, 2008, at 18 (CSXT WP "Final DEP Order.pdf"). And although that Order noted that the gopher tortoise, a "species of special concern," might be found within the area affected by the proposed construction, "[i]mpacts to the gopher tortoise will be avoided or mitigated through burrow avoidance, tortoise relocation or mitigation. Mitigation can include purchase of suitable gopher tortoise habitat offsite, in consultation with the FWCC." *Id.* Similarly, the possible presence of another protected species, the Eastern indigo snake, was noted, as was the use of "standard protection measures" to deal with that animal. *Id.* at 18-19.

The construction of a conveyor from the banks of the St. Johns River to the SGS stockpile would be even less likely than the Unit 3 project to impact the gopher tortoise. That animal is typically found in areas with sandy soils adaptable to burrowing, including "upland pine flatwoods" (*id.* at 18), not in wet areas near river banks. CSXT nonetheless requested an evaluation of the likely presence of the gopher tortoise and the Eastern indigo snake in the area where construction of the conveyor would take place. Breedlove, Dennis & Associates, Inc. ("BDA"), a Florida environmental consulting firm, analyzed the site and the regulations applicable to these two species and concluded that "[t]he corridor is too small to support a viable population of gopher tortoises on its own" but noted that because of the connectivity of the corridor to more favorable habitat there is a "moderate likelihood" of the tortoises, as well as the Eastern indigo snake which enjoys a symbiotic relationship with the tortoise, occurring at the site. CSXT WP "BDA Final Gopher Tortoise and Indigo Snake" at 1. However, BDA's regulatory analysis clearly demonstrates that the Florida Fish and Wildlife Conservation Commission ("FWC") "has permitting guidance in place, *Gopher Tortoise Permit Guidelines*, that would allow for construction of the proposed coal conveyor project with regard to this species." CSXT WP "BDA October 9, 2009 Regulatory Report" at 5]. And similarly, that

permitting process "includes FWC requirements for appropriate protection of the indigo snake should the species be encountered." *Id.* at 6.

In short, there are no serious environmental or other regulatory obstacles to SECI constructing a conveyor from a dock on the banks of the St. Johns River to the SGS coal stockpile.

f. The Difference Between the Expired Contract Rate and the Dotiki Tariff Rate Does Not Support a Finding of Market Dominance.

SECI's final argument for market dominance is to assert that the amount by which CSXT increased its tariff rate for the Dotiki-SGS movement after expiration of the 1998 Contract proves that CSXT must be market dominant. *See* SECI Opening at II-19-20. {{

}} The fact that SECI's {{ }} rate was replaced by a rate reflecting today's market is plainly not evidence of market dominance.

g. CSXT Does Not Possess Market Dominance Over Coal or Petcoke Traffic From Charleston, SC.

CSXT-32531, the common carrier rate challenged in these proceedings by SECI, includes at the utility's request the Port of Charleston, SC as an "Origin Port" for coal and petcoke shipments. Charleston, of course, is not a mine. Traffic moving under this rate item would "originate" at the Port of Charleston only in the sense of being transloaded from ocean-going or

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[62] *See* CSXT's Reply to Petition for Injunctive Relief, V.S. Fisher at 6-7 (filed Oct. 17, 2008).

other water carriers. In the past SECI has taken petcoke volumes that originate at Aruba and moved via vessel to the Port of Charleston (SECI has never moved coal from the Port of Charleston), where the commodity was then transloaded to CSXT trains for delivery to the SGS Plant at Palatka, but no such traffic has moved for the past two years. Moreover, as discussed above at I-C, SECI's SAC presentation does not contemplate that it will ship any petcoke or coal from Charleston during the SAC analysis period. Since, according to SECI's own evidence, CSXT will never "charge[]" or "collect" a rate for moving coal or petcoke from Charleston to SGS, 49 U.S.C. § 10704(a)(1), the Board does not have jurisdiction over the Charleston rates and Seminole's challenges to those rates must be dismissed. *See supra* at I-C. But even if the Board had jurisdiction to consider the reasonableness of a paper rate for a route that SECI has no present intention of using, CSXT does not have market dominance over transportation from the Port of Charleston.

By definition any coal or petcoke delivered to Charleston could be delivered just as easily to other ports, most obviously Jacksonville. There is no precedent for finding that a railroad could be market dominant over a commodity "originating" via water delivery at a particular port. And for good reason. Unlike a mine or a factory – where the commodity is tied to a specific geographical location – a product delivered to a port necessarily originates elsewhere.

Here, SECI could easily determine to ship to a different port – such as Jacksonville. It certainly could not be said that Charleston is the most convenient port for delivery to SGS – whether coal is shipped down the Mississippi from New Orleans, down the Intercoastal Waterway from Baltimore, or across the Atlantic from foreign sources. Indeed, the Port of Jacksonville – which is closer to Palatka than Charleston – is a major port that handles large volumes of goods and bulk materials like coal and stone. The Port of Jacksonville handles

approximately 6 million tons of coal and petcoke per year – well more than SECI's annual consumption.[63] In short, there is nothing to prevent petcoke cargos from being routed directly to the Port of Jacksonville rather than the Port of Charleston for transportation by barge to the SGS Plant at Palatka.

Moreover, with or without a dock at SECI, CSX does not have any 'market dominance' over a vessel or barge of petcoke that can transload its cargo at Jacksonville as readily as at Charleston. Even without building a dock at SGS, SECI could effectively truck from the Port of Jacksonville rather than have its petcoke move via Charleston. CSXT does not contend that it would be feasible to truck SECI's entire solid fuel volume from the origin mines. However, the Board must recognize the feasibility of SECI trucking significant volumes of coal or petcoke to SGS from the Port of Jacksonville. This is not a mere hypothetical possibility. CSXT has obtained a written offer from Pritchett Trucking in Lake Butler Florida to haul approximately 350,000 tons per year of petcoke from the Port of Jacksonville to SGS at $6.00 per ton, exclusive of a fuel surcharge that does not take effect unless diesel fuel exceeds $3.10 per gallon. *See* CSXT Ex. II-B-2 at 4 (EVA Report). This volume is more than the average annual petcoke shipments to SGS between 1999 and 2008 – 338,000 tons per year.

Moreover, SECI annually transports about 400,000 tons of limestone each year to SGS via truck for use to remove sulfur dioxide from its emissions and produce gypsum.[64] The limestone is transported from Fairfield, Florida – 56.5 miles from SGS – in 4-axle tractor-trailers

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[63] According to filings with the Energy Information Administration, in 2008 JEA received 4.7 million tons of coal and 1.2 million tons of petroleum coke at the St. Johns River and Northside plants by water at the Port of Jacksonville. *See* CSXT WP "Cost of coal in Florida 2008."

[64] SECI reported limestone consumption of 420,000 tons in its 2005 Form 767 filed with the Energy Information Administration.

hauling 25 tons per load.[65] These trucks were observed to require an average of 11 minutes for loading and 8 minutes for unloading, and to have a total cycle time of 158 minutes.[66] SECI's experience trucking limestone to SGS is a real-world example demonstrating the viability of a similar truck movement from Jacksonville to SGS. And the distance SECI trucks limestone to SGS is longer than the 33 miles that TECO trucks coal from Tampa to the Polk Plant.

SECI's truck movements of limestone also help to illustrate SECI's gross exaggeration of the costs of trucking materials from the Port of Jacksonville. SECI asserts that it would require a ten-hour cycle time for a single truck to make a round trip for the short journey between SGS and Jacksonville. This ludicrously high estimate is predicated on a series of misstatements and exaggerations. First, SGS claims that the distance between the port and SGS is "between 80 to 90 miles" – the actual distance is 63.6 miles from the Dames Point Terminal in Jacksonville to SGS.[67] And SECI's claim that 30 mph is an "ambitious" average truck speed is plainly wrong. The 63.6 mile distance includes 32 miles on Interstate 295 (with a posted speed limit of 65 mph) and 30 miles on U.S. Highway 17, which has a posted speed limit of 60 mph for over half of its route. As a result, a conservative average speed for a one-way trip would be 48 mph, and a running time for the round-trip transportation would be 2.5 hours – less than half of the 6 hours SECI claims would be required. An even worse exaggeration is SECI's claim that it would take a total of four hours to load, unload, weigh and refuel a truck – the limestone trucks were observed to have an average loading, unloading, and weighing time of 19 minutes.[68] As for refueling, each truck could handle 10 round trips on a single tank of gas, meaning that refueling

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[65] *See* CSXT WP "Memo, CSX Seminole Trip Rpt Limestone Trucking.pdf."

[66] *See id.*

[67] *See* CSXT WP "Memo, CSX Seminole Trucking Route from Dames Point.pdf."

[68] *See* CSXT WP "Memo, CSX Seminole Trip Rpt Limestone Trucking.pdf."

would not be necessary until the end of the day, every other day. Each loaded truck would also need to make a brief stop for the driver to conduct a cargo inspection as required by 49 C.F.R. § 392.9; CSXT conservatively estimates that the inspection would require 15 minutes. As a result, a conservative estimate of total cycle time would be 3.22 hours.[69]

Because of SECI's exaggerated cycle time, its truck fleet estimate is equally exaggerated. Assuming (like SECI) that each truck could carry 25 tons per trip, it would take a total of 15,000 truckloads to transport 375,000 tons of coal or petcoke from the Jacksonville Port. Assuming a 3.22 hour cycle time and a 10-hour work day, each truck could readily make 3 trips per day. Conservatively assuming a 5-day work week and 50 weeks per year, it would take only 20 trucks to handle this volume (a 6-day week is more likely, which would require only 50 truckloads per day or 17 trucks in service).

Simply put, truck transportation from the Port of Jacksonville is a viable alternative to rail transportation from the Port of Charleston. SECI has not come close to carrying its burden of demonstrating that CSXT is market dominant over waterborne traffic that could be delivered to the Port of Jacksonville rather than Charleston.

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In light of the feasible modal options described above, SECI cannot demonstrate that CSXT has market dominance over its traffic. SECI's argument boils down to an assertion that it *chose* not to develop a barge option {{ }}. But SECI does not have the power to

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[69] SECI's recitation of standard motor carriage safety regulations for truck transportation is another red herring. The exact same safety regulations apply to the limestone movements SECI currently makes to SGS. {{

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make CSXT market dominant by SECI's choice. That is exactly what SECI has attempted to do here – it has claimed that a very viable option for barge service is out of the question, in hopes that it can obtain a better rate from the Board. If the Board accepts SECI's ploy as a permissible stratagem for having the SECI Plant deemed "market dominant" to CSXT, it will have incented other possible complainants to create similar conditions of "captivity" and make a mockery of the genuine legal and economic significance of the term. Whether or not SECI chooses to exercise its alternatives to rail service, the threat of barge service is an effective constraint on CSXT's rail rates.

Complainants in large coal rate cases like SECI are sophisticated enterprises with the resources to employ experts and consultants to assist in the evaluation of alternatives to their logistics arrangements, and there is no reason to assume that they have not fully apprised themselves of the feasibility and costs of such alternatives before entering into long-term coal supply agreements and making investments in their generating facilities. Similarly, a large railroad like CSXT can be assumed to have carefully evaluated the market, including the alternatives that a customer like SECI may elect to use, before establishing common carrier rates. In this case it is apparent that CSXT was well aware of the rail-water alternatives available to SECI – and remains well aware of them today – and that those alternatives operated as an effective constraint on the level of the rates that it established when SECI's below-market, long-term rail transportation contract expired. Competition from very real and very viable rail-water delivery alternatives requires that the Board find that there is effective competition from another mode to CSXT's service, and accordingly the Complaint should be dismissed on the grounds that CSXT does not have market dominance over the transportation of coal to the SGS Plant.

III. STAND ALONE COST

A. TRAFFIC GROUP

The traffic group designated by Complainant Seminole Electric Cooperative, Inc. (sometimes referred to hereinafter as "Seminole," "SECI," or "Complainant") is unprecedented, consisting of a complex mix of cross-over coal, intermodal, and general freight traffic. In a variety of ways, however, Seminole's SAC evidence has ignored the complexity introduced by its diverse traffic mix, and tried to wedge its presentation into an ill-fitting template designed for a SARR handling coal unit trains that make round-trip cycles. As demonstrated elsewhere in this Reply, the failure of Seminole's case-in-chief to account for the operational complexities and requirements necessitated by its selection of very substantial volumes of merchandise and intermodal traffic that – unlike traffic typically included in SARR traffic groups – does not move in unit-train service in the real world, is a fundamental failure of proof that compels dismissal of this case. *See* CSXT Reply at III.B – III.D, *infra.* If the Board does not dismiss this case for failure of proof, it must make very substantial changes to the SAC evidence submitted by SECI in order to conform the analysis to the data and actual evidence and to SAC rules and principles. This section describes significant flaws, errors, and violations of SAC rules and requirements contained in the Complainant's traffic and revenue evidence, which result in a substantial overstatement of SFRR revenues. Below, CSXT summarizes some of the more significant errors described in more detail in the body of this section.

First, Seminole engaged in widespread external ("off-SARR") re-routing of cross-over traffic, without accounting for the effects of such re-routing on service to customers, on the operations of the residual CSXT, or on revenue allocations between the SARR and CSXT. That is, for one hundred eighty three (183) separate origin-destination pairs, SECI's SAC presentation depends on the assumption that CSXT's portions of hypothetical crossover traffic would be

diverted to a different route than their actual route(s) of movement on the CSXT system. Despite the unprecedented number and scope of presumptively impermissible off-SARR re-routes embedded in its evidence, SECI makes no attempt to present evidence to meet the indispensable pre-requisites established by the Board for allowable off-SARR re-routes. This total failure of proof justifies rejection of all crossover traffic between those 183 O-D pairs. SECI compounded this fundamental error and failure of proof by representing to the Board that its SAC presentation includes *no* off-SARR re-routes. Elimination of the impermissible re-routed crossover traffic alone may be sufficient to invalidate SECI's entire SAC presentation and justify dismissal of the case.[1]

Second, SECI's estimation of SFRR traffic volumes contains several material errors, and misapplications of traffic data and forecasts. Initially, SECI relied on an outdated, materially erroneous coal volume forecast to overstate coal volumes for 2009 (the initial year of SFRR operations), despite: (i) ubiquitous evidence showing that the present economic recession is more severe than anyone, including CSXT, anticipated when the forecast was developed more than 12 months ago; (ii) more recent, widely available neutral forecasts by government agencies (EIA) and others, projecting much lower shipments of coal and other SARR commodities in 2009 and beyond; and (iii) actual CSXT coal traffic data for 2009, showing the obsolete forecasts SECI applied to generate its SFRR volumes were materially erroneous and substantially overstated actual shipment volumes. CSXT uses actual 2009 traffic volumes, and a corrected

[1] CSXT recognizes that, despite SECI's failure of proof, the Board may decide not to eliminate this proffered traffic altogether. Accordingly, CSXT has corrected the routing of all 183 O-D pairs to eliminate off-SARR re-routes, and presented corrected revenue calculations for that crossover traffic. This corrected alternative could be substituted for SECI's impermissible re-routed traffic, if the Board decides to excuse SECI's failure of proof rather than rejecting traffic between those 183 O-D pairs.

and updated EIA forecast to correct SECI's substantial overstatement of SFRR coal traffic volumes.

Moreover, even if the January 2009 forecast SECI relied upon had been reliable or sufficiently accurate to allow its use in this case – which it was not – SECI's approach mis-applied that forecast in several important ways. Most significantly, SECI substantially inflated January 2009 forecast volumes (which themselves were already materially overstated) by "aggregating" other traffic volumes projected to originate from other, distant mines from which the SFRR did not select traffic in the base year (2008). The method SECI followed to accomplish this volume manipulation is convoluted, and its rationale for these machinations is simplistic and fallacious. The general approach and result, however, can be summarized relatively simply. SECI selected its traffic – including the SARR O-D pairs and routings upon which it based its SARR configuration, SARR operations and all stand-alone expenses and investment costs – from 2008 CSXT traffic and event data. SECI then used the 2009 forecast to add to the 2008 traffic volumes additional traffic projected to originate in 2009 from entirely different, geographically distant mine origins served by different CSXT lines and facilities. And, SECI made no effort to account for the different operations and costs that would be required to move the additional SFRR traffic from non-SFRR mine origins over routes not included in the SFRR system.

Effectively, SECI assumed that tons originating at mines not included in its SARR traffic group or operating plan would simply materialize at other distant mines (in some instances hundreds of miles away) that SECI included in its SFRR traffic selection. Neither the laws of physics nor SAC principles allow such fantastic notions, and SECI's infeasible volume inflating gambit must be rejected.

Third, SECI overstates likely issue traffic volumes, claiming that, in each of the remaining nine years of the DCF analysis period, it will ship coal volumes that are equal to or greater than the highest annual volume it has shipped in the last decade. This is particularly remarkable in light of the fact that, in the first year of SFRR operations (2009), SECI shipped far fewer tons than even its historical average shipments. Despite that record, and the likelihood that carbon emissions limits, low natural gas prices, and other factors make it very likely that coal fired power generation will decline in the coming decade, SECI assumes coal shipments to the SGS/Bostwick facility will increase by approximately 41 percent in 2010, and stay at that historically high level for the remaining nine years of the SAC analysis period.

Fourth, SECI misapplied CSXT forecasts for general merchandise and intermodal traffic in several different ways, most of which erroneously inflated SFRR traffic volumes. For example, SECI added new intermodal and freight traffic that the forecast assumed would come on to lines replicated by the SFRR in 2009, while simultaneously failing to remove all of the 2008 traffic that the forecasts assumed would be lost in 2009. SECI offers no meaningful explanation for its deliberate disregard of the offsetting traffic losses that are integral part and parcel of the forecasts SECI purported to apply.

Fifth, SECI overstated projected rate and revenue growth for SFRR traffic by misapplying existing transportation contracts and by making unreasonable and unsupported projections. Most surprisingly, SECI significantly overstated the revenues *for its own traffic*, by applying higher rates than it actually paid in 2009. The error, caused by misapplication of the parties' agreed application of the escalation provision of the challenged common carrier tariff, results in a nearly $400 million overstatement of issue traffic revenues. This misstatement of actual 2009 SECI rates – rates with which SECI is intimately familiar and was paying at the time

it filed its SAC evidence -- is a telling indicator of the level of care and precision SECI employed in developing its SAC presentation.

Sixth, Complainant significantly overstated SFRR revenues for intermodal traffic by projecting a growth rate based upon comparison of net CSXI revenues for 2008 traffic with gross interline revenues (revenues generated by both CSXI and its interline partners) for 2009. SECI also substantially overstated fuel surcharge revenues for both general freight and intermodal traffic through a number of erroneous extrapolations, mistaken assumptions, and misapplications of its own stated methodology. These errors are explained in detail in the body of this Section III.A Reply.

Seventh, due in large measure to SECI's very substantial, undisclosed off-SARR re-routes, its ATC revenue divisions mis-allocate cross-over traffic revenues, thereby inflating SFRR revenues.[2] CSXT corrects the resulting errors, as well as SECI's erroneous fixed cost calculations, and restates crossover revenue divisions.

Many of SECI's non-coal traffic volume and revenue errors appear to result from SECI's failure to recognize and properly account for the substantial, material differences between intermodal and general freight carload traffic on one hand, and coal unit train traffic on the other. This fundamental failure, repeated in various forms throughout the opening SAC presentation, is perhaps the biggest single source of error and failures of proof in SECI's SAC evidence. The analytical approaches and templates used by complainants in nearly every previous SAC case (in which coal or other bulk commodity unit trains constituted the overwhelming majority of SARR

[2] If the Board were to disallow SECI's re-routed crossover traffic altogether, recalculation of revenue divisions for that traffic would not be necessary, as the SFRR would not get any revenue for traffic it does not handle. Because the Board may instead accept CSXT's alternative correction of the impermissible re-routings of crossover traffic, CSXT also presents recalculated ATC divisions for that re-routed traffic.

traffic) – round holes into which SECI attempted to force the square pegs of this case -- are simply not adequate for the task of modeling, analyzing, and accounting for more complex general freight and intermodal traffic.

If the Board does not dismiss this case for failure(s) of proof, the necessary corrections detailed in this Section alone will result in reduction of SFRR revenue by $175 million in 2009). That revenue correction increases each year of the SFRR analysis, reaching $ 257 million in 2018. The foregoing errors in SECI's case-in-chief, as well as a number of errors of lesser magnitude, are discussed in detail below.

1. Stand-Alone Railroad Traffic.

a. Overview of Seminole's Stand-Alone Railroad and Traffic

The SFRR traffic group that SECI selected represents one of the most diverse ever attempted in a SAC analysis. While SECI acknowledges "a broader range of commodities" than most prior coal rate proceedings before the Board,[3] in fact the combination of the different types of traffic, lengths of haul, and service required is considerably more complicated than suggested by SECI's brief summary. SECI has generally included CSXT traffic that moves over the lines that it replicated for its SARR, with the exception of significant volumes of coal traffic it impermissibly re-routed. But the mere fact that SECI identified traffic moving over the defendant's lines does not translate to proper treatment and evaluation of that traffic for purposes of a SAC analysis. Having selected a traffic group that went far beyond that typically examined in such cases – notably including significant volumes of non-unit train traffic that would originate or terminate along the SARR lines – SECI must meet the difficult challenges of

[3] SECI Open at III-A-2

ensuring that the operations and facilities of its SARR are adequate to meet the diverse characteristics and requirements of this traffic.

SECI indicated that, by tonnage, 61.6 percent of its SFRR traffic is coal.[4] Use of the tonnage volume figure both overstates coal traffic's proportion of the mixed SARR traffic group. and understates the impact that its other two major traffic groups – intermodal and general freight – have on the SAC analysis and results. SECI's work papers indicate that coal represents less than one-half of total SFRR carloads and revenues in the base year, and coal's share decreases over the SAC analysis period, down to one-third of total carloads by 2018.[5] The coal traffic also averages the shortest length of haul on the SFRR, less than one-half of the average for the SFRR intermodal traffic, and 40 percent shorter than general freight traffic's average haul. In fact, excluding the issue traffic's longer hauls results in an average length of haul for non-issue coal traffic that is less than 200 miles.[6] SECI posited that the SFRR would serve directly fewer than one dozen coal mines[7] and more than two dozen electric generating stations and industrial facilities. The SFRR envisioned by SECI would originate 40 percent of the SFRR coal traffic, and also would terminate locally 40 percent of that traffic.

This leaves the SFRR with an extraordinary proportion of non-coal, non-unit-train traffic. SECI's SAC presentation relied heavily on intermodal and general freight traffic. And, as explained in detail throughout this Reply, SECI committed serious errors in attempting to incorporate this non-coal traffic to its analysis. For example, SECI failed to address the specific

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[4] *Id.*

[5] SECI WP "SARR carload forecast summary comparison 082309.xls"

[6] SECI projects that its own traffic's average length of haul will increase from 800 to more than 950 miles in 2010 when shipments commence from Consol 95 origin in West Virginia.

[7] SECI constructed the SFRR to originate traffic from a dozen mines in and around the MGA and Western Kentucky, but not to any Central Appalachian mines, which it left to the residual CSXT to serve and deliver the coal to the SFRR at interchange.

requirements of handling this traffic, and failed to develop adequate evidence regarding traffic volumes and growth, revenue assumptions, operations, and facilities. While SECI indicates that intermodal represented only 5 percent of the SFRR base-year traffic by weight, that same traffic comprises more than one-quarter of the base-year revenue units (more than 460,000 containers and trailers). Additionally, SECI assumed significant growth in intermodal volumes over the SAC analysis period, averaging 5 percent annually from 2009 through 2018, resulting in more than 710,000 SFRR revenue containers and trailers in 2018.[8] As discussed, intermodal has the longest average SFRR haul, approximately 440 miles. Although SECI assumes that most of the SFRR intermodal shipments "move in intact trainloads for their entire distance on the SARR,"[9] it is important to note that only slightly more than one-third of the SFRR intermodal traffic is overhead to the SARR. As a result, 65 percent of that traffic must be originated or terminated locally on the SFRR, which requires considerable facilities of the type not typically found on SARR networks developed for coal rate cases.

In addition to coal and intermodal shipments, SECI selected more than 530,000 carloads of general freight traffic, accounting for approximately one-third of SFRR tonnages, carloads, and revenues.[10] SECI's summary of the traffic by broad commodity group – comprising more than 16 groups at the 2-digit STCC level – but this overbroad categorization belies the truly disparate mix of traffic SECI selected for the SARR. In fact the non-coal traffic that SECI selected includes *more than 950 different individual commodities* at the 7-digit STCC level – a staggering array of different traffic with different operating characteristics, requiring different types of equipment and service.. SECI selected shipments that originated or terminated at more

[8] SECI WP "SARR carload forecast summary comparison 082309.xls"

[9] SECI Opening at III-A-3 to 4

[10] SECI Open at III-A-4 to 5

than 90 stations along its SFRR lines, and forecasted traffic volumes that would require serving more than 880 different customers at these locations.[11] Additionally, more than one out of ten SFRR general freight carloads – more than 53,000 carloads – carry hazardous materials. This includes, as described below, hundreds of carloads of PIH/TIH traffic. *See* CSXT Reply III-C, *infra*. As demonstrated in Section III-C below, by failing to address the individual shipment parameters and many other factors, SECI's SAC presentation neither develops an operating plan nor properly models the service required to handle this traffic. Like its SAC evidence as a whole, SECI's simplistic summary of the considerable volumes of SFRR general freight traffic – consisting of one paragraph and a table[12] – does not begin to adequately account for the complexity such traffic adds to a SAC analysis.

SARR traffic volumes and flows are the foundation of a SAC presentation, upon which the operating plan, operating parameters and costs, road property investment, equipment requirements, and other essential elements of a SAC presentation rest and depend. As demonstrated below, the traffic volumes and flows posited in Seminole's Opening presentation are contrary to the actual evidence and to fundamental SAC rules and requirements. As a result, even without considering the myriad other independent flaws in Seminole's evidence, the fundamental misstatement of SARR traffic volumes in Seminole's case-in-chief opening evidence alone undermines its entire SAC presentation and the maximum reasonable rates it purports to support.

b. Off-SARR Re-Routes

Despite its express contrary representations to the Board, Seminole has engaged in substantial "off-SARR" re-routing of crossover traffic. *See, e.g.,* SECI Opening at III-A-5

[11] CSXT WP "On-SFRR Customer Locations.xls"

[12] SECI Open III-A-4 to 5.

(Seminole "re-routes are entirely internal to the SFRR; that is, the change only affects the manner in which the trains move on the SFRR"). That is, the SFRR routing requires the traffic to follow a route on the residual CSXT system that is different from the route it actually traverses on the CSXT system. *Cf. id.;* Opening at III-C-53 ("All of the rerouted traffic is internally-rerouted traffic, that is, (a) the change in routing is entirely internal to the SFRR . . ."). As Seminole implicitly recognizes, the difference between on- and off- SARR re-routes is important, because the complainant's burden to justify off-SARR re-routes is far greater and much more difficult to satisfy. As explained below, because Seminole has failed even to attempt to make the demanding showing required for allowable off-SARR re-routes, the Board should reject all such re-routed traffic in its entirety.

Board precedents have established two different categories of re-routed crossover traffic for purposes of SAC cases. "On-SARR" or "local" re-routes involve traffic that deviates from the incumbent's routing only for the portion of such movements handled by the SARR (over lines replicated by the SARR), without altering the route the traffic follows over the lines of the defendant carrier, or "residual incumbent" railroad. *See, e.g., Western Fuels Ass'n, Inc. v. BNSF Railway,* STB Dkt. No. 42088, Decision at 14 (Feb. 17. 2009) (*"WFA"*). Such re-routed traffic generally is permissible if the complainant demonstrates that: (i) the new route is reasonable; and (ii) the new route would serve the shipper's transportation needs, by providing the same or superior service. *See Duke Energy Corp. v. CSXT,* STB Dkt. No. 42070, Decision at 16-17 (served Feb. 3, 2004); *Duke Energy Corp v. Norfolk Southern*, STB Dkt. No. 42069, Decision at 25-30 (served Nov. 5, 2003); *TMPA v. BNSF,* STB Dkt. No. 42056, Decision at 18-24 (Mar. 24, 2003).

In contrast, "Off-SARR" or "external" re-routed crossover traffic involves an attempt by the complainant to re-route SARR traffic beyond the boundaries of the SARR, by changing the route that traffic would follow over the lines of the residual incumbent railroad. *See WFA* at 14-15. Because of the complexities such re-routes introduce to the SAC analysis, the Board has advised parties it is "disinclined" to allow such re-routes in a SAC case. *Id.* at 15. In order to overcome the presumption against off-SARR rerouted traffic, a complainant must:
(i) demonstrate how crossover revenues should be allocated "in accordance with the defendant carrier's *actual* costs of providing the transportation service" and (ii) "provide an alternative SAC analysis where there are no off-SARR reroutes." *WFA* at 15 (emphasis added).

Thus, if a complainant wishes to include off-SARR re-routes in its SAC presentation, it must present an alternative SAC analysis without those re-routes and demonstrate how to allocate revenues for those movements using the defendant carrier's actual costs. *See WFA* at 15. Seminole did not even attempt to satisfy either essential element of the Board's test for the substantial volume of off-SARR re-routed coal traffic included in its case-in-chief. It presented no alternative SAC analysis. And, it made no effort to show how – consistent with the ATC methodology and using CSXT's actual costs – revenues could be properly allocated between the SFRR and CSXT. Seminole's inability to satisfy the criteria established by the Board for off-SARR rerouted traffic is not surprising – as the Board found, "[t]here is seemingly no coherent way to allocate the revenue contribution in accordance with the defendant's costs of providing service" for off-SARR rerouted traffic. *WFA* at 15. However, the appropriate response to the challenge of properly allocating revenues for off-SARR re-routed traffic is not to ignore the revenue allocation problem and the clear requirements imposed on any complainant positing off-SARR re-routes, but rather not to include such traffic in the first instance. *See WFA* at 14-15

(because of "inherent problems" with appropriately accounting for off-SARR re-routed traffic in SAC analysis, such traffic is disfavored). Seminole's case in chief failed to make any attempt to follow the Board's rules and requirements concerning external re-routes, and the appropriate remedy for this complete failure is exclusion of all such traffic from the SARR traffic base.[13]

i. SECI Had Ample Data and Information to Allow it To Determine CSXT Routings.

SECI claims that the data produced by CSXT in this case did not "allow the routes of all trains to be traced with sufficient specificity to permit precise definitions of on-SFRR and off-SFRR points in all cases." SECI Opening III-A-20.[14] Complainant further claims that, in such instances, it "determined the most likely and/or most logical routing based on the CSXT data that was produced and, concomitantly, the most reasonable assumed entry points onto and/or exits [sic] points form the SFRR system." *Id.* These claims are both false and misleading.[15] The data CSXT produced to Seminole were more than sufficient to identify the actual route of movement for the traffic selected by Seminole, and they provide no excuse or justification for SECI's attempt to force the residual CSXT to move cross-over traffic (to and from the SFRR) over a route that deviates from its actual route of movement.

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[13] Seminole's improperly re-routed traffic is summarized in CSXT Reply Exhibit III-A-1..

[14] SECI's traffic and revenue exhibits (SECI Open Exhibit III-A-2 and Exhibit III-A-3) identify the SFRR "On" and "Off" junctions that it assumed and relied upon to allocate cross over traffic revenues to the SFRR. See SECI Open WP "ATC Summary.xlsx"

[15] Seminole does not expressly assert in its opening evidence that the information produced by CSXT was insufficient to allow Seminole to avoid off-SARR re-routes of cross-over traffic. This is not entirely surprising, because Complainant's case-in-chief falsely represents to the Board that SECI has not engaged in such off-SARR re-routing. Because SECI may attempt, belatedly (e.g., in its rebuttal evidence), to use alleged insufficiency of data to excuse its failure to comply with the Board's clear rules concerning off-SARR re-routed traffic, CSXT demonstrates in this section that SECI had ample evidence from which to determine the route followed by the CSXT traffic it selected. Accordingly, SECI had no legitimate basis for the numerous and substantial off-SARR re-routes of coal cross-over traffic included in its SAC presentation.

SECI ignored available shipment and event records and data that CSXT produced in discovery, that SECI readily could have used to identify the actual route of movement on the CSXT system for each movement of coal cross-over traffic that it re-routed.[16] For the overwhelming majority of those movements, Seminole easily could have determined the actual route of movement of the traffic it selected for the SFRR using two of the data sets CSXT produced in discovery.[17]

First, SECI could follow the very same process it used to select coal traffic in the first instance, identifying coal trains from the 2008 CSXT shipment records produced in discovery. Those shipment records specify, among many other parameters, the origin and destination of the selected coal trains, and a specific train identification number. Second, using the train identification number (or another common field) as a cross-reference, Seminole could have used the CSXT train event records and database (produced in response to Seminole's discovery requests) to determine the route of movement for each of the selected trains. The event records identify the location of various stations, yards and other sites traversed by a particular train along its actual route of movement on the CSXT system.[18]

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[16] In this section, CSXT briefly explains how the routings of CSXT coal trains selected by SECI were readily determinable from the extensive and detailed shipment and event records and data produced to SECI in this case. Elsewhere, CSXT responds in more detail to SECI's erroneous claims that data produced by CSXT prevented SECI from making a coherent SAC presentation in compliance with governing rules or otherwise should excuse fundamental flaws in SECI's case in chief. *See* CSXT Reply Ex. I-2, *supra.*

[17] While the following discussion summarizes for the Board the process SECI's consultants could have followed to identify the actual route of movement of the coal traffic it selected for the SFRR, it would strain credulity for SECI to suggest that its experienced rail rate case consultants required any explanation of this simple process, or were somehow incapable of implementing it.

[18] Assume, for example, that hypothetical CSXT train 123 originated at mine A, and moved over the CSXT network through locations B, C, D, and E, before terminating at destination F. Together, CSXT shipment and event records would identify the route followed by train 123, commencing at origin A, traversing segment A–B, then segment B–C, then segment C–D, then segment D–E, and finally over the last segment E to (destination) F. For those few movements

The following example illustrates how SECI disregarded CSXT event records entirely in order to re-route coal traffic so it would travel over the SFRR. CSXT event records (produced to SECI in discovery) for the July 23, 2008 loaded coal train from Little Creek, KY to Terrell, NC show that the shipment traveled from the Central Appalachian mine origin through the Erwin, TN gateway to the Terrell plant, and did not touch any of the lines replicated by the SFRR. Similarly, other 2008 event records produced to SECI in discovery show that all 11 loaded trains from Little Creek to Terrell followed this same route.

Little Creek KY to Terrell NC

train_profile_id	train_origination_d	from_station_l	from_city	from_st	departure_ts	to_station_l	to_city	to_st	arrival_ts	sarr-rev loaded shipments
V362	7/23/08	SINDU0	PLACED/PULLED INDUSTRY	NULL	7/24/08 11:50	0SF211	LITTLE CREEK	KY	7/24/08 11:55	90
V362	7/23/08	0SF211	LITTLE CREEK	KY	7/24/08 11:55	0WB239	LOYALL	KY	7/24/08 16:05	90
V362	7/23/08	0WB239	LOYALL	KY	7/25/08 15:15	Z 134	ERWIN	TN	7/26/08 2:30	90
V362	7/23/08	Z 134	ERWIN	TN	7/26/08 9:15	Z 245	BOSTIC YARD	NC	7/26/08 19:30	90
V362	7/23/08	Z 245	BOSTIC YARD	NC	7/26/08 21:00	SFE 24	TERRELL	NC	7/27/08 4:50	90
V362	7/23/08	SFE 24	TERRELL	NC	7/27/08 4:50	SINDU1	PLACED/PULLED INDUSTRY	NULL	7/27/08 5:05	90

Source: 2008 CSXT train event records produced in discovery.[19]

Instead of following the CSXT route identified by the event records, SECI re-routed those trains over an entirely different, and much more lengthy, route with minimal overlap with the actual CSXT route. *See* III.A.1.b.ii.(c), *infra* (more detailed discussion and map of this off-SARR re-route).

Moreover, the very shipment records that SECI used to identify its SFRR traffic group and to develop its SARR revenue allocation provide further confirmation that the routing that SECI "assumed" for this movement was unreasonable and illogical. SECI WP

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for which the event records do not identify the route of movement with sufficient specificity, the CSXT Train Dispatch Sheets, (electronic data produced to Seminole in response to its discovery requests) could be used to more precisely delineate the route.

[19] The actual route of movement for this O-D pair contrasts starkly with SECI's assumed route of movement, as illustrated infra at III.A.1.b.ii.(c), Map III-A-3 (actual Little Creek to Terrell route highlighted in green).

"tbl_RATE_CASE _ SHIPMENTS_Extended_January2008_LEPA.csv." The CSXT shipment records report the actual loaded miles, and for the Little Creek-Terrell movement indicate 382 miles, far shorter than the 653 miles that results from SECI's alternative routing. *See* 2008 CSXT Shipment Records.

Contrary to SECI's claims, its coal traffic (re-)routing assumptions are not "likely," nor "logical," nor "reasonable." SECI's refusal to use CSXT shipment and event records properly to determine CSXT's actual routing was SECI's choice, and the resulting routing errors and proscribed re-routings cannot be attributed to unavailability or insufficiency of data.

ii. Off-SARR Re-routes in Seminole's Case-in-Chief

Despite Seminole's representations in its narrative evidence that its SAC presentation includes no off-SARR re-routes, the SFRR operations reflected in Seminole's workpapers actually require off-SARR re-routing of coal traffic between 170 separate origin-destination pairs, comprising nearly 1/3 of all SARR coal O-D pairs. *See* SECI WP "Exhibits III-A-2" and "III-A-3.xlsx" and CSXT Reply Ex. III-A-2. For the overwhelming majority of those O-D pairs, the SFRR route hypothesizes an interchange point with the residual CSXT that is not on CSXT's sole or predominant actual route of movement for that O-D pair.[20] A few examples help to illustrate the very significant off-SARR re-routing inherent in SECI's SAC presentation.

(a) Hutchinson, WV to Indiantown, FL

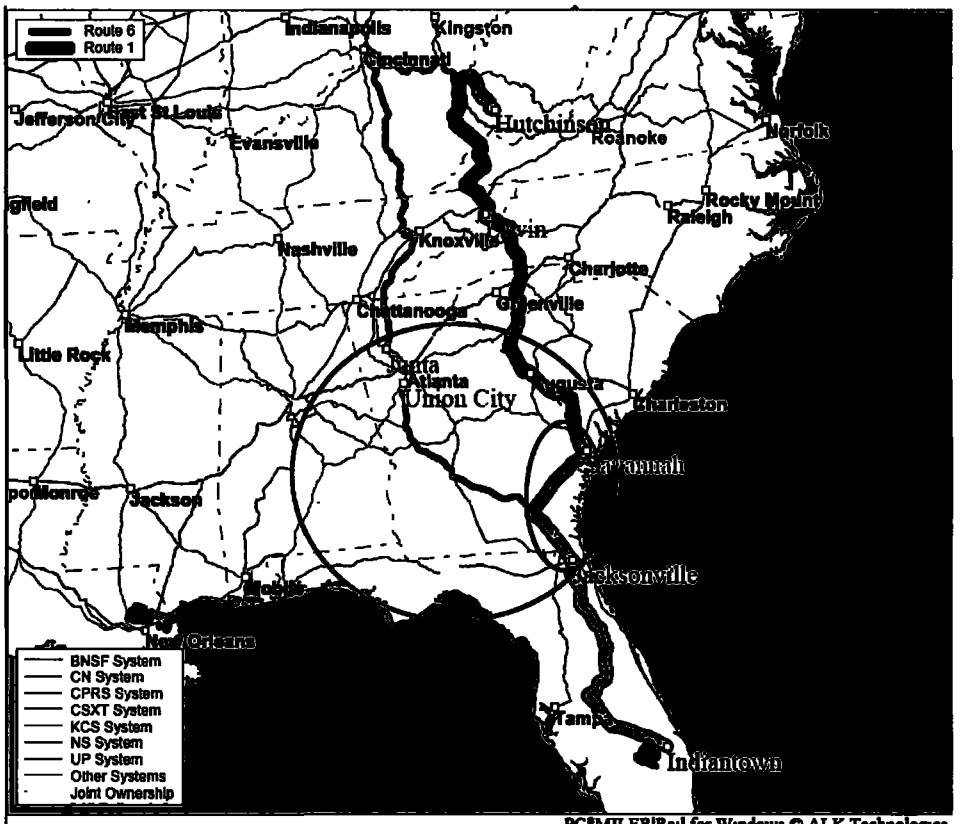
Seminole selected a coal movement between a mine origin in Hutchinson, West Virginia and a power plant destination in Indiantown, Florida (south-central Florida). SECI did not build

[20] For 163 of those 170 O-D pairs (96 percent), the off-SARR re-route deviates from the sole or predominant route of movement on the actual CSXT system. Traffic between the remaining seven coal O-D pairs travels on multiple routes over the CSXT system, but Seminole routed all traffic between each O-D pair over a single route, resulting in a deviation from the actual route of movement on CSXT (i.e., an off-SARR re-route) for the traffic does not follow that route in the real world.

its SARR to serve either the mine or the destination power plant, but instead assumed that CSXT would originate and terminate the traffic, with the SFRR serving as a cross-over traffic "bridge carrier." *See* SECI WP "Exhibits III-A-2" and "III-A-3.xlsx." As CSXT event records produced to SECI in discovery show, in the real world CSXT moves that traffic on a north-south route running through the middle of the eastern and western branches of the SFRR, from Hutchinson northwest to Big Sandy Junction, KY; and then south through the Central Appalachian coal fields and the Erwin gateway, south and east through Augusta, Georgia to Savannah, Georgia, through Waycross and on to Jacksonville; and finally south through central Florida to Indiantown.[21] The CSXT route covers 1,216 rail miles. Seminole's evidence posits a radically different routing, assuming CSXT would move coal from Hutchinson northwest all the way to Cincinnati, then south over the CC and KD subdivisions of the former Seaboard network through central Kentucky, and on to Knoxville, Tennessee; interchange the traffic with the SFRR at Junta, Georgia, which in turn would move the traffic through Atlanta and Waycross, Georgia and on to Jacksonville, where the SFRR would again interchange the traffic with CSX for transportation to the Indiantown destination, making an efficient single-system move into a markedly less efficient three-carrier haul. *See id.* And the Seminole re-route would cover 1,398 rail miles, a distance more than 10 percent longer than CSXT's actual route of movement of the traffic.

[21] CSXT WP "Event Records.xlsx"

Map III-A 1: Hutchinson, WV to Indiantown, FL Actual Route and SECI Reroute



Seminole SARR On/Off Points:
Junta - Jacksonville
391 SARR Miles
1,398 Total Miles

Corrected SARR On/Off Points:
Savannah - Jacksonville
172 SARR Miles
1,216 Total Miles

Under the routing hypothesized in Seminole's evidence, the SFRR would receive the traffic from CSXT at Junta, Georgia, and move the traffic to interchange with CSXT at Jacksonville, an on-SARR distance of 391 miles. This routing would require a radical change in CSXT's actual routing and operations, and would involve only 72 miles over CSXT lines replicated by the SARR, from Waycross, GA to Jacksonville, FL.[22] Despite this attempt to force

[22] If the traffic were correctly routed over its actual route of movement over CSXT, the on-SFRR point would be Savannah, GA and the off-SFRR point would be Jacksonville, FL, and the traffic would travel 172 miles on the SFRR – less than one-half of the SFRR haul posited by SECI. *See* CSXT Reply Exhibits III-A-2 and III-A-3.xlsx.

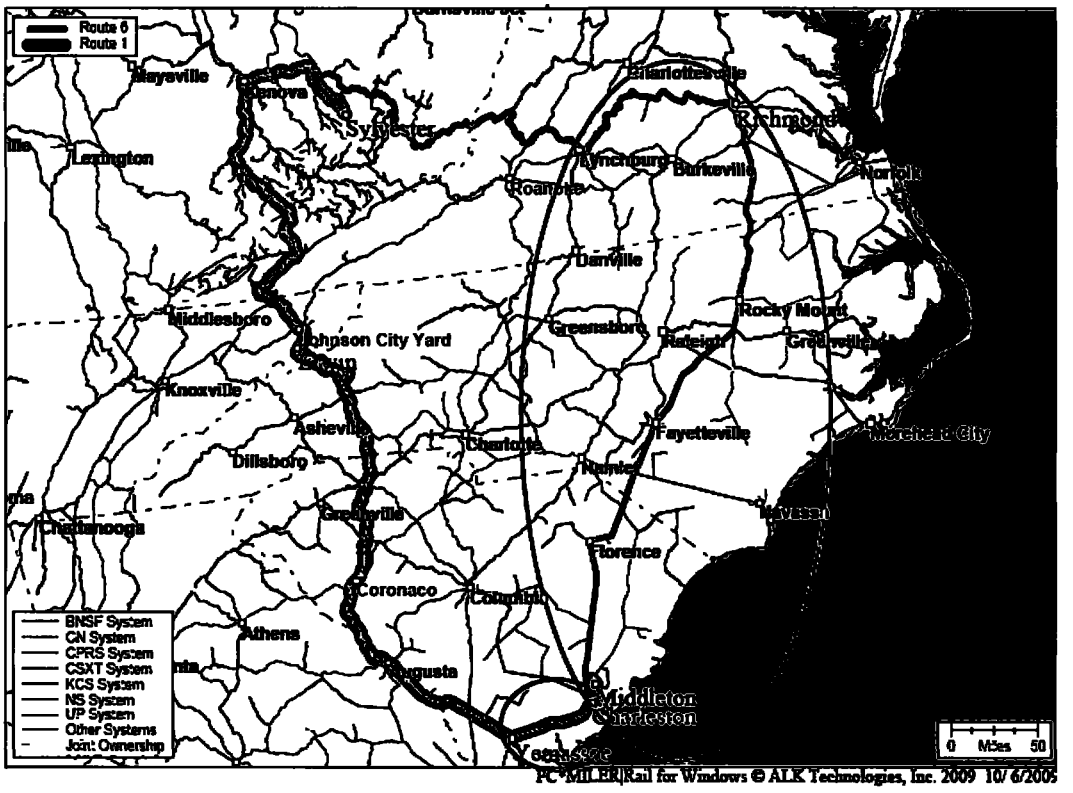
the residual CSXT to participate in a very substantial re-route, Seminole made no attempt whatsoever in its case-in-chief to make the showing required by the Board for allowable off-SARR re-routes. Seminole made no attempt to demonstrate how crossover traffic revenues should be allocated based upon CSXT's actual costs of moving the traffic, and it did not present an alternative SAC analysis without the lengthy, circuitous off-SARR re-route. *See WFA* at 15. Indeed, Seminole did not even disclose to the Board that it had engaged in this – or any other – off-SARR re-routes. Instead, it (mis)represented that all of its re-routed traffic was "internal to the SARR." *See* SECI Opening at III-C-53; III-A-5.

(b) Sylvester, WV to Middleton, SC

Another example of SECI's substantial, undisclosed off-SARR re-routing of crossover traffic is its radical re-routing of a coal movement originating in Sylvester, West Virginia, and destined for Middleton, South Carolina (a power plant outside of Charleston served by CSXT). Similar to the Hutchinson-Indiantown example above, as well as most of the coal traffic selected for the SFRR, SECI assumes the SARR would serve neither the origin nor the destination, but rather handle the cross-over movement as overhead traffic, via two hypothetical interchanges with the residual CSXT. *See* SECI Opening Ex. III-A-2. In the real world, CSXT moves this traffic over a north-south route that bisects the area between the eastern and western lines replicated by the SFRR, running through the rough geographic center of the "wishbone" lines of SECI's SARR. The CSXT routing does not remotely approach either arm of the SFRR until it reaches Yemassee in southern South Carolina, close to the end of the nearly 800-mile movement. More specifically, CSXT routes traffic between this O-D pair from Sylvester northwest to Big Sandy Junction, KY where it turns south to travel through the coalfields of eastern Kentucky and western Virginia and joins the Clinchfield system. *See* CSXT WP "Event Records.xlsx." The traffic follows the Clinchfield system through the Erwin gateway, and then continues south

through western North Carolina and western South Carolina to Spartanburg SC, and on to Augusta, GA. *See id.* The movement continues south and east to Yemassee, SC, where it turns northeast and travels to Charleston and then on to the destination power plant at Middleton, SC. *Id.* As illustrated in the following map, the only portion of CSXT's 787-mile actual routing replicated by the SARR is a 53-mile segment between Yemassee and Charleston, where the traffic would be returned to the residual CSXT for termination at the plant.

Map III-A 2: Sylvester, WV to Middleton, SC Actual Route and SECI Reroute



CSXT Actual
Corrected SARR On/Off Points:
Yemassee - Charleston
53 SARR Miles
787 Total Miles

Seminole
Seminole SARR On/Off Points:
Richmond - Charleston
393 SARR Miles
873 Total Miles

The route posited by SECI is radically different (*see* map above), traversing 904 rail miles – very little of which traces the actual CSXT route – moving east over CSXT lines to

Richmond before turning south to follow the Interstate 95 line replicated by the SFRR. From the Sylvester origin, the assumed SECI route moves over CSXT a short distance north to Liberty WV, and then travels east through Charleston WV. The re-route continues east on CSXT across Virginia through Lynchburg and on to Richmond, the on-SARR junction where SECI assumes the residual CSXT would hand off the traffic to the SFRR. At that point, the route turns south, and the SFRR moves the train down its eastern arm all of the way to Charleston, SC. At Charleston, the SFRR returns the train to the residual CSXT, which is assumed to move the train north to its termination at the Middleton plant. The contrived re-route postulated by SECI would travel over lines of the SFRR for 393 miles (from Richmond south to Charleston), a distance more than *seven times longer* than the 53 SFRR miles on the actual CSXT route of movement (from Yemassee northeast to Charleston). And the overall route SECI posits for the Sylvester-Middleton movement would be 86 miles – or more than 10 percent – longer than the actual CSXT route.

As illustrated by the foregoing examples, Seminole's assertion that its SAC evidence does not involve any off-SARR re-routes, when in fact it engaged in off-SARR re-routing for one-third of all SFRR coal O-D pairs, is a substantial misrepresentation to the Board. And the effects of this misrepresentation are not confined to failure to adequately account for the effects of the off-SARR re-routes on service to affected customers and on the residual CSXT.

By disregarding the actual routings for one-third of its SFRR coal traffic and inventing alternative routings, SECI has significantly overstated the on-SARR mileages, which results in overstated SFRR revenues. Table III-A-1 shows that by assuming new locations for hypothetical interchanges between CSXT and the SFRR that are not on the actual route of movement, SECI produces an average SARR coal traffic haul of 163 miles, which is more than 25 percent longer

than the distance that the SFRR's coal traffic would actually move on lines replicated by the SFRR. Moreover, SECI's re-routings result in an average On-SARR haul of 303 miles, nearly *three times longer* than the 115 miles that this traffic actually traverses on the CSXT lines replicated by the SFRR. *See* CSXT Reply Ex. III-A-1.

Table III-A-1: Average Length of Haul for SFRR Cross-Over Coal Traffic

	SFRR Portion	Residual CSXT Portion	CSXT Through Movement
SECI Assumed Routing	163	398	561
Actual CSXT Routing	129	409	538
SECI Overstatement (Understatement)	26%	-3%	4%

Even putting to one side Seminole's material misrepresentation to the Board, Complainant has utterly failed to meet its burden of demonstrating that such off-SARR re-routed traffic is allowable. This is a fundamental failure of proof involving nearly 19 million tons of SECI's SFRR coal traffic. *See* SECI Opening Ex. III-A-2 ; CSXT Reply Exhibits III-A-2 and III-A-3 Reply. An appropriate remedy for such a failure of proof is exclusion of all of that traffic from the SARR traffic base.

CSXT recognizes, however, that the Board has been reluctant to exclude significant evidence proffered by a complainant, even when that evidence fails to comply with basic rules and requirements established by the Board.[23] Accordingly, CSXT's Reply retains the O-D pairs

[23] CSXT's acknowledgement of the Board's reluctance to force complainants like SECI to live with the consequences of their failure to comply with established standards for justifying off-SARR re-routes is not intended, and should not be interpreted as agreement with such an approach. Rather CSXT urges the Board to stand behind its established standards and rules by excluding from the SFRR traffic base the numerous unjustified re-routes.

that SECI selected, but adjusts the routing to eliminate off-SARR re-routes and follows the actual CSXT route of movement for traffic between those O-D pairs.[24]

In most instances in which SECI's impermissible off-SARR re-routed traffic moved over a segment of the SFRR, the corrected routing also moves over a segment of the SFRR. For three destinations (power plants located at Terrell, NC; North Wateree, SC; and Dublin, GA) however, Seminole engaged in a particularly egregious form of off-SARR rerouting, by *changing the entire route of movement from* a CSXT routing that *involves no segment of the SARR*; to an entirely different routing, *in order to create SARR* traffic (because the movement would not travel on any part of the SFRR but for SECI's extreme re-routing). The example of a movement from Little Creek, KY to Terrell, NC illustrates the absurdity, and impermissibility, of these re-routes.

(c) Little Creek, KY to Terrell, NC

On the CSXT system in the real world, coal traffic originating at Little Creek, Kentucky and terminating at the power plant in Terrell, North Carolina is routed as follows. Departing Little Creek, the train moves east over the former L&N system through Harlan KY, Caylor VA and Big Stone Gap VA, where it turns south toward Frisco TN. It follows the Clinchfield system through the Erwin gateway to Bostic Yard, NC, whence it moves east on CSXT's Charlotte subdivision to Mt Holly, NC and then travels north to the Terrell plant. At no point

[24] In those few instances in which there is not a single or predominant route of movement over the CSXT system for the coal traffic in question, CSXT has followed Board SAC precedent regarding re-routed traffic by assigning traffic volumes in accordance with the proportion of actual volumes that moved over each of the routings, based upon the 2008 CSXT shipment and event records produced in discovery from which SECI selected its SARR traffic. See CSXT Reply WP "Event Records.xlsx"

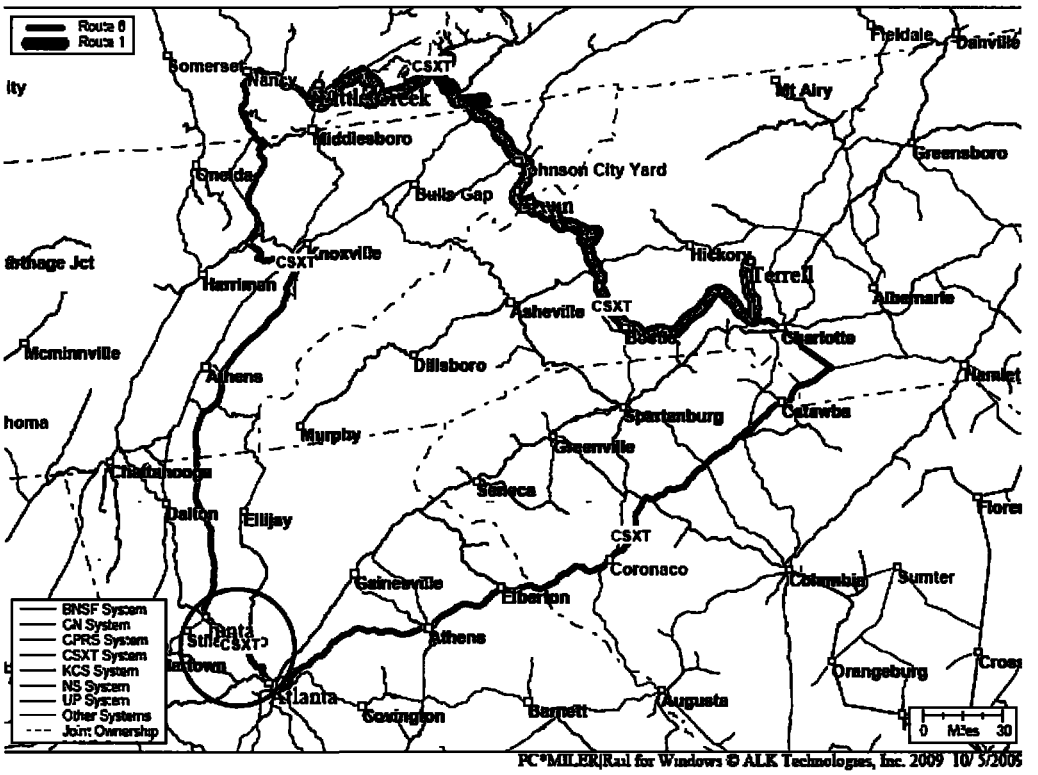
does the CSXT route travel on lines replicated by the SFRR.[25] The length of CSXT's actual route is 382 rail miles.

The routing hypothesized by Seminole, in contrast, proceeds *west* over CSXT from Little Creek to Corbin KY, where it turns south onto the Knoxville Division of the former Seaboard network. Following the former Seaboard route, the traffic continues south through Etowah, TN to Junta, GA, where SECI's evidence hypothesizes that CSXT would interchange the traffic with the SFRR. It then travels southeast on the SARR for 41 miles to Atlanta, where the SFRR returns the train to CSXT. From Atlanta, CSXT is assumed to move the traffic east and north along the Abbeville and Monroe subdivisions through Athens, GA and northeast through west central South Carolina. At Monroe, NC the train would turn to travel northwest, moving through Charlotte and then north to the Terrell plant. The wholesale re-route posited in Seminole's opening evidence would cover 653 rail miles, *more than two-thirds* (71 percent) *longer* than the actual routing over CSXT.

The actual route of movement over the CSXT system, and the re-routed cross-over movement proposed by Seminole are depicted in Map III.A.3 below.

[25] As explained, SECI's re-routing would alter the residual CSXT's operations in order to get traffic onto lines replicated by the SFRR. As a result of SECI's off-SARR re-routes, all three of the movements specifically discussed in this section, and numerous other movements re-routed (off-SARR) by SECI, would no longer follow their actual route of movement through the Erwin gateway. But the Erwin gateway is where CSXT performs fueling, inspection, servicing, and other important functions for coal trains from Central Appalachia. This is but one example of the myriad "inherent problems with such off-SARR rerouted traffic" that cause it to defy the requirement that crossover traffic revenues be allocated "in accordance with the defendant carrier's actual costs of providing the transportation service" on the On-SARR and off-SARR segments. *WFA* at 15 (STB "disinclined to permit such reroutes.")

Map III-A 3: Little Creek, KY to Terrell, NC Actual Route and SECI Off-SARR Reroute



Seminole
Seminole SARR On/Off Points:
Junta - Atlanta
41 SARR Miles
653 Total Miles

CSXT Actual
Corrected SARR On/Off Points:
None
0 SARR Miles
382 Total Miles

The Terrell, North Wateree, and Dublin re-routes are examples of especially egregious over-reaching by SECI, because they are CSXT movements that do not touch the SARR-replicated lines, which SECI attempts to force over a more circuitous re-route in order to generate SARR revenue. This effort to create and re-route crossover traffic is different in kind from "on-SARR" and "off-SARR" re-routes, and merits its own new category, "non-SARR" re-routes. Such non-SARR re-routes are the same gambit the Board rejected in a prior SAC case involving CSXT, *see Duke v. CSXT*, STB Dkt. No. 42070(2004) and for very good reason. Through the contrivance of non-SARR re-routes, Seminole attempts to generate SARR revenue while avoiding the capital investment costs necessary to serve that traffic in a rational, efficient

manner. As the Board established in *Duke v. CSXT*, "rerouting traffic in this manner is not consistent with the goals and purposes of the SAC test, as revenue from traffic that bears no relation to the SARR network should not be used to pay for the network." *Duke v. CSXT*, STB Dkt. No. 42070, Decision at 16 (served Feb. 3, 2004).[26]

Treating the non-SARR re-routes in the same manner CSXT treats other off-SARR re-routes from SECI's evidence would yield the same result as applying the *Duke/CSXT* rule – elimination of the non-SARR re-routed traffic. Unlike the other off-SARR re-routes addressed in this section, correcting the extraordinary non-SARR re-routes results in a movement that does not travel on the SFRR at all (because the actual CSXT routing does not include any lines replicated by the SFRR). As a result, even if the Board does not reject the non-SARR re-routed traffic at the outset, appropriate correction of the off-SARR re-routes would effectively exclude from the SFRR significant volumes of traffic terminating at Terrell, North Waterlee, and Dublin. This adjustment alone reduces Seminole's initial year (2009) SFRR volumes by 4.7 million tons. *See* Table III-A-2. Regardless of whether the Board excludes non-SARR re-routes as a matter of law, or adjusts those re-routes to eliminate off-SARR re-routing, those 4.7 million tons must be entirely excluded from the base year traffic.

[26] The Board indicated that it might consider allowing such non-SARR traffic re-routes in extraordinary circumstances where the complainant made a "compelling" showing "that the defendant carrier should itself be rerouting the traffic in this manner and it is inefficient for it not to do so." Id. At 16-17. In this case, however, Seminole has presented no analysis or argument whatsoever that even attempts to satisfy the Board's requirements for permissible off-SARR re-routes. Indeed, Seminole's narrative evidence attempts to conceal the existence of these and other off-SARR re-routes, claiming that the only re-routes it employed were a few on-SARR re-routes. See *supra* at III.A.1; SECI Opening III-A-5; III-C-53.

Table III-A- 2

	SECI 2009 SFRR Tons	Percent Impermissibly Re-routed	Reduction
North Wateree			
Bardo	116,560	100%	(116,560)
Blanton	58,094	77%	(45,001)
Blue Grass 4	45,646	100%	(45,646)
Leatherwood 1	32,100	100%	(32,100)
Little Creek	43,412	100%	(43,412)
Lynch 3	101,510	84%	(85,237)
Sarah	14,812	100%	(14,812)
Sigmon	15,169	100%	(15,169)
Typo	13,048	100%	(13,048)
Viall	111,773	75%	(83,599)
Wen Lar	93,174	85%	(79,387)
Terrell			
Blue Grass 4	377,041	100%	(377,041)
Buckeye 1	115,267	100%	(115,267)
Charlene	123,709	100%	(123,709)
Hilo	1,371,566	100%	(1,371,566)
Leatherwood 1	463,232	100%	(463,232)
Little Creek	1,584,262	100%	(1,584,262)
Dublin			
Balkan	12,592	80%	(10,074)
Charlene	10,276	100%	(10,276)
Resource	52,753	78%	(41,147)
Resource	19,701	78%	(15,367)
Total			**(4,685,912)**

In summary, SECI engaged in proscribed off-SARR re-routes between 170 O-D pairs for coal traffic alone, affecting 18.9 million tons of coal that SECI hypothesizes would be moved by the SARR. Exhibit III-A-1 to this Reply sets forth those numerous impermissible, but undisclosed, re-routes.

In addition to significant coal volumes, SECI attempts to re-route non-coal movements from their actual route on the CSXT system in the real world. Although CSXT did not adjust the assumptions that SECI put forth for carload traffic, it did correct the routing for thirteen different O/D pairs to be served in the bulk-train plan that CSXT developed to handle the SFRR volumes. For each of these thirteen O/D pairs, CSXT followed the same process (described above) for correcting the coal routings: using the 2008 event records produced to SECI in discovery, CSXT identified movements for which SECI's assumed On-SARR or Off-SARR locations were not on the actual route of movement that CSXT uses in the real world (thus constituting impermissible off-SARR re-routes). The following table summarizes the impermissible re-routes of SFRR bulk-train traffic that CSXT corrects in its reply evidence to incorporate the actual route of movement.

General Freight Re-route Corrections

CSX Origin City	CSX Origin State	CSX Destination City	CSX Dest. State	STCC	Corrected SARR Orig Station	Corrected SARR Dest Station	Original SARR Miles	Updated SARR Miles	% of Tons Impacted
1896. BESSEMER	PA	FAIRFIELD	AL	29	JUNTA	ATLANTA	1,271	41	100%
2130. CHICAGO	IL	RINCON	GA	26	JUNTA	ATLANTA	466	41	89%
2520. NEW WALES	FL	CHICAGO	IL	28	CALLAHAN	JUNTA	800	375	70%
2669 CENTRAL	FL	CHICAGO	IL	28	CALLAHAN	JUNTA	800	375	86%
2727. CRESTLINE	OH	WARSAW	NC	01	RICHMOND	CONTENTNEA	549	139	100%
2783. CRESTLINE	OH	TURKEY	NC	01	RICHMOND	CONTENTNEA	549	139	100%
2801. CRESTLINE	OH	ROSE HILL	NC	01	RICHMOND	CONTENTNEA	549	139	100%
2888. BREMEN	IN	ROSE HILL	NC	01	RICHMOND	CONTENTNEA	549	139	100%
3077. MORRISTOWN	IN	ANGUILLA JCT	GA	20	JUNTA	WAYCROSS	566	319	44%
3082. TOLEDO	OH	FAYETTEVILLE	NC	01	RICHMOND	FAYETTEVILLE	619	215	73%
3125. WEBBERVILLE	MI	VALDOSTA	GA	01	JUNTA	WAYCROSS	566	107	100%
3185. GRAND LEDGE	MI	MT OLIVE	NC	01	RICHMOND	CONTENTNEA	549	139	50%
3192. CRESTLINE	OH	MT OLIVE	NC	01	RICHMOND	CONTENTNEA	549	139	100%

iii. On-SARR Re-routes

SECI acknowledges that it engaged in on-SARR (internal) re-routing of two groups of traffic that it re-routed. *See* SECI Opening at III-C-52 to 53 This admission stands in contrast to SECI's mis-statements concerning the myriad off-SARR re-routes that SECI included in its SAC analysis in order to inflate SFRR revenues, but denied in its narrative evidence. *See* SECI Opening at III.A.1.b, *supra.* The two re-routed traffic groups that SECI discloses are internally re-routed, *i.e.*, routed over SFRR lines that differ from the CSXT lines used in the real world, but in a fashion that directly affects only the SFRR routing, and not the residual CSXT's off-SARR route of movement. These re-routes include shipments that travel on CSXT between Nashville, TN and Manchester, GA via Birmingham, AL that the SFRR would handle over its line via Atlanta, GA; and shipments that travel on CSXT directly between Waycross, GA and Jessup, GA that the SFRR would move via Folkston, GA. Unlike SECI's impermissible external re-routes, such internal re-routes are often allowed in a SAC analysis, so long as the SFRR incurs the appropriate costs of handling the traffic and providing adequate service to the customer. In the operating plan section of this Reply evidence (III-C) CSXT generally accepts these two internal re-routes, and makes operating plan corrections and other adjustments necessary to meet the handling and service requirements of that re-routed traffic.

2. Volumes (Historical and Projected)

Multiple significant errors in Seminole's traffic evidence cause it to substantially misstate both of the fundamental components of SARR traffic volumes, base year traffic and future traffic projections. The combined effect of these multiple, compound errors is a substantial overstatement of SARR revenues for each year of the analysis period, as well as misstatement of the peak year volumes that serve as the basis for SARR infrastructure, facilities, and equipment requirements and operating parameters and expenses. Below, CSXT describes the flaws in

Seminole's volume estimates and assumptions for each of the three major categories of SARR traffic: coal, intermodal, and general freight.

a. Coal Traffic

i. SFRR Base Year Tonnages – Non-issue Traffic

Seminole developed its base year SARR traffic by starting with 2008 actual traffic data produced by CSXT and "adjusting" them to hypothesize SARR coal volumes for 2009, the first year of SARR operations. *See* SECI Opening at III-A-7. There are two fundamental flaws in Seminole's approach to hypothesizing the SFRR coal volumes in its inaugural year of operations, 2009. First, Seminole relied exclusively on a January 2009 forecast as the sole basis for developing the volume of coal that it hypothesizes would move over the lines of the SFRR in 2009. CSXT generated this now badly outdated forecast over the course of 2008, based on economic assumptions and projections that have proven to be extremely optimistic and unrealistic. As a result, the January 2009 forecast significantly overstate *actual* coal shipment *volumes* over the CSXT system during that recently completed calendar year. Second, Seminole further inflated the volume of the traffic it selected by aggregating coal volumes originating from broad coal mine regions and treating all of those volumes (including non-SFRR mine origins that are not even served by the same origin network as the one that serves SFRR origins) as if they originated on, and move over, the lines of the SARR. While the Board indicated in one prior case that limited aggregation of volume from mine origins in the same vicinity as SARR origins might be allowable in some instances, the gross region-wide aggregation Seminole conducted in this case far exceeds the limits of the Board's rationale for allowing such limited origin shifting. Seminole's over-aggregation would undermine the fundamental principle that a SARR must make the necessary investments in road property, facilities, equipment, and operating expenses

needed to serve the selected traffic. Accordingly, Seminole's aggregation gambit in this case is a "bridge too far," and should be rejected.

(a) Use of Outdated and Inaccurate Forecast to Determine SARR Base Year Traffic Volumes

As the Board, Seminole, and everyone else, are painfully aware, the economic downturn and recession of 2009 was far worse than expected. More specifically, the deep, prolonged recession has caused an unprecedented drop in coal traffic volumes during 2009 that exceeded all expectations.[27] Like nearly every other economic forecast developed or issued in the last half of 2008 and early 2009, CSXT's coal traffic forecasts issued a year ago (in January 2009) were materially erroneous.[28] Despite abundant evidence that CSXT's January 2009 forecast was inaccurate – including multiple express warnings provided by CSXT to SECI in this very case – SECI doggedly insisted on using that inaccurate and outdated forecast to develop its SARR coal traffic volumes included in its case-in-chief filed eight months later. As demonstrated below, SECI's obdurate failure to take account of actual declining coal volumes and downward revisions to forecasts *alone* caused it to overstate base year SFRR coal volumes by 25 percent, or 16 million tons.

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[27] The 8.6 percent decline in U.S. coal production in 2009 is the greatest annual percentage reduction since 1958, more than 50 years ago. *See* EIA Annual Energy Review 2008 Table 7.2.

[28] *See, e.g.*, U.S. Energy Information Administration ("EIA"), An Updated Annual Energy Outlook 2009 Reference Case Reflecting Provisions of the American Recovery and Reinvestment Act and Recent Changes in the Economic Outlook, Summary Section 4, "Update of Macroeconomic Assumptions" (April 2009) (noting that EIA's AEO 2009 was based on November 2008 macroeconomic projections but that substantial downward adjustments in "all macroeconomic forecasts" since that time necessitated issuance of revised forecasts in April 2009: "[S]ince November [2008] all macroeconomic forecasts have reduced their short-run economic growth projections and delayed the beginning of the eventual economic recovery.")

(i) Substantial Changes in Coal Markets and the Economy Compel Use of More Current Data

Partly because of the unprecedented decline in coal shipment volumes, the Energy Information Administration took the extraordinary step of issuing a revised, updated Annual Energy Outlook ("AEO") in April 2009. The EIA's AEO is the neutral, objective annual agency forecast the Board has adopted and used for several years as the basis and standard for coal volume projections in SAC cases. *See, e.g., Duke Energy Corp. v. Norfolk Southern Railway*, STB Dkt. No. 42069, Decision at 60 (served Nov. 6, 2003). EIA typically issues only one AEO per year, but extraordinary events and economic conditions in late 2008 and early 2009 compelled it to issue a substantially revised AEO in April 2009. The Updated AEO was developed and issued primarily to account for two factors: (i) the substantially greater severity and projected length of the current economic downturn; and (ii) the projected effects of new federal government programs and regulations embodied in the American Recovery and Reinvestment Act enacted in February 2009. The updated analysis issued in April forecast that 2009 coal production for the Central Appalachian and Eastern Interior regions would be *9.6 percent and 9.2 percent lower*, respectively, than the forecasts the EIA itself issued barely one month earlier. *See* CSXT Reply WP "AEO Comparison.xlsx." The overall forecasts for all Eastern coal in the April AEO were down eight percent from the AEO issued in January. If EIA's forecasts in January, March, and even April failed to adequately capture the negative effect of the 2009 economic downturn, surely CSXT's January 2009 forecast could not be expected to accurately predict the downturn. And, as actual 2009 CSXT coal traffic volumes show, it did not. Numerous other forecasts and projections issued during the course of 2009 similarly projected greater declines in coal shipment volumes than those issued near the beginning of the year.

Moreover, CSXT's actual coal shipment records for the first three quarters of 2009 show that CSXT's coal volume {{

}}, and far below CSXT's January 2009 forecast. In the first three quarters of 2009, CSXT moved 102 million tons of coal originating from mine origins in Central Appalachia, Northern Appalachia, or the Illinois Basin, the three main coalfields from which Seminole posits the SFRR would move coal. *See* CSXT WP "CSXT 2009 Coal Actuals.xls". This represents a decline of 15 percent from the same period in 2008, and an 11 percent greater decline in carloads than projected in CSXT's annual forecast issued a year ago in January 2009.

Given the unpredicted decline in actual coal traffic and significant downward revisions in other relevant forecasts for 2009, it is not reasonable to use an outdated and inaccurate forecast from the first month of last year as the basis for SARR base-year traffic. In the face of actual events and data, as well as uniform downward revisions by virtually every economic and business forecasting entity, both logic and the interests of accuracy compel the substitution of more current forecasts and *actual* traffic data for prior forecasts that are indisputably erroneous and materially overstated. *See Duke Energy v. Norfolk Southern Railway Corp. et al,* STB Nos. 42069, 42070, 42072, Decision at 8-9 (STB adopted, on reconsideration, revised EIA coal volume forecasts due to changes in EIA forecast *after the close of the evidentiary record*). Indeed, blind application of coal traffic forecasts that actual experience – in the form of actual CSXT coal shipment volumes and a well-publicized general market decline -- has shown are materially erroneous would distort the SAC analysis from the very outset (by misstating traffic volume from the first year of SARR operations), and eliminate any possibility of accurate or meaningful analysis or results in this case.

It is important to note that, to the extent there has been unusual delay in the development and filing of evidence in this case, that delay is attributable to the actions and requests of Complainant. Shortly after filing this case, SECI requested a longer discovery period and a longer time for filing evidence than provided by the Board's regulations. CSXT opposed that request. In response, the Board established a substantially longer procedural schedule than provided in its regulations. *See Seminole Elec. Coop, Inc. v. CSXT,* STB Dkt. No. 42110 Decision (served Dec. 11, 2008) (extending the time for filing opening evidence to June 1, 2009). Later, SECI requested another extension of the procedural schedule, indicating that it needed additional time to develop its opening evidence. The Board granted that request, extending the deadline for SECI's opening filing to July 31, 2009. *See SECI v.* CSXT, STB Dkt. No. 42110 Decision (served May 9, 2009). Later, SECI filed yet another request for extension of time, which the Board granted in a July 2009 order. *See SECI v. CSXT,* STB Dkt. No. 42110, Decision (served July 13, 2009) (extending the time for filing opening evidence to August 31, 2009).

(ii) SECI Should Have Calculated SARR Volumes Using Current, More Accurate Data and Forecasts, Which Were Readily Available

Heedless of the fundamental need for accurate base-year traffic volumes as the foundation for a sound SAC analysis, however, SECI did not adjust SARR traffic projections to eliminate distortions resulting from the use of outdated and overstated traffic projections. In the face of overwhelming, and indisputable evidence of substantial further deterioration in coal shipment volumes, Seminole's opening evidence nonetheless used undeniably overstated CSXT forecasts from January 2009 as the basis for SFRR base-year coal volumes. As demonstrated below, SECI has no reasonable basis to claim that: (i) it was not aware of the substantial further decline in CSXT coal volumes during 2009, or that it did not know that CSXT's January forecast

was unreliable and could not be used to project 2009 traffic volumes accurately without substantial adjustment; or (ii) it could not have made appropriate adjustments to SFRR traffic volumes using data and information available when it filed its evidence.

First, SECI cannot excuse its failure to conform its SFRR traffic volume evidence to reality by asserting that it relied on a CSXT forecast. SECI knew very well when it filed its evidence at the end of August that CSXT's January forecast significantly overstated 2009 coal traffic volumes. Indeed, *CSXT expressly warned Seminole* on multiple occasions in the Spring of 2009 that the January forecast did not accurately project CSXT traffic volumes, and provided additional data to assist Seminole in making appropriate adjustments. In May 2009, CSXT supplemented the traffic data it had produced previously by producing full system traffic and event files and data for the first quarter of 2009. CSXT specifically drew SECI's attention to the fact that the data showed that CSXT traffic volumes had declined substantially more than CSXT had projected in January 2009, and suggested that SECI use this actual traffic and revenue data to develop more accurate 2009 traffic volume estimates:

> You will note that the enclosed traffic files show a substantial, continuing decline in CSXT traffic volumes, to levels below those CSXT forecasted as recently as January 2009. This illustrates the substantial uncertainty that characterizes current economic and market conditions faced by rail carriers and their customers. We are furnishing this traffic data to assist SECI in developing its SAC evidence and presentation using more current actual volume and revenue data.

P. Hemmersbaugh Letter to K. Dowd, C. Mills (May 22, 2009) (emphasis added), CSXT WP CSXT May 22 Letter.pdf". Thus, SECI not only had express notice from CSXT that the January 2009 forecast was inaccurate and had been overtaken by market events and conditions, it had actual CSXT 2009 traffic volume data that it could – and should – have used to confirm the inaccuracy of the January forecast and to develop more accurate SARR volume estimates. At the

end of the letter, CSXT repeated its admonition that the January 2009 forecasts previously produced were inaccurate and unreliable, and advised SECI that substantial adjustments would be necessary to develop accurate traffic volumes, stating:

> [I]n light of recent economic events and conditions, the annual long-range (five-year) forecasts that CSXT completed in January 2009, and previously produced to SECI in this case, substantially overstate realistic volume and revenue projections for the five-year period covered by those forecasts. Because CSXT's January 2009 forecasts did not anticipate the magnitude or extent of the current downturn and deterioration in economic conditions, we caution SECI that those CSXT forecasts are not reliable and require significant downward adjustment.

Id. (emphasis added). The following month (nearly three months before SECI filed its evidence), CSXT again reminded SECI that the January 2009 forecasts were inaccurate and that CSXT had produced actual real-world volume data that SECI could use as a basis for developing 2009 traffic levels, stating, in part:

> While CSXT's actual experience has shown that the January 2009 forecasts produced in this case substantially overestimated year-to-date actual traffic volume in 2009, this is the result of incorrect assumptions and predictions of future market conditions, not [data errors]. . . . . Moreover, for calendar year 2008 and the first quarter of 2009, CSXT has produced actual traffic and revenue data. There is, of course, no reason to use outdated forecasts for any period for which actual traffic and revenue data are available.

Hemmersbaugh Letter to Dowd, Mills at 2 (June 3, 2009) (emphasis added), CSXT Reply WP "CSXT June 3 Letter.pdf" SECI willfully ignored these clear, express warnings and notice, and instead chose to apply the erroneous and overstated January 2009 forecast without modification to generate its base-year SFRR coal volumes. *See* SECI Opening at III-A-7. The result is that, from the very outset, SECI knowingly and substantially overstated SFRR traffic volumes.

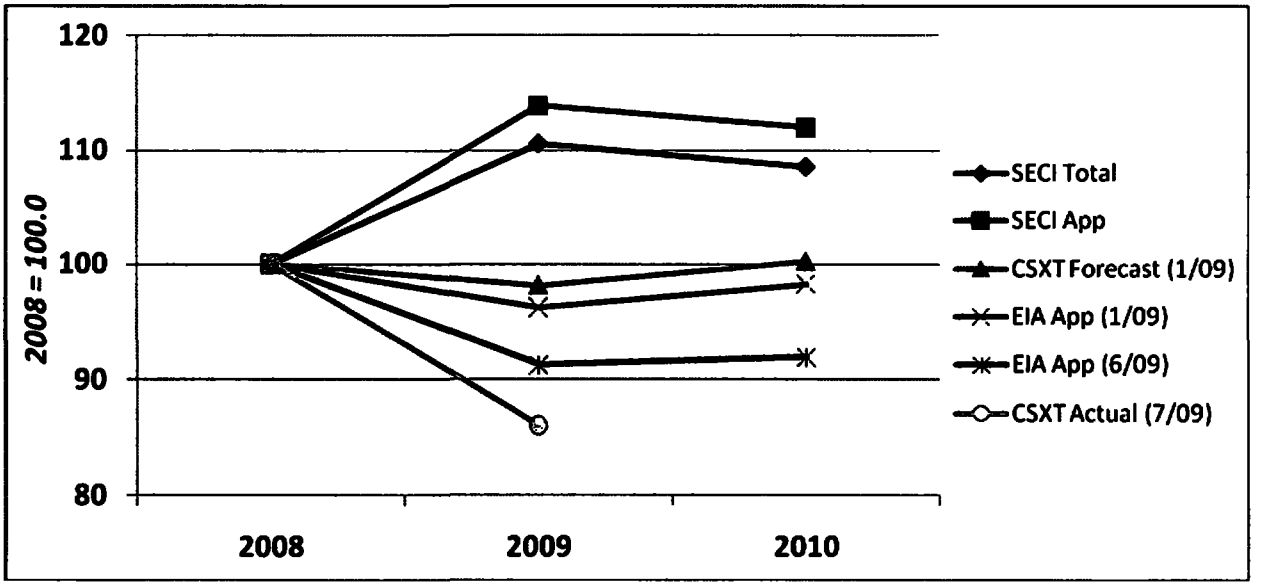
Second, Seminole cannot claim that it applied a forecast it knew was inaccurate because it had no more accurate alternative basis for SFRR base-year traffic volumes. Again, SECI had

actual CSXT traffic volumes for the first quarter of 2009. *See* CSXT Reply WP "CSXT June 3 Letter.pdf". Obviously, even the best forecast could not reflect traffic volumes for a particular period as well as the actual traffic records for that period. But Seminole declined to use that actual traffic data, preferring to rely upon a forecast that it knew was materially flawed and inaccurate.

Moreover, at the time Seminole filed its evidence, there were numerous public data sources it could — and should — have used to adjust 2009 SFRR coal volumes to more closely represent actual contemporaneous economic and market conditions. For example, EIA's revised 2009 AEO had been available for more than four months when SECI filed its evidence. SECI was indisputably well aware of the April 2009 AEO, because the Complainant used that forecast to project future coal volumes. *See* SECI Opening at III-A-10. Moreover, in July 2009, EIA's Short Term Energy Outlook showed an *additional* two percent decline for Appalachian and Interior coal volumes in comparison to the (already downward revised) April AEO.[29] CSXT's public financial reports in 2009 showed year-over-year declines in coal volume shipments of 114,000 tons, or 13 percent during the first half of the year. *See* CSX Quarterly Financial Report, Second Quarter 2009, at 8. The following graph illustrates the magnitude of coal volume overstatement in the SFRR's first year of operation alone as a result of SECI's failure to adjust its coal volume assumptions in light of actual events and experience prior to the filing of its Opening evidence in at the end of August 2009.

[29] The EIA's Short-Term Energy Outlook ("STEO") is published monthly with "base case" projections for a variety of energy prices and volumes. Projections extend 12 to 24 months (every January the STEO forecast is extended through December of the following year).

Figure III-A-1: Comparison of SECI and CSXT Forecasts to Other Coal Volume Projections Available as of Summer 2009



Despite the wealth of available recent data and projections – all showing that coal traffic volumes have declined significantly more than CSXT and others had projected in late 2008 and early 2009 – SECI relied on an outdated, erroneous forecast to substantially inflate and overstate SFRR base-year coal traffic volume. There can be no real dispute that SECI's inaccurate approach generated overstated SFRR base-year volumes, and that those inflated volumes must be corrected. The question is how should those volumes be adjusted to better reflect actual coal traffic volumes transported by CSXT over the lines replicated by the SFRR in 2009? For the first three quarters of 2009, the best and most accurate methodology is to avoid the use of projections altogether and use actual CSXT traffic data. *See, e.g., Duke v. CSXT,* STB Dkt. No. 42070, Slip Op. at 44 (Feb. 4, 2004) (Board prefers actual traffic data over forecasts for purposes of establishing SARR volumes, and will request parties to submit actual traffic data even after the close of the record, in order to "limit[] the amount of forecasting required."); *Arizona Public Service Co. v. ATSF*, 2 STB 367, 382 (1997) (Board used updated actual traffic

data for first three quarters of a year, submitted on rebuttal, that showed a significant decrease in traffic over forecast levels).

CSXT's traffic records for the first three quarters of 2009 – showing the *actual* coal traffic volumes that moved over the CSXT system during that period – have been finalized and are now available.[30] CSXT used those files and data to derive actual volumes for all of the traffic appropriately selected for inclusion in the SFRR in the first three quarters of 2009, the SFRR's first year of operation.[31] Because CSXT's full-year actual traffic data for 2009 were not available in time for inclusion in this Reply evidence, CSXT has used current EIA projections to estimate volumes for the final quarter of 2009.

CSXT decided to use EIA forecasts as the basis for fourth quarter 2009 SFRR coal volumes in its Reply evidence because EIA is the neutral, independent government agency source preferred by the Board for coal volume forecasts in the absence of appropriate forecasts developed in the normal-course-of-business by the defendant carrier. *See, e.g., AEP Texas North Company v. BNSF Railway Co.*, STB Dkt. No. 41191 (Sub-No. 1), Decision at 16, 32 (served Sept. 10, 2007); *Duke Energy et al v CSXT et al,* STB Dkt Nos. 42069, 42070, 42071 Decision at 6 (served Oct. 20, 2004).[32] In order to derive fourth quarter estimates, CSXT used EIA's Short

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[30] CSXT submits with this evidence files containing its actual traffic data for January 1 through September 30, 2009. See CSXT WP "CSXT 2009 Coal Actuals.xls" As discussed above, the unusual lapse of time between the conclusion of discovery and the filing of CSXT's Reply evidence in this case is due entirely to the multiple schedule extensions sought and obtained by Complainant. Seminole has little standing to object to the use of more current – and more accurate --actual traffic data generated during the pendency of a case whose schedule was extended (three times) at its sole request.

[31] As established, CSXT's 2009 annual forecast is not a reliable or appropriate basis for estimating 2009 coal traffic volumes.

[32] Because there is no appropriate CSXT forecast available to estimate traffic volumes for the last three months of 2009, CSXT has used the most current EIA forecast available at the time it was finalizing coal traffic volumes for this Reply evidence. CSXT anticipates that its full-year actual traffic data for 2009 will be available soon. If the Board wishes, CSXT could submit that

Term Energy Outlook issued in November 2009, and determined the portion of overall coal volumes EIA attributed to the fourth quarter for 2009 for each coal production region. CSXT then applied the resulting ratio to actual CSXT traffic volumes for SFRR movements in the first three quarters of 2009, to develop an accurate estimate of appropriate SFRR traffic volumes for the fourth quarter of 2009. Finally, CSXT added to the actual volumes for the first three quarters of 2009 the extrapolated volume estimates for the fourth quarter to develop full-year SFRR traffic volumes for 2009. *See* SECI WP "Exhibits III-A-2" and "III-A-3.xlsx"; CSXT Reply WP "Exhibits III-A-2" and "III-A-3 Reply.xlsx." CSXT's process establishes a sound and reliable estimate of the volume of coal traffic selected by Seminole that actually moved over the lines replicated by the SFRR in 2009. Using the described approach, CSXT estimates that the total volume of coal that would be moved by the SFRR in 2009 is 64.4 million tons which is 22% lower than the overstated volume posited by SECI.[33]

(b) Shifting Volumes from Origins On a Different Network

The second fundamental flaw in Seminole's development of SFRR coal traffic volumes from 2009 through 2013 is its aggregation into SARR traffic of coal volumes originating from widely dispersed mines that are served by different rail lines, divisions, routes and origin networks, but not served by the SFRR. In hypothesizing 2009 SFRR volumes, Seminole included CSXT 2009 forecast volumes not just for origins from which CSXT actually moved

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data to the Board (designated Highly Confidential under the governing Protective Order), to allow it to consider whether to use full year actual data to establish 2009 SARR traffic levels instead of using EIA projections for the fourth quarter of 2009. See, e.g., Duke v. CSXT, STB Dkt. No. 42070, Slip Op. at 44 (Feb. 4, 2004) (Board stated intention to request that parties submit actual traffic data even after the close of the record, to "simplify the rate case process by limiting the amount of forecasting required.").]

[33] This corrected SFRR coal volume estimate also includes corrections to impermissible re-routings and other coal traffic volume adjustments described previously in this section.

traffic in 2008 over lines replicated by the SFRR, but also for additional geographically dispersed mine origins served by CSXT across entire EIA *regions* (*e.g.*, Central Appalachia or Northern Appalachia).[34] *See* SECI Opening at III-A-8. Through the device of hypothetical shifting and aggregation of coal volumes from distant mine origins, Seminole seeks to artificially inflate 2009 SFRR volumes from mines that originated coal traffic selected (from 2008 CSXT traffic data) for the SFRR. However, the 2009 CSXT forecast on which SECI purports to rely does not project such increased volumes from those 2008 origins. In some instances the CSXT forecast – which itself substantially overstates actual 2009 volumes -- projected significant *decreases* in volumes shipped from those origins in 2009 and later. This origin shifting and volume aggregation tactic is materially different from the *ad hoc* remedy fashioned by the Board under the exceptional circumstances of the single prior case relied upon by SECI, *Carolina Power & Light v. Norfolk Southern Ry.*, STB Dkt. No. 42072. ("*CP&L*").

In *CP&L*, the Board did relax certain SAC requirements and principles in a manner that effectively allowed a complainant to inflate volumes from certain SARR-served origins.[35] However, the similarity between this case and *CP&L* ends there. For several independent reasons, *CP&L* provides no basis for the Complainant's attempted volume shifting in this case.

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[34] Each EIA coal production region is quite large, covering tens of thousands square miles and extending across several States. The Northern Appalachia region includes portions of Pennsylvania, Maryland, Ohio, and Northern West Virginia. See EIA Annual Energy Outlook 2009, Table 121. The Central Appalachia region includes Southern West Virginia, Virginia, Eastern Kentucky, and Northern Tennessee. *Id.* The Eastern Interior region includes Illinois, Indiana, Mississippi, and Western Kentucky. *See id.*

[35] As explained below, the Board countenanced such artificial origin inflation only because the complainant was denied access to traffic data for SARR-served mines that did not originate SARR traffic in the base year, but could originate coal destined for SARR destinations in the first year of SARR operations. *See CP&L,* STB Dkt. No. 42072, Decision at 15-18 (served December 22, 2003).

(i) CP&L Was *Sui Generis* and Provides No Basis for Inflating Coal Traffic Volumes Here

In order to explain the difference between *CP&L* and SECI's gambit in this case, it is necessary to summarize the relevant facts of *CP&L*. In *CP&L*, the complainant selected its SARR traffic from the defendant carrier's traffic records and data for 2001, but the first year of SARR operation was 2002. The defendant carrier's coal traffic forecast for 2002 projected that some 2001 SARR origin mines would *not* move coal to SARR destinations in 2002. *See id.* The same forecast also projected that certain SARR-served mines that did not ship coal to SARR origins in 2001 *would* move coal to SARR destinations in 2002. During the course of the case, the defendant produced actual traffic data for 2002, but confined that data to traffic that originated at SARR-served mines in 2001. *See* CP&L at 16-17. Because the defendant had not produced traffic data for SARR-served origins that did not move traffic to SARR destinations in 2001, the complainant was unable to determine the actual volumes shipped from those SARR origins and destinations in 2002, the first year of SARR operations. *See id.* at 16-18. The Board found that the incomplete 2002 traffic data would have inappropriately prevented the complainant from including in SARR volumes the additional 2002 traffic from SARR-served mines that did not originate SARR traffic in 2001. *Id.*

Because actual traffic data for all mine origins served by the SARR were available for 2001 (the traffic "base year"), the Board determined first-year (2002) SARR traffic volumes by using the 2001 traffic selected by the complainant and indexing it to 2002 levels using an EIA index. *See id.* at 17-18. In explaining its decision to index 2001 traffic to 2002 rather than using the 2002 actual traffic data that excluded certain SARR-served origins, the Board noted that real world coal shippers sometimes make annual shifts between mine origins served by the same carrier. *Id.* at 16-17.

The Board essentially reasoned that coal traffic that a shipper shifts from one mine served by the SARR to another served by the SARR in the same geographic area (*e.g.*, in the same mine origin rate district) is not volume the SARR has lost, but rather a fungible volume the SARR would transport to the same destination from another origin. *See id.* at 16-17 (2004).[36] Because the 2002 traffic data did not include all SARR-served origins to which 2001 traffic might have shifted, the Board relied on the volumes of the traffic selected for the SARR from 2001 carrier data (which did not exclude any origins), indexed to 2002 by the applicable EIA coal volume growth rate. *See CP&L* at 16-18.

Properly understood in context, the Board's ruling in *CP&L* was an extraordinary remedy fashioned by the Board to address the potential inequity resulting from the defendant carrier's production of materially incomplete traffic data for the SARR's initial year of operation. There is no indication in the *CP&L* decision that the Board would have applied this peculiar remedy – or even discussed origin shifting – if the complainant had access to the defendant carrier's full system coal traffic data for the relevant period. *See generally CP&L* at 16-18. Given that no SAC case has ever allowed even the limited sort of origin volume shifting discussed in *CP&L* – assuming shifts of volumes from other origins *served by the SARR* in the same geographically compact origin cluster – it appears the origin-shifting discussion in *CP&L* is confined to the unique facts and circumstances of that case. For the following additional reasons, the unique

[36] CSXT does not agree that the type of traffic volume aggregation discussed (but not applied) in CP&L is appropriate or consistent with SAC principles and requirements. Accordingly, the Board were to decide to use the outdated January 2009 CSXT forecast to estimate SFRR traffic volumes, CSXT requests that revisit and more carefully consider the dicta discussion of origin shifting in CP&L. Because CSXT recognizes that the Board may allow the type of limited aggregation discussed in CP&L, however, this Reply evidence has accepted SECI's traffic volume projections to the extent they are based on hypothetical origin shifting and aggregation similar to that discussed in CP&L. The over-aggregation and volume shifting described in the remainder of this section is confined to those instances in which SECI went well beyond the limited aggregation discussed in *CP&L*.

ruling in *CP&L* does not authorize the drastic origin shifting and volume aggregation SECI attempts in this case.

First, in *CP&L,* the Board did not actually engage in origin volume-shifting. Rather, the Board made a case-specific remedial decision to allow the complainant to credit the SARR with coal traffic volume that the defendant carrier moved in the base year but which the defendant projected would not move in the following year. *CP&L* at 17-18. As partial support for this unprecedented *ad hoc* remedy, the Board discussed the possibility that, over time, SARR shippers might change coal mine sources from a particular mine to another nearby mine. *See id.* Contrary to SECI's impression, *CP&L* does not stand for the proposition that a SAC complainant may assume that the laws of physics would be suspended to cause coal volumes from multiple geographically dispersed origins to instead originate at a different mine origin(s) located elsewhere.

Second, there is no basis or justification in the facts and circumstances of this case for application of the extraordinary remedy the Board applied in *CP&L.* In that case, the Board effectively inflated traffic volumes from base-year (2001) origins as a remedy for the defendant carrier's failure to provide traffic data for other SARR-served origins for the SARR's initial year or operations (2002). *See CP&L,* 17-18. In this case, CSXT produced in discovery full-system traffic data for 2007, 2008, and the first quarter of 2009. And, CSXT is producing with this filing full system traffic data through third-quarter 2009.[37] Because SECI has more than ample traffic data for all origins (and destinations) served by CSXT, there is no sound basis for the

[37] By replacing the obsolete and inaccurate January 2009 forecast with actual CSXT traffic volume data, this Reply obviates the need for the Board to consider SECI's origin shifting tactic in this case. In the interest of completeness, upon request CSXT would be willing to produce its fourth quarter 2009 coal traffic data (designated as Highly Confidential) as soon as it has been processed and becomes available, which should be in early February, well before SECI is scheduled to file its rebuttal evidence.

Board to waive or distort SAC principles and analysis by allowing the gross region-wide origin shifting SECI proffers in this case.

Third, unlike SECI's present effort to inflate SFRR traffic, the origin shifting discussed by the Board in *CP&L* was from mine origins actually *served by the SARR*. Indeed, the very passage of the *CP&L* decision that SECI quotes makes clear that the origin shifting contemplated by the Board was confined to origins actually served by the SARR:

> The better approach is to . . . . view the particular coal traffic that moved over those lines in 2001 as representative of the aggregate traffic that would be expected to move on the [SARR] in future years. Thus, the fact that some traffic would not continue to move from a specific mine to a specific destination throughout the SAC analysis period does not mean that other traffic would not move from the mines served by the [SARR]

SECI Open III-A-10 (quoting *CP&L* at 17) (emphasis added). In this case, the SFRR does not serve the overwhelming majority of the origins from which it attempts to shift traffic – nearly all of the shifted volumes would be crossover traffic. However, SECI's case-in-chief makes no attempt to account for the different costs (e.g. capital costs for infrastructure, facilities, operating expenses, etc.) of serving traffic that would move along different routes between the distinct O-D pairs. Nor does it include ATC calculations or revenue allocations for the crossover traffic between those additional O-D pairs. Thus, aggregation of volumes from geographically distant non-SARR origins would simultaneously distort both SARR revenues and SARR costs, thereby substantially undermining the accuracy and soundness of the SAC analysis and the reliability of its results.

Fourth, the evidence submitted by the parties in *CP&L* indicates that even CP&L did not attempt to aggregate volumes from mines dispersed across entire coal production regions. Instead, CP&L sought to aggregate volumes from geographically compact origin "clusters," which apparently were akin to mine rate districts or gathering districts. *See, e.g.,* CP&L Rebuttal

Evidence at III-A-2 to III-A-5, *CP&L v. NS*, STB Dkt. No. 42072. (evidence filed Nov. 27, 2002); *see also id.* CP&L Reply Evid. At II-A-1 (defendant's mine origin variable costs calculated on a "station group" or mine district basis).[38] Apparently, the volume aggregation proposed by CP&L was limited to traffic originating from mines within the same origin clusters. *See id.* at III-A-3 to 5. SECI's "aggregation" approach, in contrast, would shift traffic between mines that are hundreds of miles apart, thereby causing impermissible re-routing, and requiring the residual CSXT to modify its operations in order to handle to traffic between mine origins and new on-SARR points.[39] *Cf. WFA* at 15.

(ii) SECI's Volume Aggregation Would Create Impermissible Off-SARR Re-routes.

Implicit in Seminole's attempted aggregation of projected traffic volumes from geographically dispersed mine origins across an entire EIA region is the assumption that all traffic movements to a given destination, regardless of the location of the mine origin or the rail lines and networks that serve them, or the relative length of the haul, or any other variable, are interchangeable for purposes of SAC analysis. This assumption is fallacious and, as applied by SECI, violates the Board's rules concerning off-SARR reroutes.

SECI's attempted aggregation of volumes across broad coal producing regions would create off-SARR re-routes without the supporting evidence and analysis required by the Board.

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[38] Copies of the foregoing evidence excerpts from *CP&L v. NS* are included in the workpapers. *See* CSXT Reply WP "CPL 2002 Excerpts.pdf" The evidence also indicates that defendant carrier's forecasts were made on an origin cluster basis, and (unlike the CSXT forecasts at issue in this case) did not include individual projections for each origin mine within a "cluster." *See id.,* CP&L Reb. At III-A-3, n. 2. Thus it appears that, in CP&L, unlike in this case, the origin cluster volume distribution approach proffered by the complainant was necessitated by the level of aggregation in the forecast the complainant used to project SARR volumes. *See id.* ,CP&L Rebuttal at III-A-3 to 5.

[39] For example, a portion of the tons to Cross in the forecast from Little Creek KY (on the L&N/Seaboard network) are allocated to Fork Creek WV (on the C&O WV) even though the two origins are over 300 miles apart.

See WFA at 15 (proponent of off-SARR re-routes must present alternative SAC analysis without those re-routes and demonstrate how to allocate crossover revenues using defendant carrier's *actual* costs).[40] SECI elected not to build the SFRR to *any* of the Kentucky and West Virginia mines in the Central Appalachian region that originate the majority of SFRR coal traffic. Largely as a result of that decision, most of the projected coal movements from additional origins that SECI attempts to lump together with 2008 SFRR traffic would themselves be crossover traffic, originated by the residual CSXT.

Because in many instances those additional, geographically dispersed mine origins are served by different lines, segments, and sub-networks of the CSXT system, CSXT movements of coal traffic from those additional origins to a given destination follow different routes than the CSXT route for traffic from the 2008 origin to that same destination. Shifting projected traffic from such additional origins to 2008 origin-destination pairs – as SECI did in its opening evidence – results in different routing for that crossover traffic over the residual CSXT. That is, SECI's aggregation of CSXT coal traffic volumes originating from geographically dispersed origins located on different lines, and different mine origin networks of the CSXT system creates "off-SARR re-routes," which are presumptively impermissible in a SAC analysis. *See WFA* at 15.[41] Such off-SARR re-routes are also impermissible because they would require modifications

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[40] If allowed, SECI's volume aggregation and origin shifting tactic, and the routing alterations it tacitly assumes, would also distort most other key components of its SAC analysis, including its SARR configuration, operating plan and expenses, and road property investment.

[41] For example, CSXT coal traffic originating at mines in the central West Virginia area of EIA's Central Appalachian ("CAPP") region follows an entirely different route than CSXT traffic originating at coal mines in the southern Kentucky area of the same CAPP region. By simply assuming tons moving from origin A (in central West Virginia) to destination C (in Florida) will materialize at an origin B (in southern Kentucky) that is located on a different CSXT line segment or sub-network from origin A, however, SECI has failed to determine and include in its SAC analysis the costs and revenues of movements from A to C over its actual route. Failure to take into account the cost and revenue effects of off-SARR re-routes is the primary reason the

to CSXT operations on the segments of the movement that would be handled by the residual CSXT, without accounting for associated additional costs. *See, e.g., Duke Energy Corp. v. Norfolk Southern Railway Co.*, STB Dkt. No. 42069, Decision at 30 (served March 25, 2003).

The very example used in SECI's own evidence illustrates the problem with its overly broad aggregation approach. See SECI Opening at III-A-8 to 9. As Seminole notes, "[C]oal moving to {{ }} in 2008 originated at mines in CSXT's Beem, Big Sandy, and Kanawha rate districts. However, the 2009 CSXT Forecast projects shipments to {{ }} . . . from mines in the New River District." *Id.* at III-A-8. What Seminole does not discuss, or account for is that the mines in the Beem, Big Sandy, and Kanawha rate districts are on a different geographically separate rail network from those in the New River district, and coal traffic moving from the separate and district New River to {{ }} does not "move over the lines replicated by the [SARR]" as SECI suggests. *See* SECI Opening at III-A-9 to 10.[42]

Coal traffic from mine origins in the New River district would use a much different route to reach the {{ }} destination. The mine with the largest 2008 coal tonnage to Edgemoor is Sylvester, WV (in the Kanawha district). Traffic from Sylvester to Edgemoor moves over the West Virginia network of the former C&O, going north through Ohio before joining the SARR at McKeesport, PA.[43] The Hopkins, WV mine (in CSXT's New River

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Board has indicated it will not allow such re-routed crossover traffic unless the complainant submits an alternative SAC analysis without such re-routes and shows how to accurately allocate revenues using the defendant's actual costs. *See WFA* at 15 (finding that, for off-SARR reroutes, there is "seemingly no coherent way to allocate the revenue contribution in accordance with the defendant's costs of providing service").

[42] While traffic from the New River district to Edgemoor would briefly touch the lines of the SFRR (for approximately 10 miles), it would not follow the SFRR routings from the Beem, Big Sandy and Kanawha districts.

[43] SECI incorrectly routed this traffic through Richmond, Virginia. See SECI Exh. III-A-2.

district), in contrast, is on the former NF&G network, whose traffic is routed to {{ }} via Charlottesville, VA. Traffic between Hopkins and Edgemoor travels only 10 miles on the SFRR, between Alexandria, VA and Benning in the District of Columbia. Because Sylvester and Hopkins are on separate sub-networks of the CSXT system, they follow radically different routings.

Thus, the very example that SECI uses to illustrate "the propriety" of its origin-shifting approach actually demonstrates the opposite – in this and a number of other instances, SECI reaches too broadly in aggregating volumes from mine origins across an entire EIA coal producing region without regard for the rail lines of mine origin networks on which those far-flung origins are located. The only way that coal volumes from additional origins on geographically separate and distinct CSXT networks could move over lines of a different CSXT network replicated by the SFRR would be through impermissible off-SARR re-routes, which SECI has made no attempt to support in its case-in-chief. *Compare* SECI Opening III-A-8 to III-A-10 *with WFA*, Decision at 14-15.

(iii) Shifting Volumes from Origins Intentionally Excluded from Base Year Traffic Selection.

SECI also engaged in even more egregious inflation of SFRR volumes for several O-D pairs, by shifting volumes from distant mines that actually did originate coal that moved to the destination in question in 2008. *See* SECI WP "*Coal Traffic Forecast*". That is, SECI excluded from its SFRR traffic group 2008 traffic from certain origins (say origins "A, B & C") to a given destination, and instead lumped the volumes moving over those O-D pairs into its hypothesized traffic volume for an entirely different movement from origin "Z." *See id.* For example, SECI selected traffic from six Central Appalachian ("CAPP") mine origins that ship coal to Harllee, GA. SECI posited that the traffic from these mines would travel on the SFRR for 41 miles,

between Junta and Atlanta. All of those six origins are on the former L&N/Seaboard network in Kentucky. *See* SECI Opening Ex. III-A-2. To calculate 2009 SFRR volumes to Harllee, however, SECI added volumes that CSXT's 2009 forecast projected would move from two other mines (Bevins Branch and Sunny Knott) that are on the separate and distinct network of the former C&O in Kentucky. *Id.*, SECI WP *Coal Traffic Forecast.xlsx.* The traffic data CSXT produced to SECI in discovery show that CSXT moved coal from those additional non-SFRR origins to Harllee in 2008. *See* CSXT Shipment files (produced in discovery).[44] Critically, however, SECI *did not select* those movements as part of its SFRR traffic group, and the 2008 CSXT traffic and event records that SECI used to select its SFRR traffic confirm that the actual CSXT routes of movement from Bevins Branch and Sunny Knott *do not touch* any line replicated by the SFRR network.

In addition to several other violations of fundamental SAC principles and rules, SECI's attempted sleight of hand – shifting coal traffic volumes that do not traverse any SFRR segment in the real world to other lanes that include SFRR lines – is an improper re-route that overstates SFRR volumes. The following table III-A-3 enumerates instances in which SECI engaged in the sort of unprecedented and unjustified origin shifting described above. The table lists coal movements between specific O-D pairs that SECI did not select from the 2008 CSXT traffic records – likely because the routes followed by these movements are not replicated by the SFRR network[45] – but whose 2009 forecast volumes (totaling approximately 8 million tons) SECI seeks to include in its SFRR volumes as if they originated at a different mine.

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[44] CSXT Shipment Records (traffic files) for 2008 were produced to SECI on several computer disks, labeled with document identification numbers CSX-SE-HC-DVD-005 through CSX-SE-HC-DVD-007, and CSX-SE-HC-DVD-15, 18 & 23.

[45] Event records produced by CSXT to SECI in this case confirm the routes in question are not replicated by the lines of the SFRR. *See* CSXT Reply WP "Event Records.xlsx."

Table III-A-3: O/D Pairs Excluded from SFRR Traffic Group, but Included in SFRR Forecasts and Re-assigned to Other Origins

CSX ORIGIN	Origin Network	CSX DEST	'08 Shipments	'09 Forecast	'10 Forecast	'11 Forecast	'12 Forecast	'13 Forecast
Bevins Branch, KY	C&O KY	Harllee, GA	{{		-	-	-	-
Sunny Knott, KY	C&O KY	Harllee, GA						
Kohlsaat, WV	C&O WV	Terrell, NC						
Typo, KY	LN/SBD	Terrell, NC						
Damron Fork, KY	C&O KY	Terrell, NC						
Consol 95, WV[46]	B&O	Relief, OH						
Whitetail, WV	B&O	Stony River, WV						
Shaw, PA	B&O	Stony River, WV						
Phillips, WV	C&O WV	North Wateree, SC						
Mousie, KY	C&O KY	North Wateree, SC						}}
Total			**24,640**	**76,188**	**72,735**	**70,947**	**73,397**	**72,876**

There can be no real dispute that these last, extreme examples of volume manipulation fall outside the bounds of the limited sort of volume aggregation discussed indirectly in *CP&L* *See CP&L* at 16-17. Here, despite the fact that traffic *did* move between the O-D pairs in question in the base year, the Complainant excluded that traffic from the portion of its actual route replicated by the SFRR, and tacitly "assumed" those volumes would somehow move between entirely different O-D pairs (located on a distant origin network) over a much different route. As demonstrated, SECI's approach artificially – and impermissibly – inflates SFRR volumes without accounting for the costs associated with moving those volumes, by shifting coal

[46] SECI did construct the SFRR to serve the Consol 95 mine, but shipments from that mine to Relief actually travel west over the CSXT network (rather than east as posited by SECI), and therefore would not traverse the lines of the SFRR. Accordingly, SECI's assumed routing is an impermissible off-SARR reroute, and its origin shifting from Consol 95 (which erroneously inflates SFRR volumes) should be rejected.

traffic volumes from their actual mine origin(s) and route(s) of movement entirely different rail network(s), route(s), and even State(s). Table III-A-3 shows over 70,000 annual carloads of traffic from origin-destination pairs that SECI attempted to add to SFRR volumes for 2009 to 2013, despite having intentionally excluded those very O-D pairs from its traffic group (selected from the 2008 CSXT traffic records). Because coal shipments on those non-SFRR lanes do not use the lines replicated by the SFRR, this fantastic shifting of coal traffic volumes also constitutes impermissible re-routing of crossover traffic. Such illogical and infeasible aggregation of origins and the tacit re-routing it would require is a clear abuse and violation of basic SAC principles and rules, and it should be rejected out of hand.

(iv) CSXT Correction of 2009 Coal Volumes

CSXT's Reply evidence corrects the SARR volume overstatements resulting from SECI's over-aggregation of coal traffic volumes from entire EIA regions. The starting point for CSXT's corrections is the 2009 volume figure developed from actual traffic data for the first three quarters of 2009, annualized using EIA's STEO issued in November 2009. *See* III.A.2.a.i., *supra*. To assign actual 2009 traffic to SFRR traffic destinations, CSXT first updated each origin-destination pair that SECI used in its opening evidence, with the 2009 actual CSXT volumes for that origin-destination pair. These origin-destination specific matches represent eighty-nine percent (89%) of CSXT's actual 2009 traffic to the SFRR. *See* CSXT Reply Ex. III-A-5.

To appropriately allocate the remaining 2009 traffic to SFRR origin-destination pairs selected by SECI, CSXT first assigned volumes from each group of origins served by a particular rail network ("origin network") to SFRR origins served by that same origin network, allocating the volumes to each SFRR origin in proportion to the share of SFRR volumes shipped from each

of those origins in 2008.[47] For example, 56 percent of the 2009 coal traffic to Park, FL, came from origins that also originated traffic in 2008 that SECI selected for the SFRR. The remaining 44 percent of coal traffic volume to Park originated from other mines in the same origin networks (L&N/Seaboard, C&O KY and C&O WV) that served a selected SFRR origin, and were allocated to the SFRR origin-destination pairs in proportion to those origins' share of 2008 tons shipped to Park. This approach assigned 2009 tons only to those origin networks selected by the SFRR, thereby eliminating the over-aggregation of origins inherent in SECI's approach, while still allowing for volume of shifting within an origin network.

The final step in CSXT's adjusted volume aggregation approach allocated the relatively small volume of tons that originated in 2009 from additional origin network – destination "pairs" that did not move traffic in 2008, and which SECI reasonably could not be expected to have selected for inclusion in the SFRR traffic. CSXT allocated these volumes to the SFRR based upon the EIA production region of the network origin group. For example, five mines originated coal traffic destined to Power Park, Florida in 2009, but none of that traffic originated from the single mine on the SFRR that originated coal to Power Park in 2008 (Bevins Branch, on the C&O Kentucky network). Only one of the five 2009 origins is on the C&O KY network, and CSXT allocated volumes from that origin to Bevins Branch on the SFRR. The other four mines, however, are on networks that did not originate any traffic destined for Power Park in 2008. CSXT allocated volumes from three of those mines assigned to Bevins Branch because they are

[47] The term "origin network," as used here, refers to coal mine origins served by the same rail sub-network of the CSXT system, as defined by the lines and facilities of a CSXT predecessor railroad (e.g., MGA, B&O, C&O KY, C&O WV).

in the CAPP EIA region. CSXT excluded from SFRR traffic shipments originating at the other mine because that mine is in the NAPP region.[48]

(c) Contract Minimum Volumes

SECI made two errors in accounting for minimum volume requirements in rail transportation contracts between CSXT and its customers. First, in those instances in which forecast volumes were lower than contractual requirements, SECI increased SFRR volumes to the contract minimum level. The remedy for failure to meet contractual minimums, however, is a liquidated damages payment to the carrier, not forced shipment of additional volumes. Accordingly, CSXT corrected SECI's error by adding SFRR revenues in the amount of the liquidated damages payments, and removed the corresponding shortfall tons from SFRR volumes posited by SECI.[49]

Second, Seminole misallocated the contract minimum for {{

}}, which results in an overstatement of SFRR volumes by {{ }} million tons in 2009 and by {{ }} million tons from 2010 through 2012. SECI's evidence assumes that the entire {{ }} contract minimum volume would be destined solely for Chesapeake Bay Pier, and posits that the entire {{ }} shortfall would originate from a single mine (Brooks Run, WV) and move over the SFRR to Baltimore (Chesapeake Bay Pier). The governing contract, however, clearly states that {{

}}.

Moreover, the 2008 traffic files that CSXT produced in discovery show that 92 percent of the

[48] The origin aggregation approach advocated by Seminole would also exclude traffic originating from mines outside the EIA region(s) that originated coal to a destination in 2008. .

[49] See CSXT Reply WP CSXT Reply WP "Exhibits III-A-2 and III-A-3 Reply.xlsx." This correction increases SFRR revenues without a corresponding cost increase.

coal traffic covered by this contract terminated at {{

}}.*See* 2008 CSXT Shipment Records. Further, all of that {{ }} traffic is forecast to originate at mines in the central Appalachian coalfields, and none of it is projected to move over lines replicated by the SFRR. Therefore, it is appropriate to allocate only 8 percent of the contract's minimum volume shortfall, or {{ }} tons to the single lane included in the SFRR, Brooks Run to Chesapeake Bay Pier. CSXT corrected SFRR volumes to eliminate this overstatement, reducing 2009 volumes by {{ }} tons, and reducing 2010-2012 volumes by {{ }} tons each year.

ii. Projected SFRR Coal Traffic – 2010 to 2018

SECI used the CSXT January 2009 annual five-year forecast to project SFRR volumes for the years 2010 to 2013. As CSXT has demonstrated, its January 2009 forecast failed to predict the full extent of the present economic downturn, and the accompanying drop in CSXT coal traffic volume. *See supra* at III.A.2.a.i. Accordingly, the January 2009 forecast significantly overestimated coal volumes that would be transported over the CSXT system, including the lines replicated by the SFRR, during the forecast period. The Board has established the EIA AEO as its preferred source for coal volume projections for periods for which there is no carrier forecast. Here, CSXT's 2009 forecast is demonstrably flawed and erroneous – there is thus no accurate or reliable carrier forecast available. The forecasts issued by EIA in the intervening year not only further confirm that CSXT's January 2009 forecast was well off the mark, they are more recent and more accurately reflect actual economic conditions and projections than the flawed and outdated CSXT forecast. As between the January 2009 CSXT forecast and the April 2009 EIA AEO forecast, the latter presents a more likely and credible estimate of coal volumes in the coming years, for shipments that would traverse the lines of the SFRR. Accordingly, CSXT has used EIA's revised April 2009 AEO – the very same

source SECI used to project volumes from 2014 to 2018 – to project SFRR traffic volumes from 2010 to 2013.[50]

Finally, for purposes of this Reply CSXT preliminarily accepts SECI's use of the April 2009 AEO Update forecast to escalate SFRR volumes from 2014 through 2018. This is consistent with the Board's acceptance of EIA's AEO as the appropriate objective agency standard for coal projections when carrier forecasts are not used. Importantly, however, EIA recently issued an "Early Release" of its AEO 2010 forecasts, which project further decreases in coal production. [51] In that Early Release, EIA now projects that coal will comprise a lower share of total electricity generation than EIA forecast in the April 2009 AEO, and also that total coal-fired generation will be lower than previously forecast, stating "the reduced outlook for coal consumption in the electricity sector is the result of increased generation from natural gas and renewable energy in the AEO2010 reference case."[52] More directly relevant to forecasts for the SFRR coal traffic is EIA's significantly lower projection for Appalachian coal production in 2010. As illustrated in Figure III-A-1, *supra*, despite reducing its forecast for 2009 coal

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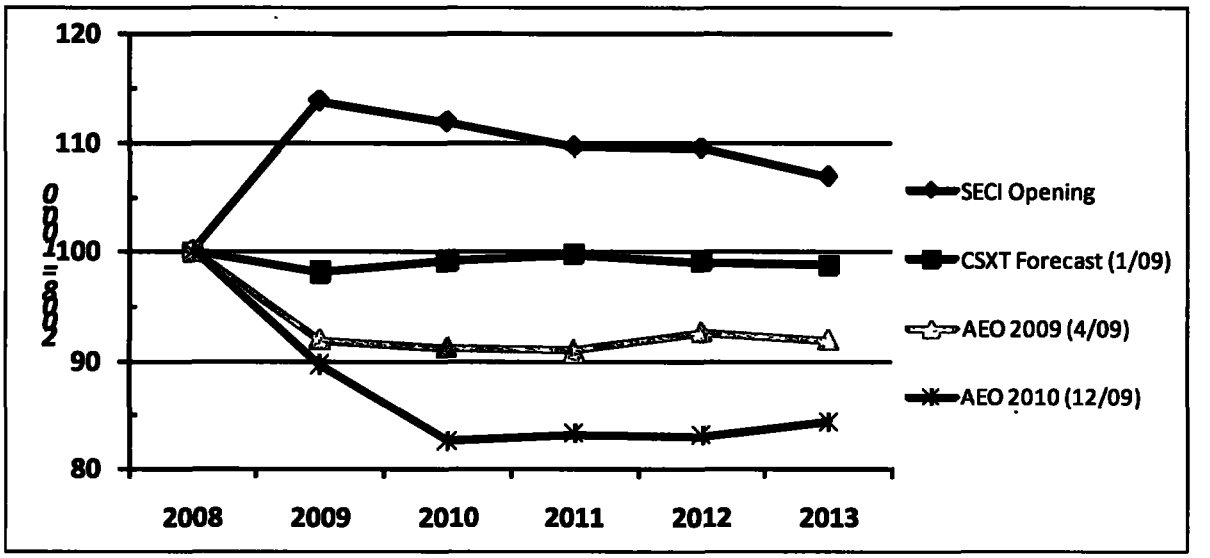
[50] This approach results in different forecasts between the parties for certain utilities that are projected to close or to shift from coal generation during the period covered by the flawed CSXT January 2009 forecast. In particular, the CSXT forecast indicated that shipments to Georgia Power's JacMac (McDonough) and Mitchell plants would cease before 2013, consistent with public announcements of the plants' closing and shifting to biomass, respectively. *See* CSXT Reply Ex. III-A-6 (Outlook for Demand for Coal by Eastern Power Plants). As SECI used the CSXT forecast on an O/D basis, its SFRR traffic group also includes no shipments to either of these plants after 2012. By applying EIA's overall projections of coal production by region to the actual 2009 volumes, however, CSXT's SFRR traffic group includes forecasted volumes to these plants through 2018. CSXT notes that such particular shipments are not expected to occur, but follows this approach to be consistent with the use of the EIA's overall production estimates.

[51] *See* http://www.eia.doe.gov/oiaf/aeo/overview.html. The Early Release includes coal production forecasts only at the broader region level (e.g., Appalachia); the full release – currently scheduled to be published in March 2010 – contains the more detailed projections typically incorporated by the STB.

[52] http://www.eia.doe.gov/oiaf/aeo/overview.html

production during the course of 2009, the EIA continued to project that coal production would remain at 2009 levels in 2010. The Early Release, however, indicates that the EIA now expects even further reductions in Appalachian coal production, decreasing 8 percent from 2009 levels.[53] As Figure III-A-2 below illustrates, the EIA also does not expect recoveries in the production in subsequent years, projecting levels to remain 7-10 percent below the AEO 2009 forecast on which CSXT's Reply evidence is based.

Fig. III-A-2: EIA, CSXT 1/09, SECI Opening Forecasts for Appalachian Coal Production



CSXT urges the Board to follow its precedent, and use the updated 2010 EIA forecast, which takes into account more current information and economic projections than the April 2009 AEO, to project SFRR volumes from 2010 forward.[54] This will be the

[53] This further decrease is separate from the significant decreases from 2008 (the period from which SECI selected its SFRR traffic group from CSXT's records) to 2009 (the first year of SFRR operations) that SECI failed to reflect, and CSXT at least partially captures through the use of its actual volumes for the first three quarters.

[54] Had the full AEO 2010 been available in time, CSXT would have used that more current forecast rather than the April 2009 AEO to project SFRR traffic volumes starting in 2010. Presumably, SECI will – as it should -- use the more recent and up-to-date AEO 2010 to project traffic volumes in its Rebuttal submission. In prior cases, the Board has adjusted SARR traffic

most current and up-to-date EIA annual forecast available at the time of the close of the evidence in this case (absent another extraordinary mid-year update).

iii. Projected SGS Traffic

SECI projected in July 2009 that issue traffic volumes would total 2.76 million tons. Based upon actual volumes for three quarters of 2009, annualized using recent EIA projections as described above, CSXT projects that issue traffic volumes will be approximately 2.88 million tons, approximately 4 percent higher than the 2009 projection that SECI used. Because CSXT's projection is based upon nine months of actual issue traffic volumes, CSXT uses its more recent actual-volume-based estimate for 2009 issue traffic volumes, rather than SECI's mid-year forecast. *See* CSXT Reply Ex. III-A-2.

Remarkably, SECI's forecast of issue traffic volumes for the remainder of the SARR analysis period – in the midst of a deep economic recession, historically low natural gas prices, and the likely imposition of substantial additional regulatory curbs on coal-burning power plants[55] – averages 4.1 million tons, which would represent a huge volume increase (approximately 41%) over 2009 volumes, and a significantly greater (by more than 11 %) annual volume than the 3.67 million tons that SECI has averaged since 2000. *See* SECI Opening at III.A.11, Exh. III-A-2. Although SECI's annual coal shipment volumes have approached 4.1 million tons only once this decade, (in 2006),[56] Complainant's highly optimistic evidence projects 4.0-4.1 million tons for *each year* from 2010 through 2018.

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volumes to reflect new EIA projections issued during the pendency of a case. *See, e.g., Duke et al v. Norfolk Southern et al,* STB Dkt. Nos. 42069, 42070, 42072 Decision (served Oct. 20, 2004).

[55] *See* Exhibit III-A-6 (Outlook for Demand for Coal by Eastern Power Plants).

[56] In fact, SECI's assumption that coal shipments to the Seminole plant would average 4.07 million tons for the next nine years not only exceeds by 11 percent the average over the last nine years (even when 2009's lower shipment levels are excluded), it is 5 percent higher than the

Table III-A-4: Issue Traffic Shipments: Actual and Assumed by SECI

Year	Coal	Pet Coke	Total Tons
2001	3,301,000	182,000	3,483,000
2002	3,120,593	282,232	3,402,825
2003	2,770,532	721,281	3,491,813
2004	2,931,723	787,444	3,719,167
2005	2,743,879	808,434	3,552,313
2006	3,493,205	586,677	4,079,882
2007	3,774,057	154,802	3,928,859
2008	3,666,473		3,666,473
Average	3,225,183	503,267	**3,665,542**
2009	2,881,395	0	2,881,395
2010	4,105,500	0	4,105,500
2011	4,095,490	0	4,095,490
2012	4,119,982	0	4,119,982
2013	4,110,347	0	4,110,347
2014	4,033,373	0	4,033,373
2015	4,079,432	0	4,079,432
2016	4,098,821	0	4,098,821
2017	3,980,620	0	3,980,620
2018	4,036,380	0	4,036,380

Sources: 2001-2005: FERC; 2006-2008: CSXT shipment records; 2009: Actual shipments (3Q annualized); 2010-2018: SECI forecast. *See generally*, CSXT Reply WP "Seminole plant fuel consumption.xlsx."

Seminole has offered no explanation for its unrealistic assumption that coal shipment volumes to SGS in each of the next nine years consistently would be higher than in any year in the preceding decade.[57]

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average for any three-year period during this decade. *See* CSXT Reply WP "Seminole plant fuel consumption.xlsx."

[57] Seminole states only that its volume projections for 2010-2018 are based upon projections it generated during the pendency of this case, which it describes as a "long-term SECI coal delivery forecast dated June 24, 2009." SECI Open III-A-11. Seminole does not further explain this forecast, the purpose for which it was created, or how it can be reconciled with Seminole's historical shipment volumes. A power plant's reasonable projection of its own coal traffic might generally be entitled to some deference. However, Seminole's newly minted assumption that coal traffic volumes will jump from 2.8 million tons in 2009 to 4.1 million tons the following year and stay at that historical peak level for nine straight years – without offering any

To correct this overstatement of future issue traffic volumes, CSXT first identified, using publically available data filed by SECI with the EIA, the maximum actual solid fuel consumption and power generation that SECI's Bostwick plant (SGS) achieved since 2000.[58] *See* EIA-906, EIA-920, and EIA-923 Databases, 1998-2008. Because the Seminole plant is a "baseload" plant, the maximum solid fuel it consumed annually this decade represents a reasonable ceiling on the annual amount of such fuel it is likely to consume in the coming decade, while also allowing for increases in coal deliveries intended to build on-site inventory.[59] Moreover, the use of overall fuel consumption data takes into account Seminole's consumption of other fuels (such as petroleum coke) in prior years, as well as use of higher projected BTU coal from West Virginia included in its forecast for 2010-2018. *See* SECI WP "Coal Traffic Forecast.xlsx," worksheet "Seminole Forecast".

As the following table shows, SECI's average solid fuel consumption for the last eight years was 92.7 million BTU (3.71 million tons) and its maximum solid fuel consumption was in 2003, when it burned 97.8 million BTU (3.91 million tons). To avoid overstatement of potential

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explanation or other support for this assumption – is not reasonable and lacks any credible justification for ignoring the actual tonnages or recent years.

[58] EIA is a neutral and independent government agency responsible, in part, for collection and publication of accurate power generation data. EIA databases and reports provide monthly and annual data on generation and fuel consumption at the power plant – using data submitted by the plants themselves – from 1970 to the present. See EIA forms EIA-906, EIA-920, EIA-923. Thus, the EIA data that CSXT used to present this analysis are actual data collected and submitted to EIA (and before, FERC) by Seminole itself.

[59] Although SECI's shipment volumes to SGS/Bostwick were substantially lower than average in 2009, the coal burn at that facility was also similarly reduced. The result is that SECI had similar coal inventories in 2009 and in late 2008. SECI's annual coal shipments through third quarter 2009 totaled 2.19 million tons, which exceeded the 2.13 million tons consumed at SGS during the same period. Accordingly, despite reduced coal shipments in 2009, there is little opportunity for coal shipment volumes to SGS/Bostwick above SECI's historical average in 2010.

future generation, CSXT used SECI's maximum consumption in the last decade (2003) to develop issue traffic volumes on the SFRR.

Table III-A-5: SECI Bostwick Plant Consumption and Generation (MMBTUs)

Year	Heat Input (MMBtu)	Electric Generation (MWh)
2001	88,735,777	8,966,541
2002	89,994,969	9,217,202
2003	97,776,520	9,544,769
2004	91,495,317	9,012,225
2005	97,340,288	9,719,551
2006	92,993,832	9,470,455
2007	94,153,934	9,420,051
2008	89,066,976	8,922,473
Average	**92,694,702**	**9,284,158**

CSXT's experts translated the Seminole issue traffic projections into consumed BTUs, based on the heat content (measured in BTUs) of the coal from each origin mine. For the Kentucky and Illinois mines, CSXT used the heat content specified in the {{

}}, and for the Consol 95 mine origin, CSX used the heat content for that mine provided in Consol Energy's SEC Form 10-K. SECI's assumed shipment levels of 4.0-4.1 million tons annually throughout the 2010-2018 period — used for purposes of this case — would result in an annual heat content that exceeds 101 million BTU in eight of those nine years. The nine-year average is nearly *10 percent higher* than the 2001-2008 average, and would exceed by 4 percent the *maximum* fuel consumption achieved by Seminole in any year in the past decade. *See* CSXT WP "Seminole plant fuel consumption.xslx."

To correct this manifest overstatement, CSXT compared those annual implied coal consumption data to its highest annual consumption at SGS over the last decade, thereby determining the proportion by which the consumption implied by the coal volume projections SECI used for this case overstated the plant's historical maximum. Using the proportionate coal

consumption overstatement, CSXT then reduced SECI's coal volume projections to levels corresponding to the plant's highest annual coal burn (2003). Plainly, that using a plant's historical *maximum* consumption levels as the assumed *average* consumption for nine straight years represents a very optimistic and aggressive forecast assumption.[60] However, unlike SECI's fantastic projections – which translate into nine uninterrupted straight years of power production that significantly exceeds the issue plant's single highest production year over the last decade – the projections developed by CSXT are (barely) plausible. Applying the adjustment described above, projected SFRR coal shipments volumes should be reduced to 3.97 million tons annually for 2010-2016, a volume that exceeds annual coal shipments to Bostwick in all but one year in the past decade. Based upon Seminole's forecasted shift to take more shipments of higher-BTU coal from Consol 95 (thus requiring fewer delivered tons to attain the same total generation) in 2017, CSXT's projected issue traffic volumes decline slightly thereafter, to 3.88 million tons annually.

[60] CSXT acknowledges that it is possible that SGS coal shipments could exceed that necessary for its maximum historic coal consumption in one year or even perhaps two or three years over a nine-year period. What is entirely implausible, however, is the notion that coal shipments to SGS would exceed the volume necessary to achieve such a maximum annual burn rate in every single year for nine straight years.

Table III-A-6: CSXT Revised Issue Traffic Volume Tonnage Forecast

Year/ Origin	Pattiki, IL	Dotiki, KY[61]	Consol 95, WV	Total
2009				
2010	1,276,706	1,383,098	1,311,042	**3,970,845**
2011	1,279,999	1,386,666	1,304,717	**3,971,381**
2012	1,271,971	1,377,969	1,320,135	**3,970,075**
2013	1,275,117	1,381,377	1,314,092	**3,970,587**
2014	1,300,821	1,409,223	1,264,726	**3,974,770**
2015	1,285,318	1,392,427	1,294,502	**3,972,247**
2016	1,278,901	1,385,476	1,306,825	**3,971,203**
2017	-	1,937,627	1,937,627	**3,875,255**
2018	-	1,937,627	1,937,627	**3,875,255**

Based on the corrections and adjustments to coal traffic volumes described in this section, the corrected SFRR coal traffic volumes presented by CSXT in this Reply Evidence, and those proffered by SECI's evidence, are summarized and compared in the following table.

Table III-A-7: CSXT Reply SFRR Coal Tonnages

	SECI Opening	CSXT Reply	Difference
2009	82,104,778	64,397,958	(17,706,820)
2010	80,602,582	64,562,912	(16,039,670)
2011	78,440,220	64,635,140	(13,805,079)
2012	78,485,759	65,561,838	(12,923,921)
2013	76,912,499	64,472,232	(12,440,267)
2014	73,712,892	62,963,110	(10,749,783)
2015	71,844,780	61,496,860	(10,347,920)
2016	70,551,159	60,419,494	(10,131,665)
2017	70,285,998	60,185,391	(10,100,607)
2018	69,782,847	59,679,673	(10,103,174)

[61] Also includes 299,000 and 84,000 tons, respectively, from Cimarron and Cardinal 9 for 2009.

b. Intermodal Traffic

Seminole developed SFRR intermodal traffic levels for 2009 by applying CSX Intermodal's ("CSXI") forecast volumes moving between origin-destination pairs that Seminole selected from CSXT's 2008 shipment records for the SFRR. SECI did not, however, eliminate those 2008 movements that are not in the 2009 forecast from the hypothetical 2009 SFRR intermodal traffic group. Rather, it assumed that – contrary to CSXI's forecast – that discontinued 2008 intermodal traffic would still move in 2009 and later years, at reduced volumes. *See* SECI Opening at III-A-11 (stating that SECI's decreased such "non-forecast" volumes by 50 percent each year).

Seminole's approach significantly overstates SFRR intermodal traffic in 2009 and future years in two fundamental respects. First, by applying CSXI's forecast and then supplementing the SARR traffic with 2008 traffic that is not in the CSXI forecast, Seminole substantially overstated CSXI traffic that would move on the SFRR. The CSXI forecast includes all of the volumes that are projected to move, and there is no basis for adding traffic that moved in a prior year, but which CSXI projects will not move in the forecast year. Such an approach undermines the logic of the forecast and renders it entirely unreliable because it adds projected traffic growth while refusing to take into account the other side of the formula – offsets to that growth as a result of lost or reduced traffic between the same origin-destination pairs. Intermodal traffic patterns, volumes, and commodity mix are all very dynamic, and they shift substantially over time. Any meaningful projection of intermodal traffic volumes must appropriately take into account both traffic volume growth and traffic volume reductions, and their offsetting effects on overall traffic volume. SECI's approach seeks to take advantage of all of the growth while ignoring accompanying traffic losses. Seminole offers no explanation or justification for this "heads-I-win, tails-you-lose" distortion of CSXI's forecast, and it should be rejected out of hand.

Second, even if Seminole's "add growth while ignoring lost traffic" gambit were appropriate – and it is not – SECI did not even follow its stated approach. Rather than reducing the volume of 2008 intermodal traffic by 50 percent each year for moves that do not appear in the CSX Forecast, SECI applied the reduction only once, to convert 2008 volumes to 2009 volumes. *See* SECI WP "Intermodal Forecast comparison red traf grp orig 09 fest final cost ATC sample c97 v1.xlsx." For the remaining nine years of the analysis period, SECI's assumed traffic group included those non-existent volumes, maintaining them constant at the level it derived for 2009. *See* SECI WP "Intermodal Forecast comparison red traf grp orig 09 fest final cost ATC sample c97 v1.xlsx." CSXT corrects SECI's misapplication of the CSXI forecasts by first reducing volumes to follow the approach that SECI's narrative claimed it had applied (reducing 2008 traffic volumes that are not included in the 2009 CSXI five-year forecast by 50 percent each year). *See* CSXT Reply WP Intermodal Tons & Revenue Reply.xlsx. To correct the more fundamental error of assuming the SFRR would continue to move traffic that moved in 2008 but does not appear in the CSXI forecast, CSXT has properly applied that forecast by eliminating those movements in their entirety in 2009.

CSXT also corrected another error in SECI's application of the CSXI forecast, which results in increased SFRR intermodal traffic volumes. In developing its SFRR intermodal traffic volumes, SECI failed to match certain origin-destination pairs data due to minor variations in a few station names in the data sources used by SECI (for example both "N. Bergen" and "North Bergen" are used to refer to the same station). CSXT standardized the station names and rematched the CSXI forecast data for the intermodal traffic with lanes SECI selected for the SFRR. *See* CSXT Reply WP "Intermodal Forecast comparison red traf grp orig09 fcst final cost ATC sample c97 v1 Reply.xlsx." Through this process, CSXT identified several additional

origin-destination pairs that match entries in the forecast, and thus should not have been subject to the 50-percent reduction approach described above. Accordingly, CSXT added those projected CSXI intermodal traffic volumes to SFRR volumes. *See id.*

CSXT further corrected one other significant error in SECI's application of the CSXI traffic volume forecast, namely SECI's failure to account for the intermodal traffic's use of multiple routes and interchange locations. As background, many CSXI shipments are interline movements with other carriers, and movements between the same ultimate origin and destination can and do move over different portions of CSXT's rail network. For origin-destination pair traffic that followed more than one route, SECI attributed the total CSXI forecast volume, aggregated from *all* of the multiple routes between a particular origin and destination, to *each* of those multiple routes. *See* SECI WP "Intermodal Forecast comparison red traf grp orig09 fcst final cost ATC sample c97 v1 .xlsx." (spreadsheet formula sums intermodal traffic volume for each O-D pair and assigns sum to each lane, rather than allocating that volume among multiple SFRR lanes) As a result, for O-D pairs for which the SFRR replicates more than one route, SECI's evidence overstates SFRR traffic by multiples of the forecast volumes (*i.e.*, if the SFRR includes two routes, traffic volumes are double-counted; if SFRR includes three routes, traffic volumes are triple-counted, etc.).[62]

In instances in which the SFRR replicates only one of multiple routings (or a segment of one of those alternative routings) between and origin and destination, SECI generally routed all traffic over the routing replicated by the SFRR. For example, intermodal traffic moving from Seattle, WA to North Kearney, NJ moves over two lanes replicated by the SFRR, one following

[62] SECI committed the same type of error with respect to several general freight movements, resulting in double- and triple-counting of general freight volumes for a given O-D pair. CSXT has corrected those volume overstatements in this Reply evidence. *See* CSXT WP CSXT Carload Forecast Jan 2009 GF red traf grp v. ATC onoff orig 09 fest sample v1 Reply.xlsx.

a shorter, northerly route over CSXT lines from Chicago or Des Plaines, IL to North Kearney, and the other moving over a longer route from Chicago south to Atlanta and back up to Kearney. Very nearly all (99.5 percent) of the 2008 Seattle-North Kearney intermodal traffic followed the northerly route, but this route is not replicated by the SFRR. The remaining 0.5 percent (4 carloads) followed the longer route through Atlanta. But SECI erroneously assumed in its case-in-chief that the entire 2009 volume moved over the longer route, thereby re-routing all of that traffic over the longer route via Atlanta.

Example of SECI's Intermodal Forecast Error

Origin	CSX Origin	CSX Dest	D ST	Destination	D ST	CSX 2008	SECI 2009		Corrected 2009
SEATTLE	CHICAGO	ATLANTA	GA	N KEARNY	NJ	4	685	0.3%	2
SEATTLE	CHICAGO	DIXIANA	SC	N KEARNY	NJ	1	685	0.1%	1
SEATTLE	CHICAGO	MARION	OH	N KEARNY	NJ	1	685	0.1%	1
SEATTLE	CHICAGO	N KEARNY	NJ	N KEARNY	NJ	1,208	685	94.2%	645
SEATTLE	DES PLAINES	N KEARNY	NJ	N KEARNY	NJ	68	685	5.3%	36
				O-D Total		1,282	3,425		685
				SFRR Total		4	685		2

This overstatement is evident in review of SECI's summary traffic exhibit (III-A-2), that presents the SECI's SFRR volume assumptions by O/D pair. The following table identifies a number of the entries from that exhibit that, like the immediately preceding example, result in implausible increases from 2008 to 2009. It is from this dramatically overstated 2009 base that SECI developed its intermodal traffic for the SARR analysis period.

Table III-A-8: Examples of SECI Mis-Application of CSXI Forecast Volumes

SECI Exh. III-A-2 Line #	CSX Origin	SFRR Origin	SFRR Destination	CSX Destination	2008 Containers	SECI 2009 Containers	SECI Change
555	Baltimore, MD	Alexandria Jct, MD	Mckeesport, PA	Des Plaines, IL	524	1,567	199%
628	Chambersburg, PA	Cherry Run, WV	Mckeesport, PA	Des Plaines, IL	169	1,098	550%
724	Chicago, IL	Princeton, IN	Atlanta, GA	Atlanta, GA	6,369	29,234	359%
737	Chicago, IL	Princeton, IN	Bostwick, FL	Miami, FL	771	2,284	196%
747	Des Plaines, IL	Princeton, IN	Nashville, TN	Nashville, TN	360	1,676	366%

CSXT's Reply evidence corrects these and similar double-counting and re-routing errors by allocating SFRR volumes to multiple lanes using the same proportions observed in 2008.[63] This type of volume overstatement correction reduces annual SFRR volumes by 687,000 to 1.1 million tons during the forecast period. *See* CSXT Reply WP "Intermodal Forecast comparison red traf grp orig09 fest final cost ATC sample c97 v1 Reply.xlsx." The corrected intermodal traffic volumes resulting from the adjustments described in this section, and comparison with volumes posited by SECI's evidence, are set forth in the following table.

[63] In this example, the Chicago to Atlanta routing is assigned two carloads rather than 685.

Table III-A-9: CSXT Reply Intermodal Tonnages

Year	SECI Opening	CSXT Reply	Difference
2009	6,000,171	5,586,652	(413,520)
2010	6,297,228	5,859,958	(437,270)
2011	6,631,210	6,141,506	(489,704)
2012	7,126,081	6,636,404	(489,677)
2013	7,448,513	6,938,334	(510,179)
2014	7,786,764	7,254,817	(531,947)
2015	8,141,629	7,586,580	(555,050)
2016	8,513,945	7,934,387	(579,558)
2017	8,904,592	8,299,045	(605,547)
2018	9,314,494	8,681,400	(633,095)

c. General Freight, or Merchandise, Traffic

As Seminole acknowledges, one of the features that makes its SARR and SAC presentation extraordinary is the fact that fully one-third (33 percent) of the traffic it selected for the SFRR consists of general freight.[64] Although SECI's narrative is largely silent about its volume forecasts, Exhibits III-A-2 and III-A-3 show that SECI assumes considerable growth in non-coal traffic. SECI's volume forecast assumptions result in 380,000 additional carloads of non-coal traffic in 2018, a more than 40 percent increase over their SFRR base year (2009) levels. *See* SECI WP "SARR carload forecast summary comparison 082309.xls" In fact,

[64] As discussed in detail in other sections, Seminole further complicates this operationally complex SARR by assuming that the vast majority of that merchandise traffic would move over the SFRR in trains consisting of both SFRR and CSXT cars. Despite – or perhaps because of – this operational and analytical complexity, SECI's case-in-chief provides no real operating plan to serve the many and varied merchandise customers whose traffic would move over the SFRR. *See infra* CSXT Reply III.B, III.C, III.D. This traffic volume analysis considers only those cars handling SFRR's selected traffic, as SECI assumes that the CSXT cars it handles would not generate revenue for the SFRR (but that the SFRR would earn "merchandise line-haul credits" for handling those cars).. See SECI Opening III-A-23 to 24. As discussed elsewhere in this Reply, CSXT accepts – solely for purpose of this case – SECI's unprecedented, unsupported, and unrealistic assumption regarding non-revenue cars moved by the SFRR on behalf of CSXT. *See* CSXT Reply III.D.

SECI's non-coal traffic accounts for more than two-thirds of the revenue growth over the period, and 2009 non-coal revenues of $593 million nearly double in only 9 years, to $1.16 billion in 2018.

SECI's unorthodox choice to inflate non-coal traffic volumes significantly through the SAC analysis period warrants close examination. In previous SAC cases, complainants who have included non-coal traffic in their SARR traffic groups typically have not attempted to inflate those traffic volumes beyond base-year levels.[65] The apparent reason prior complainants have foregone future non-coal traffic volume growth is to avoid the operational complexity and challenges that result from such increased volumes. In contrast to coal unit trains, the requirements of general freight and merchandise traffic, and the manner in which carriers must handle such traffic in the real world, require a complex operating plan.[66] An assumption that non-coal traffic volumes will grow adds further complexity to developing accurate operating plan and capacity requirements, because such traffic does not move in unit trains that cycle in one block between origin and destination.[67]

To minimize the operational complications and challenges created by such non-coal traffic, complainants in prior cases have also assumed that the SARR would use the same train

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[65] In *AEP Texas North v. BNSF,* STB Docket No. 41191, complainant's evidence "assumed no growth in non-coal traffic over the 2003-2020 time period from levels shown for 2002, the most recent year for which full records are available." STB Dkt. No. 41191, Opening Evidence of AEP Texas North, at III-A-15 (March 2004). Similarly, in *Otter Tail Power v. BNSF,* STB Dkt No. 42071, complainant explained that "[t]he volumes of non-coal traffic handled by the [SARR] are held constant at 2002 base year levels." STB Dkt No. 42071, Opening Evidence of Otter Tail Power, at III-A-10 (June 2003).

[66] Less than 15 percent of SECI's non-coal traffic is handled in bulk unit-train service. *See infra,* Section III.C.

[67] As described in Section III-C, SECI included considerable volumes of general freight and merchandise traffic that are moved by more than one train on the CSXT system. Further, more than one-half of SECI's non-coal volumes originate or terminate on the SFRR.

sizes that the Defendant carriers were then operating.[68] Holding volumes and train sizes constant at those used by the incumbent carrier allows a complainant to assume that the traffic will be handled the same way the traffic is handled in the real world, and makes it easier for the complainant to meet its burden of showing the SARR would meet the service needs of each customer.

SECI's decisions to assume increasing volumes of non-coal traffic and increasing train sizes – to levels for which train handling and operating information is not available – both made the task of demonstrating that its operating plan is workable and meets the customer's needs considerably more challenging, and warrants considerable scrutiny. As demonstrated in Section III-C, SECI's submission cannot withstand scrutiny: its operating "plan" and evidence does not adequately account for the effects of its assumed volume growth, and fails to show the SFRR would provide service required by that traffic.

In hypothesizing SFRR general freight traffic volumes, SECI mis-applied CSXT's forecasts in several different ways.[69] First, as it did for intermodal traffic, Seminole inflated general-freight traffic volumes above levels that CSXT projected, by assuming that 2008 traffic that is not included in CSXT's 2009 forecast would nonetheless continue to move over the SFRR

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[68] *See*, Opening Evidence of AEP Texas North, at III-C-12 ("The [SARR's] train sizes are the same as those presently operated by BNSF."), Opening Evidence of Otter Tail Power, at III-C-9 ("The [SARR] will handle the same train sizes and mixes of loaded and empty cars that BNSF moves between the interchange location pairs.")

[69] The general approach SECI followed to estimate SFRR general freight traffic volumes was to determine 2008 volumes for selected traffic from the 2008 CSXT traffic files and adjust those volumes for the years 2009 through 2013 based upon the CSXT 2009 forecast. For the period from 2014 through 2018, SECI applied adjusted volumes by 2012-2013 growth rate it derived from CSXT's 2009 forecast. See generally SECI Open III-A-13. CSXT accepts that general approach as described here, but objects to SECI's misapplication of CSXT forecasts, and to its unreasoned and illogical extrapolation of one aspect of CSXT's forecast. CSXT also makes appropriate adjustments to two elements of its January 2009 forecast necessitated by the unforeseen length, depth, and magnitude of the continuing global recession.

in 2009 and beyond. More specifically, Seminole assumed such non-forecast traffic volumes would continue to move in 2009 at 86 percent of 2008 levels, and thereafter at 50 percent of the prior year's level (*i.e.*, a 50-percent annual volume reduction after 2009). *See* Seminole Opening at III-A-13.[70]

The CSXT forecast accounts for all forecast traffic volume, and adding traffic that CSXT has determined will not move in 2009 would overstate volumes in 2009 and every year thereafter. This is a distortion of the CSXT forecast that erroneously inflates SFRR traffic volumes. CSXT's Reply corrects this misapplication of its forecast and the resulting general freight traffic volume overstatement by removing the extra-forecast (2008) traffic from the 2009 SFRR traffic. *See* CSXT WP "CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09 fest sample v1 Reply.xslx."

Second, Seminole doubled-counted forecast volumes of CSXT interline traffic that could be interchanged at more than one location, by attributing the full forecast volume between an origin-destination pair to each of two (or more) different routings. This double-counting appears to result from SECI's application of the CSXT forecast at the CSXT O-D pair level, without consideration of the different interchanges used for interline movements. For example, general freight traffic moving between Robinson, IL and Henderson, KY could be received by CSXT from the Indiana Railroad ("INRD") at Sullivan, IN or at Terre Haute, IN. Rather than splitting the Robinson-Henderson traffic volumes between the two routes, Seminole's evidence assigned

[70] SECI claims to have based the 14-percent reduction assumption on the average volume decline of "all SFRR general freight movements that appear in the [CSXT] 2009 Carload Forecast." *Id.* n.10. But the 2008 traffic that does not "appear in the 2009 Carload Forecast" does not appear for a very good reason – CSXT determined it will not move that traffic in 2009 and beyond. Seminole's rationale makes no sense and its illogical manipulation of the CSXT forecast should be rejected out of hand. SECI offers no explanation or rationale at all for applying a 50-percent reduction to (non-existent) remaining 2008 traffic volumes over the next nine years of the DCF period.

the total volume moving between that O-D pair to each CSXT on-junction, thereby overstating the forecast volume for that O-D pair by 100 percent. *See* SECI Open Ex. III-A-2 and 3 (Nos. 1073 and 1108). CSXT's Reply evidence corrects such misapplications of its forecast and eliminates the resulting double counting and overstatement of SFRR general freight volumes. *See* CSXT WP "CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09 fest sample v1 Reply.xslx."

Third, CSXT corrected one specific application of SECI's blanket assumption that a particular movement's growth rate from the CSXT forecast for 2012 to 2013 could serve as a perpetual annual growth rate for the entire period from 2012 to 2018.[71] Specifically, movements of synthetic gypsum (calcium sulfate hydrate) from Stilesboro to Bridgeport will not continue to grow from 2013 to 2018 at the same rapid rate they are projected to grow in the preceding years. CSXT's forecast for this lane was based upon the Stilesboro (Bowen) power plant's installation and use of "scrubber" pollution abatement equipment, and the potential outbound shipment of synthetic gypsum that can be generated in the scrubbing process. Synthetic gypsum suitable for use in wallboard can be generated from a byproduct of the process of "scrubbing" sulfur from coal-fired power plant emissions.[72] SECI itself generates commercially significant volumes of such gypsum at the SGS plant, which it sells to a neighboring wallboard manufacturing facility operated by LaFarge, North America. Similarly, the owner of the Stilesboro plant (Georgia

[71] SECI offers no quantitative support or analysis for its broad extrapolation of growth rates for general freight traffic. Generally, however, CSXT has decided not to challenge SECI's growth assumption because of the inherent difficulty of demonstrating in advance the accuracy of any particular forecast for periods 5 to 10 years in the future.

[72] Waste generated by the scrubbing process may be disposed of in several different ways, including burial in a landfill or similar waste disposal facility, and converting it to synthetic gypsum that can be used in manufacturing wallboard. The degree to which a utility employs different disposal means generally depends on the relative economics of different disposal options. The relationship between the net costs of those options varies over time and with economic conditions (e.g., demand for building materials such as wallboard).

Power) has contracted with CSXT to move synthetic gypsum to a wallboard manufacturing facility in Bridgeport, AL, beginning in 2009 or 2010.

Georgia Power has advised CSXT that each of its four scrubbed units could be used to produce as much as 200,000 tons of synthetic gypsum. Based upon projected coal volumes to be burned at the Stilesboro plant, and the rate at which Georgia Power has advised CSXT that it plans to phase in the scrubbing process at the Stilesboro plant (over a four-year period commencing in 2009 or 2010), CSXT's 2009 forecast projected that shipments of synthetic gypsum from Stilesboro to Bridgeport would start with 200,000 tons in 2010, and increase by 200,000 tons in each of the following three years, as the plant phased in its use of scrubbers and the generation of gypsum to their full intended levels. *See* CSXT WP "CSXT Carload Forecast Jan 2009.xlsx" (row 154,837). Thus, the CSXT forecast projected that it would move 600,000 tons of gypsum from Stilesboro to Bridgeport in 2012, and reach the 800,000-ton maximum in the following year (2013). *See id.*

After the phase-in of the scrubbing process is complete in or about 2013, however, synthetic gypsum production at Stilesboro will not continue to increase, and, at most, gypsum shipments over that lane will remain constant.[73] SECI's methodology ignores this fact and

[73] Given current economic conditions and reduced demand for electric power and for coal, it is possible, perhaps even likely, that gypsum shipments over this lane will not reach 800,000 tons in 2013. Reduced demand for electric power and reduced prices of alternative fuels (e.g., natural gas) have resulted in significantly lower coal burn at Stilesboro than CSXT had forecast for 2009. Moreover, substantial reduction in the price of SO_2 credits recently has made scrubbing relatively more expensive, and has caused many coal-fired generating plants (including Stilesboro) to reduce the amount of scrubbing they conduct. The relationship between lower-than-projected scrubbing and lower volumes of gypsum is illustrated by the actual volumes of gypsum that the Stilesboro plant has shipped to Bridgeport in 2009. CSXT's forecast projected it would move 200,000 tons of gypsum on that lane in 2009. Based on three quarters of actual volumes, it appears that the volume shipped on that lane will be approximately 100,000 tons in 2009. For similar reasons, it is entirely possible that, even if volumes do reach 800,000 tons by

applies the annual growth rate based on the forecasted increase from 2012 to 2013 – 33 percent[74] – *in each year* thereafter. Any increase the levels CSXT forecast for 2013, however, is not supported. The compound result from applying a 33-percent growth rate, year after year, is an unrealistic, gross overstatement of gypsum traffic from Stilesboro that would be available for movement on the SFRR. SECI's assumption that the 33-percent growth rate would continue *ad infinitum* results in a more than *three-fold* increase in Stilesboro to Bridgeport volumes in only five years. In fact, Seminole's approach produces an increase of 820,000 tons in 2018 – an *annual growth* increment in *one year* that exceeds the peak volume in the CSXT forecast.[75] As a result of this misapplication of the CSXT forecast, this single movement alone comprises 40 percent of the total growth in all SFRR general freight traffic over the entire 10-year period. *See* CSXT WP "Stilesboro Growth Reply.xslx."

CSXT corrects SECI's gross overstatement of SFRR volumes by assuming, generously, that calcium sulfate volumes originating at Stilesboro will reach 800,000 tons in 2013, and remain constant at those levels for the five remaining years of the DCF period. This adjustment likely still results in an overstatement of volumes originating at Stilesboro from 2013 to 2018 because SFRR coal shipments to Stilesboro are projected to decrease during that period. *See* CSXT Reply Ex. III-A-2 and III-A-3.

2013, those volumes may decline, rather than remain constant at peak levels, in subsequent years.

[74] The implicit growth rate in the volume of gypsum shipments on that lane from 2012 to 2013 is 33.3 % (200,000 increase from 2012 to 2013 / 600,000 in 2012).

[75] Moreover, the notion that a power plant that burns approximately 8 million tons of coal annually could generate more than 3 million tons of synthetic gypsum is absurd. SECI generates less than 500,000 tons of gypsum from coal consumption that is close to one-half that of Stilesboro, suggesting that plant might generate a maximum of approximately one million tons of gypsum, less than one-third of SECI's extrapolated projection for its SFRR.

Fourth, CSXT has adjusted its January 2009 forecast for automobile and metals shipment volumes downward to reflect more current and updated forecasts. Again, like many others, CSXT underestimated the magnitude of the economic downturn at the time (*circa* fourth quarter 2008) it was developing its January 2009 general freight forecast. In particular, CSXT significantly underestimated the more acute production and shipment declines in the automotive and metals sectors. CSXT's year-to-date volumes provide powerful testimony to the dramatic decline in automobile and metals shipments during 2009. In the first three quarters of 2009, CSXT's publicly reported data showed that its year-over-year decline in shipments for each of those two business segments exceeded forty (40) percent, accounting for nearly one-half of CSXT's entire decline in general freight volumes. *See* CSX Quarterly Financial Report – Third Quarter 2009, at 8.

Using recent (October 2009) forecasts from Global Insight (the same entity whose forecasts CSXT personnel used to prepare the January 2009 forecast used by SECI),[76] CSXT reduced automotive and metals volumes for 2009 to 2013, in order to reduce the substantial overstatement of volumes in its January 2009 forecast. The effect of this adjustment on SFRR volumes is illustrated in Table III.A.11, below.

[76] Two of the sources CSXT relied upon to develop its general freight volume forecasts issued in January 2009 were the Global Insight forecasts of Light Vehicle Production and Iron & Steel Production indices.

Table III-A-10: Macroeconomic Adjustments to SFRR General Freight Volumes

STCC (2 digit categories)	2009	2010	2011	2012	2013[77]
37 Transportation Equipmt					
- January 2009 Forecasts	9.60	11.70	13.20	13.80	14.70
- October 2009 Forecasts	8.61	10.17	11.81	13.33	14.29
Difference	-10.3%	-13.1%	-10.5%	-3.4%	-2.8%
Tonnage Effect	-190,596	-276,484	-243,959	-80,498	-66,929
33 Primary Metal Products					
- January 2009 Forecasts (2008=100)	75.9	79.6	86.4	93.5	99.4
- October 2009 Forecasts (2008=100)	53.2	65.5	80.4	94.5	99.3
Difference	-30.0%	-17.7%	-7.0%	1.0%	-0.1%
Tonnage Effect	-409,617	-212,720	-85,896	13,217	-1,709
Combined Tonnage Effect	-600,213	-489,204	-329,855	-67,281	-68,637

In order to eliminate the overstatement in the outdated forecasts on which SECI relied, CSXT compared the projected industrial and automotive production as of the time the CSXT forecasts were being developed, with more current projections. For example, in January 2009, Global Insight was forecasting that light vehicle production would be 9.6 million units in 2009. By October 2009, Global Insight was projecting that light vehicle production would be 8.61 (million units), or 10.3 percent lower than its expectations as of January. Thus, SFRR traffic volume estimates that relied upon the CSXT January 2009 forecast would have incorporated overly optimistic, industrial projections as of that time, which have proved to be erroneous. CSXT has adjusted the forecasted SFRR shipments of primary metals and automobiles by the percentage difference between the January and October 2009 forecasts, as shown in the table

[77] As SECI's 2014-2018 traffic levels are derived from the CSXT forecast for 2013, the 2013 adjustments are applied throughout the later years.

above.[78] That table indicates that the economic downturn is not a short-term phenomenon from which U.S. industrial production will recover in 2010. In fact, Global Insight projects that industrial production will not reach January 2009 forecast levels in any of the next six years (*i.e.*, through 2015), and that automotive production will attain that level only once, but not until 2012.

After the corrections described in this section, CSXT's Reply presents the following adjusted general freight volumes (shown in comparison to overstated volumes presented by in SECI).

Table III-A-11: CSXT Reply General Freight Tonnages

	SECI	CSX	Difference
2009	34,915,630	31,221,865	(3,693,765)
2010	32,470,522	30,043,118	(2,427,404)
2011	33,241,662	31,384,564	(1,857,098)
2012	34,071,464	32,664,664	(1,406,801)
2013	35,116,795	33,788,454	(1,328,341)
2014	36,337,669	34,771,889	(1,565,780)
2015	37,729,756	35,811,303	(1,918,454)
2016	39,310,605	36,908,787	(2,401,817)
2017	41,115,119	38,067,371	(3,047,748)
2018	43,195,369	39,290,996	(3,904,373)

d. Peak Year Traffic

After correction of SECI's overstatements of SFRR coal, intermodal, and general freight traffic volumes, the last year of the analysis period (2018) remains the peak year of traffic volumes on the SARR for the CSXT Reply. As explained further in Section III-C below, CSXT

[78] Although other general freight traffic volumes also declined by more than CSXT forecast in January 2009, those differences are not as large as the differences for automotive and metals traffic. To be conservative, CSXT has not adjusted those other volumes downward to reflect additional declines in shipments of other commodities, but instead uses the January 2009 forecast to calculate SFRR volumes for all other general freight traffic. See CSXT Reply Exhibit III-A-2.

incorporates these peak-year volumes in developing the operating plan necessary to handle the SFRR traffic and serve its customers, and evaluating the track and yard capacity requirements. CSXT also notes that, as shown in Table III-A-13 below, the lowest year throughout the 10 years is within 7 percent of the peak year volumes, and two-thirds of the years under analysis are within 3 percent of the peak-year. Thus, this is clearly a case in which the SARR would require its full infrastructure, facility, and equipment capacity from the time it commences operations through the entire analysis period.

Table III-A-12: CSXT Reply SFRR Tonnages (in Millions)

Year	Coal	Intermodal	General Freight	CSXT SFRR Total
2009	64.40	5.59	31.22	101.21
2010	64.56	5.86	30.04	100.47
2011	64.64	6.14	31.38	102.16
2012	65.56	6.64	32.66	104.86
2013	64.47	6.94	33.79	105.20
2014	62.96	7.25	34.77	104.99
2015	61.50	7.59	35.81	104.89
2016	60.42	7.93	36.91	105.26
2017	60.19	8.30	38.07	106.55
2018	59.68	8.68	39.29	107.65

3. Revenues (Historical and Projected)

After development of accurate SARR volumes for the analysis period, the next step in the SAC analysis is to develop SARR traffic rates, and apply them to SARR volumes to generate SARR revenues. In this section, CSXT identifies significant errors in SECI's evidence concerning rates and revenues, corrects those errors, and applies the corrected rates and escalated rates to the corrected SFRR traffic volumes, to derive appropriate SFRR revenue estimates for

the ten-year period from 2009 through 2018.[79] Again, each of the three major categories of SFRR traffic is discussed in turn.

a. Coal Traffic Revenues

To determine rates for each coal traffic movement selected for the SFRR, SECI applied rate escalation provisions from coal transportation contracts produced by CSXT in discovery (for the period from 2009 until the expiration of the relevant contract). For movements that were not under contract in 2009, or for which the governing contract is scheduled to expire in or before 2013, SECI used the rate growth (by individual movement) projected in the January 2009 CSXT forecast, which extends through 2013. For the period 2014 through 2018, SECI used the EIA's April 2009 AEO Transportation Rate Escalator to estimate SFRR rates. Because the foregoing approach is generally consistent with Board precedent, CSXT's Reply evidence follows SECI's general approach for calculation of coal traffic revenues, with the exceptions described below. *Compare* CSXT WP "Exhibits III-A-2" and "III-A-3 Reply.xslx" *with* SECI WP "Coal Revenue Forecast Reply v2.xslx."

i. Adjustments to SECI Base Rate Evidence

(a) Use of Actual Coal Revenues for First Three Quarters of 2009

The primary adjustment CSXT has made to the coal revenues posited by SECI is to substitute CSXT's actual rates through the third quarter of 2009 for the forecast rates used by SECI. This adjustment is appropriate to conform revenues to CSXT's updating of SFRR traffic volumes to reflect actual CSXT volumes for the first three quarters of 2009. In order to make

[79] The differences between SECI's revenue estimates and those developed by CSXT in this Reply evidence are due primarily to differences in their respective traffic volume calculations, and only secondarily due to differences in rate and escalation parameters described in this section.

this revenue adjustment, CSXT first matched actual 2009 rates for each SFRR origin-destination pair, to correspond with the updated actual tonnages. *See* CSXT WP "Exhibits III-A-2" and "III-A-3.xslx." To project fourth quarter 2009 rates, CSXT used the average rate per ton over the first three quarters of 2009. *See* CSXT WP "Exhibits III-A-2" and "III-A-3.xslx." For origin-destination pairs that did not move traffic in 2008, but for which CSXT nonetheless agreed to allocate projected volumes for 2009 to SFRR O-D pairs, *see supra* at III.A.2.a., this Reply evidence accepts the rates per ton assumed in SECI's opening evidence. *See* CSX Reply Ex. III-A-2 and III-A-3.xslx.

(b) Escalation of Issue Traffic Rates

SECI erroneously escalated the challenged rates, resulting in a significant overstatement of SFRR revenues for the Bostwick (SGS) traffic at issue in this case. SECI stated that it escalated the issue-traffic rates based on the RCAF-U index, as set forth in the associated tariff, CSXT-32531. *See* SECI Opening at III-A-29. While the challenged tariff nominally provides that the rates are adjusted by the RCAF-U, SECI failed to account for the fact that CSXT employs a "banking" approach that credits SECI for reductions in the index, and applies those credits to offset future RCAF index increases. *See, e.g.,* CSXT WP "SECI 2009 Rates.pdf"; 2009 SECI Freight Bills.pdf" (CSXT-SECI correspondence and invoices confirming this banking approach). That is, if an RCAF index decrease would have the effect of reducing the applicable rate below the base rate specified in the tariff, CSXT continues to charge the base rate, but records the effective (lower than the base) rate as a sort of "shadow rate." In subsequent quarters in which the index increases, CSXT applies the percentage increase to calculate a revised shadow rate. Importantly, CSXT continues to charge the customer (here SECI) the same, constant base rate until such time as the shadow rate (as adjusted by changes in the RCAF or other applicable index) exceeds the base rate. Only when the shadow rate level meets or exceeds

the base rate specified in the tariff does CSXT apply index increases to escalate the rate charged to the customer.

For example, the RCAF-U index for the Second Quarter of 2009 reported a 16.8% decrease. Although CSXT did not decrease the rate that it charged SECI, it calculated and recorded an effective shadow rate based upon the decline in the index, and used the resulting shadow rate as the basis for applying the RCAF in the third quarter. In the Third Quarter, the RCAF-U increased by 10.4%, *less* than the amount by which it had decreased in the Second Quarter. As a result, CSXT adjusted the shadow rate in the Third Quarter, but continued to charge SECI the same base rate that charged in the Second Quarter, because the shadow rate remained below the base rate. By contrast, SECI calculated SFRR revenues by applying the Third Quarter RCAF-U increase to the base-rate that had been charged in the Second Quarter, even though SECI's own invoices and payments demonstrated it continued to pay the lower bass rate. *See* CSXT WPs "SECI 2009 Rates.pdf"; "2009 SECI Freight Bills.pdf"

Table III-A-13

	1Q09	2Q09	3Q09	4Q09
SECI Opening	$41.68	$41.68	$46.00	$49.43
Actual Rate Charged	$41.68	$41.68	$41.68	$41.68
Difference	$0.00	$0.00	-$4.32	-$7.75

As indicated by the table, the failure of SECI's evidence to account for banking of its own rate resulted in overstatements of the challenged rates of 10 and 19 percent in the third and fourth quarters of 2009 respectively. Because that overstatement persists throughout the SAC analysis period, the effect of SECI's failure to account for CSXT's "banking" of adjustments to the issue traffic rates results in a cumulative overstatement of SFRR revenues by $ 393 million

over the SAC analysis period. CSXT's Reply evidence corrects that overstatement by accurately accounting for the banking process. *See* CSXT Reply WP "Banking Impact."

Table III-A-14

	Revenue Overstatement
2009	$11,828,197
2010	$37,206,064
2011	$38,410,352
2012	$40,017,297
2013	$41,358,520
2014	$42,038,790
2015	$42,131,894
2016	$44,082,787
2017	$46,262,695
2018	$49,678,793

(c) Correction of Erroneous Exclusion of Revenue

In an apparent computational error, SECI's rate calculation spreadsheets excluded base rates for certain few movements to {{ }}, effectively assuming those movements were subject to fuel surcharges and a zero base rate. CSXT corrected those errors by adding the applicable rates for movements from five origins during the period 2010 through 2018. Together, these adjustments made by CSXT on Reply increase SFRR revenue by an average of $3.4 million per year.

ii. Fuel Surcharges for SFRR Coal Traffic

As explained above, CSXT largely accepts SECI's escalation approach for coal-traffic revenues, relying upon the contract provisions for those movements under contract, the CSXT forecast for any other rate adjustments for the 2009-2013 period, and the EIA April 2009 AEO

Update to escalate rates beyond 2013 (other than those that remained under contract).[80] In addition to escalating base-rates, SECI also incorporated the terms of the various fuel surcharge provisions that apply to coal traffic. *See* SECI Opening at III-A-29. Specifically, SECI assumed that SFRR coal traffic movements would generate fuel surcharge revenues consistent with what CSXT collected in the real world through the contract expiration, after which all coal traffic would generate surcharge revenues based on CSXT's HDF program. CSXT generally accepts SECI's approach for determining the projected base revenues and fuel surcharges for the SFRR coal traffic with a few exceptions, related to shipments for {{

}} and for {{ }}

The contracts for these four destinations, which were renewed in 2009, specify that the trigger price for the fuel surcharge is {{ }}. HDF is projected not to reach that level until 2017. *See* CSXT WPs "Lakeland.pdf and SCE&G.pdf."

SECI also made a computational error that significantly understated coal fuel surcharge revenues by a total of $96 million over the final 4 years of the SFRR. Due to an apparent spreadsheet lookup error, SECI kept the per-car-mile fuel surcharge rates constant at 2014 levels for 2015 through 2018. *See* SECI WP "Coal Fuel Surcharge Forecast.xlsx." CSXT corrects the error in this Reply evidence.

b. Intermodal Traffic Revenues

SECI's intermodal traffic revenue evidence contains two primary categories of errors:

(i) erroneous escalation of rates from 2008 to 2009 for non-contract movements; and

(ii) application of the published default CSXI fuel surcharge mechanism to traffic that does not

[80] The discussion in this paragraph is limited to the escalation of selected CSXT coal traffic rates and revenues, and does not discuss cross-over traffic revenue allocation, which is analyzed in a separate subsection, *infra*

pay that published default fuel surcharge. Below, CSXT describes those errors and how this Reply corrects them, as well as areas in which CSXT accepts SECI's approach.

i. Rate increase from 2008 to 2009

Complainant SECI first identified rates for the intermodal traffic it selected for the SFRR in the 2008 traffic file data produced by CSXT's affiliate CSX Intermodal. SECI then developed assumed rates for that traffic for 2009, the SFRR's first year of operation, using two different approaches. For approximately one- half of the SFRR traffic, SECI applied contractual escalation provisions to calculate 2009 rates. CSXT does not object to this approach, and accepts SECI's rate assumptions for 2009 for that traffic. *See* CSXT WP "Intermodal Forecast comparison red traf grp orig 09 fcst final cost ATC sample c97 v1.xlsx." For the other half of the SFRR's intermodal traffic, SECI hypothesized that rates would escalate from 2008 to 2009 at an across-the-board 11 percent growth rate. This 11-percent rate growth assumption is erroneous, and it would not apply to the intermodal traffic that Seminole selected for the SFRR.

SECI states that it developed an average per- unit rate of increase for all intermodal traffic movements included in the forecast. *See* SECI Opening at III-A-30. Review of SECI's calculations, however, shows that it determined its hypothetical 11-percent revenue growth rate by comparing the average *total* revenue per unit in CSXI's 2009 forecast { } to the average *net* revenue per unit for the 2008 CSXI traffic from certain shipment records that CSXT produced in discovery { }. See SECI WP "Intermodal Forecast comparison red traf grp orig 09 fest final cost ATC sample c97 v1.xlsx." While the total revenue figure that Seminole used for 2009 is approximately 11 percent higher than the net revenue figure it used for 2008, this apples-to-oranges comparison is a misapplication of the CSXI forecast that does not represent the average rate of increase in CSXI's intermodal revenue per unit.

Seminole's approach calculated 2008 intermodal revenue net of payments made to interline partners, but did not deduct those payments from 2009 intermodal revenues, resulting in comparison of 2008 *net* revenues (*i.e.* total intermodal traffic revenue less amounts payable to foreign carriers for interline movements) with 2009 *total* revenues (including both CSXI revenues and foreign carrier revenues). CSXT explained to SECI that the intermodal shipment records produced in discovery identify separately total line-haul revenues and amounts that were paid to other carriers ("line haul payables"), which apply predominantly to transcontinental ("Transcon") shipments. *See* CSXT WP "CSXT April 10 Letter.pdf." In making its revenue comparison, Seminole confused the average and net revenue figures, using the average *net* revenue figure { } for 2008 intermodal traffic and the average *total* revenue from the 2009 CSXI forecast { }.[81] *See* SECI WP "Intermodal Forecast comparison red traf grp orig 09 fest final cost ATC sample c97 v1.xlsx." What SECI failed to recognize is that the "difference" it identified between 2008 and 2009 intermodal rates was almost entirely due to the payables to foreign line carriers for the Transcon traffic, which is consistent with CSXI's forecast of static rate levels in 2009.

Moreover, Seminole's mis-step could have been avoided altogether had it focused on the CSXI traffic that it actually selected for the SFRR. CSXI shipments records identified a line of business, classifying the traffic as either IN001 (defined in materials produced to Seminole as "Core") or IN003 (identified as "Transcon"). Review of Seminole's SFRR intermodal traffic confirms that virtually all of it is Line of Business 001 / Core.[82] The 2008 CSXI system-wide

[81] For 2008, the average total line-haul revenue for all CSXI traffic was {{ }} per unit (excluding fuel surcharge), and the average payable was {{ }}, producing an average net revenue figure of {{ }}.

[82] Of the approximately 473,000 CSXI revenue units that SECI selected from the 2008 shipment file, less than {{ }} reported LOB 003.

shipments that Seminole used to select its traffic group, however, indicate that {{

}}[83] If Seminole had compared the average revenue per unit for the Core traffic from the CSXI 2008 shipment files { } to the average for the Core traffic in the CSXT 2009 forecast { }, it would have confirmed that CSXI forecast no material rate growth for the SFRR intermodal traffic from 2008 to 2009.

ii. Fuel Surcharges for SFRR Intermodal Traffic

To develop SFRR fuel surcharge revenues for intermodal traffic, SECI applied a few selected fuel surcharge provisions to all of the diverse intermodal shipments that it selected for the SFRR traffic group. CSXT generally accepts SECI's calculation of fuel surcharges for the minority of movements for which SECI estimated fuel surcharge revenues based on specific, applicable fuel surcharge provisions, *i.e.*, by applying the terms of an existing CSXI agreement to the specific traffic that it actually governs. CSXT takes issue, however, with SECI's fuel-surcharge revenue assumptions, calculations, and methodology for (1) traffic for which SECI did not identify the specific governing terms; and (2) traffic moving after the expiration of an existing CSXI agreement or arrangement.

(a) Traffic for which SECI Did Not Identify the Specific Fuel-Surcharge Provisions

In order to estimate intermodal traffic fuel surcharge revenues, SECI selected 40 of the 469 CSXI price authorities that govern CSXI movements that SECI included in its SFRR traffic group.[84] *See* SECI Opening at III-A-30-31. SECI's work papers show that it generally applied

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[83] For instance, of { }} in total CSXI line-haul payables, {{ }} was associated with LOB 003 traffic.

[84] The 40 price authorities that Seminole chose to review accounted for the majority of the volume of intermodal traffic it selected for the SFRR. SECI erroneously states that "the parties

the relevant fuel surcharge provisions of those 40 price authorities correctly, resulting in an accurate estimate of fuel surcharge revenue for traffic volumes covered by those 40 selected price authorities. *See* SECI WP "Intermodal Contract Summary v2 combined 072409 FSC HDF 0910 0609GIRCAF Reply.xslx."

For the diverse customers for which SECI did not review a governing price authority, however, Complainant unreasonably assumed that all such traffic (subject to 429 separate price authorities) would pay fuel surcharges based on general default CSXI fuel surcharge terms published on the CSXI internet web site, which apply to shippers who are not covered by a specific agreement or price authority. *See* SECI Opening at III-A-31. This assumption is arbitrary and distorts the evidence upon which SECI purported to rely.

Given that SECI apparently believes it selected a representative sample of price authorities governing SFRR intermodal traffic, a less arbitrary approach to estimating fuel surcharges for intermodal traffic not covered by those 40 price authorities would be to apply a weighted average of the fuel surcharge revenues generated by the 40 sampled authorities. As discussed below, this is the approach used by CSXT to adjust estimated SFRR fuel surcharge revenues.

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agreed CSXT would produce a *representative sample*" of CSXI price authorities. SECI Opening III-A-30, n. 34 (emphasis added). CSXT agreed to produce a reasonable number of CSXI price authorities selected and designated by SECI. CSXT did not agree to produce a "representative" sample, and it played no part in the development or application of any criteria SECI may have used to select the price authorities the Complainant chose to review. Rather, SECI simply provided a list of pricing authorities to CSXT and requested they be produced. See D. Jaffe letter to P. Hemmersbaugh at 1 (April 24, 2009) (CSXT Reply WP "SECI April 24 Letter.pdf") CSXT takes no position as to whether the fuel surcharge provisions in the price authorities selected by SECI were "representative" of the fuel surcharge provisions governing all intermodal traffic it selected for the SFRR. If the sample SECI selected for review were representative of the population of intermodal traffic SECI included in the SFRR traffic group, this would further support the conclusion that the method SECI used to estimate fuel surcharges for the remaining SFRR intermodal traffic was erroneous and would substantially overstate SFRR fuel surcharge revenues.

Review of SECI's workpapers, as well as the very agreements that SECI selected, indicates that {{ }} the intermodal customers covered by those agreements pay {{ }} the general default surcharge published on the CSXI website, and that the average fuel surcharge paid by those customers is {{ }} than that default level.[85] It is patently unreasonable for SECI to assume that *all* intermodal customers whose agreements it did not review would pay fuel surcharges that are {{ }} that the actual price authorities indicate CSXI could expect to collect in the real world. Moreover, SECI offers no rationale or justification in support of its extraordinary, simplistic assumption that all 429 non-sampled price authorities would provide for a { } fuel surcharge rate than {{ }} of the purportedly representative sample of price authorities SECI chose for review.

To correct SECI's overstatement of fuel surcharge revenues for intermodal traffic covered by existing price authorities, CSXT applies the same methodology that SECI used to estimate fuel surcharges for general freight traffic not included in the rate authorities selected by SECI. That is, CSXT estimates fuel surcharge revenues for the remaining intermodal traffic based on the weighted-average fuel surcharges paid for those CSXI customers for which SECI reviewed the actual price authorities and applied the governing surcharge terms. This approach effectively applies SECI's stated assumption that the fuel surcharge provisions of the sample of 40 intermodal price authorities it selected for review are representative of the fuel surcharge provisions for the remainder of the intermodal traffic it selected for the SFRR.[86] *See* SECI Opening at III-A-30, n.34

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[85] See SECI Opening WP "Intermodal Contract Summary v2 combined 072409 FSC HDF STEO 0910 0609GIRCAF.xlsx"

[86] The accurate way to calculate fuel surcharge revenues would be to review and apply the fuel surcharge provision of every applicable rate authority. Because, during discovery, CSXT did not know what traffic SECI might ultimately select for the SFRR, CSX Intermodal could not

The following table compares the published default fuel surcharge amounts that CSXI collects from {a minority of its customers} to the average fuel surcharges that CSXI collects pursuant to the agreements selected and reviewed by SECI.

	Published Default CSXI Fuel Surcharge	Average Fuel Surcharge from CSXI Agreements	Difference
2009	16.0%	{{ }	{{ }
2010	20.0%	{ }	{ }
2011	16.0%	{ }	{ }
2012	19.5%	{ }	{ }
2013	24.0%	{ }	{ }
2014	27.5%	{ }	{ }
2015	30.5%	{ }	{ }
2016	33.5%	{ }	{ }
2017	36.0%	{ }	{ }
2018	39.0%	{ }}	{ }}

*Based on HDF forecast from April 2009 AEO Update.

(b) Fuel Surcharges after Contract Expiration

In addition to assuming that all other intermodal traffic would pay the {{ }} published default CSXI surcharge, SECI also assumed that the SFRR would collect the fuel surcharge at the published level for all intermodal traffic after a contact or other rate authority expires, regardless of the actual fuel surcharge terms in place. *See* SECI Opening at III-A-31. This approach – which SECI applied without evidence or support – overstates SFRR revenues,

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produce all rate authorities governing potential SFRR unless it produced every single intermodal rate authority. This would have been an enormously burdensome and costly undertaking for both parties that likely would have substantially delayed the submission and determination of this case. Given that SECI selected approximately 10 times more intermodal movements than intermodal rate authorities, estimation of fuel surcharge revenue for the traffic for which rate authorities are not available requires application of some assumption about all of the other traffic SECI selected for the SFRR. As between the two alternatives proffered by the parties for purposes of this case (the arbitrary and biased approach proffered by SECI and the more evidence-based and objective approach advanced by CSXT and applied by SECI for general freight traffic), however, the CSXT approach is plainly superior.

because it assumes that fuel surcharges that would not be available to CSXI would nonetheless be available to the SFRR. As discussed above, fewer than {{ }} of the agreements SECI selected for review require the customer to pay the full published default CSXI surcharge. That is largely because those agreements were the product of private market-place negotiations between CSXI and its customers, and many of the surcharges reflect the customers' own surcharge program(s) or formula(e). For example, the CSXI contract with {{ }} sets forth a fuel surcharge that has both a higher trigger price and a smaller increment than the default CSXI formula,[87] each of which contributes to a lower surcharge amount than would apply under the default CSXI program. In fact, based on the average HDF for 2009 of $2.46 per gallon, surcharges under the {{ }} agreement were {{ }} under the default CSXI program. After this contract expires {at the end of 2009}, however, SECI assumes that the traffic automatically converts to the published default CSXI surcharge, nearly {tripling} the surcharge revenues. Such an assumption is both unrealistic and inconsistent with the standard approach in SAC cases, in which future post-contract SARR revenues are extrapolated from existing revenues and arrangements, not assumed to depart dramatically from the existing pattern absent strong supporting evidence predicting such a change. Indeed, SECI itself essentially followed this approach when calculating SARR line haul revenues following the expiration of governing agreements. *See, e.g.,* SECI Opening at III-A-30 to 31 (estimating annual intermodal line haul revenues for the period from 2014 through 2018 by extrapolating the amount of annual increase

[87] The published default CSXI fuel surcharge program allows for a surcharge when the HDF price exceeds {{ }} per gallon; under the {{ }} agreement, a surcharge is not assessed until the HDF exceeds {{ }}. The published default CSXI surcharge increases by 0.5% for every 4-cent increase in the HDF; the surcharge for { { }} traffic increases only {{ }} increase.

from the last forecast year, 2012-2013). To correct SECI's overstatement of fuel-surcharge revenues for { } of the SFRR intermodal customers, CSXT calculates and applies each customer's fuel surcharges throughout the SAC analysis period based on the particular surcharge formulas contained in the agreements that SECI selected and incorporated.

c. General Freight Traffic Revenues

SECI developed the revenues for the SFRR general-freight traffic by following a multi-step process using a sample of actual price authorities and the 2009 CSXT forecast. *See* SECI Opening at III-A-32 to 35. Specifically, SECI classified general freight traffic into three strata, based upon the number of carloads shipped (volume), and selected a sample of CSXT price authorities for each stratum. Based on the sampled price authorities, SECI developed average escalation and fuel-surcharge factors for each stratum, and applied those factors to all movements within the same volume strata. CSXT accepts the general approach that SECI followed for the purposes of estimating base line haul rates for the SFRR general freight traffic, but finds significant errors in the estimation and application of the fuel surcharges associated with these volumes. Initially, those material errors are similar to those that resulted in SECI's overstatement of fuel surcharges for SFRR intermodal traffic. Those initial errors are exacerbated by SECI's volume-based grouping, or stratification, of that traffic. Below, CSXT describes those errors and how it corrected them.

i. SECI's Failure to Properly Account for Sampled Traffic with No Applicable Fuel Surcharge

SECI selected and reviewed a sample of the CSXT price authorities that apply to general freight movements SECI selected for the SFRR traffic group. *See* SECI Opening at III-A-32. SECI claims that it used the specific fuel-surcharge provisions of governing price authorities to calculate the fuel surcharges it applied to each of the movements in its sample. *See* SECI

Opening at III-A-32 to 33. While CSXT accepts this element of SECI's stated approach, SECI did not consistently follow that approach. First, for sampled movements that SECI's own work papers identified as not being subject to a fuel surcharge, SECI nonetheless "assumed" the SFRR would collect fuel surcharges based upon CSXT's published default common carrier tariff fuel surcharge rate.[88] This is obviously an error, because a SARR could not collect fuel surcharge revenues from customers who are not required (by a governing rate authority) to pay such charges.

Second, in other instances, SECI erroneously credited the SFRR with fuel surcharge revenues for traffic subject to a fuel surcharge provision whose trigger price was *higher* than the benchmark highway diesel fuel ("HDF") price during the period in question. Because fuel surcharges do not apply until the relevant fuel price hits the trigger level, customers whose trigger price is above the actual market price do not pay a fuel surcharge. Both of the foregoing errors caused SECI to overstate SFRR revenues by the amount of the putatively applicable CSXT fuel surcharge provision if that published surcharge were applicable. To correct the resulting overstatement of SFRR revenues, CSXT's Reply evidence excludes those fuel surcharge revenues that SECI's own work papers indicated are not subject to such provisions. *See* CSXT Reply WP "CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09 fcst sample v1.slxs."

[88] *See* CSXT Reply WP "CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09 fcst sample v1.slxs."

ii. Traffic for which SECI Did Not Review Fuel-Surcharge Provisions

For those movements that SECI selected for the SFRR traffic group, but for which it did not review applicable rate authorities, SECI initially applied the weighted average fuel surcharge from its sample to the remaining traffic within each stratum. *See* SECI Opening at III-A-34. However, SECI applied that average only in the first two years of SFRR operation (2009-2010). Beginning in 2011 and continuing through the end of the analysis period, SECI blithely assumed – without evidence or support – that all SFRR general freight traffic for which SECI did not review a rate authority would pay {{ }} fuel surcharges based on the CSXT published common carrier tariff. *See* SECI Opening at III-A-34. There is no reason to assume that customers subject to a { } fuel surcharge in 2009 and 2010 would, in 2011, agree to pay the { } common carrier fuel surcharge for the next eight years. In the absence of any argument or other support, this illogical assumption should be rejected. CSXT corrects SECI's overstatement of SFRR general freight fuel surcharge revenue by applying the weighted average fuel surcharge rates to the full analysis period.[89] CSXT's approach is less arbitrary, and likely to yield a more accurate estimate of the average surcharges that the SFRR might collect from other SFRR customers, for which SECI provided no evidence. The following table summarizes the average fuel surcharges per car-mile for the SFRR general freight traffic that is applied to the

[89] CSXT applied SECI's initial approach to estimated the fuel surcharge per mile based upon EIA HDF price forecasts for each year from 2010 to 2018. CSXT then applied the weighted averages each of SECI's SFRR general freight strata, by year. The Board should apply EIA's HDF forecast from the 2010 AEO – which is scheduled to be released in the first quarter of 2010 – to derive a more current estimate of future SFRR fuel surcharge revenue

traffic for which SECI did not identify specific price authorities, within SECI's first stratum ("A").[90]

Table III-A-15

	SECI	CSXT	Difference
2009	{{		-31%
2010			-3%
2011			-31%
2012			-22%
2013			-17%
2014			-15%
2015			-14%
2016			-14%
2017			-13%
2018		}}	-12%

iii. Fuel Surcharges after Contract Expiration

SECI assumed – again without any support – that all contract traffic would begin to pay CSXT's full published common carrier fuel-surcharge rate upon contract expiration, and would continue to pay that rate through the end of the analysis period. *See* SECI Opening at III-A-33. As CSXT explained above, it is unreasonable to assume that upon expiration of contracts providing for fuel surcharges that are different from the published default common carrier tariff provision, fuel surcharge provisions of a bargained-for contract would immediately convert to the { generally higher } published common carrier tariff rate, and remain at that level for the duration of the analysis period. Negotiated contracts included in the authorities that SECI asked CSXT to produce contain fuel-surcharge provisions that are significantly different from CSXT's published common carrier fuel surcharge. For example, SECI selected shipments moving under price authority {{ }} that were subject to a fuel surcharge only

[90] A similar summary for all three strata is included in the exhibits to this section. *See* CSXT Reply Exhibit III-A-7.

when the trigger price exceeds {{ }} higher than CSXT's standard trigger price.[91] SECI's assumption that upon expiration of that contract the surcharge for this traffic { } is unsupportable. To eliminate this type of fuel surcharge overstatement upon expiration of an existing rate authority, CSXT's Reply applies that same surcharge provision from the expiration of a sample rate authority through the end of the SAC analysis period.[92]

4. Revenue Divisions: Cross-Over Traffic

SECI's traffic selection, in combination with the CSXT lines it chose to replicate for the SFRR, together result in the vast majority of SFRR traffic being handled as "cross-over" with CSXT. Cross-over traffic accounts for approximately 92 percent of SFRR traffic volume. SECI made several significant errors in its application of the Board's Average Total Cost ("ATC") methodology to allocate crossover traffic revenues between the SFRR and CSXT. Because the overwhelming majority of SFRR traffic is crossover traffic, the effect of SECI's ATC errors is a substantial overstatement of SFRR revenues.

Proper allocation of cross-over traffic revenues is essential to a sound and meaningful SAC analysis. As the Board has explained, a complainant is allowed to use the simplifying device of cross-over traffic only to "make the analysis more manageable without introducing bias." *Major Issues*, STB Ex Parte 657, Decision at 24 (Oct. 30, 2006). In order to avoid

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[91] For another {{ }} price authority, { } that expired in September 2009, SECI assumed the Base FSC throughout the SARR period. As CSXT Reply WP { } demonstrates, {{ }} traffic shifted to the new price authority {{ }} when the contract was renewed. For SFRR purposes, CSXT applied the fuel surcharge terms of {{ }} to traffic listed under price authority {{ }}.

[92] As previously discussed, this is consistent with SECI's assumptions for base line haul revenue escalations for intermodal and general freight traffic, which assume the annual revenue increase from 2014 through 2018 will be the same as the increase in the final forecast year, 2012-2013. See, e.g., SECI Opening III-A-32.

introducing such bias or distortion to the SAC analysis, it is essential that crossover traffic revenues are properly allocated "between the facilities replicated by the SARR and the residual network of the railroad needed to serve that traffic." *Id.*[93] Stated differently, an essential condition of a complainant's use of the expedient device of cross-over traffic is proper application of the Board's methodology for allocating the revenues from that traffic.

The Board has determined that the best way to achieve the dual goals of making the SAC analysis more manageable and avoiding bias is through careful and proper application of the ATC methodology, which allocates the revenues generated by cross-over movements in accordance with the average total cost of each segment (i.e. the SARR segment and the residual incumbent segment(s)) for each movement. *See id.* at 24-39; *Western Fuels Ass'n,* Decision at 12-15 (providing further direction concerning the application and implementation of ATC). Having decided to rely extensively on cross-over traffic, it is incumbent upon Seminole to apply the ATC methodology in accordance with the rules and requirements established by the Board. Because Seminole has failed to meet those basic requirements, CSXT's Reply provides corrections and adjustments necessary to conform SECI's cross-over traffic revenue allocations to the Board's requirements, as explained in *Major Issues, WFA,* and their antecedents. The several significant corrections to SECI's ATC calculations described below result in a significant downward adjustment of SFRR revenues. For example, CSXT's correction of SECI's ATC calculations for coal traffic alone reduce SECI's 2009 coal revenues by 11.2 percent, or $58.8 million. *See* CSXT Reply WP "Exhibits III-A-2 and III-A-3 Reply.xlsx."

[93] If insufficient revenues are allocated to the residual incumbent's segments of a crossover movement, the residual incumbent would not be able to provide the service required by the traffic, and the full movement – including the SARR segments – would not be viable.

a. Application of ATC to Corrected Re-Routes

The substantial – though undisclosed – off-SARR rerouting embedded in SECI's SAC presentation compels significant adjustments to its crossover traffic revenue allocation. As demonstrated, SECI has engaged in re-routing of crossover traffic that would change (in many instances radically change) the traffic's route of movement over the residual CSXT without meeting the threshold requirements of (i) "demonstrat[ing] how crossover revenues should be allocated "in accordance with the defendant carrier's *actual* costs of providing the transportation service" and without (ii) "provid[ing] an alternative SAC analysis where there are no off-SARR reroutes." *WFA* at 15; *see* III.A.1.b *supra.* This is a fundamental failure of proof. If, as is entirely appropriate, the Board rejects all SFRR traffic using an off-SARR re-route, then it should simply remove all SFRR revenues that SECI attributed to such impermissible re-routed traffic in its case-in-chief. *See id.*

If, instead, the Board decides to excuse SECI's failure of proof and follow CSXT's alternative approach of correcting the routing, then the substantial routing changes would require commensurately substantial corrections and adjustments to the ATC revenue-division calculations. Such corrections and revised calculations, described in more detail below, are essential to properly reflect the appropriate routings necessary to eliminate SECI's unsupported, and hence prohibited, off-SARR re-routings. CSXT corrected the SFRR on/off junctions and the SFRR and residual mileages in the URCS variable cost input spreadsheets for each re-routed move.[94] CSXT then re-ran URCS using the newly available 2008 URCS data and recalculated the ATC percentages for each move. *See* CSXT WP "ATC Summary Reply.xlsx."

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[94] See CSXT Reply WPs UMMARY_OF_REVENUE_LBS_TONS_MILES_SARR_CoalTraffic _2008_050809_RAW_DATA073109s REPLY.xlsx and CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09 fcst sample v1 Reply.xlsx

b. Fixed Costs

In addition to the erroneous variable-cost calculations resulting from SECI's impermissible off-SARR re-routes, SECI also made several significant errors in its calculation of the fixed costs for purposes of its ATC calculations. These errors include failure to apply revisions and refinements the STB has directed parties to follow in implementing the ATC revenue division approach. *See, e.g., Western Fuels Ass'n v. BNSF,* Decision at 13-14. Correction of those errors affects revenue allocation for all cross-over traffic, not just improperly re-routed traffic. As the Board has explained, the ATC approach uses the defendant carrier's URCS variable and fixed costs, and the density and length of each segment, to develop an average total cost per ton for each segment (on-SARR and off-SARR) of each crossover movement. *See id.* The ATC approach then allocates cross-over traffic revenues to the SARR and the residual incumbent in proportion to the average total cost of the movement on the on-SARR and off-SARR segments. *See Major Issues*, Decision at 34-36.

i. Off-SARR Fixed Costs

SECI erroneously applied off-SARR fixed costs on a per *ton-mile* basis rather than on a *per-ton* basis. *See Major Issues* at 34 (ATC uses average costs per ton). This error caused a significant understatement of Off-SARR fixed costs, which in turn overstated the SFRR's ATC percentage, and thereby over-allocated revenues to the SFRR. The following excerpt from SECI's workpapers ("OffSARRCoal.xls") illustrates the error embedded in all of SECI's Off-SARR fixed cost spreadsheets. SECI calculated fixed cost for each route by multiplying the cost per mile ($154,000) by the number of miles (219.3 in the first line of the sample below) but then it divided that cost by the gross ton-miles (figures in millions) instead of by the number of tons. Effectively, SECI divided "per ton" costs by the number of miles.

OFFSARR		CSXT Destination		Destination Residual	Destination Residual	Fixed Cost Per Mile	$154,079 Corrected
Station	state	Station	state	Miles	GTMs	SECI	Cost per Ton
ATLANTA	GA	BEECH ISLAND	SC	219.3	6,016.0	$0.006	$1.23
ATLANTA	GA	CROSS	SC	410.8	13,440.8	$0.005	$1.93
ATLANTA	GA	DUBLIN	GA	340.2	8,890.6	$0.006	$2.01
ATLANTA	GA	GASTON	AL	196.4	8,152.0	$0.004	$0.73
ATLANTA	GA	HARLLEE	GA	172.7	2,235.4	$0.012	$2.05
ATLANTA	GA	LUGOFF	SC	276.1	6,992.4	$0.006	$1.68
ATLANTA	GA	NORTH WATEREE	SC	274.1	7,223.4	$0.006	$1.60
ATLANTA	GA	SAVANNAH	GA	340.2	8,890.6	$0.006	$2.01
ATLANTA	GA	TERRELL	NC	322.2	9,369.8	$0.005	$1.71
BENNING	DC	BALTIMORE	MD	36.3	3,136.3	$0.002	$0.06
BENNING	DC	CHESAPEAKE BAY PIER	MD	43.9	3,136.5	$0.002	$0.09
BENNING	DC	CONSOL COAL TERM	MD	43.9	3,136.5	$0.002	$0.09
BENNING	DC	HERBERT	MD	46.8	447.7	$0.016	$0.75
BENNING	DC	WOODZELL	MD	50.6	515.9	$0.015	$0.77
BOSTWICK	FL	TAFT	FL	97.8	1,889.5	$0.008	$0.78
CALLAHAN	FL	BOYKIN	FL	212.8	5,171.2	$0.006	$1.35
CALLAHAN	FL	BROOKSVILLE	FL	242.4	7,807.7	$0.005	$1.16
CALLAHAN	FL	GAY	FL	242.4	7,807.7	$0.005	$1.16
CALLAHAN	FL	HAGUE	FL	74.6	2,696.1	$0.004	$0.32
CALLAHAN	FL	HAILE	FL	80.1	2,743.0	$0.004	$0.36
CALLAHAN	FL	PARK	FL	187.9	7,780.7	$0.004	$0.70

To correct this error, CSXT multiplied SECI's costs per ton-mile figures for each off-SARR segment by the associated miles which yields fixed costs on a per-ton basis. *See* CSXT WPs "OffSARRCoal Reply.xls, OffSARR_Intermodal Reply.xls, OffSARR GF_Origin Reply.xls and OffSARR GF_Dest Reply.xls."

ii. On-SARR Fixed Costs

SECI also incorrectly calculated the On-SARR fixed costs in three separate respects. *First*, SECI's calculations used the hypothetical densities of the SFRR rather than actual CSXT system densities. *See* SECI WP "SECI SARR FixedCosts.xls." In *Western Fuels*, the STB clarified that the ATC formula must use the *defendant carrier's actual* densities for the lines replicated by the SARR, *not* the *hypothetical* densities on the SARR system. *See WFA*, Decision at 13-14. CSXT corrected this error by substituting CSXT traffic densities for segments replicated by the SFRR. *See* CSXT WP "SECI_SARR_Fixed Costs_Reply.xlsx."

Second, as it did for the off-SARR fixed costs, SECI's approach erroneously calculated on-SARR fixed costs on a ton-mile basis, for each segment. *See* SECI Opening WP " SECI_

SARR_ FixedCosts.xslx." To convert the fixed costs for each SFRR segment to a per-ton basis, CSXT ignored the ton-mile calculations in SECI's spreadsheet and divided each segment's fixed costs by its tonnage to determine the fixed cost per ton. *See* CSXT Reply WP "SECI_ SARR_ FixedCosts Reply.xslx."

Third, all of SECI's on-SARR fixed costs for general freight traffic were erroneously set at zero (this appears to be due to a spreadsheet look-up error), because the densities were assumed to be zero. CSXT remedied this error by inserting the correct density figures.

In most instances, the corrected fixed costs resulted in a lower ATC percentage for the SFRR because the off-SARR error understated costs more than the on-SARR errors. Following are two examples of CSXT's fixed cost corrections.

Table III-A-16: Hutchinson, WV, to Indiantown, FL
On/Off SARR Junctions: Junta/Jacksonville
Revenue: {{ }}; Contribution: {{ }}

	Per Gross Ton							
	CSXT Origination		SARR		CSXT Destination			
	Variable	Fixed	Var.	Fixed	Variable	Fixed	ATC%	SARR Revenue
SECI	$5.06	**$0.003**	$2.85	**$0.10**	$2.38	**$0.01**	28.3%	{{
Corrected	$5.06	**$2.13**	$2.85	**$0.93**	$2.38	**$3.12**	22.9%	
							Difference:	}}

Table III-A-17: Brooks Run, WV, to Chesapeake Bay Pier, MD
On/Off SARR Junctions: Cumberland, MD/Point of Rocks, MD
Revenue: {{ }}; Contribution: {{ }}

	Per Gross Ton							
	CSXT Origination		SARR		CSXT Destination			
	Variable	Fixed	Var.	Fixed	Variable	Fixed	ATC%	SARR Revenue
SECI	$0.99	**$0.01**	$0.86	**$0.05**	$0.85	**$0.003**	33.0%	{{
Corrected	$0.99	**$0.61**	$0.86	**$0.28**	$0.85	**$0.20**	30.2%	
							Difference:	}}

After making the tonnage and revenue adjustments described above, CSXT's Reply presents the following adjusted revenues (shown in comparison to overstated revenues in SECI's evidence).

Table III-A-18: SFRR Revenues ($ million)

	SECI Opening	CSXT Reply	Difference
2009	1,116.1	942.0	(174.1)
2010	1,250.8	1,035.4	(215.4)
2011	1,272.0	1,058.5	(213.6)
2012	1,360.7	1,153.4	(207.4)
2013	1,488.0	1,274.1	(213.9)
2014	1,571.0	1,361.6	(209.4)
2015	1,652.5	1,434.5	(218.0)
2016	1,737.6	1,508.5	(229.1)
2017	1,832.6	1,592.5	(240.1)
2018	1,936.6	1,680.7	(255.9)

III. STAND-ALONE RAILROAD SYSTEM

B. STAND-ALONE RAILROAD SYSTEM

1. Route and Mileage

The route SECI has proposed for the SFRR comprises a 2,092 mile system with two divisions laid out in a wishbone shape:

1. The West Division extends from Princeton, IN to Bostwick, FL. It replicates parts of CSXT's Nashville, Atlanta and Jacksonville Divisions.

2. The East Division extends from northeastern West Virginia to Folkston, GA, where it connects with the West Division. It replicates parts of CSXT's Huntington East, Baltimore, Florence and Jacksonville Divisions. The East Division also includes a portion of the former Monongahela Railway ("MGA") lines now owned by Norfolk Southern Railway Company ("NS"), over which CSXT (and thus the SFRR) acquired operating rights.

Although SECI determined that the SFRR will route issue traffic originating on the West Division differently than CSXT routes that traffic today, CSXT accepts the general configuration of the SFRR as defined by SECI. A map of the SFRR configuration is presented as Exhibit III-B-1.

a. Main Line

West Division – The SFRR's main line starts at Princeton (a/k/a North Gibson), IN, and proceeds south and southeast to Bostwick, FL[1] via Evansville, IN, Madisonville, KY, Nashville and Chattanooga, TN, Atlanta and Folkston, GA and Callahan and Jacksonville, FL. It replicates all or parts of CSXT's CE&D, Henderson, Nashville Terminal, Chattanooga, W&A, Atlanta

[1] The exact location of SGS is near Palatka, FL. However, the spur to the plant connects with CSXT's main line at Bostwick.

Terminal, Manchester, Fitzgerald, Jesup, Nahunta, Jacksonville Terminal and Sanford Subdivisions.

East Division – SECI assumes the SFRR's main line starts at Brownsville, PA (CP Brown) and proceeds north to McKeesport (Demmler Yard), PA, and thence southeast and south to Folkston, GA via Connellsville, PA, Cumberland, Brunswick and Point of Rocks, MD, Washington, DC, Richmond, VA, Rocky Mount, NC, Florence and Charleston, SC and Savannah, GA. It replicates all or parts of CSXT's Mon, Pittsburgh, Keystone, Cumberland, Metropolitan, RF&P, Bellwood, North End, South End, Charleston and Nahunta Subdivisions.

b. Branch Lines

SECI has included a total of ten branch lines for the SFRR, three on the West Division and seven on the East Division. These branch lines serve coal mines, power plants and other industrial destinations, water/rail transfer terminals, and interchange points.

The three branch lines on the West Division are the Morganfield, Paradise and Stilesboro Branches. The Morganfield Branch extends from Atkinson (Madisonville), KY west to the Dotiki Mine near Providence, KY, and also serves the Cardinal 9 (Warrior) Mine. The Paradise Branch extends from Madisonville east to Drakesboro, KY. It serves the Cimarron (a/k/a Elk Creek) Mine and Tennessee Valley Authority's Paradise power plant.[2] The Stilesboro Branch extends from Junta, GA (near Cartersville) to Georgia Power's Bowen power plant near Stilesboro, GA, and replicates part of CSXT's Cartersville Subdivision.

[2] The SFRR delivers the coal trains destined to the Paradise plant to TVA at Drakesboro, KY. TVA then moves the loaded trains over its own trackage to Paradise for unloading and returns the empty trains back to Drakesboro using its own crews. These operations are specified in the contract between TVA and CSXT.

The seven branch lines on the East Division are the Robinson Run, Dahlgren, Richmond, Roanoke Rapids, Stone, Cross and Charleston Branches.

The Robinson Run Branch extends from Brownsville, PA (CP Brown) to Haywood, WV and the Consol 95 (a/k/a Robinson Run) Mine via Rivesville (Catawba Jct.), Fairmont, Grafton, Clarksburg and Lumberport, WV. This branch serves Allegheny Power's Harrison power plant at Haywood and the Loveridge Mine, and the SFRR also uses it to interchange traffic with CSXT at Grafton and Haywood, WV. The SFRR operates over the NS (former MGA) Loveridge Secondary between CP Brown (Brownsville) and Catawba Jct. (Rivesville) and between Catawba Jct. and Loveridge Mine pursuant to joint use rights under the MGA Agreement, stepping into CSXT's shoes under that agreement for this purpose. Between Catawba Jct. and Haywood/Consol 95 Mine, the SFRR replicates (constructs, owns and operates) portions of CSXT's Fairmont, Bridgeport and Short Line Subdivisions. SECI omitted from the Robinson Run Branch route mileage 0.6 miles of the Haywood Industrial Track, which is currently owned by CSXT and connects the Short Line Sub to the Robinson Run Industrial Track. CSXT added this distance to the SFRR route miles.

The other six branches on the East Division serve power plants and other destinations and rail/water transfer terminals in Virginia, North Carolina and South Carolina. The Dahlgren Branch serves the Birchwood power plant at Sealston, VA. The Richmond Branch serves coal-fired power plants and other industrial facilities at Wheelwright, Bermuda Hundred and Hopewell, VA. The Stone Branch serves a Stone Container plant that burns coal at Stone, SC. The Cross Branch serves Santee Cooper's Cross Generating Station in Berkeley County, SC. The Charleston Branch serves ship/rail transfer facilities at Charleston, SC.

SECI assumes that the two legs of the Monongahela Railroad – totaling just over 135 miles – from which the SFRR originates traffic will be accessed under the terms of the Monongahela Usage Agreement between CSXT and NS. However, by failing to construct the portions of the MGA included in the SFRR configuration, SECI has failed to account for the road ownership costs associated with CSXT's equal access to MGA under the MGA Operating Agreement[3]—costs which the SFRR would also incur in order to access MGA traffic. In its reply, CSXT has developed the costs to build the MGA lines from Federal 2 to Brownsville and from Loveridge Mine to Brownsville SFRR and included 50 percent of those costs – representing CSXT's share of equal access to the MGA assets – as part of the required SFRR investment. With the inclusion of these two branch lines, the SFRR will have a total of 12 branch lines – three on the West Division and nine on the East Division.

c. Interchange Points

SECI assumes that the SFRR interchanges coal and other traffic with two Class I railroads, CSXT and NS, along with various regional and short-line railroads that CSXT actually interchanges with today. SECI also assumes that the SFRR interlines traffic with additional short lines that are reached via residual CSXT trackage – that is, the SFRR tracks do not physically connect with the short line's tracks. Based on its development of a detailed operating

[3] NS assumed ownership of the former MGA as part of the Conrail control transaction approved by the Board in *Finance Docket No. 33388*. CSXT has joint use (operating) rights over the former MGA lines pursuant to the Monongahela Usage Agreement between CSXT and NS dated as of June 1, 1999, and the related Monongahela Operating Plan (collectively the "MGA Agreement"). A copy of the MGA Agreement is reproduced in Part III-C e-workpaper "MGA Agreement.pdf." Pursuant to the MGA Agreement, NS operates CSXT coal trains between the former MGA-served mines and CSXT's Newell Yard near Brownsville, PA, using NS crews. CSXT reimburses NS in the form of a trackage rights fee for operating expenses and pays a 50% share of annual capital expenditures. In its opening, SECI includes only the trackage rights portion of the compensation, thereby creating a road ownership and capital maintenance cost void.

plan designed to serve properly the traffic moving over the SFRR, CSXT has determined the SECI has understated the number of interchange locations needed for the SFRR. CSXT Exhibit III-B-3 compares the interchange locations assumed by SECI with those required to serve the SFRR traffic as determined by CSXT.

d. Total Route Mileage

SECI assumed the SFRR would be required to build a total of 2,092.40 route miles. With the addition of the two Monongahela lines, the constructed route miles included in CSXT's reply are 2,228.21. The constructed route mileages for the SFRR's principal line segments are shown in Table III-B-1 below.

TABLE III-B-1
SFRR LINE SEGMENTS AND ROUTE MILEAGE

Segment	CSXT Subdivision(s)	SECI	CSXT
West Division			
Princeton to Evansville	CED, Evansville	33.73	33.73
Evansville to Nashville	Henderson, Nashville Terminal	153.48	153.48
Nashville to Chattanooga	Nashville Terminal, Chattanooga	147.36	147.36
Chattanooga to Atlanta	W&A, Atlanta Terminal	131.03	131.03
Atlanta to Folkston	Atlanta Terminal, Manchester, Fitzgerald, Jesup	312.25	312.25
Folkston to Jacksonville	Nahunta, Jacksonville Terminal	37.96	37.96
Jacksonville to Bostwick	Jacksonville Terminal, Sanford	49.02	49.02
Morganfield Branch	Morganfield Branch/Pee Vee Spur	25.13	25.13
Paradise Branch	O&N	27.53	27.53
Stilesboro Branch	Cartersville	10.21	10.21
East Division			
Federal 2 to CP Brown	Monongahela Railroad	0	55.52
Loveridge to CP Brown	Monongahela Railroad	0	79.60
Brownsville to McKeesport	Mon, Pittsburgh	42.20	42.20
McKeesport to Cumberland	Pittsburgh, Keystone	134.16	134.16
Cumberland to Brunswick	Cumberland Terminal, Cumberland	99.70	99.70
Brunswick to Washington	Metropolitan, Capital	48.94	48.94
Washington to Richmond	Capital, RF&P, Richmond Terminal	119.46	119.46

TABLE III-B-1 SFRR LINE SEGMENTS AND ROUTE MILEAGE			
Segment	**CSXT Subdivision(s)**	**SECI**	**CSXT**
Richmond to Rocky Mount	Richmond Terminal, Bellwood, North End	123.93	123.93
Rocky Mount to Florence	South End	172.30	172.30
Florence to Folkston	Charleston, Nahunta	305.07	305.07
Robinson Run Branch	Loveridge Secondary, Fairmont, Mountain, Bridgeport, Shortline	60.52	61.21
Dahlgren Branch	Dahlgren Branch	9.91	9.91
Richmond Branch	Hopewell, Bermuda Hundred	18.90	18.90
Roanoke Rapids Branch	North End/Roanoke Rapids	5.07	5.07
Stone Branch	Stone Spur	5.80	5.80
Cross Branch	Cross	13.27	13.27
Charleston Branch	Andrews	5.47	5.47
Total main line miles		1,910.59	2,045.66
Total branch line miles		181.81	182.50
Total constructed route miles		**2,092.40**	**2,228.21**

2. Track Miles and Weight of Track

SECI assumes that the SFRR will require a total of 3,037.04 miles of main, interchange, helper pocket and setout tracks and yard tracks. In its opening narrative, SECI cites electronic work paper "SFRR Track Miles.xls" as the detailed source for its development of SFRR track miles. However, SECI did not include the file "SFRR Track Miles.xls" with its opening evidence and, despite repeated requests from CSXT,[4] failed to provide the detail underlying its SFRR track mile calculations. Without access to the file that created the SFRR track miles, CSXT has been unable to replicate the track miles for any of the track categories identified by SECI.

[4] *See* CSXT Workpapers "2009 Nov 12 - track miles workpaper request.pdf" & "2009 Oct 19 - workpaper request.pdf."

As a result, CSXT was forced to wade through a myriad of SECI exhibits and work papers in an effort to replicate SECI track miles. After much effort, CSXT was unable to replicate SECI interchange, helper, set-out and yard track mile figures.

On reply, CSXT developed from its own detailed operating plan the SFRR yard track and helper pocket track requirements. SFRR's interchange location and configuration requirements were determined from the volume of SFRR's forecasted interchange activity. For interchange and set out tracks, where CSXT could confirm the location and configuration of SECI proposed track miles from SECI exhibits and work papers, CSXT accepted SECI's proposed track lengths. In those situations in which new interchanges were deemed necessary, CSXT applied SECI's standard interchange track layout to the new location. Additional bad order and maintenance of way setout tracks for the MGA were sized and placed consistent with SECI's opening criteria.

In addition to correcting obvious errors and omissions in SECI's route mileage calculations, CSXT witness Robert Phillips determined the minimum track configurations required to serve the feasible operating plan created by CSXT witness John Gibson. CSXT witness David Wheeler then analyzed the ability of the SFRR's proposed physical plant to accommodate the projected traffic volumes given the operating characteristics determined by CSXT witness Gibson. The qualifications of CSXT witnesses Phillips, Gibson, and Wheeler are set forth in Section IV. As described in detail in Section III-C below, in order to provide even a minimally acceptable level of service to the selected shipper group, the SFRR would be required to build the following yard facilities and other tracks and facilities in addition to the physical plant included in SECI's Opening Evidence:

- 13 new yards
- 6 intermodal facilities
- 11 Transflo facilities
- 7 new interchange locations

The specific location of, and justification for, each of these additional rail facilities are described in Section III.B.3.a. and Table III-B-3 below, and illustrated in greater detail in Exhibit III-B-2. The location and SFRR traffic volumes for each of the Transflo facilities are described in Table III-C-4.

With these additional facilities, the SFRR would have a total of 3,410.15 miles of track, consisting of 2,227.47 miles of main line track, 772.29 miles of second main line track, 186.44 miles of interchange track, 13.63 miles of set out track, 339.38 miles of yard track, and 22.77 miles of customer access track.

TABLE III-B-2 SFRR CONSTRUCTED TRACK MILES

	SECI	CSXT
Main line track – Single first main track	2,092.40	2,228.21
– Other main track[1/]	750.13	772.29
Total main line track	2,842.53	3,000.5
Interchange tracks	75.62	186.44
Helper pocket and setout tracks	13.03	13.63
Yard tracks[2/]	105.86	339.38
Customer Access Tracks	-	22.27
Total track miles	**3,037.04**	**3,562.22**

[1/] Equals total miles for constructed second main tracks and passing sidings.
[2/] Includes all tracks in yards, such as locomotive inspection tracks and MOW equipment storage tracks.

a. Main Lines

In the track configuration posited by SECI, the SFRR's main lines consist primarily of a single main track, with 750.13 track miles of second main track (including signaled passing

sidings) at particular points to enable SFRR peak period train movement. An additional 22.16 miles of second main track/passing sidings is associated with the two Monongahela lines for which the SFRR would incur costs. The SFRR has a total of 772.29 track miles of second main track/passing sidings.

SECI has stated that it would construct the main track and passing sidings in line segments carrying 20 million tons or more gross tons per year ("MGT") with new 136-pound continuous welded rail ("CWR"). Standard rail is used for all mainline track, except that premium (head-hardened) rail is used on curves of 3 degrees of more, where rail wear is heaviest. The main tracks in segments carrying less than 20 MGT (including all branch mains) consist of new 115-pound CWR. CSXT accepts these general construction standards.

b. Branch Lines.

As described above, the SFRR will construct and operate twelve branch lines: the Morganfield, Paradise and Stilesboro Branches on the West Division and the Robinson Run, Sealston, Richmond, Roanoke Rapids, Stone, Cross and Charleston Branches, plus the two Monongahela lines on the East Division. The track configurations for these branches are shown in Exhibit III-B-2. As proposed by SECI, each branch consists of a single main track except for the Robinson Run branch, which has several passing sidings due to its length and the volume of traffic moving over it.

c. Sidings

In order to aide ease of comparison, CSXT will follow SECI's example of discussing the SFRR's passing sidings as part of its main tracks in both mainlines and branch lines in Subparts a. and b. above.

d. Other Tracks

Other tracks include interchange tracks, pocket tracks for helper locomotives, set-out tracks for bad order cars, and spur and industry tracks. Yard tracks are discussed in the next section. CSXT Workpaper "CSXT Reply Track and Facilities Summary.xlsx" details the track miles by type and quantity.

Interchange tracks. Interchange tracks are located at the points described in Exhibit III-B-3. Most of the interchanges are with CSXT, although some are with NS or various regional and short line railroads. All interchange tracks have 115-pound new CWR, with No. 14 turnouts. The layout of the interchange tracks at each location is shown in Exhibit III-B-2. The SFRR has a total of 186.44 miles of interchange tracks.

Helper pocket and other setout tracks. The SFRR has two helper districts, located near Cowan, TN and Sand Patch, PA. Trains are helped in both directions in each helper district. Each helper district has helper pocket tracks at both ends of the district, and there are also helper pocket/setout tracks at Sand Patch, which is where most helpers are removed in that district, and at the ends of the southbound and northbound Cowan districts. These tracks are double-ended tracks, 600 feet in length.

In addition, one setout track is placed on each side of each of the SFRR's Failed-Equipment Detectors ("FEDs"), as described in Parts III-C and III-F below, with one FED on each track in areas with two main tracks. All of these setout tracks are double-ended tracks, 860 feet in length between switches. This provides 600 feet in the clear to accommodate both the occasional bad-order car and the temporary storage of maintenance-of-way ("MOW") equipment. One double-ended setout track also is located at each non-yard interchange point.

The locations of the helper pocket and setout tracks are shown in Exhibit III-B-2. Details are provided in CSXT Workpaper "CSXT Reply Track and Facilities Summary.xlsx." The SFRR has a total of 13.63 track miles for helper pocket and setout tracks, consisting of 115-pound new CWR.

Industry and spur tracks. SECI's track configuration does not include spur tracks, industry tracks or switch connections at any customer locations. *See* SECI Opening Ex. III-B-3. Such facilities clearly would be needed for the SFRR to provide the physical services (pick-ups and set-offs) required by customers. CSXT addresses this deficiency in SECI's track configuration and operating plan by including in the SFRR's physical plant a turnout at each unique customer location. In the time available to prepare this Reply Evidence, it was not feasible for CSXT to identify the precise length of track currently in place at each location, or to determine how much of the track at each location is railroad-owned and shipper-owned. Accordingly, CSXT conservatively assumed that, on average, there would be 250 feet of carrier-owned track at each unique customer facility. (At most locations, the length of track actually in place is significantly greater.) Those tracks and turnouts are incorporated into CSXT's configuration for the SFRR, as illustrated in Exhibit III-B-2.

3. Yards

a. Locations and Purpose

As explained in Section III-C at 67, the four yards proposed by SECI for the SFRR, two on the West Division and two on the East Division, are insufficient to support a feasible operating plan. In addition to the four coal yards specified by SECI, CSXT witness Gibson added two smaller coal yards to enable the SFRR to originate and terminate local coal traffic efficiently, to stage empty coal trains, and to support crew reporting and utilization. CSXT

witness Gibson has explained that the SFRR will also require 13 regional and local yards to handle the merchandise traffic served by the SFRR. Some of these yards would include intermodal and Transflo facilities, as well. The SFRR's regional yards would be added to those proposed by SECI at Nashville, TN; Petersburg, VA; and Newell, PA; however, CSXT witness Gibson has determined that efficient SFRR operations would require the yard SECI proposed at Folkston, GA to be located at Callahan, FL (also the site of a major regional merchandise yard). The remaining regional merchandise yards would be located at Princeton, IN; and Atlanta, GA on the West Division; and at Demmler, PA; Alexandria Jct., MD; Richmond, VA; and Pembroke, NC on the West Division. An additional yard to serve both East and West Division merchandise traffic is needed at Jacksonville, FL. In addition, five local merchandise yards would be required on the SFRR at Richmond, VA; Rocky Mount, NC; Charleston, SC; Savannah, GA; and Bostwick, FL. In addition to the coal train staging yard specified by SECI at Newell, PA, the SFRR would also require a coal yard at Atkinson (Madisonville), KY. Lastly, three yards with stand-alone Transflo facilities will be located at Chattanooga, TN; Clarksburg, WV; and Dalton, GA.

i. Callahan Yard

SECI proposed that the SFRR's largest yard would be located near Folkston, GA, where the West Division connects with the East Division. Because of the volume of general freight traffic that would need to be switched and interchanged with CSXT, witness Gibson has determined that Callahan, FL is more efficient than Folkston, GA as a regional yard location. He consolidated the coal and merchandise activities for Folkston, Waycross and Callahan at Callahan because it is the location where the highest level of activity would occur. The Callahan Yard is located south of the junction between the West and East Divisions just south of the

GA/FL state line (approximately 18 miles) at milepost A 625.7, near the point of interchange with CSXT. The Callahan Yard configuration is illustrated at Exhibit III-B-2 at page 55.

Callahan Yard is a blocking/classification yard for merchandise trains, handling an average of 864 merchandise cars per day (with a peak of 1,037 cars/day), as well as a staging/inspection point for empty coal trains moving from power plant destinations in Florida (including SGS) to mines served via both the East and West Divisions. All empty coal trains moving through Callahan receive a 1,500-mile inspection at this yard, and some intermodal and general freight trains receive a 1,000-mile inspection there as well. The locomotives on these trains are refueled at Callahan Yard, using used DTL trucks. Because of the volume of traffic travelling through Callahan, and thus the number of trains requiring refueling, two 30,000 gallon fuel storage tanks will be located there. Given its proximity to both the West and East Divisions, locomotive maintenance and repair facilities are located at Callahan, and 92-day locomotive inspections are performed at Callahan as needed. Callahan Yard is also a maintenance-of-way and crew base. Lastly, Callahan Yard will also provide space for a contract car repair shop.

ii. Nashville Yard

The SFRR's Nashville Yard is a regional yard for merchandise train blocking and classification, coal train staging, intermodal lift and ramp operations, train inspection, and interchange. Nashville Yard is also the location of a Transflo facility handling primarily ethanol. The yard is located south of the Nashville interchanges with CSXT and the Nashville & Eastern Railroad at milepost 000 182.5. The Nashville Yard configuration is illustrated on page 51 of Exhibit III-B-2.

Nashville Yard is used to stage empty coal trains for movement to Illinois Basin mines/interchange points located further north on the West Division. Nashville Yard is also used

to classify and create blocks for an average of 596 merchandise cars per day (with a peak of 715 cars/day). In addition, Nashville Yard contains SFRR intermodal and Transflo facilities.

All empty coal trains that move through Nashville receive a 1,500-mile car inspection at Nashville Yard, and some intermodal and general freight trains receive a 1,000-mile inspection at this yard. The locomotives are also fueled and serviced at Nashville Yard, using tanker trucks, and 92-day inspections are performed on these locomotives as needed. Nashville Yard is also a maintenance-of-way and crew base.

iii. Petersburg Yard

The SFRR's Petersburg Yard is located on the East Division near Petersburg, VA at milepost A 27.0. The Petersburg Yard is a coal train staging yard and the site of a Transflo facility, handling primarily incinerator ash (STCC 40). This yard is used for 1,500-mile inspections of empty and loaded coal trains moving to/from mines in Pennsylvania and West Virginia served via the East Division, and for 1000-mile inspections of some intermodal and general freight trains. 92-day locomotive inspections and locomotive refueling, using tanker trucks, also are performed on these trains at Petersburg. Petersburg Yard is also a maintenance-of-way and crew base. The Petersburg Yard configuration is illustrated on page 47 of Exhibit III-B-2.

iv. Princeton Yard

The SFRR's Princeton Yard is a station for merchandise train blocking and classification, intermodal lift and ramp operations, train inspection, and interchange. Princeton Yard is also the location of a Transflo facility handling primarily ethanol. Princeton Yard is used to classify and create blocks for an average 778 merchandise cars per day (933 cars/day peak). This yard is used for 1000-mile inspections of some intermodal and general freight trains. Princeton Yard is

located south of the SFRR's interchanges with CSXT and Norfolk Southern, for traffic to or from Chicago, at milepost 0ZA 260.3. The Princeton Yard configuration is illustrated on page 49 of Exhibit III-B-2.

v. Atlanta Yard

The SFRR's Atlanta Yard is a regional yard for merchandise train blocking and classification, coal train staging, intermodal lift and ramp operations, train inspection, and interchange. Atlanta Yard is also the location of a Transflo facility handling primarily ethanol. Atlanta Yard is used to classify and create blocks for an average of 519 merchandise cars per day (623 cars/day peak). This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Atlanta, GA at milepost ANB 865/0WA 4.9. The Atlanta Yard configuration is illustrated on page 54 of Exhibit III-B-2.

vi. Demmler Yard

The SFRR's Demmler Yard is a regional yard for merchandise train blocking and classification. Demmler Yard is used to classify and create blocks for an average of 701 merchandise cars per day (841 cars/day peak). This yard is also used for 1000-mile inspections of some intermodal and general freight trains. Demmler Yard is a crew change location and a base for maintenance of way crews. Demmler Yard is located in Demmler, PA at milepost PLY 11.4 near the site of SFRR's interchange with CSXT and the McKeesport Connecting Railroad. The Demmler Yard configuration is illustrated on page 58 of Exhibit III-B-2.

vii. Alexandria Junction Yard

The SFRR's Alexandria Junction Yard is a regional yard for merchandise train blocking and classification. Alexandria Junction Yard is used to classify and create blocks for an average of 741 merchandise cars per day (899 cars/day peak). This yard is also used for 1000-mile

inspections of some intermodal and general freight trains. Alexandria Junction Yard is a crew change location. Alexandria Junction Yard is located outside the District of Columbia in Alexandria Junction, MD at milepost BAA 36.4. The Alexandria Junction Yard configuration is illustrated on page 59 of Exhibit III-B-2.

viii. Pembroke Yard

The SFRR's Pembroke Yard is a regional yard for merchandise train blocking and classification. Pembroke Yard is used to classify and create blocks for an average of 701 merchandise cars per day (841 cars/day peak). This yard is also used for 1000-mile inspections of some intermodal and general freight trains. Pembroke Yard is a crew change location and a base for maintenance of way crews. Pembroke Yard is located in Pembroke, NC at milepost A 243.3 near the site of SFRR's interchange with CSXT. The Pembroke Yard configuration is illustrated on page 62 of Exhibit III-B-2.

ix. Jacksonville Yard

The SFRR's Jacksonville Yard is a regional yard for merchandise train blocking and classification, coal train staging, train inspection, and interchange. Jacksonville Yard also contains a Transflo facility handling primarily ethanol, and an intermodal facility. Jacksonville Yard is used to classify and create blocks for an average of 302 merchandise cars per day (362 cars/day peak). Jacksonville Yard is used to serve the Port of Jacksonville, as well as Blount Island. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Jacksonville, FL at milepost A 640.4 near the sites of SFRR's interchanges with CSXT, Florida East Coast Railway, South-Central Florida Express, Norfolk Southern, and Talleyrand Terminal Railroad. The Jacksonville Yard configuration is illustrated on page 56 of Exhibit III-B-2.

x. Richmond Yard

The SFRR's Richmond Yard is a local yard for creation of local merchandise trains to deliver general freight shipments along the SFRR, train inspection, and is the location of a Transflo facility handling primarily ethanol. Richmond Yard is used to create local merchandise trains for delivery of an average of 294 merchandise cars per day (353 cars/day peak). Richmond Yard is a crew change location and a base for maintenance of way crews. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. Locomotives are refueled at Richmond Yard using tanker trucks from Petersburg, if required. The yard is located in Richmond, VA at milepost CFP 2.0, and the Richmond Yard configuration is illustrated on page 60 of Exhibit III-B-2.

xi. Rocky Mount Yard

The SFRR's Rocky Mount Yard is a local yard for creation of local merchandise trains to deliver general freight shipments along the SFRR. Rocky Mount Yard is used to create local merchandise trains for delivery of an average of 294 merchandise cars per day (353 cars/day peak). Only yard crew changes occur at Rocky Mount Yard, but this yard is also a base for maintenance of way crews. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Rocky Mount, NC at milepost A 120.2, and the Rocky Mount Yard configuration is illustrated on page 61 of Exhibit III-B-2.

xii. Charleston Yard

The SFRR's Charleston Yard is a local yard for creation of local merchandise trains to deliver general freight shipments along the SFRR. Charleston Yard also contains a Transflo facility handling primarily ethanol, and an intermodal facility. Charleston Yard is used to create local merchandise trains for delivery of an average of 177 merchandise cars per day (212

cars/day peak). Charleston Yard is a crew change location and a base for maintenance of way crews. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Charleston, SC at milepost A 388.2, and the Charleston Yard configuration is illustrated on page 63 of Exhibit III-B-2.

xiii. Savannah Yard

The SFRR's Savannah Yard is a local yard for creation of local merchandise trains to deliver general freight shipments along the SFRR. Savannah Yard also contains a Transflo facility handling primarily ethanol, and an intermodal facility. Savannah Yard is used to create local merchandise trains for delivery of an average of 110 merchandise cars per day (132 cars/day peak). Only yard crew changes occur at Savannah Yard, but this yard is also a base for maintenance of way crews. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Savannah, GA at milepost A 496.4, and the Savannah Yard configuration is illustrated on page 64 of Exhibit III-B-2.

xiv. Bostwick Yard

The SFRR's Bostwick Yard is a local yard for creation of local merchandise trains to deliver general freight shipments along the SFRR. Bostwick Yard is used to create local merchandise trains for delivery of an average of 149 merchandise cars per day (179 cars/day peak). Bostwick Yard is a crew change location and a base for maintenance of way crews. This yard is also used for 1000-mile inspections of some intermodal and general freight trains. The yard is located in Bostwick, FL at milepost A 690.9, and the Bostwick Yard configuration is illustrated on page 57 of Exhibit III-B-2.

xv. Newell Yard

The SFRR has a coal train staging and inspection yard on the East Division at Newell, PA. It is located just north of the intersection between the SFRR's tracks and the NS tracks serving the MGA mines at Brownsville (CP Brown), PA, at the same location as CSXT's existing Newell Yard at milepost PLM 47.7. 1500-mile inspections are performed on all empty coal trains moving through Newell Yard. 92-day locomotive inspections and locomotive refueling, using tanker trucks, also are performed on these trains at Newell Yard. Newell Yard is also a maintenance-of-way and crew base. The configuration of SFRR's Newell Yard is illustrated on page 46 of Exhibit III-B-2.

xvi. Atkinson Yard

The SFRR has a coal train staging and inspection yard on the West Division at Atkinson (Madisonville), KY. It is located near the CSXT interchange with the Paducah and Louisville Railroad at Atkinson, KY at milepost 0HC 274.4. 1500-mile inspections are performed on empty coal trains moving through Atkinson Yard as needed. Atkinson Yard is also a maintenance-of-way and crew base. The configuration of SFRR's Atkinson Yard is illustrated on page 50 of Exhibit III-B-2.

xvii. Grafton Yard

The SFRR has a coal train staging yard on the East Division at Grafton, WV. It is located near the CSXT interchange with the Appalachian & Ohio Railroad at Grafton, WV at milepost BA 280.0. Atkinson Yard is also a maintenance-of-way and crew base. The configuration of SFRR's Atkinson Yard is illustrated on page 33 of Exhibit III-B-2.

xviii. Chattanooga Yard

Chattanooga Yard, on the West Division, is the site of a Transflo facility handling primarily ethanol. 1000-mile inspections are performed on Transflo trains moving through Chattanooga Yard as needed. Chattanooga Yard is also a maintenance-of-way and crew base. This yard is located in Chattanooga, TN at milepost 0WA 137.3, and the configuration of Chattanooga Yard is illustrated on page 52 of Exhibit III-B-2.

xix. Clarksburg Yard

Clarksburg Yard, on the East Division, is the site of a Transflo facility handling primarily ethanol. This yard is located in Clarksburg, WV at milepost BA 302.7, and the configuration of Clarksburg Yard is illustrated on page 65 of Exhibit III-B-2.

xx. Dalton Yard

Dalton Yard, on the West Division, is the site of a Transflo facility handling primarily ethanol. This yard is located in Dalton, GA at milepost 0WA 98.8. The configuration of SFRR's Dalton Yard is illustrated on page 53 of Exhibit III-B-2.

b. Miles and Weight of Yard Track

The SFRR's eighteen major yards (comprising regional, local, coal, Transflo, and intermodal yards) contain a total of 339.38 miles of track. Details are shown in CSXT Workpaper "CSXT Reply Track and Facilities Summary.xlsx." As shown in Exhibit III-B-2, the yard tracks have 115-pound new CWR. The main running tracks through the yards and the initial yard leads have the same weight and type of rail as the adjacent mainline tracks.

The table below summarizes the track miles for each of the SFRR's major yards:

C = CSXT Only
B = Both Seminole and CSXT

Table III-B-3: SFRR Yards – Track Miles

Locations	Yard Type	Eng Milepost	Yard (Coal)	Yard (GF)	Intermodal	Transflo	Track Miles
Alexandria Jct., MD	REGIONAL	BAA 36.4		C			30.15
Atlanta, GA	REGIONAL	ANB 865 / 0WA 4.9		C	C	C	25.98
Callahan, FL	REGIONAL	A 625.7	C	C			44.79
Demmler, PA	REGIONAL	PLY 11.4		C			28.59
Jacksonville, FL	REGIONAL	A 640.4		C	C	C	34.69
Nashville, TN	REGIONAL	000 182.5	B	C	C	C	28.98
Pembroke, NC	REGIONAL	A 243.3		C			18.50
Princeton, IN	REGIONAL	0ZA 260.3		C	C	C	32.29
Bostwick, FL	LOCAL	A 690.9		C			11.78
Charleston, SC	LOCAL	A 388.2		C	C	C	19.39
Richmond, VA	LOCAL	SRN 0.4		C		C	17.40
Rocky Mount, NC	LOCAL	A 121.4		C			11.26
Savannah, GA	LOCAL	A 496.4		C	C	C	16.02
Atkinson (Madisonville), KY	COAL	0HC 274.4	C				4.42
Chattanooga, TN	Transflo	0WA 137.3				C	0.02
Clarksburg, WV	Transflo	BA 302.7				C	0.16
Collier (Petersburg), VA	COAL	A 27.0	B			C	6.44
Dalton, GA	Transflo	0WA 98.8				C	0.16
Newell, PA	COAL	PLM 47.7	B				8.36
Total			**5**	**13**	**6**	**11**	**339.38**

4. Other

a. Joint Facilities

The SFRR route as proposed by SECI has two joint facilities, both owned by NS. However, by failing to construct the facilities serving the portions of the MGA included in the SFRR configuration, SECI has failed to account for the road ownership costs associated with CSXT's equal access to MGA under the MGA Operating Agreement, costs which the SFRR

would also incur to obtain equal access to these facilities. One is the NS (former MGA) Loveridge Secondary, which extends between Brownsville, PA and Rivesville (Catawba Jct.), WV and between Rivesville and Loveridge Mine, WV. In its Reply, CSXT has developed the costs of constructing these two joint facilities and included 50 percent of those costs – representing CSXT's share of equal access to the MGA assets – as part of the required SFRR investment.

b. Signal/Communications System

In SECI's configuration for the SFRR, all of the main lines and the Robinson Run Branch are equipped with a Centralized Traffic Control ("CTC") system, with powered switches that are controlled by centralized dispatchers located at the railroad's headquarters at Folkston, GA. SECI also configured the SFRR to use power switches for the connections between the main line and the SFRR's other branch lines, the helper pocket and setout tracks, the yard lead and relay tracks, and the spurs at local origins and destinations. Switches on the branch lines themselves, interior yard switches, and set-out track switches are hand-thrown switches.

Although CSXT uses fiber-optic communications systems, SECI has configured the SFRR to conduct communications using a microwave system, with microwave towers at the intervals described in SECI Opening at Part III-F-6. All locomotive engineers, dispatchers and field supervisory personnel are equipped with radios connected to the microwave system. Certain employees also will be equipped with cellular telephones for emergency railroad use, as a back-up to the radios. Further details on the SFRR's signal and communications system are provided in Part III-F-6-e below.

c. Turnouts, FEDs and AEI Scanners

SECI has specified all turnouts between the SFRR's main tracks in CTC territory as No. 20 turnouts. No. 20 turnouts also are used for the "wye" connections at Folkston and between the main line and branch lines, as well as for the yard leads and the main running tracks at both ends of each of the SFRR's four yards. SECI specified No. 14 turnouts to be used between main tracks and all other tracks, including interchange tracks, the connections with the origin and destination spurs, and helper pocket tracks, where trains move at slower speeds. No. 10 turnouts are used within yards and for setout and MOW equipment storage tracks.

In SECI's configuration for the SFRR, FEDs, which include hot-bearing, dragging-equipment, cracked-wheel and wide/shifted load detection systems, have been spaced approximately every 25 miles along the SFRR's route. Two FEDs are provided at each location that has two main tracks, one for each track. Each FED is accompanied by two setout tracks, each located within three train lengths on either side of the FED. Each such track is an 860-foot double-ended track (with 600 feet in the clear) to facilitate the setout of bad-order cars from trains operating in either direction. These tracks are used primarily for temporary storage of bad-order cars detected by the FEDs, as well as for temporary storage of work equipment.

Automatic Equipment Identification ("AEI") scanners are located at or near each of the locations where the SFRR interchanges trains with other railroads (CSXT, NS and various short lines), as described in Part III-B-1-c above. A total of 36 AEI scanners have been provided, as shown in Exhibit III-B-2. The AEI scanners have been placed so as to enable them to capture all train movements that occur on the SFRR, including both local and interline movements.

d. RTC Model Simulation of SFRR Configuration

Contrary to SECI's assertions (SECI Opening at III-C-1; III-C-48; III-C-52), an RTC Model simulation of a SARR's operations cannot prove that the SARR's operating plan is "feasible."[5] However, an RTC Model simulation can be utilized to test whether the track configuration and other physical infrastructure posited by Complainant (or Defendant) are sufficient to enable a SARR to execute an otherwise feasible operating plan. The RTC Model also generates certain operating statistics that may be used as inputs in estimating a SARR's operating expenses. In order for such an RTC simulation to generate valid results, the Model used to perform the simulation must incorporate all of the elements of a feasible operating plan for the SARR's traffic.

The SARR proffered by SECI in this case is fundamentally different from those presented by Complainants in prior SAC proceedings. Specifically, SECI designed the SFRR "to transport a broader range of commodities" than "the hypothetical stand-alone railroads that have been presented in most prior coal rate proceedings before the Board." SECI Opening at III-A-2. SECI's decision to include massive volumes of both general freight (merchandise) traffic and intermodal containers/trailers in the SFRR traffic group required SECI to present a track configuration and operating plan capable of serving nearly 900 unique customer locations along the SFRR's lines. As CSXT demonstrates in Section III-C below, SECI's Opening Evidence utterly fails to satisfy those requirements.

Unlike the coal traffic that has predominated in prior SAC proceedings (which moves in unit train shipments between a limited number of origin and destination points), merchandise

[5] Rather, Complainant's operating plan is "feasible" if it properly accounts for all of the activities and services necessary to satisfy the requirements of the traffic that the SARR would handle. *See Duke-CSXT* at 24.

freight moves in single-car or multiple-car shipments between a wide range of origins and destinations. A "feasible" operating plan for a SARR that handles large volumes of merchandise traffic (as does the SFRR) must include all of the activities necessary to provide adequate service to general freight customers. Those necessary activities include classifying and "blocking" cars at intermediate points along the SARR's network, and picking up and delivering (setting off) both loaded and empty rail cars at shipper facilities. As CSXT demonstrates in Section III-C, SECI's operating plan simply ignores this reality.

Likewise, in order to test the adequacy of the track and other physical facilities posited by such a SARR, an RTC Model simulation must take into account the time and resources required to perform the complex operations associated with merchandise railroading. Accordingly, the RTC Model simulation presented by CSXT witness Wheeler is both more complex and more detailed than the RTC simulations than the Board has seen in past proceedings. The RTC Model is a robust, sophisticated tool that is capable of simulating the operations of a merchandise railroad. The Model can process complex train operations, such as the movement of a merchandise train across a rail network as it makes multiple stops to add or drop off blocks of cars at intermediate yards, and to pick up or deliver cars at local industries. Based upon detailed inputs regarding the carrier's track facilities and operating plan, and information such as locomotive power, number of cars and trailing tonnage on each train, permissible track speed, topography, and external factors that may inhibit the movement of a train (including other trains on the line, vehicle crossings and random track outages), the RTC Model determines the most efficient way to accommodate all of the train activity on the SARR's lines. (Indeed, the RTC Model can even take into account train crew hours of service, and prioritize train movements to minimize the number of crews that "die on the law!") A successful simulation of the SARR's

peak period operations provides an indication that the track and other physical facilities posited by a party are sufficient to enable the SARR to serve its customers.

Unlike the RTC Model simulation proffered by SECI, in which "SECI's experts did not attempt to model local trains or to replicate the operation of other trains with intermediate pick-ups and set-outs" (SECI Opening at III-C-23), the RTC Model simulation conducted by CSXT witness Wheeler fully accounts for all of the activities necessary to handle the SFRR's coal, bulk, merchandise and intermodal traffic in accordance with customer requirements. Specifically, as explained below, witness Wheeler designed his RTC Model to include all of the elements of the detailed train service plans developed by CSXT's operating expert, witness Gibson, for each category of SFRR traffic – coal, bulk, merchandise and intermodal. Following is a description of the inputs to CSXT's RTC Model.

i. Track Inputs

The track configuration and other physical facilities that witness Wheeler incorporated into CSXT's RTC Model were those specified by witness Gibson in CSXT's operating plan. Those physical facilities are described in detail in the prior portions of this Section III-B. In addition, witness Gibson instructed witness Wheeler to correct several critical errors that SECI made in defining the physical characteristics of the SFRR in SECI's RTC Model, including the following:

(a) Centralized Traffic Control

SECI's operating plan posits that "[a]ll of the SFRR's main lines and the Robinson Run Branch are equipped with a CTC traffic control system." (SECI Opening at III-B-16.) However, SECI's RTC Model did not include any of the thousands of signals necessary to implement the CTC system specified by its operating expert. To correct this deficiency, CSXT witness Wheeler

coded a total of 4,632 signals across the SFRR, at locations and with spacing directed by CSXT witness Gibson. Figure III-B-1 illustrates the signals that SECI neglected to provide in its RTC Model (and which witness Wheeler incorporated into CSXT's RTC Model).

Figure III-B- 1 Correct Signal Coding for CTC

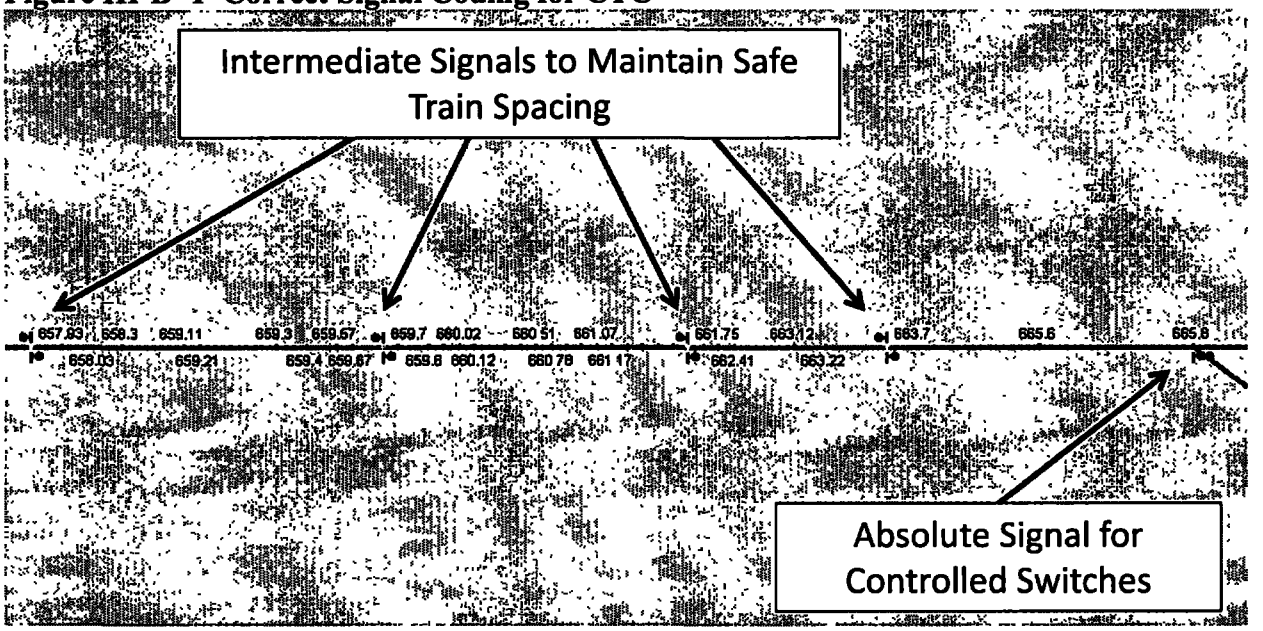
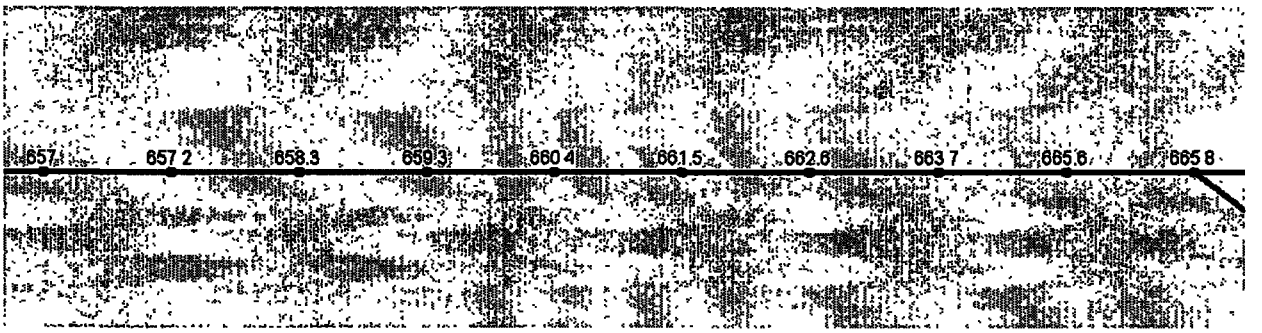


Figure III-B-2 is an excerpt from SECI's RTC Model of the same track segment depicted in Figure III-B-1. As Figure III-B-2 shows, the SFRR modeled by SECI's experts lacks the signal facilities required to enable proper communication with SFRR trains and to maintain proper spacing between trains.

FIGURE III-B-2



(b) Foreign Railroad "At-Grade" Crossings

As CSXT demonstrates (at pp. III-C-35-37), SECI's RTC Model failed to recognize any of the thirty-six (36) locations at which the SFRR's tracks would cross rail lines operated by the incumbent CSXT and other rail carriers. Those foreign at-grade railroad crossings were clearly displayed on the CSXT track charts produced to SECI in discovery. CSXT witness Wheeler incorporated all foreign at-grade crossings of SFRR lines into his RTC Model.

(c) Vehicle Road Crossings

In designing its RTC Model, SECI also failed to include any of the more than 1,000 at-grade vehicle road crossings that exist along the CSXT rail lines replicated by the SFRR. *See* pp. III-C-35-37. Again, the presence of those vehicle crossings could have been discerned by SECI from CSXT track charts produced in discovery and through publicly available data. Witness Wheeler corrected this error by coding a total of 1,025 vehicle road crossings into CSXT's RTC Model. *See* CSXT Workpaper "Vehicle Road Crossing Documentation.xls."

(d) Track Geography Coding Errors

SECI's RTC Model also including numerous track-related coding errors. Such errors included inaccurate speed limits; tracks constructed over physical barriers – including the James River; and numerous track direction and grade inaccuracies. CSXT witness Wheeler identified and corrected those errors in CSXT's RTC Model. *See* CSXT Workpaper "SFRR SARR Model Track Changes.xls"; CSXT Workpaper "SECI RTC Grade Errors.pdf."

ii. Train Inputs

(a) Merchandise and Intermodal traffic

Based on the train service plans for the SFRR's merchandise and intermodal traffic developed by CSXT witness Gibson (*see* pp. III-C-51-64), witness Wheeler coded into the RTC Model detailed information for each train that the SFRR would operate. That information

included the specific consist of the train (including loaded or empty status of each car or intermodal unit); all intermediate stops at SFRR yard facilities and/or customer locations that the train would make during the course of its journey; the specific work -- including pick-ups and set-offs of cars (or blocks of cars) -- at each intermediate stop; the exact change in the train's consist (and tonnage) resulting from pick-ups and set-offs at each location; and the time that each train would "dwell" at intermediate yards and/or customer facilities to perform such local operations (as specified by witness Gibson in CSXT's operating plan).

The comprehensive manner in which CSXT's RTC Model simulation takes accounts of, and provides for, the services required to satisfy the needs of the SFRR's customers is illustrated in CSXT Reply Ex. III-B-4. That Exhibit is a video excerpt from the RTC Model simulation performed by witness Wheeler, depicting the movement of SFRR Train MPRINAS, a merchandise road train that operates between Princeton, IN and Nashville, TN. As the video excerpt shows, Train MPRINAS departs Princeton with 93 loaded cars and 24 empties, and a weight of 12,011 tons. The train's first stop is at Henderson, KY, where it sets off cars destined to customer facilities, an activity for which the RTC Model assigns a dwell time of 30 minutes (in accordance with witness Gibson's instructions -- *see* p. III-C-90). Train MPRINAS leaves Henderson with 62 loaded cars and 5 empties, and a weight of 7,629 tons (reflecting the physical changes resulting from setting off 31 loaded and 19 empty cars at Henderson). At its next stop, Madisonville, KY, Train MPRINAS both picks up and sets off cars. Witness Wheeler's RTC Model assigns a dwell time of 45 minutes for those activities (again, as specified by CSXT witness Gibson for locations at which both pick-ups and set-offs are performed – *see* p III-C-90). As the train departs Madisonville, its consist has changed again, to 65 loaded cars and 7 empties, with a train weight of 8,050 tons. At its next stop, Hopkinsville, KY, the train picks up one car,

experiencing a dwell of 30 minutes and further changing its consist to 66 loaded cars, 7 empties and a weight of 8,153 tons. Following a 30-minute stop at Guthrie, KY to pick up 6 empty cars, Train MPRINAS departs Guthrie with 66 loaded cars, 13 empties and a weight of 8,375 tons. Upon departing its next stop, Courtland, KY, the train's consist remains at 66 loads and 13 empties, but its weight increases from 8,375 tons to 8,381 tons (reflecting a slight difference in the weight of the cars swapped at Courtland). Train MPRINAS arrives at its final destination, Nashville, TN with a consist of 66 loaded cars and 13 empties, and a weight of 8,381 tons.

As CSXT Reply Ex. III-B-4 convincingly demonstrates, CSXT's RTC Model simulation takes into account the specific characteristics of every SFRR train, and measures the effects of all of the activities that the SFRR would have to conduct in serving its merchandise and intermodal shippers. Based upon witness Wheeler's simulation of the SFRR's peak period operations using his correctly-designed RTC Model, CSXT determined the correct amount of track and other physical facilities that a least cost, most efficient railroad would need to satisfy the requirements of the SFRR's customers.

By contrast, SECI's RTC simulation is based upon the premise that all SFRR trains operate "intact" from their On-SARR junction to their Off-SARR junction without stopping en route to block or classify cars or to pick up cars from (or deliver cars to) the SFRR's customers. (*See* SECI Opening at III-D-107) ("the SFRR is assumed to operate only complete trains intact from origin to destination" for RTC modeling purposes). Indeed, SECI candidly acknowledges that its experts did not even know the origin, destination, or shipper of the "non-revenue" traffic that comprises more than half of all cars moving in SFRR trains. (SECI Opening at III-C-22-23) Thus, not surprisingly, the train operations modeled by SECI's experts bear little resemblance to those that the SFRR would need to perform in handling more than 1 million loaded cars of

general freight traffic and approximately 800,000 loaded intermodal units (*see* pp. III-C-50,59 below).

The profound difference in the approach taken by SECI and CSXT in designing their respective SFRR track configurations and operating plans can be seen by comparing CSXT Reply Exhibit III-B-4 and CSXT Reply Exhibit III-B-5. As discussed above, CSXT Reply Exhibit III-B-4 depicts the careful manner in which CSXT modeled the SFRR's merchandise train operations in its RTC analysis. CSXT Reply Exhibit III-B-5 contains a similar video excerpt taken from the RTC Model simulation submitted by SECI as part of its Opening Evidence. CSXT Reply Exhibit III-B-5 depicts the movement of SFRR Train 423FNorNas6 , a merchandise road train that operates in SECI's simulation between North Gibson, IN (a point close to Princeton) and Nashville, TN – the same route as Train MPRINAS depicted in CSXT Reply Exhibit III-B-4. However, there the similarity ends.

As shown in the video, Train 423FNorNas6 departs North Gibson with a consist of 96 loaded cars and 26 empties, and weighs 11,705 tons.[6] However, unlike Train MPRINAS, Train 423FNorNas6 does not stop at Henderson, KY, the first intermediate location at which Train MPRINAS delivered 31 loaded merchandise cars and 19 empties to SFRR customers. Instead, in SECI's model, Train 423FnorNas6 passes right by the SFRR's customers at Henderson, KY – and at Madisonville, Hopkinsville, Guthrie and Courtland -- without stopping to pick up or

[6] The "bubbles" showing loaded and empty car counts, and train weights, superimposed on the video excerpts set forth in CSXT Reply Exhibits III-B-4 and III-B-5 do not appear in the original SECI and CSXT RTC simulations. Rather, they have been added by CSXT to facilitate comparison of the manner in which the parties conducted their RTC Model simulations. Indeed, as discussed in Section III-C, SECI's RTC expert, Mr. Schuchmann, had no idea of the origins, destinations or customers associated with most of the cars moving in the SFRR trains that SECI modeled, because those trains were handed to him by witness Crowley, rather than being designed by SECI's putative operating expert, Mr. Reistrup.

deliver their cars. As a result, SECI's Train 423FNorNas6 arrives at Nashville with the very same mix of cars (96 loads and 26 empties), and the very same weight (11,705 tons) as it had when it departed North Gibson, IN. As CSXT Reply Exhibit III-B-5 graphically shows, SECI's RTC Model simulation takes no account whatsoever of the operations that SFRR trains would need to perform at intermediate yards and local customer facilities. SECI's failure to conduct an RTC simulation that reflects the services required to meet the needs of the SFRR's non-coal shippers renders the results of that simulation, and any track configuration or operating statistics based upon it, meaningless.

(b) Coal and Non-Coal Bulk Traffic

CSXT's RTC Model corrects the mistakes made by SECI in coding in the weight for 97% of its coal trains (*see* p.III-C-35-37) and in ignoring "real world" physical factors at coal origins and destinations that restrict the length of unit trains that can be operated to/from those points (*see* p. III-C-81-83). The trains specified by CSXT witness Gibson in CSXT's coal train service plan, which witness Wheeler incorporated into his RTC Model, comport with real world operating conditions.

(c) Other Trains Input to RTC Model Simulation

CSXT witness Wheeler incorporated into his RTC Model each of the SFRR's coal, merchandise and intermodal trains, based upon CSXT's train service plans for each category of traffic. Those trains included coal (and other bulk commodity) unit trains, intermodal trains, general freight road trains, and local trains operating out of SFRR yards, in each case as specified by witness Gibson's operating plan. *See* CSXT Workpaper "SFRR_CSXT_REPLY_CASE_TIMESTAMP_REPORT.xls." Witness Wheeler then added foreign road trains that would operate on lines that cross the SFRR, in order to simulate the real

world interference from foreign train movements that a carrier like the SFRR would inevitably encounter in its operations. Witness Wheeler used a random number generator to populate the RTC Model with the foreign trains at random times throughout the day. A total of 193 foreign railroad trains were coded into the RTC Model. *See* CSXT Workpaper "CSX Foreign RR Crossing Volumes.xls."

iii. Other Operating Inputs

(a) Dwell Times for Major Events

In order to take account of the time required for SFRR trains to perform routine functions, including interchange with other carriers, crew changes, locomotive and car inspections, adding and removing helper locomotives, pick-ups and set-offs at customer facilities, and switching at intermediate points along the SFRR network, witness Wheeler incorporated appropriate "dwell times" for each of those tasks into his RTC Model. The specific amounts of time allotted for each function were specified by witness Gibson, based upon his experience and review of precedents established in prior SAC cases. Those dwells include:

- Crew change: 15 minutes
- 1,500 mile inspection: 6 hours
- 1,000 mile inspection: 3 hours
- Add helper locomotives: 20 minutes
- Remove helper locomotives: 15 minutes
- Switching Yard Dwell: 30 minutes for either pick-up or set-off; 45 minutes for both
- Interchange to Foreign Railroad (including CSXT): 30 minutes
- Online Customer Loading/Unloading: 30 minutes for either pick-up or set-off; 45 minutes where both are performed
- Coal Customer Dwell Times: CSXT accepts SECI's proposed coal customer dwell times. SECI Opening at III-C-31.

(b) On-line Failures

Witness Gibson accepted the methodology proposed by SECI in it Opening Evidence. Accordingly, witness Wheeler's RTC Model makes the same allowance for random outages as SECI's RTC Model.

(c) Speed Limits

CSXT witness Gibson directed Mr. Wheeler to correct the maximum empty coal train speed to 60 mph in the RTC Model simulation. *See* SECI Opening at III-C-30 n.18. This change was input to the model. Mr. Gibson accepted all other SECI speed limit assumptions.

iv. Running the RTC Model Simulation

Once coded with the corrected track structure and with the trains that reflect the CSXT Reply revenue cars/tonnage, witness Wheeler ran the RTC Model simulation to completion and developed transit time reports for use in the rolling stock requirements. *See* CSXT Workpaper "SFRR_CSXT_REPLY_CASE_TIMESTAMP_REPORT.xls." Witness Wheeler compared transit times between the CSXT Reply output and that of the SECI Opening output. *See* SECI Opening at III-C-51-52 and accompanying workpapers. After thorough analysis, Wheeler found these times to be comparable and acceptable, as illustrated in the following table:

RTC Case	Seminole SFRR	CSXT SFRR
RTC version number	2.70 L52B	2.70 L52B
Overall average speeds	22.24	20.53
Expedited	30.59	28.41
Freight	20.54	18.87
C-Coal Loads	12.83	13.05
E-Empty Unit Coal	17.24	15.50
F-Foreign RR Detour	0.00	32.59
G-Grain Loads	24.72	24.52
I-Intermodal	0.00	28.39
L-Local	0.00	11.34
M-Merchandise	26.08	22.32
V-Vehicle / Parts	0.00	28.60
X-Empty Grain	24.57	26.00

Source: RTC Report files
a) Seminole SFRR 8-25
b) SFRR_CSXT_REPLY_OP_PLAN

CSXT Workpaper "CSXT Reply RTC Case Files.zip"; *see also* CSXT Workpaper "SFRR_CSXT_REPLY_CASE_TIMESTAMP_REPORT.xls."

Upon completing a successful simulation, witness Wheeler determined that the RTC Model could not run successfully with less than all of the tracks and physical facilities assumed by the Model without slowing transit times to an unacceptable level. This process confirmed that the track configuration set forth in CSXT's Reply Evidence represents the minimum facilities that a least cost, most efficient carrier would need to build and operate in order to handle the traffic posited by the SFRR in a manner that satisfies customer requirements.

III. STAND-ALONE COST

C. OPERATING PLAN

INTRODUCTION

SECI acknowledges the foundational principal of SAC analysis that "[a] SARR's operating plan must enable it 'to meet the transportation needs of the traffic the SARR proposes to serve.'" SECI Opening at III-C-18. SECI also cites the Board's admonition that "the assumptions used in the SAC analysis, including the operating plan, must be realistic, *i.e.*, consistent with the underlying realities of real-world railroading." *Id.* (*quoting WFA/Basin* at 15). The operating plan set forth in SECI's Opening Evidence utterly fails to comply with these requirements, and should be rejected in its entirety.

It is well-established that Complainant must present an operating plan that demonstrates the SARR's ability to provide all of the services necessary to meet the needs of its selected traffic group.[1] SECI does not even attempt to construct the physical facilities, or to demonstrate the SFRR's ability to perform the operations, required to handle the massive volumes of general freight (merchandise) and intermodal traffic that SECI elected to include in the SFRR traffic base. Among the most glaring deficiencies in SECI's track configuration and operating plan are the following:

- SECI posits that more than 592,000 loaded cars of "selected" general freight traffic and an additional 1.3 million loaded and empty so-called "non-

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[1] *See, e.g., Public Service Co. of Colo. d/b/a Xcel Energy v. BNSF*, STB Docket No. 42057, at 23 (June 8, 2004) ("The operating plan must be able to meet the transportation needs of the traffic the SARR proposes to serve."); *Texas Mun. Power Agency v. BNSF*, 6 S.T.B. 573, 589 (2003) ("[T]he SARR must meet the transportation needs of the traffic in the group by providing service that is equal to (or better than) the existing service for that traffic.").

revenue" merchandise cars would move in SFRR trains, and that the SFRR would interchange traffic with CSXT and other carriers at 51 different locations.[2] Yet, SECI takes the position that the SFRR would not need to perform freight classification anywhere on its 2,092-mile system. (SECI Opening at I-29) Indeed, SECI's proposed track configuration does not include any general freight classification facilities. *See* SECI Opening Ex. III-B-3.

- SECI contemplates that nearly 800,000 units of "selected" and "non-revenue" intermodal traffic would move in SFRR trains.[3] Yet, SECI did not construct a single SFRR-owned intermodal facility anywhere on the stand-alone system, thereby rendering the SFRR's intermodal operations totally dependent upon facilities owned by third party vendors.

- SECI's track configuration does not include spur tracks, industry tracks or switch connections at any of the 884 unique customer locations at which SFRR would be required to perform pick-ups or set-offs of local, interline forwarded and interline received general freight traffic. SECI Opening Ex. III-B-3.

- In order to meet the requirements of all of the traffic moving in SFRR trains, the SFRR would need to perform more than two million switches for general freight traffic annually. *See* CSXT WP "Seminole Block and Yard Volumes 01-08-10.xls". Neither SECI's operating plan nor its capacity analysis account in any way for the time required to perform those local switching operations, or the impact of such operations on the SFRR's line capacity, train transit times, cycle times and locomotive, car and crew requirements.

- SECI's proposed locomotive fleet for the SFRR includes only eight (8) locomotives to handle all switching and work train service across the entire 2,092-mile SFRR system. SECI Opening Table III-C-3.

- The traffic selected by SECI includes more than 6,300 carloads that are transloaded from rail to truck at intermediate points along the SFRR system, for delivery to off-rail destinations. However, SECI's proposed SFRR configuration does not include any transloading facilities – indeed, neither SECI's evidence nor its workpapers give any indication that SECI was even aware of the service requirements relating to this traffic.

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[2] SECI's operating plan actually contemplates interchange at 58 (rather than 51) different locations. *See* Seminole WP "Base_Year_2008_TrainList_final.xls".

[3] *See* Seminole WP "Base_Year_2008_TrainList_final.xls".

- The traffic selected by SECI includes PIH/TIH commodities that collectively involve movements across more than 70 percent of the SFRR's lines. Yet, SECI does not equip the SFRR with the Positive Train Control ("PTC") capability mandated by Congress for trains carrying such commodities.

- SECI's RTC Model simulation – upon which SECI relies to "confirm" the feasibility of its operating plan (SECI Opening at III-C-52) – does not account for the time required to perform pick-ups and set-offs at intermediate points. To the contrary, yard and local train activities are intentionally excluded from SECI's RTC simulation. SECI Opening at III-C-24. Moreover, the RTC Model utilized by SECI did not contain any inputs for foreign railroad crossings or motor vehicle crossings, nor did it include the signals posited by SECI as part of a CTC communications system for the SFRR.

These fatal deficiencies in SECI's operating plan are compounded by its bizarre and unprecedented assumption that SFRR trains would carry not only SFRR's "selected" traffic but also 1.4 million cars/units of so-called "non-revenue" general freight and intermodal traffic annually (for which SECI awards the SFRR more than $108 million in so-called "merchandise line-haul credits"). These "non-revenue" cars represent traffic that SECI chose not to include in the SFRR's traffic base (but which moved in the real-world CSXT trains upon which SECI based its operating plan).[4] SECI's operating plan does not even attempt to identify – much less account for – the local switching, pick-up and/or set-off activities required to serve shippers of "non-

[4] SECI attempts to justify its inclusion of "non-revenue" cars in SFRR trains on the grounds that the data provided by CSXT in discovery made it "impossible to tell . . . . whether the cars were SFRR revenue cars or other cars." SECI Opening at III-C-23. SECI's claim that the data furnished by CSXT were not sufficient to enable it to identify the origin, destination and shipper of cars characterized by SECI as "non-revenue loads" is specious. As CSXT demonstrates (*see* CSXT Reply Ex. I-2), the data produced by CSXT in discovery were more than sufficient to enable SECI to determine the operating characteristics of both the SFRR's "selected" traffic and those cars classified by SECI as "non-revenue loads."

revenue loads". Utilizing the very same data that it provided to SECI in discovery,[5] CSXT developed an operating plan that properly accounts for the services (including switching, pick-ups and set-offs at intermediate points) required to serve both SFRR's "selected" traffic and "non-revenue loads" in a manner consistent with customer needs.

SECI professes that it "recognizes that the cost of intermediate, yard and local switching operations that involve the SFRR's traffic must be accounted for." SECI Opening at III-C-24. However, rather than developing the actual cost of building the physical facilities, acquiring the equipment and performing the operations necessary to serve SFRR's general freight and intermodal customers (as SAC requires), SECI applied CSXT's 2008 system-average I&I switching cost (and the terms of certain agreements between CSXT and CSXI as a "surrogate" for those costs. SECI Opening at III-D-108. For the reasons explained below, this ill-conceived mathematical exercise is not a proper substitute for analysis of the cost of the facilities and services needed to serve the SARR's traffic base in a SAC proceeding. SECI's reliance upon historic values in estimating the cost of local car handling activities also violates the fundamental SAC requirement that Complainant demonstrate the forward looking cost of constructing actual

[5] This point is critical: in designing its operating plan, CSXT did not use any data not provided to SECI in discovery to ascertain the origins, destinations or customers whose merchandise and intermodal traffic the SFRR would carry. The complete failure of SECI's operating plan to account for the local pick-up, set-off and switching services required to meet the needs of those customers cannot be attributed – as SECI seeks to do – to any deficiency in the data produced by CSXT in response to SECI's discovery requests.

facilities and providing actual rail service adequate to meet customer needs during the DCF period.[6]

SECI asserts that the RTC Model simulation performed by witness Schuchmann "confirm[s] that the SFRR's configuration, facilities and operating plan are feasible." SECI Opening at III-C-52. SECI also relies upon the output of witness Schuchmann's RTC simulation for the train transit and cycle times upon which its locomotive and car fleets and crew requirements are based. SECI Opening at III-C-48. As an initial matter, an RTC Model simulation cannot confirm the "feasibility" of an operating plan. The test of feasibility is whether the operating plan demonstrates the SARR's ability to deliver the services necessary to satisfy customer requirements – and SECI's operating plan clearly does not.[7] Rather, an RTC simulation provides an indication of whether the track configuration, equipment and personnel posited by Complainant are sufficient to enable a SARR to execute its operating plan. In any event, as CSXT demonstrates (CSXT Reply at III-C-21-44), the RTC Model simulation proffered by SECI suffers from numerous deficiencies – not the least of which is its failure to account in any way for the required switching, pick-ups or set-offs of non-coal traffic – that render its output meaningless.

In short, SECI's Opening Evidence fails to present a feasible operating plan – *i.e.*, one that is capable of meeting the service requirements of the SFRR's customers, particularly

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[6] *Arizona Elec. Power Cooperative, Inc. v. Burlington N. & Santa Fe Ry. Co.*, STB Docket No. 42058, at 13 (served March 15, 2005).

[7] *See, e.g., Duke Energy Corp. v CSX Transportation, Inc.*, STB Docket No. 42070, at 24 (February 7, 2004) ("*Duke-CSXT*")("A core SAC principal is that the SARR must meet the transportation needs of the traffic that it would serve.")

shippers of general freight and intermodal traffic. For that reason, the Board should reject SECI's operating plan in its entirety. Moreover, given SECI's reliance upon its fatally deficient operating plan and RTC Model simulation in calculating the SFRR's operating expenses, there is no rational nexus between SECI's operating expense estimates and the costs that the SFRR would necessarily incur in providing service to customers.

A. SECI Has Failed To Present A Feasible Operating Plan For Its SARR

SECI's SARR is fundamentally different from those presented in prior SAC cases. While the traffic selected by the Complainant in other recent SAC proceedings has consisted primarily of unit train shipments of coal (occasionally augmented with small volumes of overhead merchandise and/or intermodal traffic), SECI posits a SARR that would originate, terminate and handle over line-of-road massive volumes of both "general freight" (merchandise) and intermodal business. Specifically, the SFRR traffic base selected by SECI includes 592,094 carloads of general freight traffic and 710,486 units of intermodal traffic. SECI Opening Table III-C-1. In addition to this "selected" traffic, SECI awarded the SFRR a mileage-based "credit" for handling approximately 1.4 million cars of "non-revenue" traffic in SFRR trains.

While coal customarily moves in unit train service between a limited number of mines and a limited number of destination points, merchandise traffic moves in single-car or multiple-car shipments between a very wide range of origins and destinations. For that reason, operation of a merchandise rail network is far more complex and capital intensive than operation of a rail system designed primarily to handle coal. A merchandise operation must be capable of accommodating an ever-changing mix of hundreds of different commodities tendered by thousands of customers, both large and small. Such shipments may require specialized cars

and/or facilities to permit the transfer of the product from rail cars to trucks. Traffic volumes vary from day to day, and service schedules must be adjusted from time to time to meet the needs of customers. Given the truck-competitive nature of many merchandise commodities, customer demands for service are high. In order to meet shipper requirements, a merchandise carrier must build and operate a network of regional and local classification and switching yards, and must have the resources needed to pick up, set off and transfer cars between trains at hundreds of origin, destination and interchange points along its rail system. SECI's operating plan utterly ignores this reality.

SECI's description of its "operating plan" for general freight traffic is riddled with inconsistencies. On the one hand, SECI acknowledges that "[SFRR's] traffic group consists of a variety of commodities that move between hundreds of SFRR O/D pairs in the modeling period, involving different (and occasionally overlapping) segments of the SFRR system." SECI Opening at III-C-49-50. (emphasis added). SECI asserts – in a footnote – that "to the extent such a [SFRR] train drops off or picks up cars at an intermediate point that is a local SFRR destination or origin, the SFRR crew performs this work as well." SECI Opening at III-C-8, n.5. Yet, SECI states repeatedly that its RTC Model simulation – upon which SECI expressly relies to validate its operating plan (*see* SECI Opening at III-C-52) – does not take into account the time and resources required to serve local origin/destination points. *See, e.g.,* SECI Opening at III-D-107 ("the SFRR is assumed to operate only complete trains intact from origin to destination for purposes of SECI's simulation of its peak period operations"). SECI Opening at III-C-23 ("SECI's experts did not attempt to model local trains or to replicate the operation of other trains with intermediate pick-ups and set-outs in the RTC simulation"). *id.* (SECI's RTC

simulation "mov[ed] complete trains intact, as the SFRR receives them in interchange or at a local origin point, regardless of whether the trains have cars of non-SFRR traffic on them"). Elsewhere, SECI offers yet another characterization of its evidence, suggesting that its operating plan (and RTC Model simulation) do, in fact, provide for local pick-up, set-off and switching of SFRR's "selected" traffic, but not for "non-revenue loads." *See, e.g.,* SECI Opening at III-C-9 ("The SFRR moves these trains as it receives them from CSXT, without removing or adding any cars unless cars with SFRR traffic were removed or added at an intermediate point..."). (emphasis added); SECI Opening at III-C-22 ("For purposes of the RTC simulation, these trains were kept intact from origin to destination; that is, the SFRR did not switch non-SFRR revenue cars out at origin, destination or any intermediate location"). (emphasis added) SECI does not explain how merchandise trains received by the SFRR in interchange, which contain both "selected" and "non-revenue" general freight traffic, can simultaneously "move intact" across the SFRR system and also stop to perform pick-ups, set-offs and intermediate handling for "selected" cars.

The reality is that the operating plan proffered by SECI makes no provision for the time and physical resources necessary to provide local service for general freight traffic. Based upon SECI's own evidence, nearly 40 percent of the general freight carloads handled by the SFRR are either local, interline forwarded or interline received traffic – *i.e.*, they originate or terminate (or both) at points along the SFRR system. SECI Opening at Table III-C-1. SECI's evidence also assumes that the SFRR would earn "merchandise line-haul credits" for handling approximately 1.3 million loaded and empty cars of "non-revenue" general freight traffic, including "non-revenue" shipments originating or terminating at SFRR-served points. In addition, the SFRR

would interchange merchandise traffic with CSXT and other carriers at 58 separate locations. SECI Opening Ex. III-B-2.[8] Yet, SECI's track configuration evidence includes no facilities for classification or switching of merchandise freight – to the contrary, SECI declares that "SFRR does not perform [classification switching] anywhere on its system . . . .". SECI Opening at I-29. (emphasis added) The notion that a railroad could handle more than 1.8 million loaded and empty merchandise cars across a 2,092-mile rail network without performing any intermediate classification or switching is simply not "consistent with the underlying realities of real-world railroading."[9]

SECI's operating plan likewise fails to account for the special handling requirements, such as transloading, associated with the traffic that it selected. For example, during 2008, CSXT handled more than 1,000 loaded tank cars of Ethyl Alcohol (Ethanol) via its Transflo facility at Nashville, TN. At the facility, the product is transferred from rail tank cars to trucks for delivery to the ultimate receivers, who require less-than-trainload shipments of the product. Six major customers currently utilize CSXT's Nashville Transflo facility: {

} These entities, in turn, provide the commodity to other

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[8] While SECI's operating plan designates 51 interchange locations, examination of the SFRR's traffic reveals that SECI missed seven interchanges: Cordele, GA, where SFRR interchanges with the Heart Of Georgia short line; North Charleston, SC, where SFRR interchanges with the Port Terminal RR of SC; Vine Hill, TN, where SFRR interchanges with the Nashville & Eastern; Waterford, AL, where SFRR interchanges with the Wiregrass Central; Wilson, NC where SFRR interchanges with the Coastal Carolina Railway and NS; Lumberport, WV, where SFRR interchanges with CSXT; and, Hopewell, VA, where SFRR interchanges with NS.

[9] *Western Fuels Assn., Inc. and Basin Electric Power Cooperative v. BNSF*, STB Docket No. 42088, at 15 (September 7, 2007) ("*WFA/Basin*").

end-users; for example, { } receives the product on behalf of {

}. Most of the Ethyl Alcohol traffic that moves through CSXT's Nashville Transflo facility was selected by SECI for the SFRR's traffic group. However, SECI's proposed SARR configuration does not include any facilities to provide transload service at Nashville (or, for that matter, anywhere else on the SFRR network). To the contrary, neither SECI's Opening Evidence nor its workpapers give any indication that SECI was even aware of the transloading facilities and services required by customers that receive Ethyl Alcohol at Nashville – or the thousands of other cars of SFRR "selected" traffic that are transloaded between rail and truck on a daily basis at points replicated by the SFRR. SECI's SARR configuration and operating plan utterly fail to consider – much less meet the transportation needs of – this traffic. *Duke-CSXT* at 24; *WFA/Basin* at 15.

Even more nonsensically, while SECI acknowledges that the SFRR's selected traffic originates and/or terminates at "hundreds" of intermediate points along the SFRR system (SECI Opening at III-C-49-50), SECI's proposed track configuration for the SFRR does not include spur tracks, sidings or industry tracks at any of the locations at which such tracks would be needed to access a customer's facilities. SECI Opening Ex. III-B-3. Without such physical facilities, service to SECI's merchandise customers is not only not "feasible," it is physically impossible.

Nor does SECI's RTC Model simulation incorporate any allowance for the time that would be required for SFRR trains to pick-up or set-out cars at origin and destination points. Indeed, while SECI purports to base its operating plan, in part, on data relating to more than 5,000 yard and local trains operated by CSXT during 2008 (SECI Opening at III-D-109),

"[t]rains meeting these definitions were not included in the RTC modeling of peak period trains." (SECI Opening at III-C-24)

SECI's operating plan and RTC Model simulation treat the SFRR's general freight traffic business as an essentially "overhead" operation in which merchandise trains move "intact" across the SFRR system without stopping en route to pick-up cars from, or deliver cars to, shippers, or to switch cars from one train to another. In other words, SECI's operating plan for merchandise freight attempts to mimic that of a typical coal-hauling railroad. As SECI's operating expert knows full well, such an approach is not feasible for merchandise traffic. SECI's failure to build classification yards, spurs or industry tracks, or to design and test the local train operations required to accommodate the massive volume of general freight traffic that it selected for the SFRR violates well-established SAC principles and renders its operating plan fatally deficient.

SECI acknowledges that "the cost of intermediate, yard and local switching operations that involve the SFRR's traffic must be accounted for." SECI Opening at III-C-24. It purports to account for such operating expenses by "including costs associated with these operations" in its operating expense calculations "whenever switching is known to have occurred for a car moving SFRR revenue traffic (or the corresponding empty car). . . ." *Id.* Specifically, SECI applies CSXT's historic system-average URCS variable switching cost as a "surrogate" for the cost of each switch movement that the SFRR would need to perform in providing local pick-ups,

set-offs and intermediate switching.[10] SECI's approach to estimating the cost of local train service must be rejected, for several reasons.

The mathematical exercise proffered by SECI violates a first principle of the SAC test – that Complainant must demonstrate the forward-looking costs of constructing all of the facilities, and providing all of the services, required to meet the needs of the SARR's shippers. The Board has rejected similar attempts by a complainant to use system-average URCS costs instead of developing ground-up costs for the particular services involved:

> URCS reflects historical costs, not reproduction costs (which is the objective of the SAC test). Moreover, the URCS data are not specific to any line segment. A SAC analysis should be addressed to the lines to be replicated, not a carrier's entire system.

Arizona Elec. Power Cooperative, Inc. v. Burlington N. & Santa Fe Ry. Co., STB Docket No. 42058, slip op. at 13 (served March 15, 2005). In addressing a related issue (the use of a trackage rights fee as a "surrogate" for the cost of building facilities) in *Guidelines*, the ICC observed that "a SAC presentation based on trackage rights over the very facilities to which the rate at issue applies is not useful" because the assumed level for the trackage rights fee would prejudge the ultimate issue in the case, *i.e.*, the cost of providing the facilities." 1 I.C.C.2nd at 543, n.60. The agency's decisions in *Guidelines* and *AEPCO* dictate that SECI's "surrogate cost" approach likewise be rejected here.

SECI's approach of simply applying costs (based upon CSXT's URCS system-averages) to local pick-up, set-off and switching does not take account of the time involved in performing

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[10] SECI concedes that neither its operating plan nor its operating expense calculations consider the cost of picking up, setting off or switching "non-revenue loads" that originate or terminate at points along the SFRR system.

such activities. In fact, the time required to perform such intermediate switching operations is not taken into account anywhere in SECI's Opening Evidence. As CSXT's RTC Model simulation graphically demonstrates, these necessary operations at intermediate points would tie up the main line (thereby reducing line capacity), increase cycle times, and require the SFRR to deploy far more locomotives, cars and crews than SECI estimated. CSXT Reply Ex. III-C- 2; CSXT Reply Ex. III-C-3. Ignoring the element of time renders SECI's estimated train transit times, car and locomotive cycle times, locomotive and car fleets, and crew requirements unreliable. In short, SECI's "operating plan" and RTC Model simulation postulate trains moving at full speed along the SFRR's main lines, dropping off and picking up individual cars on (non-existent) industry tracks and spurs without slowing down or stopping. This inconceivable feat is accomplished via a series of "book entries" based upon historical system-average URCS costs and internal CSXT-CSXI internal transfer prices, without giving any consideration to the actual forward-looking cost of constructing facilities, acquiring the equipment and personnel, and performing the physical work required to serve the SFRR's customers.

Moreover, SECI's "surrogate" cost calculations vastly understate the level of switching activity that the SFRR would be required to perform. SECI says that it applied its "surrogate" cost only to those "selected" carloads for which "switching is known to have occurred." SECI Opening at III-C-24. However, nothing in SECI's evidence or workpapers allow it (or the Board) to follow individual car movements; the bizarre methodology employed by SECI permitted it only to follow train movements and required it to rely upon average cars per train in

developing its switching costs. (*See* Section III-D, *infra*)[11] SECI itself estimates that the SFRR would have to provide approximately 419,000 switch movements during the base year. SECI Opening at III-C-109. In fact, handling the traffic (including "non-revenue" cars) moving in SFRR trains in accordance with customer requirements would involve more than two million switch movements annually. *See* CSXT WP "Seminole Blocks and Yard Volumes.xls". Thus, even if SECI's "surrogate cost" methodology were conceptually valid – and it most emphatically is not – the operating expense estimates generated by that exercise reflect only a small fraction of the costs of providing local service to shippers.[12]

CSXT's operating plan corrects these deficiencies by identifying the physical facilities required to handle SFRR's merchandise and intermodal traffic; developing the forward-looking cost of constructing those facilities; properly accounting for the time required to perform local pick-ups, set-offs and intermediate switching; incorporating those time requirements into CSXT's RTC Model simulation (and train transit and cycle times); and developing the number of locomotives, cars and crews actually required to serve both SFRR's "selected" traffic and "non-revenue loads" in a manner consistent with shipper needs.

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[11] Indeed, SECI's methodology for selecting trains from CSXT's 2008 train event files to develop its operating costs – pursuant to which trains were "adopted" only if they contained at least 15 cars of SFRR "selected" traffic – resulted in SECI failing to capture the entire route of movement of its "selected" traffic across the SFRR system. *See* pp. III-C-53-55.

[12] The operating expenses (including switching) associated with traffic moving in SFRR trains are addressed in detail in Section III-D.

B. SECI Does Not Even Attempt To Proffer An Operating Plan That Accommodates The Requirements Of "Non-Revenue" Traffic.

The major flaws in SECI's operating plan are compounded by its unprecedented assumption that SFRR trains would carry not only the SFRR's "selected" traffic, but also a massive number of so-called "non-revenue" merchandise cars and intermodal units. SECI chose not to include those shipments in the SFRR's traffic base, even though SECI attempted to utilize the event data for trains in which such "non-revenue" cars actually moved as the basis for some of the SFRR's operating statistics.[13] The merchandise and intermodal shipments that SECI characterizes as "non-revenue" traffic include a substantial number of cars and intermodal units that actually originate or terminate (or both) at points along the SFRR's lines.

Nevertheless, SECI posits that "non-revenue" traffic would move "intact" from an SFRR on-junction to an SFRR off-junction – "that is, the SFRR [would] not switch non-SFRR revenue cars out at origin, destination or any intermediate location." SECI Opening at III-C-22. Some of the "non-revenue" cars to which SECI applies this assumption are cars with the same origin, same destination and same shipper as SECI's "selected" traffic. In other words, SECI's Opening Evidence assumes that the SFRR would provide local pick-up and set-off service for those

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[13] SECI identified its "selected" traffic group from the waybill file that CSXT produced in discovery. SECI then attempted to match the "selected" waybill records with cars in the separate train event file produced by CSXT. Whenever SECI was able to match at least 15 cars (or containers) from its selected waybill records with cars (or intermodal units) shown as moving on a CSXT train in the train event file, SECI "adopted" that train as an SFRR train for purposes of its operating plan, operating statistics and possible inclusion in its RTC Model. Of course, because SECI did not select all of CSXT's merchandise and intermodal traffic, there was not a complete match between the waybill records selected by SECI and all the cars on a train in the train event file. Nevertheless, SECI chose to assume that all of the cars included on a train in the CSXT train event file would move in SFRR trains, with those not part of its selected traffic base classified as "non-revenue" traffic.

shipments of a particular customer that were "selected" by SECI, while that customer's other cars would not be delivered to (or picked up from) the customer's facility but would instead move "intact" to an Off-SFRR junction to be handed off to CSXT. Indeed, SECI did not bother to conduct the inquiry required to determine the origin, destination, shipper and revenue associated with the "extra" cars that it found in the CSXT trains that carried the SFRR's "selected" traffic in 2008. Under the Board's SAC procedures, SECI should have performed that analysis in deciding whether or not it wished to select additional traffic for the SFRR's traffic base. Instead, SECI simply kept the cars on the train and assumed that the SFRR would earn a cost "credit" for moving those "non-revenue" cars – fully $108.6 million for 2009. SECI Opening at III-D-109-110.

The Board should not countenance SECI's attempt to award itself a massive operating expense reduction by positing a mythical arrangement pursuant to which the SFRR would earn a "credit" for handling the incumbent CSXT's residual traffic. The Board's precedents do not permit a SAC Complainant to make up out of whole cloth operating agreements that do not exist in the real world. The { } between CSXT and non-party CSXI upon which SECI relies is an agreement {

.}.[14] That

[14] SECI attempts to apply one minor, isolated provision { } effectively seeking to have the SFRR partially "step into the shoes" of a non-party, CSX Intermodal. Moreover, SECI seeks { } to (mis)apply a provision to benefit the SFRR, while disregarding the other obligations and responsibilities of the parties to the agreement. The Board

arrangement does not support SECI's fanciful (and self-serving) assumption that the incumbent CSXT would voluntarily enter into an arrangement with SECI to handle massive volumes of general freight and intermodal traffic that CSXT itself is capable of handling via its own lines – particularly in light of the fact that the SFRR had already diverted almost half of CSXT's merchandise traffic base![15]

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permitted SECI to obtain discovery of CSXI documents in order for SECI to evaluate whether certain revenues received by CSXT for moving CSXI intermodal traffic resulted from an arms-length transaction. *See SECI v. CSXT,* STB Dkt. No. 42110, Decision at 2 (Feb. 17, 2009) (no discussion of CSXT general merchandise traffic, { } SECI's Opening Evidence contains no discussion whatsoever concerning this issue, and utterly fails to show that, contrary to SAC precedents, the SARR should be allowed to take on some -- but not all -- of the contractual rights and responsibilities of a third party. Instead, SECI audaciously assumes – contrary to SAC precedent, basic contract law, market economics, and common sense – that the SFRR could selectively { } force the residual CSXT to tender its traffic to the SFRR and charge CSXT for the "privilege," while simultaneously assuming the SFRR would not be bound by the other terms of the { } For purposes of this case only, CSXT has elected not to contest SECI's erroneous position that a SARR may step into the shoes of a third-party in the manner SECI advocates. Although CSXT believes this position is contrary to established Board precedent and inconsistent with SAC theory, it has elected not to oppose SECI's position for purposes of this case in order to avoid a distracting, complex, and potentially costly side-dispute in a case that is already beset with unprecedented complexity. In any event, for all of the reasons set forth in this Reply, SECI's evidence falls so far short of demonstrating the challenged rates are unreasonable that even its irrational and unlawful assumptions concerning { } and line-haul revenues for SFRR general freight and intermodal traffic are inadequate to allow it to meet its burden of proof and establish the challenged rates exceed a maximum reasonable level. To avoid confusion in future cases, the Board's decision in this case should make clear that it was not required to address the question of whether a SARR can assume it would step into the shoes of a third party, or obtain revenues not available to the defendant carrier, because CSXT elected not to contest SECI's position for purposes of this SAC case only.

[15] SECI's assumption that SFRR trains would carry massive volumes of "non-revenue" cars presented CSXT with a dilemma. With only one opportunity to present evidence in this proceeding, CSXT was forced to choose between (i) rejecting the "non-revenue" traffic concept in its evidence and excluding those 1.4 million cars from CSXT's operating plan; or (ii) giving effect to SECI's assumption that the SFRR would handle that traffic, and incorporating it into

Even more nonsensical is SECI's position that the SFRR should be awarded a "credit" for handling "non-revenue" cars without any corresponding responsibility for picking up or setting out those cars that originate or terminate at intermediate points along the SFRR's lines. To the contrary, if the Board permits SECI to engage in the fiction that the SFRR would earn a "credit" for handling such "non-revenue loads" it must also require that the SFRR provide (and account for) all services necessary to handle those shipments in accordance with customer requirements. CSXT's operating plan serves both SFRR's "selected" traffic and "non-revenue loads" in a manner consistent with every customer's needs.

Finally, SECI's attempt to justify its treatment of these merchandise and intermodal shipments as "non-revenue" movements on the grounds that "it was impossible to tell from the [CSXT] movement data [produced in discovery] . . . . which cars on these trains were picked up or set off at which locations and whether the cars were SFRR revenue cars or other cars" (SECI Opening at III-C-23) is not credible. Indeed, SECI's assertion that it could not discern whether cars were "SFRR revenue cars or other cars" is a blatant misstatement – by definition, "SFRR revenue cars" are those cars that SECI selected for the SFRR's traffic base. Utilizing the data sources furnished by CSXT, SECI could have determined the specific locations and customers

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CSXT's operating plan. SECI's "non-revenue" traffic concept is neither permitted under SAC procedures nor justified by SECI's claim that the characteristics of cars that it treated as "non-revenue loads" could not be gleaned from the data produced by CSXT. If CSXT excluded the "non-revenue" (CSXT) traffic from SFRR traffic on Reply, however, the two parties would have presented wholly different SARR traffic, and the Board would be required to choose between using the traffic selected by the Complainant or applying the only rational and sufficient SAC analysis available, that produced by CSXT. In order to avoid that dilemma and to assure that the record contains one operating plan that satisfies the needs of all customers whose traffic SECI posits would move in SFRR trains, CSXT's operating plan fully accounts for the handling of cars designated by SECI as "non-revenue" traffic in SFRR trains.

whose traffic SECI chose to classify as "non-revenue" cars. *See* CSXT Reply Ex. I-2. Using the same data that it produced in discovery, CSXT did just that, identifying the origin and destination of each purported "non-revenue load" (more than half of which were, in fact, empty car movements – *see* p. III-C-51 below) and developed an operating plan that properly accounts for the services (including switching, pick-ups and set-offs at intermediate points) required to serve both SFRR's "selected" and "non-revenue" traffic in a manner consistent with customer requirements.

C. SECI'S RTC Model Simulation Is Meaningless.

SECI attempts to establish the feasibility of its operating plan by presenting "a simulation of the SFRR's peak-period operations using the Rail Traffic Controller (RTC) Model with operating inputs provided by Mr. Reistrup." SECI Opening at III-C-1. According to SECI, the Model developed by witness Schuchmann "ran to a successful conclusion" (SECI Opening at III-C-48), "confirm[ing] that the SFRR's configuration, facilities and operating plan are feasible." SECI Opening at III-C-52. SECI also relies upon the output of its RTC simulation for the elapsed train running times, train cycle times, locomotive and car hours and train-crew count set forth in its Opening Evidence. SECI Opening at III-C-48.

As an initial matter, SECI's claim that a (purportedly) successful RTC Model simulation can "confirm" the feasibility of a Complainant's operating plan is wrong. The RTC Model simulation cannot prove the feasibility of an operating plan. Rather, a Complainant's operating plan is "feasible" if it includes all of the activities and services necessary to satisfy the requirements of all of the traffic that the SARR would handle. *Duke-CSXT* at 24. In this case, SECI's operating plan fails to account in any meaningful way for the physical facilities, local

switching services and time that would be required to handle the massive volume of merchandise and intermodal traffic posited to move in SFRR trains. For that reason alone, SECI's operating plan is not "feasible" within the meaning of SAC analysis.

An RTC Model simulation of a SARR's "peak week" operations can be utilized to test whether the track configuration and other physical infrastructure posited by Complainant are sufficient to enable a SARR to execute an otherwise feasible operating plan. The RTC Model is also a useful tool for generating operating statistic inputs (such as transit times between points) that are needed to estimate a SARR's operating expenses. However, in order for such a simulation to generate valid results, the RTC Model used to perform the simulation must incorporate all of the elements of a feasible operating plan (*i.e.*, one that satisfies the requirements of the SARR's traffic). The RTC Model upon which SECI based its simulation of the SFRR's peak period operations suffers from numerous input deficiencies that render its inputs erroneous and its output worthless.

1. SECI's RTC Simulation Does Not Even Consider The Local Service Requirements of Non-Coal Customers.

The most serious deficiency in SECI's RTC simulation is its complete failure to consider (much less measure the effects of) the local pick-ups, set-offs and intermediate and yard switching activities that the SFRR would necessarily have to perform in order to provide service to its general freight and intermodal shippers. SECI's RTC analysis treats the SFRR's merchandise and intermodal business as if it were a strictly "overhead" operation. No effort is made to determine the time and resources required to provide local service in connection with the enormous volume of SFRR non-coal traffic.

Amazingly, this glaring omission is intentional. SECI candidly acknowledges that "SECI's experts did not attempt to model local trains or to replicate the operation of other trains with intermediate pick-ups and set-outs in the RTC simulation." SECI Opening at III-C-23. (emphasis added) *See also* SECI Opening at III-D-107 ("the SFRR is assumed to operate only complete trains intact from origin to destination" for RTC modeling purposes). Nor does SECI's RTC Model incorporate any inputs to take account of the time required for SFRR trains to pick-up or set-out general freight cars at on-line customer facilities – even though SECI acknowledges elsewhere that the SFRR's selected traffic originates and/or terminates at "hundreds" of intermediate points along the SFRR system. SECI Opening at III-C-49-50. Indeed, SECI's "experts" did not even bother to include any spur tracks, sidings or industry tracks at customer facilities in the track configuration input into SECI's RTC Model.

The degree to which SECI ignores the needs of the SFRR's customers is illustrated by the following example:

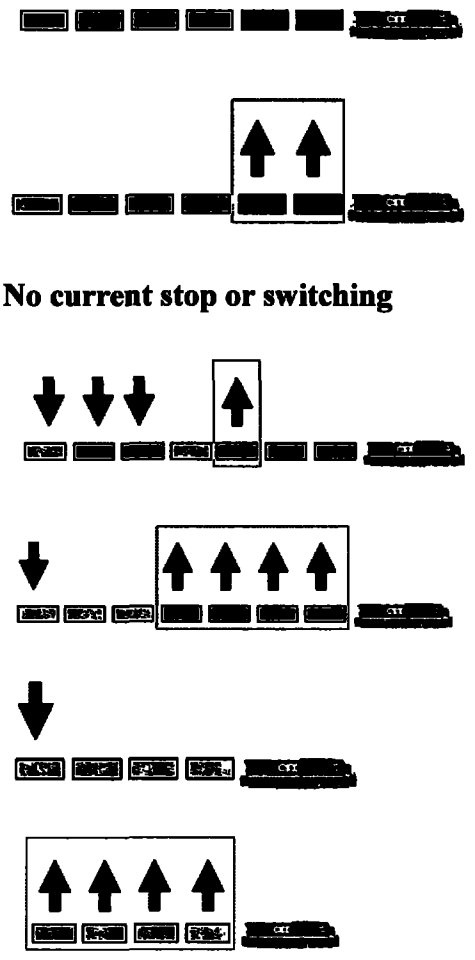
SECI's RTC Model simulation includes a train designated as Train 482FRocWay1 (based on Train Q409 operated daily by CSXT), moving on the SFRR during the peak week (on August 5, 2018). This train currently originates at CSXT's Selkirk Yard near Albany, NY and runs south to CSXT's Rice Yard near Waycross, GA. SECI's operating plan contemplates that the SFRR would receive this train from CSXT at Alexandria Junction, MD and deliver it back to CSXT at Waycross, GA. In SECI's RTC Model simulation, this train simply rolls past each intermediate location without stopping. *See* CSXT WP "Q409 RTC Operating Plan – SECI SFRR.pdf" (which contains a video excerpt of the movement of this train in SECI's RTC Model).

SECI's RTC simulation fails to comport with the real-world operation of this train – and all of the other merchandise trains that SECI "adopted" from CSXT's train event file. In reality, Train Q409 makes multiple stops on its journey from Selkirk to Waycross, dropping off and/or picking up blocks of cars at intermediate points including Richmond, VA; Rocky Mount, NC; Florence, SC; Charleston, SC; and Savannah, GA. The movement of Train Q409 on a typical day is graphically illustrated in Figure III-C-1.

FIGURE III-C-1

CSXT Train Q409

Train: Q409
Origin: Selkirk, NY
Destination: Waycross, GA.
Frequency: 7 days per week



SELKRIK, NY

NORTH BERGEN, NJ

No current stop or switching

ALEXANDRIA JUNCTION, MD

ROCKY MOUNT, NC

FLORENCE, SC

CHARLESTON SC

WAYCROSS GA

As Figure III-C-1 shows, cars moving to common destinations (or intermediate yards) on CSXT's lines south of Albany are "blocked" at Selkirk Yard. The train stops at North Bergen, NJ to set off two such blocks that are destined for local businesses in the New York/New Jersey

metropolitan area. (In Figure III-C-1, blocks that are set off at a particular location are depicted with upward-facing arrows, while blocks that are picked up are depicted by downward-facing arrows.) Train Q409 does not currently pick up or delivery blocks of cars at Alexandria Junction, MD, the point at which SECI assumes it would first arrive on the SFRR. However, upon arrival at Rock Mount, NC, Train Q409 drops off one block of cars and picks up three new blocks of cars destined to points further south. As Figure III-C-2 illustrates, these blocks cannot simply be added and subtracted from the front or rear of the train.

FIGURE III-C-2

BLOCK SWAPPING AT ROCKY MOUNT, NC

STEP 1

Incoming train is carrying a block to set off at Rocky Mount. The block may not be located on the front or back end of the train but may be in the middle. In that event, switching would be required to get the desired block out of the train and to place it on a set off track.



STEP2

Three new blocks built at Rocky Mount Yard are added to the train. Building such blocks requires a switching yard. Existing blocks on the train may need to be re-switched before the new blocks can be added to the train.



STEP3

In order to enable Train Q409 to set off two (green) blocks at a subsequent location that is smaller than Rocky Mount, further switching may be performed at Rocky Mount to line the blocks up correctly.



As Figure III-C-2 shows, the yard crew at Rocky Mount may be called upon to perform multiple switching movements so that blocks added to Train Q409 are in the proper position to facilitate efficient block-swapping at points further along the route. In addition, cars that originated in the vicinity of Rocky Mount may be added to blocks that are already on Train Q409 when it arrived at Rocky Mount Yard. Train handling safety requirements, such as the correct placement of cars containing hazardous materials, may also require additional switching. Train Q409 then departs for its next stop, Florence, SC.

At Florence, Train Q409 drops off four blocks of cars and picks up one new block. The process by which blocks are added to, removed from, or shifted within the train at Florence is the same as at Rocky Mount. Train Q409 then proceeds from Florence to Charleston, SC, where one more block is added to the train. Upon arrival at Waycross, GA, the journey of Train Q409 on this day is complete. However, blocks of cars that arrived at Waycross on Train Q409 are reclassified and added to outbound trains destined for points such as Jacksonville, Miami, Tampa, New Orleans, Atlanta, Nashville and Chicago, as well as other yards, customer facilities and interchange points.

As the foregoing example clearly demonstrates, SECI's facile assumption that the SFRR would not need to perform freight classification anywhere on its 2,092-mile system is absurd. Merchandise trains on CSXT (and other real-world railroads) rarely, if ever, move "intact" from one end of the network to the other without intermediate classification, block swapping or switching of individual cars. CSXT's operating plan provides for the yard facilities and other resources that the SFRR would need to perform those necessary functions at intermediate points

on its system. CSXT Reply Ex. III-C-1 contains a series of maps that illustrate the multiple destinations for which blocks of cars would have to be built at the nine (9) SFRR switching yards that would handle at least 250 merchandise cars per day.

SECI's assertion that "[t]he simulation of a SARR's operations using the RTC Model is designed to show that the SARR has the capacity and ability to move trains containing the traffic of its customers between the O/D pairs involved, not to simulate activity at yards or other local switching activity" (SECI Opening at III-C-23) is nonsense. The receipt of cars from, and delivery of cars to, customers at intermediate points is a critical element of serving the general freight traffic that SECI chose for the SFRR's traffic base. Such local switching consumes a significant amount of time, requiring a road or local train to stop at each origin or destination facility and tying up the main line (unless additional track facilities are provided at a particular location to enable the carrier to switch the customer's traffic without utilizing main line tracks). CSXT Reply Exhibits III-C- 2 and III-C-3 are depictions (from CSXT's RTC Model simulation) of the stops (and associated dwell times) that a typical SFRR road train and local train, respectively, would need to make in order to serve the SFRR's customers. It is incumbent on a Complainant to demonstrate that its SARR has sufficient track capacity, equipment and personnel to perform both local and overhead operations during the SARR's "peak week." SECI's attempt to circumvent any meaningful analysis of the time and physical facilities required to provide such local service is utterly inconsistent with the SAC test, and must be rejected.

The absence of any inputs to account for the SFRR's local train service requirements fatally undermines both the RTC Model constructed by SECI's experts and the output of any

simulation based on that model. Moreover, as discussed below, SECI's RTC simulation suffers from numerous other flaws that render its output unreliable.

2. SFRR Trains Enter and Depart the SFRR's Lines at Different Locations on Different Days.

In SECI's RTC Model simulation, the same SFRR trains enter and/or exit the SFRR system at different locations on different days, often at points that are hundreds of miles apart. Under this scenario, crews would be required to go on-duty and off-duty at different locations on different days, making it virtually impossible for the SFRR (or connecting carriers) to follow a coherent crew plan. For example, CSXT examined ten Q410 trains (Q410 is the northbound counterpart of southbound Train Q409 discussed above) selected by SECI for the SFRR's peak week traffic. In SECI's RTC Model simulation, Train Q410 entered and departed the SFRR's lines at the same On-SARR and Off-SARR locations on only four of the ten days during the simulation period. On the other six days, Train Q410 entered the SFRR at three different locations and exited the SFRR at two separate points. The distance between the two On-SARR locations for Train Q410 reflected in SECI's RTC analysis (Florence, SC and Waycross, GA) is approximately 276 miles. Likewise, the distance between the two Off-SARR locations assumed by SECI's RTC Model (Alexandria Jct., MD and Savannah, GA) is approximately 570 miles. The On-SARR and Off-SARR locations represented by SECI's SFRR RTC Modeling Period Train List, excerpted in Figure III-C-3 below, cannot be served by the same crews.

FIGURE III-C-3

SFRR RTC Modeling Period Train List

	TRAIN ID	On SARR LOCATION	On SARR STATE	On SARR MILE POST	Off SARR LOCATION	Off SARR STATE	Off SARR MILE POST	On SARR DATE/TIME	Loads	Empties	Total	TRAILING TONS
	(1)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
218	Q4100909-AUG-08	Waycross	GA	AN 587	Alexandria Jct	MD	BAA 33.6	08/08/2008 22 00	75	47	122	9857.4
289	Q4100808-AUG-08	Waycross	GA	AN 587	Savannah	GA	A496	08/07/2008 22.15	78	52	130	10335
332	Q4101010-AUG-08	Waycross	GA	AN 587	Savannah	GA	A496	08/09/2008 22:00	91	59	150	12013
497	Q4101212-AUG-08	Florence	SC	A 293	Alexandria Jct	MD	BAA 33 6	08/11/2008 22:00	74	29	103	9262.1
579	Q4102929-JUL-08	Jesup	GA	A 548.6	Alexandria Jct	MD	BAA 33.6	07/30/2008 04:00	70	34	104	8936.8
580	Q4101111-AUG-08	Waycross	GA	AN 587	Alexandria Jct	MD	BAA 33.6	08/10/2008 22 00	72	28	100	9006
1190	Q4103030-JUL-08	Florence	SC	A 293	Alexandria Jct	MD	BAA 33.6	07/30/2008 21:30	100	33	133	12351.1
1194	Q4100707-AUG-08	Florence	SC	A 293	Alexandria Jct	MD	BAA 33.6	08/07/2008 00 35	89	48	137	11489.9
1201	Q4100505-AUG-08	Florence	SC	A 293	Savannah	GA	A496	08/04/2008 21:45	124	26	150	14917

No real-world railroad would employ such a practice, nor would connecting carriers tolerate such chaotic interchange arrangements. The train movements reflected in SECI's RTC simulation would introduce tremendous inefficiencies on the SFRR - generating costs that are not accounted for in SECI's crew expense calculations. Indeed, the crew assignments implicated by the handling of these trains in SECI's RTC Model are utterly inconsistent with the crew districts sponsored by SECI witness Reistrup.

The chaotic interchange practices assumed by SECI's RTC Model would also impose substantial additional crew costs on CSXT and other connecting carriers, which would be forced to exchange trains with the SFRR at an ever-changing number of interchange locations. Indeed, it is conceivable that the train movement pattern upon which SECI's RTC analysis is based could double the carriers' crew expenses (if a recrew were required to "bridge the gap" between different On-SARR and Off-SARR locations). To illustrate, a CSXT crew that customarily goes off-duty at Richmond, VA (where the SFRR would receive that crew's train on certain days) would almost certainly not have enough hours to handle the train further south to Rocky Mount, NC or Florence, SC (as SECI's RTC analysis contemplates) without exceeding FRA-prescribed

hours of service. Indeed, a CSXT crew that customarily works only so far south as Richmond might not even be qualified to operate over CSXT territory south of Richmond to Rocky Mount or Florence.

Not only would the practice of requiring crews to deliver trains (and, therefore, to go on-duty and off-duty) at different locations on different days of the week increase the carrier's costs, it would significantly impair the quality of life of affected employees. Such a practice would reduce efficiency by making it harder for the SFRR to retain qualified train personnel.

SECI's RTC Model simulation incorporates a random element into the SFRR's train movements that would require crews to go on-duty and off-duty at different locations on different days. Such an assumption not only creates chaos for the SFRR, it imposes impermissible additional costs on the incumbent CSXT, in violation of the Board's prior rulings in SAC cases.[16]

3. The Locomotive Configurations Input Into SECI's RTC Model Ignore the Physical Forces Operating on a Train.

SECI's RTC Model simulation violates basic laws of physics by adding an excessive number of locomotives to the front and rear of many SFRR trains. The RTC Model cannot discern whether a proposed power configuration is inconsistent with the laws of physics – *e.g.*, whether placing more and more power on the front or rear of an oversized train to avoid a stall

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[16] *Duke v. CSXT* at 40-41 ("[W]hile the proponent of a SARR can determine (within reason) how the SARR would operate, it cannot assume that a connecting carrier . . . would alter its existing operations for the benefit of the SARR"); *Public Service Co. d/b/a XCel Energy v. BNSF*, STB Docket No. 42057 (June 7, 2004) (Complainant's operating plan inappropriately shifted cost of providing facilities to stage trains to mine operators).

would, in the real world, cause the train to tear apart. However, SECI's operating expert, Mr. Reistrup, should be aware of such practical limitations upon locomotive configurations.

SECI's RTC Model simulation contemplates that the SFRR would power heavy trains by adding "a third (and in some cases a fourth and/or fifth) locomotive [to the front of a train] at certain locations." SECI Opening at III-C-27. Indeed, SECI's RTC Model simulation includes nineteen (19) trains with five locomotives on the front, all of which also have three locomotives on the rear. SECI's simulation also includes two-hundred ninety five (295) trains that operate with three or more locomotives on the rear. *See* SECI WP "loco_count_and_position.xls". According to SECI's operating plan , all locomotives on SFRR road trains are 6-axle AC4400 locomotives. SECI Opening at III-C-10-11. In numerous instances, the locomotive power configurations upon which SECI's RTC Model is based are inconsistent with both the laws of physics and real-world operating practice.

For example, CSX Train Q3880404-AUG-08 (modeled by SECI as 276FDemCum9) is a 150-car train weighing a total of 17,205 net tons. In SECI's RTC simulation, this train operates over a 60-mile segment of the SFRR network with a consist of five AC4400s locomotives on the front and three more AC4400 units on the rear (for a total of 48 axles). *See* CSXT WP "overpowered example.pdf". SECI incorrectly assumes that, because the RTC Model permitted the train to proceed without incident, a train with such a power configuration could be operated in the real world. SECI is mistaken.

The physical forces likely to affect a train with a given power configuration can only be determined by correctly applying a train dynamic model. Based upon such modeling, CSXT and other Class I railroads prescribe operating practices relating to the maximum stated horsepower

in a train and a matrix of placement configurations. *See* CSXT WP "Air Brake and Train Handling Rules, Section 4; page 1 of 18, ABTH Rules 10-1-07.pdf". The power configuration assumed by SECI for the train modeled as 276FDemCum9 would not be permitted by CSXT or any other real world railroad. CSX publishes Special Instructions in its timetables concerning helper operations. Generally two AC4400 units may push only loaded bulk unit trains; other types of trains are subject to reduced consist or other restrictions (depending on train makeup and the placement of helper locomotives). *See* CSXT WP "CSXT Nashville Division Timetable, p. 25, CSXT Baltimore Division Timetable, p. 134."

Even if SECI were somehow immune to the restrictions imposed by CSXT's powered axle rules, the physical forces on couplers would cause SFRR trains configured in the manner contemplated by SECI major operating problems. Two primary categories of car couplers exist – one rated for 280,000 pounds of force and the other, a high tensile construction for heavy hopper cars, rated at 400,000 pounds of force. CSXT tested the locomotive configurations contemplated by SECI's RTC Model simulation utilizing a publicly available train dynamics model, the Train Dynamic Simulator TDS-5000 by New York Air Brake, which CSXT uses in the normal course of operating its railroad. *See* CSXT WP "Train Dynamics Simulator TDS5000.pdf". Predictably, trains operating with such power configurations encountered serious problems. For example, testing the proposed SECI version of Train Q3880404-AUG-08 (modeled by SECI as the 276FDemCum9), a 150-car train weighing a total of 17,205 net tons, the locomotive configuration assumed by SECI generated forces exceeding 290,000 pounds, a result that would destroy couplers commonly used in merchandise cars at all railroads in normal operations. *See* CSXT Workpaper "Train Dynamics – Output.pdf". Additional scenarios were

tested including a brake line failure while ascending the grade and a stop/start experience (*i.e.*, where the train was required to stop and restart on the grade) – each resulted in forces of 598,000 and 570,000 pounds of force respectively. SECI's RTC Model simply disregards the physical forces that would operate on this train and other trains simulated by its RTC Model. As CSXT's train dynamics analysis proves, the locomotive power assignments and configurations employed by SECI in modeling numerous SFRR trains are simply not feasible in real-world railroading.

SECI's assignment of impermissible power arrangements to numerous SFRR trains in its RTC simulation has significant economic consequences. A proper application of accepted power configuration practices would require the SFRR to operate such trains with different locomotive configurations and, in some cases, to split them into smaller trains. This, in turn, produces higher train counts and greater operating expenses than those proffered by SECI based upon its flawed RTC Model.

4. The Vast Majority of Coal Trains Modeled by SECI Have Incorrect Trailing Tonnages Weights.

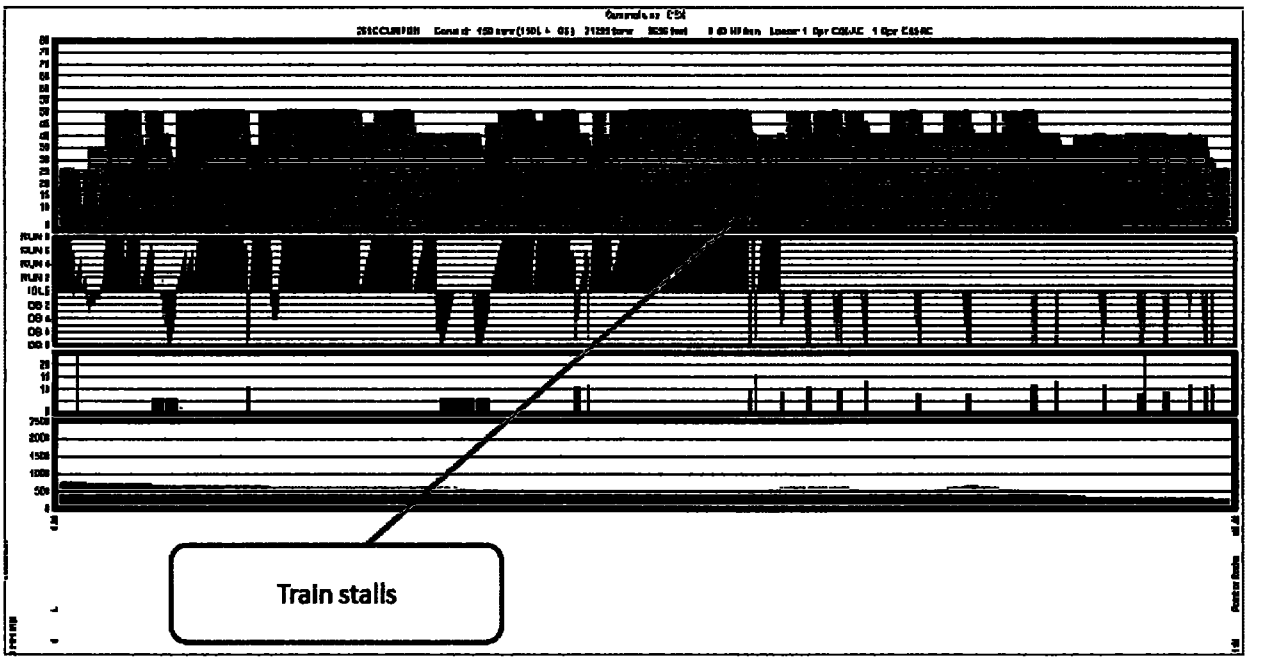
SECI's RTC Model was input with incorrect data regarding most SFRR coal trains. Indeed, all of the SFRR's base-year coal trains were coded with incorrect trailing tonnages. Only so-called "growth" trains, added to the model to reflect the additional coal volumes handled by the SFRR in the "peak year," were coded with the correct trailing tonnage. Those "growth" trains account for only 3 percent of the loaded coal trains in SECI's peak week simulation – meaning that fully 97 percent of the coal trains contained in SECI's RTC analysis have incorrect weights.

It appears that the cause of this error is SECI's failure to include car tare weights when inputting coal trains into its RTC Model. Ironically, while SECI's RTC Model assumed that some trains would operate with too many locomotives (*see* III-C-33-35 above), this error results in many other SFRR trains modeled by SECI being underpowered. For example, the train identified as V5540505-AUG-08 (240CCimPar1 is the RTC ID) is a loaded coal train that originates at Cimmaron, KY and moves off-SARR at Paradise, KY, for a total movement of 9.7 miles on the SFRR. The train contains 138 loaded coal cars. In SECI's RTC Model, the train is powered with two AC4400s on the front and one AC4400 on the rear, for a total of 13,200 horsepower measured at the generator or 12,744 at measured at the rail. According to SECI WP "SARR Event peak period trains 07-08-09 correct stats v2.xls," the gross trailing tons (weight of car plus contents) of this train is 15,829 tons (an SECI assumed 114.7 gross tons x 138 cars). However, the factor of 114.7 tons applied by SECI in calculating the weight of train V5540505-AUG-08 more closely represents the "net" tons of each car (*i.e.*, the contents of the car) not its gross tons (*i.e.*, the weight of the car plus its contents). Indeed, CSXT's records indicate that the actual net tons for this exact origin – destination pair is 112.2 tons. (*See* CSXT WP "SFRR coal ut list.xls"). The "tare" weight of these particular coal cars is approximately 26.1 tons. Indeed, SECI applied a tare weight of 26.9 tons to all of its empty coal trains, indicating that SECI knew the weight of the cars. Based upon SECI's weight calculations for train V5540505-AUG-08, assuming a tare weight of 26.1 tons per car, the average net tons per car would be only 86.8 tons, a very low loaded weight for a car that typically carries 112.2 tons. By failing to include the tare weight of cars in its calculations, SECI understated the trailing tonnage for train V5540505-AUG-08 by 3,602 tons.

SECI did correctly take account of car tare weight in SECI Workpaper "SARR Event peak period trains 070609 coal gf im CHK PR-SUBS TRN ONOFFs and FIXED SORT.xls". Used correctly, the "Gross Weight" column in that workpaper shows 18,892 trailing tons (cell AD2812 of "SARR Event peak period trains 070609 coal gf im CHK PR-SUBS TRN ONOFFs and FIXED SORT.xls"). Thus, it appears that one SECI workpaper properly includes the tare weight and the other does not. The workpaper that does not include the tare weight apparently was used by SECI in creating the "non-growth" coal trains in its RTC Model, while the spreadsheet that does include tare weight in the trailing tons was used only in creating "growth trains" of coal traffic.

SECI's failure to calculate trailing tonnage in inputting SFRR trains into its RTC Model renders meaningless SECI's assertion that its RTC simulation "ran to a successful conclusion." SECI Opening at III-C-48. To illustrate, the SFRR train U8782828-JUL-08 in SECI's RTC Model is coded as a 150-car loaded coal train with 17,205 trailing tons. Adding in the 27 tons per car tare weight omitted by SECI, the correct trailing weight should be 21,255 tons. As the following excerpt from SECI's RTC simulation shows, when the correct weight for train U8782828-JUL-08 is input to the RTC Model, the train stalls at milepost 109.5 near Cherry Hill due to excessive weight as shown in the RTC Model screen shot below:

Incorrect Trailing Tonnage Example
Train U8782828-JUL-08, SECI modeled as the 265CCumPoi1
Loaded Coal, 150 loaded cars, 17,205 tons. Corrected trailing weight is 21,255



Because of this error, many of SECI's trains become underpowered and would stall on one of the grades in the SFRR network. In order to remedy this problem, SECI would have to either break up its longer trains or add more helper locomotives in a distributed power configuration that would require placing locomotives in the middle of the train. Neither SECI's RTC Model, nor its estimate of the SFRR's operating costs, takes either of these solutions into account.

5. SECI Failed to Input Foreign Railroad Crossings And Road Crossings In Its RTC Model.

The incumbent CSXT's lines would cross SFRR's tracks at 6 locations. In addition, there are 30 foreign railroad crossings located along the portions of CSXT's system replicated by the SFRR. Information regarding these foreign train crossing locations was readily available to

SECI on the CSXT track charts produced in discovery. Foreign train crossing data is also publicly available from the FRA website. *See* http://safetydata.fra.dot.gov/OfficeofSafety. Table III-C-1 lists the foreign train crossings along the SFRR system.

TABLE III-C-1: SFRR AT GRADE CROSSINGS WITH FOREIGN RAILROADS

Division	Subdivision	Location	Milepost	Other Railroad
Baltimore	R&P	Doswell	21.80	Buckingham Branch
Florence	Bellwood	Rockets	0.70	Norfolk Southern Railway
Florence	Hopewell	Hopewell	22.10	Norfolk Southern Railway
Florence	Hopewell	Hopewell	22.36	Norfolk Southern Railway
Florence	Hopewell	Hopewell	22.90	Norfolk Southern Railway
Florence	Hopewell	Hopewell	23.35	Norfolk Southern Railway
Florence	Hopewell	Hopewell	23.40	Norfolk Southern Railway
Florence	North End	Emporia	62.60	Norfolk Southern Railway
Florence	South End	Wilson	136.50	Coastal Carolina Short Line
Florence	South End	Selma	161.00	Norfolk Southern Railway
Florence	South End	Fayetteville (A&Y Rrx)	209.40	Csx Transportation
Florence	South End	Fayetteville (A&R Rrx)	210.60	Aberdeen & Rockfish Line
Florence	South End	Pembroke	241.30	Csx Transportation
Florence	Charleston	Meads	386.20	North Charleston Terminal Co (Ns&Csx)
Florence	Andrews	Filbin	413.90	North Charleston Terminal Co (Ns&Csx)
Florence	Charleston	Charleston (Sy)	388.59	Norfolk Southern Railway
Florence	Charleston	Savannah (Garden City Ld)	489.10	Norfolk Southern Railway
Jacksonville	Savannah	Savannah (Central Jct)	490.40	Norfolk Southern Railway
Jacksonville	Savannah	Savannah (Alabama Jct)	491.70	Georgia Central Railway, L.P.
Jacksonville	Nahunta	Nahunta	576.60	Csx Transportation
Jacksonville	Jacksonville Terminal	Jacksonville (Moncrief)	640.30	Norfolk Southern Railway
Jacksonville	Jacksonville Terminal	Jacksonville (Dukes Xing)	642.87	Florida East Coast Railway
Nashville	C E And D	Princeton	260.04	Norfolk Southern Railway
Nashville	Henderson	Trident	276.50	Csx Transportation
Nashville	Henderson	Moorman	119.30	Csx Transportation
Nashville	W And A	Chattanooga-Wheland	149.40	Norfolk Southern Railway
Atlanta	Atlanta Terminal	Tilford Yard - Trim Leads	6.40	Csx Transportation
Atlanta	W And A	M. Dalton (Hair)	99.00	Norfolk Southern Railway
Atlanta	W And A	N. Dalton	99.30	Norfolk Southern Railway
Nashville	W And A	Chattanooga-Sou Belt Line	136.47	Norfolk Southern Railway
Jacksonville	Fitzgerald	Cordele	694.93	Heart Of Georgia
Jacksonville	Fitzgerald	Cordele	695.00	Norfolk Southern Railway
Jacksonville	Fitzgerald	Oglethorpe	727.70	Norfolk Southern Railway
Jacksonville	Jacksonville Terminal	Jacksonville (Moncrief)	640.30	Norfolk Southern Railway
Jacksonville	Jacksonville Terminal	Jacksonville (Dukes Xing)	642.87	Florida East Coast Railway
Atlanta	Cartersville	Cedartown	631.30	Norfolk Southern Railway

In building its RTC Model, SECI failed to input any of these railroad crossings into the SFRR network. As a result, SECI's RTC simulation assumes (contrary to reality) that SFRR trains could at all times proceed unimpeded by foreign train movements. This means that SECI's simulation does not take account of the delays that real world railroads inevitably experience as a result of being required to reduce train speeds, or to hold trains at crossings, to accommodate foreign train movements.

SECI likewise failed to input any motor vehicle road crossings into its RTC Model. There are 1,025 road crossings on the SFRR. *See* CSXT WP "Road Crossing Documentation.xls". All of those road crossings are clearly displayed on the CSXT track charts produced to SECI in discovery and in data available on the FRA website. Information regarding the location of vehicle crossings is important in modeling train meets (to avoid holding trains at locations that block vehicle crossings) and in estimating dwell times when trains meet near road crossings.

SECI's failure to include foreign train crossing points and vehicle road crossings in its simulated SFRR network, or to include any input for train delays caused by crossing movements, further invalidates the train transit times and equipment cycle times generated by SECI's RTC simulation.

6. SECI's RTC Model Did Not Fully Incorporate the CTC Signal System Posited for the SFRR.

A CTC communications system promotes safe operations by maintaining adequate spacing between trains, managing train conflicts and avoiding collisions. SECI's operating plan specifies that "[t]he facilities reflected in the SFRR's operating plan include a Centralized Traffic

Control ('CTC') system covering the SFRR's main lines." SECI Opening at III-C-60. However, the railroad modeled in SECI's RTC simulation does not include all of the elements of a CTC signal system. Specifically, while SECI coded power switches into its RTC Model, it did not incorporate any of the thousands of signals that are used (in tandem with the switches) to control train movements. Without the signals (which enable personnel at a remote location to know the location of trains and to advise a train's crew to slow down or stop), power switches are of little use.

SECI's failure to input the complete CTC system called for by its operating plan results in its RTC Model simulating train movements as if there were no spaces between trains. Such a simulation clearly does not comport with real-world operating conditions – a railroad operating without signals (or any other means of communication regarding the spacing of trains along the carrier's lines) would court disaster. Furthermore, without the correct signals, the RTC Model cannot accurately determine whether (or where) passing sidings ought to be sited to maintain safe and fluid train operations. CSXT provided SECI with information regarding the location of more than 38,000 signals that exist on CSXT's lines in the SARR states. *See* CSXT WP "Signal Locations.xls". There is no legitimate reason for SECI not to have incorporated this important information into its RTC Model.

7. SECI's RTC Model Contains Other Inconsistencies With SECI's Operating Plan.

In addition to the glaring errors discussed above, there are a number of other significant inconsistencies between SECI's RTC Model and the SFRR operating plan proffered by SECI. For example, the interchange facility connections in the model are not coded in the manner

portrayed in SECI's stick maps. (\SECI Opening Ex. III-B-3. In its RTC Model, SECI often input connections on both sides of an interchange location, whereas its engineering stick maps – upon which SECI's construction cost estimates are based – contain such connections on only one side of the track. *Compare* Seminole SFRR 8-25 RTC case files *with* SECI Opening Ex. III-B-3. If interchange locations in the RTC Model were constructed in the manner described in SECI's Opening Ex. III-B-3, the RTC Model would not run successfully.

In SECI's operating plan, witness Reistrup allocated "an allowance of one hour for crew preparation/ taxi time". (SECI Opening at III-C-42) However, in SECI's RTC Model, crew preparation/taxi time was coded in as only thirty (30) minutes. CSXT witness Wheeler corrected this error in SECI's Model by changing "all initial crew service time" settings to one hour in CSXT's RTC Model. Correction of this discrepancy between SECI's operating plan and its RTC Model results in additional SFRR crews exceeding the maximum permitted hours of service.

The track configuration input into SECI's RTC Model also includes a double-track line over a river at a location where there is no crossing. This nonsensical input further illustrates the careless and inaccurate nature of SECI's RTC evidence.

* * * * *

As the foregoing discussion demonstrates, the RTC Model upon which SECI's simulation of the SFRR's "peak week" operations is based contains numerous inputs that conflict with SECI's operating plan, overlook physical facts (such as the presence of vehicle and foreign railroad crossings) in the territory through which the SFRR operates, and ignore immutable laws of physics. Those glaring errors render the RTC simulation proffered by SECI in support of its operating plan – and its outputs – meaningless. The Board should disregard them.

CSXT'S OPERATING PLAN FOR THE SFRR

1. General Parameters

The Board has made clear that, regardless of deficiencies associated with a Complainant's evidence, the Defendant must file its own operating plan and develop the associated operating, maintenance and capital costs. In the following portion of its Reply Evidence, CSXT presents the operating plan that SECI should have proffered in its Opening Evidence. Based upon the operating plan set forth below, CSXT developed an accurate estimate of the SFRR's operating costs, and defined and quantified the track and facilities that the SFRR would need to handle its traffic.

CSXT's primary operating witness, John M. Gibson, Jr., former CSXT Vice President-Operations Research and Planning, directed the development of CSXT's operating plan for the SFRR. Mr. Gibson is intimately familiar with CSXT's train operations. During a distinguished 31-year career with CSXT and the Federal Railroad Administration, Mr. Gibson held a series of positions of increasing responsibility, including AVP-Operations Planning, Vice President-Operations Planning and Passenger Services, and Vice President-Operations Planning and Research. In those positions, Mr. Gibson had direct responsibility for analyzing CSXT's train services and infrastructure needs (including literally hundreds of projects in which the RTC Model was utilized). Witness Gibson has also served as Director-Business Development of CSXT and President of Three Rivers Railroad, positions in which he acquired substantial experience with the operations of short-line and regional carriers comparable to the proposed SFRR.

Drawing on that extensive experience, his personal observation of CSXT's current operations in the SFRR's service territory, input from CSXT operating personnel and the results of witness Wheeler's RTC Model simulation, witness Gibson crafted an operating plan for the SFRR that provides the appropriate level of track and facilities, locomotives and cars, crews and other operating personnel, repair facilities, and management and administrative support to enable the SFRR to serve its traffic group in the least cost, most efficient manner, consistent with customer requirements and in accordance with applicable laws and safe operating practices. Under Mr. Gibson's direction, each car to be handled by the SFRR was evaluated to determine the specific services that the SFRR would have to provide. A comprehensive car blocking plan was designed to move general freight cars efficiently across the SFRR system. Road, local and yard train services were designed to meet the requirements of both SFRR's overhead traffic and cars that originate and/or terminate at points along on the SFRR's lines. Based upon this comprehensive train and blocking plan, witness Gibson determined the physical facilities (including yards, intermodal terminals, transloading facilities, sidings, and spur and industry tracks) and resources (including locomotives, cars and personnel) required to execute that plan.

CSXT's operating plan for the SFRR is based upon projected full-year traffic for the "peak year" 2018. The operating plan presented in this Section III-C consists of three (3) train plans developed by CSXT witness Gibson specifically for each type of SFRR traffic:

- a general freight, or merchandise, operating plan with train service designed to originate and/or terminate cars efficiently at customer facilities along the network, and to move cars from/to interchange points with other carriers;
- an intermodal operating plan designed to move intermodal containers and trailers efficiently between intermodal terminals and interchange points on the SFRR network; and

- a coal/bulk operating plan, designed efficiently to originate/receive and terminate/forward unit trains (*i.e.*, trains consisting of a single commodity operating intact between a single origin and a single destination) along the network.

Because SECI did not make a serious attempt to develop a plan for handling the SFRR's merchandise and intermodal traffic, which originates or terminates (or both) at 884 unique customer locations along the SFRR network, CSXT's experts concluded that SECI's "operating plan" for those traffic groups was essentially worthless. Therefore, CSXT developed a completely new operating plan capable of meeting the service requirements of the SFRR's customers. The methodology employed by CSXT in creating the SFRR's operating plan is described in the following portions of this Section III-C. A map depicting the SFRR – including all of the yards, transloading facilities, interchange points, crew bases, locomotive fueling/servicing points, and locomotive and car inspection locations contemplated by CSXT's operating plan for the SFRR – is set forth in CSXT Reply Exhibit III-B-1.

a. Identification of SFRR General Freight and Intermodal Traffic

The first step that CSXT undertook to develop a complete operating plan for the SFRR's merchandise and intermodal traffic was to determine the origin, destination, commodity and customer of each car (including both "selected" traffic and cars classified by SECI as "non-revenue loads") that moved in SFRR trains. For "selected" traffic, CSXT reviewed SECI's revenue division ("ATC") work papers to identify the merchandise and intermodal traffic that originates or terminates (or both) at a point along the SFRR system. If (i) the SFRR origin and/or destination and the CSXT origin and/or destination were the same and (ii) SECI's workpapers indicted that SECI took revenue credit for originating and/or terminating the load,

CSXT concluded that the SFRR would originate and/or terminate the load. Table III-C-2 shows the cars and tons, by 2-digit STCC, that originate and/or terminate along the SFRR network.

TABLE III-C-2
General Freight Traffic Originating and/or Terminating on the SFRR
By 2-Digit STCC

STCC	2009 Cars	2009 Tons
01	12,170	1,250,896
10	3,442	365,025
14	46,152	4,840,026
20	14,639	1,204,342
24	6,519	532,456
26	3,129	218,856
28	16,421	1,562,852
29	5,431	495,227
32	3,741	367,609
33	1,983	177,160
35	22	892
36	1,505	25,865
37	21,372	454,649
40	29,985	1,763,777
41	341	9,879
42	9	117

Identifying the specific customers and facility locations at which SFRR's merchandise and intermodal traffic originates and/or terminates was a straightforward exercise. Utilizing the very same data provided by CSXT in discovery, the traffic identified as originating and/or terminating at points along the SFRR was matched, at a 2-digit STCC level, with SECI's traffic forecast (*see* SECI WP "CSXT Carload Forecast Jan 2009 GF red traf grp v ATC onoff orig 09

fcst sample v1.xlsx.").[17] Based upon that matching process, CSXT created a list of SFRR customers. By contrast, SECI never bothered to identify the SFRR's prospective customers, much less consider any unique service requirements (*e.g.*, transloading of multimodal shipments) that might be required to serve them. Utilizing this customer/location list, CSXT developed a general freight operating plan that takes full account of the identities of the specific SFRR customers and the services required at intermediate points along the SARR to meet their needs.

For example, the forecast showed that the SFRR would originate 1,713 cars of STCC 33 traffic at Petersburg, VA. By examining the details of the SECI forecast materials, it is possible to determine that three distinct customers [ )] ship loads of steel (STCC 33) traffic from that location, in different car types and ownerships, to multiple destinations. Using the forecast data, CSXT determined the number of cars in the SECI traffic group attributable to each of those three customers, based upon destination, car type and car ownership. *See* CSXT WP "GF SARR Orig Dest Customers.xls" for a detailed listing of the SFRR's unique origin and destination customers and locations.

As discussed above, SECI assumed that SFRR trains would carry not only "selected' traffic, but also "non-revenue" traffic that was not chosen by SECI for the SFRR's traffic group. SECI Opening at III-C-22-23. These "non-revenue" units, consisting of approximately 1.3 million cars of general freight traffic and 88,000 intermodal units in the base year, account for more than half of the non-coal traffic that would move in SFRR trains. *See* SECI WP

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[17] It was necessary to use the forecast data because SECI did not maintain individual car visibility in its workpapers after it selected its SFRR traffic group from the CSXT waybill file. From the point in SECI's methodology at which it began to match its selected waybill records with cars in the CSXT train event file, only train visibility exists for SECI's traffic.

"Base_Year_2008_Train_List_final.xls". SECI's claim that deficiencies and errors in the data furnished by CSXT left SECI no alternative but to include these cars in SFRR trains as "non-revenue" movements is demonstrably false. *See* CSXT Reply Ex. I-2. Indeed, SECI offers no credible explanation as to how the data sources that CSXT provided – which contain the very same fields for all cars in the file – enabled SECI to identify the origin and destination of the traffic that it selected, but did not permit it to ascertain the same information for cars that SECI elected not to include in the SFRR's traffic base.

The truth is that identification of the origins, destinations and customers associated with "non-revenue" cars/containers in SFRR trains was not only possible, but relatively straightforward. Indeed, if SECI had bothered to look, it would have discovered that fully 61 percent of the cars that it classified as "non-revenue loads" are not, in fact, loaded cars, but rather are empty cars – many of them empty return movements for loaded cars in SFRR's selected traffic base! Ascertaining this fact would not even have required SECI to perform any cross-matching between the waybill file and the train event data - the loaded or empty status of every car is displayed as a distinct field in the train event file. *See* CSXT Reply Ex. I-2. SECI's own work papers confirm that the CSXT train event file identifies every car in a given train by initial and number and by loaded or empty status. It strains credulity for SECI to claim (as it does) that it was forced to classify as "non-revenue loads" cars that were clearly identified as empty in the train event data.

Beginning with SECI's own work papers, which contain the subset of CSXT trains used by SECI in developing its operating plan, CSXT eliminated the empty cars (based upon the

load/empty status of each car as clearly displayed in the train event data).[18] After empty cars were removed, the majority of the remaining traffic that SECI classified as "non-revenue" is merchandise traffic (approximately 523,00 actual loaded general freight cars) and the remainder was intermodal traffic (approximately 88,000 loaded units). CSXT incorporated the handling, including the origination and/or termination, of those "non-revenue" loaded cars into its merchandise train service plan.

Using the car initial and number of the remaining loaded cars, and the date of the train, CSXT then identified the CSXT origin and destination of the approximately 523,000 "non-revenue" loaded cars from the waybill traffic file produced in discovery (as SECI itself could have done). The unique shipment ID number assigned to each car made this a straightforward exercise. Any cars for which the CSXT origin and the CSXT destination were the same (approximately 6,000 cars) were eliminated from the file. In addition, cars for which the waybill showed zero revenue (*i.e.*, the revenue field was blank or the waybill had been voided) were also eliminated (about 18,000 cars).[19] CSXT also eliminated approximately 30,000 "duplicate" cars that SECI had counted twice in its waybill/train event file matching exercise. CSXT then determined which of the remaining 470,000 "non-revenue" merchandise cars remaining originate and/or terminate along the SFRR network. The local services, including switching, pick-ups and

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[18] As discussed in Section III-D below, the notion that CSXT – or, for that matter, anyone – would give the SFRR a "merchandise line haul credit" for moving empty cars associated with loaded shipments for which the SFRR received 100 percent of the revenue is nonsensical.

[19] As with any very large database, the CSXT waybill file contained a small number of entries for which the movement information was erroneous, or which involved voided shipments. The 18,000 cars containing such errors amount to only 1.2 percent of the 1.4 million cars and intermodal units that SECI classified as "non-revenue" traffic.

set-offs, required to handle those "non-revenue" loads were evaluated in the same manner as those for SECI's "selected" traffic to develop CSXT's merchandise operating plan.

In the real world, general freight shipments frequently move in more than one CSXT train during the course of their journey. Accordingly, individual merchandise cars often appear on multiple trains in the CSXT train event file. In trying to match its selected waybill records with the train event data, SECI encountered many observations of the same car moving on different CSXT trains. Contrary to SECI's assertion (SECI Opening at III-C-23), such observations are neither "inconsistencies" nor "anomalies"; rather, they accurately portray the movement of such cars across the CSXT network.

In cross-matching waybill records for its "selected" traffic with CSXT's train event data, SECI applied an arbitrary methodology that caused it to ignore segments of the movement of its "selected" traffic. For example, under SECI's matching process, if "selected" Car "100" arrived at an On-SARR point on CSXT Train "A" and train A also contained at least 14 other "selected" SARR cars, then SECI "adopted" Train A as an SFRR train and included it in the subset of CSXT trains used to develop SECI's operating plan and operating statistics.[20] If, during 2008, CSXT switched Car "100" to CSXT Train "B" for further movement, and SECI found least 14 other cars of "selected" traffic on Train B in the train event file, then SECI also adopted Train "B" for its roster of SFRR trains. However, if Train B did <u>not</u> contain at least 15 cars of "selected" traffic, then SECI disregarded Train B, even though Train B clearly accounted for a

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[20] SECI does not proffer any cogent rationale for its 15-car cutoff for adopting trains from the CSXT train event file for inclusion in the roster of SFRR trains. Rather, as with many other mathematical assumptions made by SECI, it appears to be totally arbitrary.

segment of the movement of Car "100" (and any other "selected" cars SECI found in Train B) on the SFRR system. If, in the real world, CSXT had then switched Car "100" to a third train, Train "C," and SECI was able to match the cars in Train C with at least 15 "selected" cars drawn from the waybill file, Train C was added to the set of SFRR trains.

This arbitrary approach produced serious errors in SECI's analysis. The exclusion of trains that carried "selected" traffic simply because SECI was unable to find at least 14 other "selected" cars on that train resulted in SECI intentionally ignoring potentially significant portions of the movement of its "selected' traffic. SECI's methodology does not ensure that the selected revenue traffic is handled by the SFRR, and does not even come close to handling the "non-revenue" traffic in an efficient, least-cost manner.

Moreover, SECI's attempt to develop operating statistics for the SFRR based upon less-than-complete movement data caused it to understate both the line-haul movement costs associated with its "selected" traffic and the cost of pick-ups, set-offs and intermediate switching required to handle that traffic. This glaring error is compounded by the fact that SECI made no effort whatsoever to account for the local switching of "non-revenue" traffic moving in SFRR trains.[21]

The movement of a loaded car of merchandise traffic requires the placement of an empty car (or cars) at the customer's facility. SECI's operating plan makes no provision for the placement of empty cars for loading by its general freight customers – indeed, as discussed

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[21] In SECI's analysis, there appears to be no logic as to where "non-revenue" cars enter and depart the SFRR. While SECI's workpapers identify the first point at which SECI assumed that "non-revenue" cars would enter the SFRR, they do not identify the point at which those cars depart the SFRR.

above, SECI's operating plan erroneously assumes that empty cars moving in SFRR trains are "non-revenue loads"! By contrast, CSXT's operating plan fully accounts for the empty cars associated with each loaded general freight car included in SFRR's "selected" traffic base. In Schedule 755 of the Annual R-1 report to the STB, carriers report loaded and empty car-miles by car type, by car ownership. Based on that reported data, the Board develops an empty return ratio ("ERR") by car type, for use in URCS and other applications. CSXT's operating plan for general freight traffic applies the CSXT-specific ERR developed by the Board by car type, by car ownership, to the loaded general freight cars to determine the number of empty car movements required to serve the SFRR's customers, and incorporated those empty movements into CSXT's train service plan. For coal/bulk unit train movements, CSXT's operating plan assumes a 100 percent empty return.

CSXT's general freight operating plan does not include any empty car movements on the SFRR in conjunction with loaded "non-revenue" cars, for two reasons. First, the majority of loaded "non-revenue" cars move in overhead service on the SFRR (*i.e.*, they are originated by CSXT, interchanged to SFRR and then interchanged back to CSXT for termination). Because these cars remain, at all times, in CSXT's account, it is assumed that CSXT would take 100 percent of the revenue for the movement, and therefore would be responsible for the empty return movement.[22] Second, it is illogical to assume that CSXT would pay SFRR a fee to move

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[22] Further, it clearly makes no sense that a car originated, for example, by CSXT in Chicago, destined for south Florida, and assumed by SECI to be interchanged to the SFRR at North Gibson, IN and tendered back to CSXT at Bostwick, FL, for delivery to the consignee, would have an empty return on the SFRR for some distance. Instead, when such a car was released by

CSXT empty cars over the SFRR's lines when CSXT would be operating along the same geographic routes (which it would need to do because SECI did not select all of CSXT's merchandise customers and their traffic). This is especially true because the traffic "selected" by SECI would significantly reduce the density of the residual CSXT's merchandise operations. (For the same reason, SECI's implicit assumption that CSXT would pay SECI to handle loaded "non-revenue" cars is likewise nonsensical.)

CSXT combined (i) the approximately 390,000 loads associated with 2018 "selected" merchandise traffic, (ii) the approximately 286,000 empty cars associated with those loaded car movements, and (iii) the approximately 470,000 loaded cars classified by SECI as "non-revenue" traffic, and developed a general freight/merchandise operating plan to handle that body of traffic in the least cost, most efficient manner consistent with customer requirements, applicable laws (including regulations relating to TIH/PIH shipments) and safe operating practices.[23] Once the general freight, intermodal and coal/bulk traffic data had been identified, CSXT witness Gibson designed an integrated SFRR operating plan for that traffic.

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the consignee, CSXT would pick it up and move it to the closest CSXT customer requiring that type of car for loading.

[23] The 2018 loaded general freight car volume associated with the "selected" traffic is approximately 152,000 cars less than the total 2018 general freight volumes discussed in Section III-B. This is because, as discussed below, a least-cost, most efficient railroad would handle those 152,000 merchandise cars in unit train service. CSXT's development of unit coal and general merchandise bulk traffic is discussed at pp. III-C-71-72 below.

b. Traffic Flow and Interchange Points

i. Merchandise Traffic

At a simple level, merchandise traffic requires two general types of train service: local service to originate and terminate traffic at customer locations (*i.e.,* pick-up and set-off), and road train service to move traffic along the carrier's network between the origin and the destination. On a more detailed level, the events in a "cycle" of a merchandise car include placement of an empty car at an origin customer's facility; picking up the loaded car (usually on a subsequent day); moving the loaded car to a nearby yard; classification of the loaded car (along with other cars originating in the area) for further movement along the railroad's network; "line-haul" movement of the car along the network to another yard (or via multiple yards for further classification) closer to the car's ultimate destination; local delivery of the loaded car to the consignee's facility; pick-up of the empty car at the consignee's facility (after it has been unloaded); and movement of the empty car to a yard where it can be classified for movement towards its next point of loading.

Transporting massive volumes of merchandise traffic across a large rail system requires a railroad to "classify" cars moving to common destinations (or intermediate yards) into "blocks" to facilitate handling further along the network. All Class I carriers have multiple "hump yards" and even more flat switching yards at which this classification function can be performed efficiently.[24] Normally, cars are classified into blocks that are destined for other yards on the

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[24] A "hump yard" is just what it sounds like – a mound located in a large classification yard, where a locomotive pushes cars up the front side of the hump. At the top of the hump, the car is released and gravity allows the car to roll down the back side of the hump. The hump track feeds into multiple classification tracks and the car is directed into one of the classification tracks

same railroad, or for interchange with another railroad. Class I carriers work cooperatively to classify blocks of cars moving between a hump yard on one railroad's lines to a hump yard on a connecting carrier's system. For example, at North Platte, NE, UP creates separate blocks of cars for CSXT's yards at Chicago (Barr), Willard and Selkirk. At its Proviso Yard in Chicago, UP assembles blocks of cars destined to CSXT at Barr, Cumberland and Cincinnati; at Galesburg, IL, BNSF likewise assembles blocks of cars for movement to CSXT's major yards at Willard, Selkirk, Nashville and Chicago (Barr). Of course, CSXT reciprocates by building and forwarding comparable blocks to both UP and BNSF. The objective of this practice is to enable similar groups of cars to move the greatest possible distance before having to classify them again.

In addition to blocking cars destined for other carriers' lines, railroads create "internal" blocks to facilitate the handling of merchandise traffic within their own networks. CSXT customarily makes several blocks for its own merchandise trains, which are designed to move groups of cars efficiently between major yards. For example, southbound merchandise trains from CSXT's Chicago Barr and Cincinnati yards typically carry blocks of general freight traffic destined to Nashville and Waycross. The Waycross block will include cars destined to various points in Florida. At Waycross, CSXT further classifies Florida-bound cars arriving from Chicago and Cincinnati, combining them with other Florida-destined cars arriving on CSXT merchandise trains from Birmingham, Memphis and the I-95 Corridor. The southbound classification performed at Waycross creates blocks of cars destined to specific points and

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where it is grouped with other cars into a "block," headed for a common intermediate or final destination.

interchanges in Florida: CSXT at Jacksonville, FEC (interchange) at Jacksonville, CSXT at Tampa, CSXT at Orlando, and various CSXT-served points in south Florida. CSXT's facilities at each of those locations are sized to handle "blocks" of cars that originate or terminate in the vicinity. Thus, the CSXT facilities at Jacksonville are sufficient in size to handle CSXT's Jacksonville merchandise traffic to and from customers in local train service, and to handle the FEC Jacksonville block in interchange service to/from the FEC.[25]

SECI's operating plan – and, in particular, its nonsensical statement that "the SFRR does not perform [classification] anywhere on its system" (SECI Opening at I-29) – ignores the reality of merchandise railroading. For example, SECI's operating plan assumes that a merchandise train originated by CSXT in Chicago and delivered to the SFRR at North Gibson, IN (or a train originated by CSXT in Cincinnati and delivered to the SFRR at Amqui, TN) will move "intact" on the SFRR to Jacksonville (or Bostwick) and will then be interchanged back to CSXT, without any classification or switching en route.[26]

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[25] This "hub and spoke" operating plan is not unique to railroad merchandise operations. Most transportation systems designed to move freight (or passengers) efficiently utilize the same concept. For example, airlines move passengers between numerous smaller airports to larger "hub" airports, where passengers change planes to reach their final destination. Federal Express likewise collects packages from customer facilities by truck, moves them to regional sorting facilities, then (frequently) to FedEx's major hub at Memphis, TN, where the packages are classified for delivery to points across the country. From Memphis, packages move via air to a regional facility closer to the ultimate destination, and are delivered by truck.

[26] As discussed in Section III-D, below, SECI proffers I7I switching costs based upon historic CSXT costs for activities (such as inter-intra-train switching) it assumes would have to be incurred en route, but it includes none of the required facilities, crews, or local trains required to perform those activities. SECI offers no proof that the mathematical shortcut it employed produces results that fairly represent the forward-looking costs required by the SAC test, and it makes no attempt to tie its "surrogate" costs to the specific activities of the SFRR.

There are numerous problems with this assumption:

First, if CSXT were to receive at Jacksonville or Bostwick, FL merchandise traffic bound for a variety of Florida points, without any prior classification by the SFRR, CSXT would be required either (i) to haul that traffic all the way back to Waycross, GA to classify the Florida traffic into appropriate blocks (then turn around and bring it back to Florida), or (ii) to build additional classification facilities at Jacksonville, because CSXT's Jacksonville yard is not currently sized to handle such classification work. In either case, the SFRR would impose substantial additional costs on the incumbent CSXT, in violation of SAC principles.[27]

Second, requiring CSXT to "backhaul" Florida-bound merchandise traffic simply to enable the SFRR to avoid intermediate switching and classification of those cars would severely impair the quality of service to shippers – again, in violation of SAC principles.

Third, SECI's assumption does not explain how cars originating at points along the SFRR's lines, and destined to CSXT-served points in Florida, would find their way into SFRR trains to be interchanged to CSXT at Jacksonville or Bostwick without any classification of those cars by the SFRR.

Fourth, as a putative Class I railroad (based upon its estimated revenues), the SFRR could not expect CSXT (or any other carrier) to pre-block merchandise cars for the SFRR's benefit unless the SFRR reciprocated by assembling such blocks for those carriers. Absent such

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[27] *See, e.g., Duke v. CSXT* at 40-41; *Public Service Co. d/b/a XCel Energy v. BNSF*, STB Docket No. 42057 at 25 (June 7, 2004).

reciprocal arrangements, CSXT's SFRR would have to deal with approximately 858,000 cars of general freight traffic arriving on the SFRR's lines, in trains arranged in no particular order, thereby vastly increasing the SFRR's cost of handling them on its network (and further increasing the yard facilities that the SFRR would need to do so).

Similar problems permeate SECI's general freight operating plan. For example, SECI assumes that trains received at Demmler Yard near Pittsburgh and destined to Baltimore, Perryville, and Philadelphia move "intact" between Demmler and Alexandria Jct., MD, where they are interchanged back to CSXT. This assumption completely ignores the major classification work performed by CSXT at its Cumberland, MD hump yard – a facility that SECI does not replicate on its SARR. While CSXT does operate trains between Demmler and Alexandria Jct., the consist of each train undergoes a wholesale change at Cumberland, MD. Each merchandise train arriving at Cumberland Yard is reclassified, with every car moving through the hump facility. This classification process creates blocks of cars for further handling in trains destined to points from as far north as Selkirk, NY and as far south as Waycross, GA. SECI's operating plan simply ignores this step and assumes – contrary to reality -- that all of the trains that depart Demmler would be delivered "intact" to CSXT at Alexandria Jct., with the same cars that were in the train when it left Demmler. If CSXT were to actually receive such unclassified traffic at Alexandria Jct., it would literally have to haul that traffic 140 miles back to its Cumberland Yard and classify it properly for movement to its ultimate destinations. The resulting would add a day or more to the delivery cycle and seriously degrade customer service.

In order to provide for the correct and efficient handling of merchandise traffic by the SFRR, CSXT took the peak year (2018) merchandise cars and examined the CSXT origin and

destination or on/off junction (if received from a connecting carrier) to determine what CSXT or foreign carrier block the car was likely travelling in. Starting from scratch, CSXT then developed an operating plan to provide for the most efficient movement of that car along the SFRR network. Locations at which substantial volumes of merchandise traffic would be interchanged with CSXT became the site of the SFRR's merchandise classification yards. From those initial block determinations, CSXT developed a train service either to move blocks to the next major SFRR yard, or to provide efficient local pick-up and delivery en-route. The plan for originating and terminating traffic was combined with the line-of-road blocking plan to form the SFRR merchandise operating plan.[28]

In developing its merchandise operating plan for the SFRR, CSXT used a program called "MultiRail." MultiRail is a sophisticated spreadsheet tool that enables a railroad to integrate traffic data, network data and an operating plan design into a unified environment.[29] The use of MultiRail facilitated the SFRR merchandise plan in several ways:

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[28] One final step was needed to incorporate the "non-revenue loads" into the merchandise operating plan. Because SECI did not identify specific On-SARR and Off-SARR points for cars that SECI classified as "non-revenue" traffic CSXT needed to determine the location at which such cars would enter and depart the SFRR. SECI's work papers identified where on the SFRR network SECI assumed the non-revenue loads would enter the SFRR. In order to determine the route of movement and Off-SARR junction for each non-revenue load, CSXT identified the most-efficient routing, consistent with what it determined SECI had done with its "selected' traffic. For "non-revenue" cars that originate or terminate along the SFRR network, the decision(s) were straight-forward -- those cars were incorporated into the designed origination and termination train service. For "non-revenue" traffic interchanged back to CSXT, the selection of route and location was made based upon the routing assumed for the "selected" traffic moving between the same points or interchanges.

[29] MultiRail has been used by the parties in rail consolidation proceedings in presenting the combined entities' new blocking and scheduling plan. *See, e.g.* STB Finance Docket No. 33556, Served May 25, 1999, *Canadian National Railway Company, Grand Trunk Corporation and*

First, given the practice of carriers to pre-block cars for one another, it was not sufficient for the SFRR blocking plan to take account only of "internal" blocks for the SFRR. Rather, in order to develop the most efficient plan for handling merchandise traffic, CSXT's operating plan also considers (and provides for) the most efficient blocking of cars moving between the SFRR, on the one hand, and CSXT and other connecting carriers, on the other hand. MultiRail enabled CSXT to integrate both traffic blocks received by the SFRR from CSXT and others and SFRR blocks destined to CSXT[30] and other railroads, in a manner that assures both the most efficient customer service and the lowest cost.

Second, even though SECI did not select all of the traffic that CSXT currently handles along the lines replicated by the SFRR, SECI nevertheless managed to effectively "touch" some 25% of CSXT's total 2008 volume over those lines, including approximately 50% of CSXT's 2008 merchandise traffic. In fact, developing a proper merchandise operating plan for the SFRR required CSXT to examine and plan for more than 3,600 O-D pairs for SECI's "selected" traffic alone. While creation of a spreadsheet to manage this much data is technically possible, it was much easier to use a specially-designed program like MultiRail.[31]

Grand Trunk Western Railroad Incorporated - - Control – Illinois Central Corporation, Illinois Central Railroad Company, Chicago, Central and Pacific Railroad Company and Cedar River Railroad Company.

[30] SECI's bizarre assumptions regarding where certain interchanges between the SFRR and CSXT would occur result in certain unavoidable inefficiencies. Most of those inefficiencies result in additional costs being incurred by CSXT – costs that are ignored by SECI in its Opening Evidence.

[31] SECI could have used the same MultiRail tool, which is available publicly from Oliver Wyman.

Third, MultiRail enabled CSXT to identify routings assumed by SECI that result in increased circuitry. CSXT manually reviewed each circuitous route discerned by MultiRail, and revised the routing as required to ensure that the level of customer service was not adversely affected. In one glaring example of inefficiency, SECI routed traffic that originates (or is received by the SFRR) along the northern portion of its East Division, and destined to Nashville and points west, all the way south to Folkston, GA and then back north along the SFRR's West Division to Nashville. Such a circuitous routing clearly is not the "least cost, most efficient" way to route the traffic, and adopting such a routing would severely impair customer service. CSXT's operating plan corrects this inefficiency by providing for the interchange of such "non-revenue" shipments by SFRR to CSXT at Pembroke, NC, and then back to the SFRR at Atlanta, GA for further movement.

CSXT WP "Seminole Block and Yard Volumes.xls" identifies the specific blocks for merchandise traffic incorporated into CSXT's operating plan. Schematic diagrams of the train service developed by CSXT for the SFRR's East and West Divisions are set forth in CSXT Reply Ex. III-C-4.

ii. Intermodal Traffic

SECI's operating plan for intermodal traffic is based on the same flawed methodology as its general freight operating plan – *i.e.*, the arbitrary exercise of matching waybill records for "selected" shipments with cars on trains in the CSXT 2008 train event file to develop a subset of CSXT trains "adopted" by the SFRR. SECI's efforts in matching intermodal units with the trains in which CSXT handled them in 2008 appears to have been somewhat more successful, in all

likelihood because SECI selected only ramp-to-ramp intermodal shipments for the SFRR. Nevertheless, SECI's treatment of intermodal traffic is not without significant problems.

As with merchandise traffic, SECI chose not to develop a specific operating plan for intermodal traffic from the ground up, but instead tried to "adopt" CSXT intermodal trains by attempting to match CSXT train event data with the loaded containers that SECI selected from the waybill file. Once again, SECI made serious errors in conducting this exercise, causing it to ignore significant segments of the movement for its "selected" intermodal traffic and to disregard entirely the requirements of intermodal shipments moving in SFRR trains as "non-revenue" traffic.

In order to develop an operating plan that takes account of the requirements for all intermodal traffic moving in SFRR trains, CSXT began with the 2018 forecasted intermodal traffic volumes. To those volumes, CSXT added the (approximately 88,000) loaded "non-revenue" units identified by SECI and shown in its work papers. Rather than blithely accepting all of the "non-revenue loads" identified by SECI, CSXT examined each of the movements and made several necessary adjustments. First, empty containers and trailers were removed. Second, flat cars carrying intermodal units – which SECI erroneously counted as "non-revenue loads" and took a merchandise line-haul credit for handling – were eliminated. Third, as it did for "non-revenue" merchandise traffic, CSXT went back to the waybill file produced in discovery and, using the unit initial and number, identified both the CSXT origin and destination and the revenue status of the unit. As with merchandise records, units reflecting "zero" revenue or indicating that the CSXT origin and CSXT destination were the same station were eliminated. For the remaining units, CSXT then applied SECI's assumption (reflected in its workpapers)

regarding where on the SFRR network intermodal units would either be received in interchange or loaded onto an intermodal train.[32] Finally, based upon the unit's destination, CSXT determined where on the system the unit would be routed, either to be terminated at an intermodal terminal or forwarded back to CSXT.

In order to calculate containers/trailers per car, SECI assumed 4.34 units per intermodal flat car. (SECI WP "SFRR Car Costs.xls") SECI took the 4.34 figure from Schedule 755 of the CSXT 2008 R-1. Line 134 "TOFC-COFC – Average No. of Units Loaded Per Car." It is unclear why SECI deemed it necessary to develop a "surrogate" number of freight cars, when the CSXT train event file clearly identified the actual number of intermodal flat cars on each train "adopted" by SECI. Specifically, the train event data shows, in addition to the loaded/empty status of each car and container/trailer, the freight car initial and number (which is very identifiable, especially for intermodal flat cars). In any event, the 4.34 intermodal units per car is an after-the fact average based on the intermodal trains that travelled on the CSXT system in 2008.[33] It does not reflect how CSXT plans its intermodal train operations, or how a least-cost, most efficient railroad would plan its operations.

Because CSXT developed its intermodal operating plan for the SFRR from the ground up, CSXT calculated the number of intermodal trains required to carry the SFRR's

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[32] The exception is intermodal traffic destined to/from New Orleans and Jacksonville. Given the time-sensitive nature of that traffic, it is not reasonable to assume (as SECI does) that the traffic would go north to Callahan or Folkston or Atlanta. CSXT runs that traffic directly through Tallahassee and, in the real world, would not turn it over to the SFRR.

[33] In order to develop the SFRR intermodal flat car costs, CSXT does use the 4.34 units/car figure to convert from trailer/container miles to intermodal flat car miles.

container/trailer traffic by looking at the specific characteristics of the routes traversed, especially geographic limitations, and designing trains to meet customer requirements over that terrain. First, CSXT assumed that the well-publicized National Gateway project will be fully completed by 2018.[34] Second, intermodal units vary in type, weight, and length. For example, a container may be 20 feet, 40 feet or even 48 feet (40 feet is currently the "norm"). Obviously, different size containers vary in weight. Likewise, trailers vary in both length and height (and, therefore, empty tare weight). Some or all of these variations can be found on a single intermodal train. Third, the commodities loaded into different types and sizes of intermodal units vary, and thus the lading weights vary, sometimes significantly. (For example, a 40 foot ISO container carrying Mattel toys weighs far less than the same sized container loaded with auto parts).

When planning intermodal train service, real world railroads develop factors to help them design train sizes, taking into account the specific terrain across which the train will be travelling. For example, the size and power requirements for a CSXT intermodal train operating over the route between New Orleans and Callahan (where the terrain is relatively flat) are different than the size and power requirements for an intermodal train operating over CSXT's Cowen Subdivision between Nashville and Chattanooga (which traverses the mountains of southern TN and northeastern AL). Similarly, the size and power requirements for either of

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[34] Because the operating plan was based upon 2018 volumes, there is every reason to expect that the tunnel clearances, including the Virginia Avenue tunnel in Washington DC, and other planned height restrictions will have been resolved by the SFRR's peak year. Likewise, the planned tunnel clearance projects between Demmler and Alexandria Junction will have been completed, enabling double-stack operations along that segment of the SFRR – an advantage that CSXT does not yet enjoy.

those two intermodal train profiles is different than the size, power requirements and height restrictions (*i.e.*, currently no ability to double-stack) along CSXT's I-95 Corridor or between Washington, DC and Pittsburgh.

Based upon known geographic limitations and his experience in designing intermodal train operations over the CSXT lines replicated by the SFRR, Mr. Gibson established the following guidelines for the SFRR's intermodal train design: for the West division, trains were designed based upon the assumptions that averages of 6 tons per unit tare weight, 60 feet per unit for length, would result in least-cost, efficient train sizes; for the East division, trains were designed based upon the assumptions that averages of 6 tons per unit tare weight, 40 feet per unit for length (between Demmler PA and Weldon NC, reflecting the full advantages CSXT will realize when it completes the National Gateway project), would result in least-cost, efficient train sizes.[35]

Using these factors, and the total number of intermodal units that the SFRR would handle in the peak year, daily average intermodal trains were designed and scheduled. Some of the SFRR intermodal trains are shorter in length and lighter in weight than many "Q" trains operated by CSXT in 2008. However, it should be noted that the CSXT intermodal operating plan powers these smaller and lighter trains with a single AC locomotive. While there has been much debate surrounding the use of a single locomotive to power a train (given the consequences in the event of a locomotive failure), the fact that the SFRR is assumed to be a least-cost carrier and it is

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[35] As a rule of thumb, intermodal train sizes operating in the eastern US reflect tonnages represent about 70% of length.

assumed to purchase new locomotives of the most current design promises greater reliability over the road and reduces the risk associated with CSXT's cost-saving assumption.

iii. Coal/Bulk Traffic

SECI's operating plan for coal traffic moving in unit trains is relatively straight-forward.[36] In the base year, 2008, SECI assumed that the SFRR would directly serve six coal origin facilities and 21 destinations. In addition, the SFRR was assumed to handle certain coal shipments that originate or terminate on the lines of other carriers (most notably CSXT, but also NS and various short lines).

In addition to coal unit trains, SECI selected the traffic of other customers and commodities for which CSXT provides "dedicated" train service. The CSXT operating plan assumes that the SFRR likewise would provide such "dedicated" train service for those customers. For example, SECI's "selected" traffic includes aggregate (rock) shipments between Millville, WV and Bladensburg, MD (approximately 11,100 cars moved in this service during 2008). CSXT handles this traffic in dedicated train service, usually two trains of 40+ cars per day, per the customer's requirements. Rather than incorporating those cars into its merchandise trains plan, a least-cost SFRR seeking to satisfy the customer's needs would continue to operate dedicated aggregate trains.

Likewise, SECI's "selected" traffic includes 22,645 cars of municipal solid waste moving from Harlem River, NY and Elizabeth, NJ to Petersburg, VA, and from Travis, NY to

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[36] Perhaps the experience of SECI's experts with unit train coal traffic enabled SECI to manage the waybill data and train event file for coal traffic more successfully than it did with respect to merchandise and intermodal traffic.

Bishopville, SC. CSXT provides dedicated train service for these movements, and a least-cost SFRR would do the same. In other cases of traffic "selected" by SECI, CSXT moved a single train during the course of a year for a customer, *i.e.*, a coke movement of 60 cars from Ashtabula, OH to Baltimore, MD. Again, based on customer requirements, that train was moved in dedicated service. Thus, rather than arbitrarily assigning all non-coal traffic into the SFRR's merchandise trains, CSXT's operating plan provides dedicated train service for customers whose traffic requires it (based upon CSXT's real-world experience). Of course, CSXT has historically handled some coal and other bulk shipments in merchandise trains; those shipments were incorporated into CSXT's merchandise train plan for the SFRR.[37]

As discussed in Section III-A, certain traffic that SECI "selected" for the SFRR should be eliminated from the SAC analysis because SECI's re-routing of those shipments violates the Board's criteria for permissible reroutes. In addition, CSXT made certain adjustments to the SFRR's coal/bulk traffic volumes to correct certain errors in SECI's forecast. CSXT's coal/bulk operating plan is based upon the corrected peak year (2018) volume of coal and other bulk traffic on the SFRR. CSXT's operating plan provides for efficient handling of the SFRR's coal/bulk unit trains between origin and destination. For coal/bulk unit train traffic, CSXT's operating plan assumes a 100 percent empty return ratio.

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[37] For example, some hospitals (or small concrete manufacturers) require only 5-10 cars of coal (or aggregate) per month. Clearly, those customers cannot receive 60 or 120 cars at a time, and must be served by the SFRR's general freight train service. This is but another example of the complexity of operating a merchandise rail network.

iv. Interchange Points

Having properly identified the origins, destinations and customers associated with the traffic that would be handled by the SFRR, CSXT's operating expert, Mr. Gibson, designed a service plan capable of handling that traffic in conformity with all customer requirements. Witness Gibson analyzed the traffic volumes, origins and destinations (for traffic moving to/from points located on the SFRR), interchange volumes (for traffic forwarded to or received from other carriers) and specific customer requirements (*e.g.*, transloading from rail to truck) associated with each category of SFRR traffic: general freight, intermodal and coal/bulk. Based upon that analysis, Witness Gibson designed integrated line-haul train operations, intermediate blocking and switching activities, and local car handling that the SFRR would be required to perform in order to transport the traffic in the least cost, most efficient manner consistent with customer needs and safe operating practices.

By contrast, "SECI Witness Crowley provided SECI Witnesses Reistrup and Schuchmann with the SFRR's trains moving during the peak seven-day period in the SFRR's 10-year DCF life, based on the CSXT trains carrying traffic in the SFRR's traffic group that moved during the peak week of 2008." SECI Opening at III-C-21. In other words, SECI's operating expert, witness Reistrup, played no role whatsoever in the "design" of the SFRR's train service! Instead, an incomplete list of CSXT trains in which the SFRR's "selected" traffic moved during 2008 was spoon-fed to SECI's operating experts by witness Crowley (who does not purport to have any independent operating expertise), and became the basis for SECI's ill-conceived operating plan and RTC modeling exercise.

The purpose of the SAC test is to develop the forward-looking costs of the physical network and railroad operations required to serve the SARR's customers in the least-cost, most efficient manner. Unlike SECI's operating plan, CSXT's operating plan is not based upon system-average URCS costs or historical train event data for an incomplete list of the trains in which the SFRR's "selected" traffic moved during 2008. Rather, taking account of the entire body of traffic that would move in SFRR trains, CSXT witness Gibson carefully designed a plan for road, local and yard trains, intermediate blocking and switching, and service at customer facilities to accommodate each category of SFRR traffic.

The SFRR would interchange traffic at 58 locations. Many of the locations at which the SFRR proposes to interchange traffic with the incumbent CSXT are points at which CSXT does not perform any interchange today. Accordingly, the SFRR is required to construct additional facilities to support interchange with the residual CSXT at those locations. Each of these interchange facilities is detailed in the work papers accompanying this filing. *See* CSXT WP "SFRR Facilities Matrix – Consolidated.xls".

c. Track and Yard Facilities

i. Side Tracks and Spurs

The general freight traffic that SECI posits would move in SFRR trains originates or terminates (or both) at 884 unique customer locations. *See* CSXT WP "GF SARR Orig Dest Customers.xls". SECI's track configuration does not include spur tracks, industry tracks or switch connections at any of those locations. *See* SECI Opening Ex. III-B-3. Such facilities clearly would be needed for the SFRR to provide the physical services (pick-ups and set-offs) required by customers. CSXT addresses this deficiency in SECI's track configuration and

operating plan by including in the SFRR's physical plant a turnout at each unique customer location. In the time available to prepare this Reply Evidence, it was not feasible for CSXT to identify the precise length of track currently in place at each location, or to determine how much of the track at each location is railroad-owned and shipper-owned. Accordingly, CSXT conservatively assumed that, on average, there would be 250 feet of carrier-owned track at each unique customer facility. (At most locations, the length of track actually in place is significantly greater.) Those tracks and turnouts are incorporated into CSXT's configuration for the SFRR.

ii. Yards

SECI's operating plan provides for only four yards, located at Newell, PA; Nashville, TN; Folkston, GA; and Petersburg, VA. These facilities appear to be designed to handle the SFRR's coal traffic. They are utterly inadequate to accommodate the classification, switching, inspection, locomotive fueling and servicing functions required to meet the needs of the SFRR's general freight and intermodal shippers. Specifically, the four yards contemplated by SECI lack the track facilities (*e.g.*, ladder tracks), locomotives and personnel required to accommodate even the incomplete daily volume of general freight traffic identified by SECI. *See* SECI Opening at Table III-C-1. Indeed, SECI candidly acknowledges that it provided no facilities at all for classification of merchandise traffic.

CSXT's operating plan corrects this fatal deficiency in SECI's presentation. Based upon the handling required for all of the traffic (both "selected" and "non-revenue") moving in SFRR trains, witness Gibson determined that SFRR would need to build 13 regional and local merchandise flat switching yards. Each of the SFRR's "regional" classification yards, located at Callahan, FL; Alexandria Jct., MD; Demmler, PA; Princeton, IN; Atlanta, GA; and Nashville,

TN) would switch an average of 500 or more cars per day. The remaining seven "local" yards would classify between 100 and 500 cars per day. Table III-C-3 identifies each of the classification yards include in CSXT's operating plan and track configuration, and the estimated daily activity at each facility. The location and daily throughput of each of the SFRR's regional and local merchandise yards is depicted on CSXT Reply Ex. III-C-5.

Table III-C-3
SFRR General Freight Regional and Local Switching Yards

Yard Location	Average Daily Cars Switched	Blocks
Alexandria Jct., MD	741	15
Atlanta, GA	519	10
Bostwick, FL	149	3
Callahan, FL	864	17
Charleston, SC	177	5
E. Savannah, GA	110	3
Jacksonville, FL	302	5
Demmler, PA	701	11
Nashville, TN	596	13
Pembroke, NC	456	14
Princeton, IN	778	10
Richmond, VA	294	9
Rocky Mount, NC	127	4

The reasonableness of CSXT's estimate that the SFRR would require 13 general freight switching yards (in addition to the facilities posited by SECI) is reflected by the fact that CSXT currently operates a total of 54 classification/switching yards (including three hump yards) in the territory replicated by the SFRR.

In addition to the four coal yards identified by SECI at Newell, PA; Nashville, TN; Folkston, GA; and Petersburg, VA, CSXT added two smaller coal yards, one at Grafton, WV and the other at Atkinson, KY. These yards were designed to enable the SFRR to originate and terminate local coal traffic efficiently, to stage empty coal trains, and to support crew reporting and utilization.

In addition to these merchandise and coal yards, CSXT's track configuration also contemplates that the SFRR would have small field yards at several locations along the SFRR system. These yards would be used for handling of traffic moving to or from customers in the vicinity of the facility. No crews or inspectors are assigned to the field yards, so the line-haul merchandise train crews will be responsible for building the trains, pick-ups and set-offs, and equipment inspection.[38]

CSXT's proposed SFRR merchandise, intermodal and coal/bulk facilities are depicted on CSXT Reply Ex. III-C-6.

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[38] The sole exception is Chattanooga TN where the SFRR is forecasted to handle approximately 13,500 car of non-coal bulk traffic in 2018. This volume of cars required the stationing of full-time inspection crews.

iii. Intermodal Facilities

SECI's "selected" traffic base includes 710,486 units of intermodal traffic. SECI Opening at Table III-C-1. Of SFRR's "selected" intermodal movements, 444,909 units – or 63 percent – are local, interline forwarded or interline received traffic (*i.e.*, they originate or terminate, or both, at a points served by the SFRR). An additional 88,000 loaded intermodal units are assumed by SFRR to be so-called "non-revenue" traffic. Yet, the SFRR (as proposed by SECI) does not build a single intermodal facility anywhere along its 2,092-mile system! Indeed, SECI's operating plan contains no discussion whatsoever concerning the manner in which the SFRR would serve its intermodal customers. Rather, as it did with general freight traffic, SECI attempts to reduce its intermodal service operating plan to a mathematical exercise, applying as a "surrogate" for the forward-looking costs of building and operating intermodal facilities a generic per-unit lift cost based upon a single arrangement between CSXT and a third party vendor. *See* Section III-D. Implicit in this mathematical exercise is the assumption that all of the intermodal terminal facilities and equipment required to transfer trailers and containers between trains, and between trains and trucks, would be acquired, paid for and owned by third parties, rather than by the SFRR.

SECI's assumption that the SFRR could rely upon third party operators to construct the facilities required to handle its container/trailer traffic is not "consistent with the underlying realities of real-world railroading" (*WFA/Basin* at 15), and should be rejected. Neither the railroad nor a third party intermodal terminal operator would agree to such an arrangement. The process of developing an intermodal terminal is complicated, expensive and time-consuming. This process includes identifying and acquiring suitable land at a location in close proximity to

the railroad's lines, obtaining permits and complying with environmental regulations, designing and constructing the facility, and acquiring lift cranes, trucks (to move trailers and containers within the terminal) and other equipment. These steps cost many millions of dollars and may require several years from concept to completion.

From the perspective of a third party operator, building and owning an intermodal facility involves substantial financial investment and risk. Many terminal operators simply could not afford such an investment. Even if such an expenditure were feasible, a rational operator would consider making it only if the railroad made a long term commitment to use the facility. Absent such a binding contractual commitment, the operator could find itself stuck with an expensive terminal facility that had little utility for any other carrier (due to its location along the original railroad's lines).

Nor would a railroad agree to make such a long term commitment to an intermodal terminal controlled by a third party. Intermodal transportation is a dynamic business, with business models, traffic flows and operating practices adapting to the ever-changing dictates of a highly competitive marketplace. In such an environment, a railroad would be loath to commit itself to long-term arrangements with outside vendors. Current agreements between CSXI and third parties that are involved in the operation of certain CSXI intermodal facilities typically have a term of three to five years, and include a right to terminate the agreement prior to its expiration if the operator fails to comply with agreed service standards. If a third party operator owned and controlled an intermodal facility, and the railroad wished to terminate its agreement with the operator on account of poor service, the railroad would lose access to the facility and would be required to develop a replacement.

In reality, while CSXI employs third parties to assist in the performance of day-to-day operations at some of its intermodal terminals, all of those facilities (except one) are leased by CSXI (rather than the operator). The lone exception is a small facility at Bessemer, AL. The Bessemer facility, which handles on average one train per week, was built for the specific purpose of supporting a Mercedes Benz manufacturing plant at nearby Vance, AL. Container shipments of automotive parts manufactured in Germany arrive by vessel at Charleston, SC, are transported by CSXT to the Bessemer facility, and are delivered to the Mercedes Benz plant by truck. The Bessemer facility, which was built by the terminal operator at the behest of Mercedes Benz, is more akin to a "shipper" facility than a general purpose intermodal terminal. At other locations along its system, CSXT intermodal traffic is handled through facilities that were sited, built and paid for by CSXT or CSXI. At those locations, the fee that CSXI pays to the third party operator reflects the cost of labor, fuel, trucks (for intra-terminal movements) and, in some instances, lift equipment, but not the cost of acquiring land and constructing the facility.

In designing the most efficient operating plan for the SFRR's intermodal traffic, witness Gibson determined that SFRR would need to construct six intermodal facilities that are not accounted for by SECI. Those facilities are located at Nashville, TN; Atlanta, GA; Jacksonville, FL; Charleston, SC; Evansville, IN; and Savannah, GA. The locations of the SFRR intermodal terminals proposed by CSXT are depicted on CSXT Reply Ex. III-C-6. The size and configuration of each of those intermodal facilities is set forth in CSXT Reply Ex. III-B-2.

iv. Transflo Facilities

SECI's "selected" traffic group includes 6,324 cars (in the base year) that currently move through Transflo facilities on the CSXT system. A Transflo facility is a location where

customers can transfer a commodity from rail cars to trucks. At most locations, Transflo facilities involve a single commodity. Most of the Transflo facilities situated along the SFRR have Ethyl Alcohol (STCC 28) as the primary commodity handled – the sole exception is Petersburg VA, where Incinerator Ash (STCC 40) is the primary commodity. The use of CSXT's Nashville Transflo facility, which handles Ethyl Alcohol shipments on behalf of multiple customers, is described at pp. III-C-10-11 above.) Transflo facilities enable customers who do not have direct access to rail service, or who require less than carload shipments of a commodity, to take advantage of the economies of rail service. Often, a Transflo facility will serve multiple customers of the same (or similar) commodities. For example, multiple consumers of plastic pellets can receive product from a single hopper car for movement by truck to the customer's facility. The railroad customarily provides the rail cars and track space where the transfer can be performed.

However, SECI's proposed SFRR configuration does not include <u>any</u> transloading facilities. Indeed, neither SECI's Opening Evidence nor its workpapers give any indication that SECI was even aware of the service requirements relating to the traffic they selected. CSXT corrects this omission by providing for the required Transflo facilities at eleven locations, as shown on Table III-C- 4:

Table III-C-4

SFRR TransFlo Facilities		2008 Units	Physical Address
ATLANTA	GA	289	1000 Chattahooche Avenue N.W.
CHARLESTON	SC	246	1990 Tuxbury Lane
CHATTANOOGA	TN	305	520 West 26th Street
CLARKSBURG	WV	50	500 North Third Street
DALTON	GA	34	107 McFarland Road
EVANSVILLE	IN	4	1550 North Kentucky Ave
JACKSONVILLE	FL	622	116 Druid Street
NASHVILLE	TN	1,066	426 Chesnut Street
RICHMOND	VA	2,987	2300 West Laburnum Avenue
SAVANNAH	GA	157	2351 Tremont Road
PETERSBURG	VA	564	3500 Halifax Road
Total		**6,324**	

d. Trains and Equipment

i. Train Sizes

Unlike, SECI's operating plan, CSXT's operating plan was designed with the requirements of the SFRR's customers in mind. For merchandise traffic, a general freight service plan was developed to accommodate all of the loaded revenue traffic selected by SECI, the empty cars associated with those revenue movements, and the loaded "non-revenue" merchandise cars that SECI assumes would travel on SFRR trains. The total peak year 2018 volume of general freight traffic was analyzed and, based upon a daily average number of cars requiring handling between origins/received locations and destinations/forwarded locations, and the intermediate handlings the traffic would require between locations, efficient train service was scheduled. Train sizes were designed to provide the least cost service, consistent with customer requirements and the terrain to be traversed. The schedule of line-haul and local merchandise trains, the frequency of service, the average number of cars, the trailing gross tons, and the car

miles are presented in the work papers accompanying CSXT's Reply Evidence. *See* "Train Category Stats.xls.".

Because CSXT merchandise trains were designed from the ground-up for a least-cost, most efficient railroad, the SFRR's train sizes vary significantly from the train sizes assumed by SECI, which were based upon an incomplete subset of CSXT 2008 trains handling a different traffic base. SECI assumed that its SFRR merchandise trains would grow in size, in some cases up to 150 cars each, for purposes of its RTC Model. This assumption – which is neither acknowledge nor defended by SECI – is in part responsible for the ludicrous locomotive configurations (8 or 10 locomotives on a train) in SECI's RTC Model. Many of the trains modeled by SECI in its RTC simulation are simply fictions, apparently designed to avoid having to actually develop an operating plan based upon the traffic base handled.

For intermodal trains, CSXT designed train sizes based upon the service requirements of the customers, the terrain traversed, and the conservative assumption that the National Gateway project will be completed by the peak year.[39] As was done with general freight traffic, using daily averages of volume between points, CSXT designed appropriate scheduled intermodal train service. *See* CSXT WP "Seminole Train Category Statistics.xls." Again, CSXT's SFRR intermodal train sizes differ from the 2008 CSXT "Q" train sizes adopted by SECI, because of the different traffic base and the assumption of completion of the National Gateway project (which permits double-stacking that was not possible in 2008).

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[39] This assumption is consistent with the use of 2018 traffic for train design, and gives the SFRR the benefit of the project completion in the early years of the DCF period, even though the project is not yet completed.

Coal and other bulk train sizes in the SFRR operating plan are designed based upon loading/unloading restrictions at customer locations, and the terrain traversed. The unit train sizes prescribed in the CSXT operating plan are, for the most part, the same as the average size of the trains that CSXT operating between the same origins and destinations in 2008. However, some of these train sizes differ from those posited by SECI's RTC simulation, because SECI assumed that, in many cases, coal trains would grow to 120, or even 150, cars each before growth trains would be added. SECI's assumption that the SFRR would operate unit trains of this size ignores "real world" customer limitations at origin and/or destination points. In reality, the size of CSXT coal trains is often constrained by physical limitations at origin mines or destination facilities. SEC attempts to minimize the work required to present a feasible operation for the SFRR by ignoring such real-world factors.

ii. Locomotives

SECI specified that the SFRR would operate with two types of locomotives – GE AC4400 locomotives for road and helper service and EMD SW1500 locomotives for yard switching and work-train service. CSXT accepts the use of AC type locomotives for its operating plan.[40] SECI estimates that SFRR would require a total of 185 locomotives to handle its peak year traffic – 177 road/helper units and eight (8) yard units. SECI Opening at III-C-10,11. CSXT's operating plan demonstrates that the SFRR would, in fact, require a total of 238 locomotives – 196 road/helper locomotives and 42 SW1500 switch units.

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[40] For the reasons explained in Section III-D, CSXT substitutes ES4400AC locomotives for the AC4400 units posited by SECI, because GE discontinued manufacture of the AC4400 locomotive before 2008.

(a) Road Locomotives

SECI's assertion that all of the SFRR's road train and helper service operations could be accomplished with a peak-year fleet of only 177 units understates the actual number of locomotives required. SECI's estimates are based upon operating statistics that are, at best, highly dubious. Specifically, utilizing the (incomplete) list of trains "adopted" from CSXT's 2008 train event file (*i.e.*, those trains for which SECI was able to match at least 15 "selected" cars from the waybill file),[41] SECI developed an estimate of SFRR locomotive unit hours. SECI then converted this ersatz locomotive unit hour figure into an estimated number of locomotive units.[42] SECI's mathematical exercise does not produce a credible estimate of the number of locomotives required for the SFRR to meet the needs of the traffic that it would handle.

To put SECI's estimate of the SFRR's locomotive requirements into perspective, conducting the SFRR's operations with SECI's proposed fleet of 177 road locomotives and 8 switch engines would require SFRR locomotives to achieve an average of 153,286 locomotive unit miles ("LUMs"), including an average of 160,763 LUMs per year for road locomotives. In reality, during the year 2008, the average number of LUMs achieved by all U.S. Class I railroads was 59,817 LUMs for road locomotives and 64,955 LUMs for all locomotives. During that same

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[41] As CSXT demonstrates above, SECI's arbitrary 15-car matching requirement caused it to exclude numerous trains that carried its "selected" traffic, thereby potentially failing to take into account significant portions of the movement of that traffic on the SFRR system.

[42] Not only is SECI's locomotive estimate conceptually flawed, its actual calculations are, at best, suspect. Specifically, in SECI WP "SFRR Operating Statistics.xls," SECI manipulates the estimate of road locomotive hours derived from SECI WP "SFRR Base Year Service Units.xls" and "Base Year Trains.xls" using the (meaningless) transit time output of its RTC Model simulation (which is based on 2018 operations) from 2008 to 2009, and then divides that figure by the total hours in a year.

year, CSXT's locomotive fleet averaged 51,518 LUMs for road locomotives and 57,406 LUMs for all locomotives, and the total Eastern average was 51,131 LUMs for road locomotives and 57,529 LUMs for all locomotives.[10] These figures demonstrate the nonsensical nature of SECI's estimated locomotive fleet requirements for the SFRR.

In contrast to SECI's arithmetic approach, CSXT determined the actual number of locomotives that the SFRR would need during the peak period identified by SECI. The use of a peak period approach ensures that the SFRR has sufficient power to operate all of the trains, loaded and empty, moving over its lines at any given time. The RTC Model developed by CSXT witness Wheeler has the capability to display the location of each train operating on the SFRR. The period from 11 AM August 6, 2008 to 11 AM August 7, 2008 was identified as the time within the peak week during which the greatest number of trains would be in operation on the SFRR system. Based upon its RTC Model simulation, CSXT determined the total number of trains that would be moving on the SFRR's lines during that period, as well as the correct locomotive consist for each train. Based upon those figures, and applying the 3.7 percent spare margin proposed by SECI (*see* SECI Opening at III-C-12), CSXT determined that the SFRR would need a total of 196 road/helper locomotive units to handle its anticipated peak traffic flows. Thus, the SFRR's total road and helper locomotive fleet requirement is 19 units more than provided for in SECI's operating plan.

CSXT accepts SECI's assumption that all road/helper locomotives owned by SFRR will have distributed power capability. In fact, the AC units acquired by CSXT during 2008, upon

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[10] *See* Analysis of Class I Railroads 2008, Association of American Railroads.

which CSXT based its assumed purchase price for SFRR's locomotives, have DP capability. However, SECI's further assumption that the SFRR and CSXT will run-through power on all trains, and that the locomotives running through between the carriers' lines will always be DP capable, poses an interesting dilemma. Clearly, all of CSXT's AC4400 locomotives are not DP equipped today. Locomotives powering run-through trains from other carriers on CSXT today, which SECI assumes will be run-through to SFRR (whether from that carrier directly or via CSXT), are likewise not all DP-equipped. This raises the question whether, in order to implement SECI's "DP-capable run-through power" assumption, the SFRR should be charged with the cost of equipping all locomotives that run-through on the SFRR system with DP capability. (Clearly, this is a cost that SECI's assumption imposes upon the incumbent, and as such is not otherwise acceptable under Board precedent.) Moreover, the question arises as to how to estimate the number of locomotives that would need to be so equipped, and the corresponding cost of doing so. Rather than seeking to develop answers to these complex questions, CSXT has decided (for purposes of this case only) simply to accept SECI's premise that all locomotives that run-through between the lines of CSXT and SFRR will have DP capability. However, CSXT does not accept SECI's further assumption that trains interchanged from CSXT to SFRR will, in all instances, have locomotives aligned in the "1/1" configuration preferred by SECI. (SECI Opening at III-C-12) Rather, it is reasonable that SECI be responsible for the time and cost required to shift the power into its preferred configuration at interchanges for received traffic. CSXT will accept the configuration determined by SECI on the trains it receives in interchange from the SFRR and will not impose any reconfiguration costs on SECI for such units.

(b) Helper Locomotives

SECI's operating plan states that it provides for helper service at two locations on the SFRR system, one on the West Division near Cowan, TN (the "Cowan Helper District") and the other on the East Division between Connellsville, PA and Cumberland, MD (the "Sand Patch Helper District"). The southbound portion of the Cowan Helper District extends from Milepost 86.95 to Milepost 96.85, a distance of 9.9 miles, and northbound portion of the Cowan Helper District extends from Milepost 94.35 to Milepost 85.45, a distance of 8.9 miles. The Sand Patch Helper District, which encompasses the Sand Patch Grade cresting the Allegheny Mountains, is considerably longer, with an eastbound segment extending from Milepost 270.0 at Connellsville, MD to Milepost 211.0 at Sand Patch, PA, a distance of 59 miles, and a westbound segment extending from Milepost 193.0 at Hyndman, PA to Milepost 211.0 at Sand Patch, a distance of 18 miles. (SECI Opening at III-C-14-15.) SECI assigns two 2-unit helper locomotive consists to each of the SFRR's helper districts. (SECI Opening at III-C-16.)

Examination of SECI's RTC simulation indicates that SECI included helper service in two additional areas – heavy coal trains operating in the MGA territory from Loveridge north and south receive help for 8.7 miles between Mileposts L62.1 and FA 302.15. In addition, SECI's RTC simulation provides help for heavy trains operating south from Brunswick, MD to Alexandria Jct. Yard, a total of 51.9 miles. It does not appear that the helper requirements for these two areas were taken into consideration by SECI in developing its AC locomotive counts.

CSXT agrees that helper service would be required in the four locations where the SECI RTC simulation applies it, and between the mileposts specified in that simulation. The number of helper locomotive units that the SFRR would need is a function of the number of trains per

shift requiring helper assistance, the distance traveled by helper units (including light movements) in assisting each train and the level of congestion on the line segments at issue. Based upon the peak-day train movements reflected in witness Wheeler's RTC Model simulation, witness Gibson determined that : one (1) two-unit consist would be required for Loveridge, three (3) two-unit consists would be required for Sand Patch; one (1) two-unit consist would be required for Brunswick; and two (2) two-unit consists would be required for Cowen for a total of 12 AC units, before application of the spare margin. Combining the road locomotive and helper requirements, and applying the 3.7% spare margin, a total of 13 AC4400 locomotives would be required for peak year helper service on the SFRR.

(c) Switch/Work Train Locomotives

SECI witness Reistrup proposes EMD SW1500 locomotives for use by the SFRR in switch and work train service. (SECI Opening at III-C-16) CSXT accepts SECI's designation of EMD SW1500 units for switching and work train service. However, SECI's assumption that the SFRR could perform all necessary switching and work train operations across its 2,092-mile network with only eight switch locomotives is sheer fantasy.[43]

As discussed above, SECI's operating plan fails to account for the physical work required to classify or switch merchandise cars moving in local, interline forwarded and interline received service. Nor do SECI's locomotive fleet estimates take account of the locomotives that would be

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[43] SECI's estimate of eight total yard locomotives is based upon the simplistic assumption of two units at each of its four yards. SECI Opening at III-C-16. It does not appear that SECI separately considered the needs of SFRR work trains in developing this estimate. (*See* SECI WP "switch assignments.xls"). Although SECI's workpapers refer to the unit type as SD-40s, it is clear that the computations are intended for the SW1500 type units.

required to perform such work. SECI's failure to tie the intermediate classification and switching of general freight traffic required by the SFRR with specific switch locomotives (or yard facilities) underscores SECI's fundamental misunderstanding of the nature of general freight rail service. Simply stated, the SFRR could not conceivably handle more than 1 million loaded and empty general freight cars with only eight switch engines deployed at only four yard locations across a 2,100-mile rail network.

CSXT's operating plan corrects this deficiency by providing 39 EMD SW1500 locomotives for merchandise switching service.[44] This estimate is based upon the average daily count of merchandise cars that would require switching at each of the 13 regional and local SFRR general freight yards defined in CSXT's operating plan. Utilizing the daily average throughput at each yard, CSXT developed the number of crews per shift required to perform switching at each yard, and each crew was assigned one locomotive.[45] In addition, witness Gibson concluded that the high volume of traffic interchanged by the SFRR at Florence, SC dictated that an SW1500 unit be assigned there as well. Witness Gibson added SECI's proposed spare margin of 3.7 percent to his base calculation to arrive at a total requirement of thirty-nine (39) switch locomotives.[46] Thus, the SFRR switch engine fleet should consist of thirty-nine (39)

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[44] The switching associated with the intermodal trains is included within the third-party provider costs used by CSXT for intermodal operations. Because the coal and other bulk traffic move in unit train service, the needs for intermediate switching do not exist and the line-haul power is assumed to handle origin and destination switching, as required.

[45] *See* CSXT WP "General Freight SFRR 2018 Yard Switching Crews/Locos.pdf."

[46] The use of a percent spare margin for yard power is appropriate because those units are assigned to specific locations and thus do not travel throughout the system as do the SFRR's road

SW 1500 units for switching service, and an additional two (2) units to power work trains, for a total of forty-one (41) SW1500 locomotives, rather than the eight (8) units proposed by SECI.

Table III-C-5 summarizes the estimates of SECI and CSXT regarding the number of locomotives that the SFRR would need to execute an efficient operating plan for traffic that would move in SFRR trains.

Table III-C-5
SFRR Locomotive Requirements

Locomotive	SECI Estimate	CSXT Estimate	Difference
AC4400	177	196	19
SW1500	8	41	33

iii. Railcars

SECI used a variety of different approaches to develop the SFRR's freight car requirements. For coal traffic, SECI assumed that at coal originations served by SFRR, where CSXT has historically provided cars, the SFRR would likewise provide the cars. For coal shipments originated by other carriers (including CSXT), where system equipment was used, SECI assumes that SFRR would pay for the use of foreign cars while on its lines. For coal originations in private cars, private cars would continue to be used. SECI employed a similar methodology to estimate the SFRR's general freight car requirements – *i.e.*, a car-mile/car hour approach with percentage allocations among system, foreign and private equipment. For

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locomotive units. Yard locomotives needing repair and servicing would have to be hauled dead-in-tow to the SFRR locomotive shops at Callahan.

intermodal traffic, SECI assumed that the flatcars used to move intermodal containers and trailers would be system-owned.

CSXT accepts SECI's approach to determining the distribution of system, foreign and private cars for its coal and general freight car fleets. CSXT also accepts as reasonable the 5 percent spare margin for rail cars assumed by SECI. SECI Opening at III-C-17. However, SECI's estimate of the number of system-owned cars that the SFRR would require to satisfy the needs of merchandise customers is substantially understated.

SECI developed SFRR car-miles and car-hours using 2008 base-year traffic and transit time output from its fatally flawed RTC Model simulation. *See* SECI Opening at III-C-17 and SECI WP "SFRR Operating Statistics.xls". SECI then divided the car-miles and car-hours into system, foreign, and private ownership groups, with the allocation percentages based upon car-mile allocations. As CSXT has shown, operating statistics derived from SECI's RTC simulation are essentially meaningless because the Model upon which that simulation is based suffers from numerous fatal flaws and omissions – not the least of which is SECI's intentional decision not to incorporate local train, yard train or customer switching activity into its Model. Accordingly, SECI's rail cars estimates, which are based solely upon operating statistics generated by its RTC simulation, are not credible.

By contrast, as explained in Section III-D, CSXT's rail car fleet estimates are based upon car-miles and car-hours derived from CSXT's detailed operating plan, which properly accounts for all of the activities required to handle traffic moving in SFRR trains. CSXT's car fleet estimates are the best evidence of record, and should be adopted by the Board.

2. Cycle Times and Capacity

In a normal SAC presentation, cycle times are a key determinant of the required track configuration and capacity, locomotive and car fleet sizes, and crew requirements. In part, this is true because most prior SAC case have involved SARRs that exclusively (or almost exclusively) move unit trains from specific origins to specific destinations. In the present case, while the SFRR operates unit trains of coal (including the issue traffic), coal represents – by SECI's own calculations – only 33% of the loaded cars/containers in the SFRR's "selected" traffic group. *See* SECI Opening Table III-C-1. When the 1.4 million cars/units of "non-revenue" traffic posited by SECI to move in SFRR trains is considered, units train shipments account for only 19% of the SFRR's traffic.

SECI did not develop cycle times for the SFRR. Instead, citing the Board's decision in *WFA/Basin*, SECI argues that the purpose of the SAC exercise is to allow the complaining shipper to "demonstrate that its SARR can provide service to its traffic group members that meets its customers' requirements." SECI Opening at III-C-18. SECI asserts that a Complainant can satisfy this standard "by showing that the train cycle times in the peak year are similar to or lower than the defendant's actual cycle and transit times during the comparable period of the most recent year for which data is available." *Id.* According to SECI, the results of its RTC Model simulation indicate that the SFRR's peak week transit times are several hours faster than the times actually experienced by CSXT during 2008. SECI Opening at III-C-48-50.

As a threshold matter, SECI does not present any comparison of SFRR and CSXT "cycle times" – rather, the comparison it proffers is based upon supposed train transit times. Moreover, any comparison (whether of "cycle times" or "transit times") based upon outputs from SECI's

RTC Model simulation is inherently suspect, because that simulation – by SECI's own admission (*see* SECI Opening at III-C-22-24) – intentionally excluded all local train, yard train and customer switching activities from the analysis. Thus, the supposed "transit times" generated by SECI's RTC Model do not reflect, among other things, (1) delays and train conflicts caused by local train movements; (2) the time required for SFRR road trains to perform pick-ups and set-offs at any of the 884 unique customer locations at which such service would be required (and the delays to other SFRR trains when the main line is used for such operations); (3) delays caused by foreign carrier trains crossing the SFRR's lines; and (4) the effect of including the complete CTC signal system that SECI posits in its RTC Model (which would reduce overall transit times by providing appropriate spacing between trains). These and other deficiencies in the RTC Model constructed by SECI's experts thoroughly undercut the validity of the SFRR transit times posited by SECI as a basis for comparison. Indeed, as CSXT shows, when these errors in SECI's RTC Model are corrected, SECI's RTC Model does not run to a successful conclusion. Finally, even if SECI's estimated SFRR transit times were reliable – and they most certainly are not – SECI's attempt to compare those times with what it claims is a "random sample" of only 30 CSXT trains (out of the more than 45,000 trains in SECI's CSXT 2008 train event file) is, in a word, farcical. In short, SECI's purported comparison between transit times generated by its RTC Model and CSXT's 2008 experience is bogus.

In contrast to SECI's approach – which is based upon a car matching exercise and RTC simulation so fatally flawed that no credibility can be given to the operating statistics it generates – CSXT's operating statistics are based upon an operating plan that properly accounts for the time required to perform all of the services needed to meet specific customer requirements. For

the SFRR's coal and bulk traffic, the customer time requirements are defined by the railroad's contract with the shipper with few exceptions. Basically, the issues are: did the train get delivered to the destination in a reasonable time from when it was loaded; did the empty train get moved from the destination in a reasonable time. However, as explained above, customer requirements for merchandise traffic are vastly more complex. The CSXT operating plan incorporates both the facilities and the time required to perform the classification and switching necessary to move the SFRR's merchandise traffic expeditiously through the system, and to provide pick-up and delivery of cars at customer locations. For intermodal traffic, CSXT the SFR's train service to ensure that contractual commitments were met.[47] Intermodal trains received the top priority for dispatching, followed by general freight train and then coal/bulk trains.

In short, CSXT's projected cycle times for SFRR trains are based upon a solid methodological approach.

a. CSXT's Capacity Analysis

In order to test the ability of the SFRR track configuration and other physical facilities posited by CSXT in Section III-B to execute the operating plan designed by CSXT, CSXT witness Wheeler developed an RTC Model of the SFRR and conducted a simulation of the SFRR's peak period operations. The methodology employed by witness Wheeler, and the results of CSXT's RTC Model simulation, are described in Section III-B.

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[47] In fact, the reader may wonder why, for example, two intermodal trains are scheduled each day between Jacksonville and Alexandria Jct. when one longer train might suffice. It is because one is scheduled in the AM and one in the PM to fulfill transportation contractual requirements.

Following is a description of certain inputs to witness Wheeler's RTC Model that were provided by CSXT witness Gibson.

b. Operating Inputs to the RTC Model

i. Road Locomotives Consists

The locomotive consists used for the merchandise, coal, other bulk and intermodal trains in the RTC simulation are the same locomotive consists that were developed in the respective CSXT train service plans. In each of those individual plans, the consists were determined based upon any customer time requirements, the sizes of the trains (*i.e.*, the trailing tonnage), the terrain to be traversed, and the tractive power of the heavy AC4400 locomotives specified for the SFRR.

ii. Train Size and Weight

As described above, the CSXT operating plan develops train sizes for each of the train types based upon the requirements of customers, the average number of cars per train, and hence, the trailing tonnage, and the terrain to be traversed. The operating plan train sizes and weights were used in CSXT's RTC simulation.

iii. Helpers

Helper's included within CSXT's RTC train simulation are at the locations specified by SECI's train RTC simulation – Cowen, Sand Patch, Loveridge and Brunswick. CSXT's RTC simulation confirmed that helper power was needed for heavy trains at each of these locations.

iv. Maximum Train Speeds

SECI's operating plan and RTC Model simulation assume "maximum" train speeds of 50 MPH for coal/bulk trains operating on SFRR main lines, 60 MPH for other trains (including

empty coal trains) operating on SFR main lines, and 35 MPH for trains operating on branch lines. (SECI Opening at III-C-30) CSXT witness Gibson accepts these maximum train speeds, and CSXT witness Wheeler incorporates them into CSXT's RTC Model simulation.

v. Dwell Times at Origins

SECI witness Reistrup allotted four hours of dwell time at each of the six mines that would be served directly by the SFRR. For trains moving to/from the MGA mines that would be served via Norfolk Southern, he assigned dwell times ranging from 7.5 hours to 12.5 hours. SECI Opening at III-C-32-33.

However, SECI's operating plan does not allot any dwell time at non-coal origins located on the SFRR system. SECI explains the basis for its decision to ignore dwell time at non-coal origins as follows: "No dwell time has been allotted at any other local origin because the trains moving from such origins are not linked with any other subsequent trains in the RTC model." SECI Opening at III-C-33. This purported rationale is nonsensical and constitutes a failure of proof. The purpose of determining origin dwell time is not simply to facilitate the development of a Complainant's RTC Model simulation. Rather, dwell time at origins (as well as destinations and intermediate points) are an important element in designing a SARR's train service, and in determining its locomotive, car and crew requirements. The cited statement reflects SECI's "backwards" approach in this case, in which the RTC Model was (inappropriately) relied upon to determine the operating plan.

As discussed above, SECI's operating plan does not even mention - much less account for – the time that would be required for SFRR to pick-up and set-off cars at the 884 unique locations at which merchandise traffic moving in SFRR road trains originates and/or terminates.

Nor does SECI's operating plan provide in any way for classification or intermediate switching of merchandise cars to facilitate the efficient movement of these cars across the SFRR system. These omissions fatally undermine both the RTC Model simulation proffered by SECI and its operating plan. CSXT's RTC Model corrects these deficiencies by including inputs for the intermediate switching and classification, and pick-ups and set-offs at customer facilities, required to provide "the level of service to which shippers in the [SFRR] traffic group are accustomed." SECI Opening at III-C-18. (*quoting PSCo/Xcel* at 11).

Specifically, for purposes of CSXT's operating plan and RTC Model simulation, CSXT witness Gibson conservatively assumed that SFRR trains would require thirty (30) minutes to set off or pick up one or more cars at SFRR customer facilities. Where a train both set off one or more cars and picked up one or more cars at a customer location, CSXT witness Gibson assumed that a total of forty-five (45) minutes would be required for both activities. These "dwell" times for pick-ups and set-offs at customer facilities reflect an assumption that SFRR crews would be very productive in performing switching at intermediate locations. Based upon witness Gibson's familiarity with short-line and regional rail carrier operations, these assumptions are very aggressive. Sustaining this level of productivity throughout every operation over the course of a year would require precise adherence to the operating plan (despite the normal interruptions and dislocations that inhibit all rail operations).

CSXT witness Wheeler incorporated the "dwell" times for pick-ups and set-offs at customer facilities prescribed by witness Gibson into CSXT's RTC Model. CSXT Reply Exhibits III-C-2 and III-C-3 contain snapshots from CSXT's RTC simulation demonstrating how the Model accounted for these local operations. CSXT Exhibit III-C-2 depicts SFRR Train

MPRINAS, a merchandise road train that operates between Princeton, IN and Nashville, TN. As CSXT Reply Exhibit III-C-2 shows, Train MPRINAS stops en route at Henderson, KY to set off cars at a customer facility (for which CSXT's RTC Model assigns a dwell time of thirty (30) minutes). At Madisonville, KY, the train both picks up and sets off cars, requiring a dwell time of forty-five (45) minutes. The train likewise stops at both Hopkinsville and Guthrie, KY to pick up cars at SFRR-served industries, with CSXT's RTC Model assigning thirty (30) minutes at each location to account for such local service.

CSXT Reply Exhibit III-C-3 depicts Train LRICHOP, a local train operating in turnaround service between Richmond and Petersberg, VA. As shown on the exhibit, the train stops twice at South Richmond to pick up or set off cars (each taking 30 minutes). At Marlboro, VA, Train LRICHOP both sets off and picks up cars at local industries, activities for which the RTC Model assigns a total "dwell" time of forty-five (45) minutes. Likewise, at Hopewell, VA, forty-five (45) minutes are allocated for the train to pick up and set off cars at customer facilities. The train then returns to Richmond.

As these examples demonstrate, CSXT's operating plan and RTC Model simulation properly account for the time required to provide pick-up and set-off service at customer facilities. By contrast, neither SECI's operating plan nor its RTC Model simulation make any attempt to account for such local activities, which are a critical element of handling merchandise traffic in accordance with customer requirements. The profound difference in the manner in which the operating plans submitted by CSXT and SECI, respectively, treat service to the SFRR's merchandise customers can be seen by comparing the movement of Train MPRINAS in CSXT's RTC simulation with the movement of Train 423FNorNas6 in SECI's RTC simulation.

Compare CSXT Reply Ex. III-B-4 *with* CSXT Reply Ex. III-B-5. As those animations graphically demonstrate, Train MPRINAS (serving Princeton/North Gibson – Nashville) makes multiple stops en route to perform necessary pick-ups and set-offs at customer facilities, while SECI's modeled Train 423FNorNas6 (serving the same North Gibson – Nashville route) passes right by the SFRR's customers without stopping to pick up or deliver their cars. As a result, SECI's Train 423FNorNas6 arrives at Nashville with the very same mix of cars (96 loads and 26 empties) as it has when it departs North Gibson, IN. *See* CSXT Reply Ex. III-B-5. By contrast, CSXT's Train MPRINAS departs Princeton/North Gibson with 93 loaded cars and 24 empties, and arrives at Nashville with 66 loaded cars and 13 empties (the "real world" result of providing local service to customers). *Id.*

vi. Dwell Times at Destinations

SECI witness Reistrup allotted dwell times ranging from two hours to 72 hours at power plants and other coal destinations, based upon his observations at a limited number of locations and data produced by CSXT in discovery. SECI Opening at III-C-32-33. Notwithstanding minor differences between witness Reistrup's estimates and CSXT's real world experience, CSXT does not challenge the dwell times assigned by SECI at those destinations.

However, as with non-coal origins, SECI's operating plan does not allot <u>any</u> dwell time at non-coal destinations. Once again, SECI attempts to justify this omission on the grounds that "[d]well times at local destinations are relevant only when an inbound train is linked to a subsequent outbound train. Only coal trains are linked in this manner. Therefore, no dwell time was allotted at the SFRR's other local destinations." SECI Opening at III-C-32. The fact that

SECI (misguidedly) did not feel the need to take account of dwell time at customer facilities in developing its RTC Model does not provide a rational basis for ignoring altogether the time required to serve non-coal destinations in designing a feasible operating plan. SECI does not even discuss (much less account for) the "dwell time" that would be required for SFRR to provide local service to non-coal customer facilities. This omission fatally undermines SECI's operating plan. CSXT's operating plan corrects this major deficiency by providing for the intermediate switching and classification, and pick-ups and set-offs at non-coal destination facilities, required to meet the needs of SFRR's customers.

The "dwell" times prescribed by witness Gibson for pick-ups and set-offs at customer origins (30 minutes to pick-up or set-off cars, and 45 minutes where both pick-up and set-off is required) were applied to those activities when performed by SFRR trains at customer destinations as well.

vii. Dwell Times at Yards

SECI's operating plan proposes the following dwell times for activities performed at SFRR yards:

- six hours for coal trains requiring a 1,500-mile inspection;
- three hours for non-coal trains requiring a 1,000-mile inspection;
- 15 to 30 minutes for all other trains depending on the activity performed at the yard. (SECI Opening at III-C-34-37)

CSXT witness Gibson accepts this assumption, and CSXT witness Wheeler incorporates them into CSXT's RTC Model.

However, a glaring – indeed, fatal – deficiency in witness Reistrup's yard dwell time estimates is his failure to make any allowance for the time that SFRR merchandise trains would need to pick up and/or set off cars, or blocks of cars, at intermediate yard locations. (Indeed, SECI's operating plan does not contemplate any intermediate handling of merchandise traffic at the four SFRR yards included in SECI's track configuration.) CSXT's operating plan corrects this deficiency, by accounting for the time that SFRR trains would require to pick up, set off and swap cars (or blocks of cars) at SFRR yard locations.

Specifically, for the purposes of CSXT's operating plan and RTC Model simulation, CSXT witness Gibson conservatively assumed that SFRR trains would require thirty (30) minutes to set off or pick up one or more cars (or blocks of cars) at SFRR yards. Where a train both set off one or more cars (or blocks of cars) and picked up one or more cars (or blocks of cars) at an SFRR yard, CSXT witness assumed that a total of forty-five (45) minutes would be required to complete both activities. Again, based upon witness Gibson's familiarity with short-line and regional rail carrier operations, these assumptions are very aggressive.

viii. Time Required to Interchange Trains With Other Railroads

The SFRR would interchange traffic with CSXT, Norfolk Southern and/or various short-line carriers at 58 different locations. SECI Opening Ex. III-B-2. As SECI acknowledges, the physical interchange of trains entails the handoff of the train from the delivering carrier's crew to the receiving carrier's crew, a brake set-and-release, and a roll-by inspection. Moreover, SECI assumes that, during the interchange process, any locomotives on an arriving train that were not required to move the train over the SFRR's lines would be removed and (if necessary)

locomotives would be repositioned in the SFRR's preferred "1/1" DP configuration. According to SECI witness Reistrup, all of these tasks could "easily" be completed in 30 minutes or less. (SECI Opening at III-C-38-39.) For purposes of CSXT's RTC simulation, witness Gibson adopted witness Reistrup's assumption.

However, many of the points at which the SFRR proposes to interchange traffic with CSXT are not locations at which CSXT conducts any interchange activity today. Accordingly, those locations are not equipped with interchange tracks upon which SFRR (or CSXT) can leave a train for the other carrier (or that could be used to run locomotive power around the train in those instances in which it was necessary to remove and/or reposition locomotives into a 1/1 DP configuration). For example, SECI Opening Ex. III-B-2 lists Yemassee, SC as a prospective SFRR/CSXT interchange point. *See* SECI Opening Ex. III-C-2 at 1; Ex. III-B-3 at 27 (Milepost 442.7). CSXT does not currently have any interchange tracks at Yemassee. SECI proposes to build only a single interchange track (connecting with a siding along SFRR's single-track main line) at this location. With such a track configuration, SFRR would need to block both its main line and the siding in order to run power around the train.

Moreover, several proposed SFRR/CSXT interchange points are located a considerable distance from the nearest CSXT crew reporting point. A CSXT crew reporting for duty at such a remote interchange location would have to taxi a considerable distance to receive a train from the SFRR. If the CSXT crew did not arrive within minutes of the arrival of the SFRR train, the SFRR main line would be blocked for longer than the 30 minutes claimed by witness Reistrup.

CSXT addresses these concerns by providing sufficient interchange tracks and/or yard facilities (based upon the anticipated interchange volume at each location) to give the SFRR the

ability to run around the train, to avoid extended blockage of the main line and to perform the minimum switching necessary to create blocks as required by the SFRR's customers.

ix. Crew Change Locations/Times

SECI's operating plan allows 15 minutes to complete crew changes. SECI Opening at III-C-40. CSXT witness Gibson accepts this assumption, and CSXT witness Wheeler incorporates them into CSXT's RTC Model.

x. Time Required to Attach/Detach Helper Locomotives

SECI's operating plan allots twenty (20) minutes to add helper locomotives to a train, and fifteen (15) minutes to detach helper units from a train. (SECI Opening at III-C-25) CSXT witness Gibson accepts SECI's proposed time allotments for these activities, and CSXT witness Wheeler incorporates them into CSXT's RTC Model.

xi. Track Inspections/Maintenance Windows

SECI's operating plan does not allocate any "delay' time to account for scheduled track inspections or maintenance windows. (SECI Opening at III-C-45). CSXT witness Gibson accepts SECI's proposed time allotments for these activities, and CSXT witness Wheeler incorporates them into CSXT's RTC Model.

xii. Time for Random Failures/Line Outages

SECI witness Reistrup developed a number of assumed random outage events during the RTC Model simulation period. SECI Opening at III-C- 47. CSXT witness Gibson accepts SECI's proposed time allotments for these activities, and CSXT witness Wheeler incorporates them into CSXT's RTC Model.

c. Crew Districts and Crew Requirements

SECI specifies four home terminals on the SFRR's West division (Nashville, TN; Atkinson, KY; Junta, GA; and Folkston, GA) and seven home terminals on its East division (Grafton, WV; Newell, PA; McKeesport, PA; Cumberland, MD; Petersburg, VA; Pembroke, NC; and Charleston, SC). As described previously, the SFRR trains contemplated by SECI's operating plan are based upon the (incomplete) list of CSXT trains "adopted" by SECI from CSXT's 2008 train event file. The actual locations at which the CSXT crews that handled those trains during 2008 reported for work, and their home terminals and crew districts, are, in many cases, radically different from those posited by SECI for the SFRR. Thus, its is not clear how SECI's designation of crew districts was derived, or how it is actually supposed to work – particularly given SECI's bizarre assumption that trains would be interchanged with CSXT and other carriers at different locations on different days (*see* p. III-C-30-32). In any event, SECI's crew districts and crew requirements are completely untethered from the work that those crews would need to perform in order to meet the dual objectives of operating a least-cost, most efficient railroad while also meeting the needs of SFRR customers.

In contrast, CSXT developed its crew districts based upon the work that needed to be performed to serve its customers, three locations at which major train interchanges would occur and the amount of territory that could be covered by a crew within the FRA mandated 12-hours of service laws.

i. Road Crews

CSXT developed its primary crew districts for the SFRR based upon the scheduled general freight and intermodal train service that witness Gibson designed to handle those traffic

groups. CSXT first identified the cars requiring handling in the peak year by origin, destination, On-SFRR point or Off-SFRR point (as applicable to each shipment). CSXT then developed a classification and blocking plan to move that traffic efficiently across the SFRR network. Based upon the results of that analysis, CSXT designed the train services and schedules required to move the traffic across along SFRR's lines. In designing the SFRR's trains, first priority was given to intermodal trains, because much of the traffic handled on those trains is subject to contractual time commitments. Then the merchandise line-haul trains were scheduled for movement along the network. Significant volumes of the SFRR's merchandise traffic originates or terminates at customer facilities, or is received from or forwarded to other carriers, at certain locations along the network. Those points were logical locations for the SFRR to perform classifications and to create blocks. Accordingly, CSXT sited the 13 SFRR regional and local merchandise yards contemplated by its operating plan at those locations. In addition to line-haul service from many of those points, CSXT's operating plan includes local trains operating in turnaround service from those yards. After examining those major rail activity points, it became clear that it would be necessary to provide for crew changes at certain intermediate locations (*e.g.*, between Nashville and Atlanta or Atlanta and Callahan) due to the distance between terminals and/or the terrain traversed. Logical locations, Junta, where many coal trains are hypothesized to be interchanged between SFRR and CSXT, and Manchester, where merchandise activity was performed, were selected. The intermodal and merchandise train scheduling resulted in the identification of 11 major crew districts. Finally, based upon an analysis of the

SFRR's coal and other bulk unit trains, witness Gibson designated three additional crew home terminals (Atkinson, Grafton and Newell) to accommodate those trains.[48]

Based upon the methodology described above, witness Gibson's SFRR operating plan specifies the following crew districts and assignments:

West Division

1. Princeton, IN. A major interchange location between SFRR and CSXT, crews based at Princeton operate in straight-away service to Nashville.

2. Atkinson, KY. A coal-based yard, Atkinson-based crews operate in turnaround service to Dotiki, Madisonville, Cimarron, Paradise, Drakesboro and Cardinal 9. Crews also operate in straight-away service to Nashville.

3. Nashville, TN. Nashville crews operate in straight-away service to Widows Creek, Chattanooga and Junta. Coal, bulk and general freight trains operating between Nashville and Junta, or between Junta and Nashville, outlaw (*e.g.*, they exceed the 12 hours of service permitted by law) 10% of the time, due to the distance and terrain traversed. Mr. Gibson based all of his assumptions regarding the percentage of trains that would outlaw based upon the amount of work the

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[48] It should be noted that unlike unit trains where there is an exact balance between loaded and empty trains, the movement of general freight and intermodal traffic is not perfectly balanced east-west or north-south. The need to balance crews and home terminals was taken into consideration in the final decisions as to where to locate the home terminals and whether to have crews operate in turnaround service (leaving from and returning to the home terminal each day) or straight-away service (departing the home terminal and spending a night at an away terminal, with a return movement on a subsequent day). Ideally in straight-away service the crew can operate another train back to its home terminal after an overnight. When it can't, it is necessary to "deadhead" the crew – have it ride with another crew on a train back to its home terminal.

train will perform, the distance and terrain covered, the level of congestion along the line, and the assumed speeds the trains will travel. Nashville crews operate in turnaround service to Amqui, TN (primarily a CSXT-SFRR interchange point) and to Smyrna, GA.

4. Junta, GA. Crews operate in turnaround service to Atlanta, Jacmac and Stilesboro, GA.

5. Atlanta, GA. Atlanta-based crews operate in straight-away service to Manchester. Atlanta crews also operate in turnaround local service to Junta, serving customers en route.

6. Manchester, GA. Manchester crews operate in straight-away service to Callahan, and in turnaround service to Oglethorpe.

East Division

7. Grafton, WV. Grafton crews operate in straight-away service to Demmler and in turnaround service to Haywood, Loveridge, Consol 95, and Newell.

8. Newell, PA. Newell-based crews pick up Bailey, Emerald, Federal and Blacksville 2 coal trains and operate in turnaround service to Demmler and Grafton.

9. Demmler, PA. Demmler crews operate in straight-away service to Cumberland, Dickerson, Brunswick, Cherry Run and Alexandria Junction. Crews operating coal and other bulk trains and merchandise trains east between Demmler and

Alexandria Jct. (and west between those points and Demmler) outlaw 15% of the time.

10. Alexandria Jct., MD. Crews operating from Alexandria Jct. operate in straight-away service, through the District of Columbia and northern Virginia, to Richmond.

11. Richmond, VA. Richmond crews operate in straight-away service to Pembroke and all points south of Weldon. Coal trains operating between Richmond and Pembroke (and between Pembroke and Richmond) outlaw 12% of the time; general freight trains outlaw 7% of the time. Crews operate in turnaround service to Bermuda Hundred, Ampthill, Wheelwright, Roanoke Rapids, Petersburg and Hopewell. A Richmond-based crew reports to Petersburg to operate the Petersburg turn (south to Emporia, north to Richmond).

12. Pembroke, NC. Pembroke crews operate in straight-away service to Charleston. Pembroke crews also operate in turnaround service to Dillon, Stone and Florence. A Florence-based crew is also assigned to report to Florence to operate daily interchange to the South Carolina Central Railroad at Florence.

13. Charleston, SC. Charleston crews operate straight-away to Savannah and Callahan. General freight trains to Callahan outlaw 7% of the time. They operate in turnaround service to Lane, Yemassee, and Pinopolis Junction. Charleston crews also get taxied to Lane, operate service between Lane and Cross in turnaround, return to Lane and are taxied back to Charleston.

14. Callahan, FL. Callahan crews operate in turnaround service to south to Bostwick and Jacksonville, and north to Waycross. General freight trains to Bostwick outlaw 7% of the time, because they frequently pick up Jacksonville loads at Bostwick and must stop and work Jacksonville on their return trips.

ii. Yard Crews

As discussed previously, SECI's decision to select massive volumes of merchandise traffic for the SFRR's traffic group, and its further assumption that the SFRR would carry loaded and empty "non-revenue" merchandise cars, created the need for a significantly more complex operating plan than the relatively straight-forward plans associated with traditional unit train operations. Given the traffic that it selected, the SFRR is required to deal with individual cars and the service requirements at nearly 900 separate customer locations, rather than a single commodity operating in trainload service between a limited number of origins and destinations. However, SECI ignored those service requirements, performing an RTC simulation in which trains operate "intact" across the SFRR system, designing a physical plant that does not include spur or industry tracks at any merchandise customer locations, and proffering "surrogate" cost estimates to intermediate switching activities rather than analyzing (and presenting the forward-looking costs of) the specific functions that the SFRR would need to perform at particular locations.[49] CSXT's evidence does not ignore those realities; CSXT's operating expert accounts for all of the operations necessary to meet the needs of the SFRR merchandise customers. In

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[49] It is somewhat ironic – and reflective of the mathematical exercise underlying SECI's "operating plan" – that Mr. Crowley, SECI's cost expert, rather than SECI's operating expert, Mr. Reistrup, picked the trains that would operate on the SFRR.

designing those operations, Mr. Gibson made the most conservative assumptions possible – many of which would result in higher costs for the incumbent CSXT.[50]

As described above, the SFRR would require 13 regional and local yards to perform switching for the blocking and classification of cars. Witness Gibson attempted to site those facilities as close as practicable to the locations at which the SFRR would receive cars from (and deliver cars to) connecting railroads, and to where the SFRR and its connections could achieve the longest lengths of haul. Those yards are located at: Callahan FL, Princeton IN, Alexandria Jct. MD, Demmler PA, Nashville TN, Atlanta GA, Pembroke NC, Jacksonville FL, Richmond VA, Charleston SC, Bostwick FL, Rocky Mt. NC, and Savannah GA. In addition, the SFRR would have 11 smaller facilities to handle Transflo general merchandise traffic, and smaller field yards where customer originations and terminations could be handled by the working road freight and local service general merchandise trains.[51] CSXT staffed each of the general freight regional and local yards with the crews and locomotives (SW1500s) necessary to handle the projected volume at each facility. (*See* CSXT Reply WP "SFRR 2018 Yard Switching Crews/Locos.")

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[50] Because of the vast complexities of the SFRR network operations, it is virtually impossible to quantify the additional handlings that CSXT would incur off-SFRR, or the additional miles that the SFRR operations require CSXT to haul traffic, or the inefficiencies and extra costs Seminole's assumptions about the non-revenue SFRR traffic imposes upon the incumbent, especially given the time constraints on the filing of CSXT's reply evidence.

[51] The SFRR also has six intermodal terminals, where all of the work is out-sourced, and several coal yards where coal trains are staged, fueled, and inspected. To the maximum extent possible, and consistent with the CSXT approach to designating crew districts that made the SFRR a least-cost carrier, CSXT tried to locate coal, intermodal and general freight yards in proximity to one another.

iii. Helper Crews

The locations on the SFRR at which helper service is required (Loveridge, Sand Patch, Brunswick and Cowen) are described at pages III-C-88-90 above. The number of crews needed to support this helper service was developed by examining the number of trains requiring help over each district and the times it took to help for the peak year, peak period from CSXT's RTC simulation. The CSXT RTC simulation confirmed that help was needed in each of these districts.

iv. Locomotive And Car Facilities

SECI's operating plan designates a major locomotive repair shop at Folkston GA, and smaller inspection-running repair facilities Newell PA, Petersburg VA, and Nashville TN. Car facilities were also designated for each of these locations. With the exception of relocating the Folkston facilities to Callahan FL, CSXT accepts the SECI locations and functions.

3. Other

a. Fueling of Locomotives

SECI's operating plan contemplates that SFRR road locomotives would be refueled in conjunction with inspections performed at one of the four yards on its system. SFRR assumes that fueling of all locomotives (including helper units at remote locations) would be performed by trucks, rather than at fixed fueling facilities. SECI Opening at III-C-57. As discussed in detail in Section III-D, CSXT accepts SECI's assumption that all fueling would be performed by truck. However, CSXT witness Gibson specifies that a least-cost carrier would use separate fuel and servicing trucks. *See* CSXT Reply at III-D-1-c, *infra.*

According to witness Reistrup, "[b]ased on [his] experience, it is likely that trains received in interchange from CSXT or another railroad will have locomotives with full fuel tanks and that do not require 92-day inspection while on the SFRR." SECI Opening at III-C-37-38. Witness Reistrup's assumption that locomotives received by SFRR in interchange would never require either fueling or a 92-day inspection defies both logic and customary rail industry practice. Based upon witness Gibson's direct responsibility for more than 1200 interchange and other intercarrier agreements during his career at CSXT, he has concluded that witness Reistrup's assumption is, at best, wishful thinking.

b. Car Inspection and Repair Facilities

i. Inspection Locations

SECI assumes that the SFRR would require a total of 141 equipment inspectors, who would be stationed at the SFRR's yards at Folkston, Nashville, Newell and Petersburg. However, neither SECI's operating plan narrative nor the workpapers underlying it evidence any attempt by SECI to tie the number of inspectors assigned to each facility to the number of inspections to be made at that location. (*See* SECI electronic WP "equip inspectors.xls."). In contrast, CSXT identifies the need for 329 inspectors at the SFRR's major merchandise yards, and bases its assignment of inspectors to particular locations on the number of merchandise and coal/other bulk cars requiring inspection at each facility. *See* CSXT WP "Inspection Inspectors – GF and Coal/Bulk.pdf."

ii. Inspection Procedures

The car inspection procedures that would be used on the SFRR are detailed in the workpapers accompanying this filing. (*See*, CSXT WP "CSXT Reply Train Inspection Package.xls" and "Circular_ot_55_j.pdf").

c. Car Repair Facilities

SECI contemplates that the SFRR would perform car inspections at each of the four yards provided for in its operating plan – Newell, PA; Petersburg, VA; Nashville, TN; and Folkston. GA. (SECI Opening at III-C-58) CSXT accepts SECI's premise that the SFRR would perform car repairs at those locations, except that, as discussed above, CSXT's operating plan relocates the Folkston facility to Callahan, FL.

d. Train Control and Communication

i. CTC/Communications System

SECI states that "[t]he facilities reflected in the SFRR's operating plan include a Centralized Traffic Control ('CTC') system covering the SFRR's main lines." SECI Opening at III-C-60. While SECI's "operating plan" includes a CTC communications system, the RTC Model simulation proffered by SECI in support of its operating plan does not. Rather, as discussed above, the railroad modeled by SECI witness Schuchmann included power switches but did not incorporate the signals that are the critical component of a CTC system. Without such signals, the SECI would lack the ability to determine the location of trains on the SFRR system or to advise trains to slow down or stop. As a result of this glaring omission, SECI's RTC Model simulates train movements as if there were no spaces between trains – an assumption that is patently inconsistent with real-world operating conditions.

CSXT corrects this serious error in SECI's track configuration by incorporating all of the necessary elements of a CTC communications system in the SFRR's physical plant.

ii. PTC

Relying upon the purported expert judgment of its operating witness, Mr. Reistrup, SECI consciously omitted any capital or operating costs associated with the Federal Government mandate that railroads that handle regularly-scheduled intercity passenger trains, commuter trains, or freight trains containing toxic or toxic-by-inhalation ("TIH") hazardous materials must install positive train control ("PTC") systems on lines which host such traffic no later than December 31, 2015. *See* SECI Opening at III-C-62-64. Remarkably, SECI acknowledges not only that the SFRR will handle TIH materials, but also that "these materials move over most of the SFRR's main lines." *Id. at III-C-63*. Notwithstanding that fact, witness Reistrup speculates that "it quite possible that the April 2010 deadline [for railroads to submit to FRA implementation plans for installation of PTC systems] (if not the December 31, 2015 implementation date itself) will be pushed back due to the lack of progress to date in developing workable PTC systems." *(Id.)* In short, SECI unilaterally excuses itself from complying with existing legal requirements that apply to CSXT and every other railroad handling TIH traffic – including the SFRR – based solely witness Reistrup's "belief" that the date for compliance with the law may be extended. This wholly unsupported and self-serving position must be rejected out of hand, and SECI must be required to account for the capital and operating costs of PTC across those portions of its system that handle PIH/TIH traffic (comprising approximately 70 percent of the SFRR's lines).

There can be no dispute that the SFRR would be required to comply with the law in the same manner as CSXT and other freight railroads that handle passengers of TIH materials. The Rail Safety Improvement Act of 2008, ("RSIA") (Public Law 110-432, Div. A 122 Stat. 4848), mandates that such railroads install PTC on lines handling such traffic no later than the end of 2015 – a full three years before the end of the DCF period in this case – and that they must submit to FRA by April 16, 2010 their proposed implementation plans, which FRA must approve or disapprove within 90 days of receipt. In addition, FRA has already instituted a Notice of Proposed Rulemaking regarding PTC implementation (74 Fed Reg 35950, July 21, 2009) and the final rule is expected to be promulgated in January 2010. That rule and the RSIA's requirements will apply to the SFRR, just as it will apply to CSXT and other freight railroads, and there is no proper basis upon which the Board could or should excuse SECI from incurring the necessary and appropriate capital and operating costs associated with installation of a PTC system. Quite obviously, Mr. Reistrup's speculation about possible extensions of the deadlines established by the RSIA are a wholly inadequate and inappropriate basis for such a "free pass" for the SFRR.

Accordingly, CSXT's operating experts included the costs of installing a PTC system on the SFRR during the construction of that stand-alone system so that the SFRR will be in compliance with Federal law and regulations for railroads handling toxic and TIH hazardous materials traffic.[52] Because the legislation does not require compliance until 2015, CSXT

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[52] In fact, the FRA has estimated that CSXT and the other existing Class I railroads face just that challenge and will be forced to spend an estimated $5 Billion in initial start-up costs and hundreds of millions more in annual maintenance costs in order to comply with the PTC mandate. *See*

provided for the installation of that PTC system during 2014.[53] In short, CSXT has made provision for the "least cost, most efficient" method of complying with the Federal mandate regarding PTC.

In order to develop the estimated PTC costs for the SFRR, CSXT's experts relied upon current vendor estimates and some of the metrics included in the SECI filing.[54] The development of the PTC costs was divided into three parts: PTC Way costs, PTC Back Office cost, and PTC locomotive costs. For the Way cost development in addition the vendor quotes for hardware, CSXT used SECI's proffered labor rates for inspectors ($50/hr) and helpers ($35/hr). These rates are much lower than CSXT itself expects to incur when it implements PTC, where its rates for Signalmen and Lead Signalmen are much higher. To develop the Back Office cost estimates, CSXT took 11% of the total cost estimate it has for installing PTC on 15,000 miles of its system (1700/1500) with one exception - the back office computer server and software has a $1,000,000 minimum cost for the system, licensing and software. The locomotive PTC costs are based upon vendor quotes and applied to the number of AC units required by the SFRR. When combined

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http://www.aar.org/Home/AAR2/InCongress/Safety%20and%20Security/~/media/AAR/Position Papers/PTC%20Oct%202009.ashx

[53] In the real world, CSXT and other major railroads began planning for PTC as soon as the RSIA was enacted, and they will begin installation of PTC well in advance of 2015. Under SAC rules, it is assumed that the SFRR would have unlimited resources, so that it could install PTC over all required portions of its system in just one year.

[54] Because much of the PTC cost is a function of the track that needs to be covered, and because of the sequential nature of preparing a SAC case (*i.e.*, traffic, then operating plan based on traffic, then engineering to build the necessary infrastructure to handle the operating plan, then testing the infrastructure adequacy with an RTC simulation) it was decided to use SECI's signal and communication counts as the basis for the way portion of the PTC. Although it turns out that the SECI counts understate the needs, they are not off by an order of magnitude.

the implementation of PTC on the SFRR totals $52.3 million, in 2009 dollars, CSXT's development of PTC is detailed in CSXT WP "SFRR CnS Spreadsheet PTC Final.xls."

iii. Dispatching Districts

The SFRR will have dispatching districts that exactly cover the 11 major general freight crew districts: Princeton, IN to Nashville, TN; Nashville, TN to Junta, GA; Atlanta, GA to Manchester, GA; Manchester, GA to Callahan, FL; Callahan, FL to Bostwick, FL; Grafton, WV to Demmler, PA to Alexandria Jct., MD; Alexandria Jct, MD to Richmond, VA; Richmond, VA to Pembroke, NC; Pembroke, NC to Charleston, SC; Charleston, SC to Callahan, FL.

III. STAND-ALONE COST

D. OPERATING EXPENSES

INTRODUCTION

Prior to detailing CSXT's specific operating expense estimates for the SFRR, it is important to address several significant – and unprecedented – operating expense "methodologies" and "assumptions" that SECI used to develop its operating expenses in the instant case. Those contrivances have never before been attempted in a Stand-Alone Cost presentation, yet SECI asserts each as if it were a routine and accepted process, a fait acompli.[1] Specifically:

(1) Rather than designing a train plan to accommodate SFRR's "selected" traffic, and developing the forward-looking stand-alone costs associated with the inter-intra-train (I&I) switching contemplated by that plan, as required by the SAC test, SECI arbitrarily assumed a certain level of train and switching activity (based upon data "adopted" from its incomplete analysis of CSXT's 2008 train event file) and applied historic CSXT URCS costs to those activities;

(2) Rather than designing and testing the local and yard services required to originate and terminate cars in the manner necessary to meet the needs of SFRR's customers, and developing the stand-alone costs of those services, as required by the SAC test, SECI guessed at a number of switches to be performed by the SFRR and manipulated an internal CSXT-CSXI

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[1] SECI briefly addressed these items in its Section III-D-9. Given the radical departure of each of these methodologies and assumptions from SAC theory and/or Board precedent, CSXT decided to address them prior to discussing its operating expense development.

transfer price methodology to use as a "surrogate" for the stand-alone costs of performing those switches;

(3) Rather than building the intermodal facilities required to provide service to SFRR's intermodal customers and developing the forward-looking costs associated with intermodal lifts and other terminal activities, as required by the SAC test, SECI simply hypothesized intermodal costs based upon internal CSXT-CSXI transfer prices; and

(4) Rather than bothering to determine the origin, destination and customer service requirements of the majority of the merchandise cars handled by SFRR trains, SECI simply classified them as "non-revenue" traffic and awarded the SFRR a "manifest line-haul credit" – essentially a reduction to calculated SFRR operating expenses for general freight cars and intermodal units so classified, derived from internal CSXT-CSXI intercompany billings.

In each case, SECI's evidence made no effort to demonstrate that the CSXT URCS costs or CSXT-CSXI internal transfer prices upon which it relied were in any way reflective of the stand-alone costs that a hypothetical, least-cost, most efficient carrier would incur in providing the subject services – SECI simply asserted the costs.

SECI's use of CSXT historic URCS costs and 2008 internal CSXT-CSXI transfer prices, in lieu of developing the stand-alone costs, is a violation of the first principles of the SAC test. As the Board stated in *AEPCO*:

> By identifying the costs that would need to be incurred by an efficient replacement carrier, the SAC test ensures that the defendant carrier's rates will be disallowed only if the revenues that the defendant is earning from the selected traffic group exceed the amount needed to cover all of the forward-looking costs that an efficient provider of rail service would face. At the same time, it ensures that the complainant shipper is not required to pay for

> cross-subsidies or inefficiencies built into the defendant's existing operations." *AEPCO*, STB Docket No. 42058, served March 15, 2005, at 2. (emphasis added)

A. SECI's Treatment of SFRR Switching Costs

In *AEPCO*, the STB dismissed the complaint "based on the failure of AEPCO to measure the stand-alone costs" of constructing a necessary piece of trackage. (emphasis added) SECI's failure to develop forward-looking stand-alone switching costs (or any other stand-alone operating costs) should result in the Board rejecting the instant Complaint as well.

Here, in addition to train-related operating costs derived from its operating spreadsheets (*i.e.*, car-mile related costs, locomotive unit-mile related costs, gross ton-mile related costs, etc.), SECI included SFRR base-year (2009) operating expenses of approximately $16.7 million for I&I switching at intermediate locations and for yard and local train movements. SECI explained development of these costs as follows:

> "The 2008 CSXT car and train movement data produced in discovery indicates that in some cases, involving primarily general freight traffic, a CSXT train containing SFRR traffic (which could include a local train whose crew began and ended its tour of duty at the same point) dropped off or picked up cars at intermediate points. Some of these cars were SFRR cars, and some were not. As described in Part III-C-3, it is impossible to discern based on the CSXT data exactly which cars were picked up or dropped off at which points. However, SECI's experts recognize that, like CSXT, the SFRR will incur costs for intermediate switching of some blocks of its cars that move in trains assumed (for RTC modeling purposes) to operate intact between a particular O/D pair.
>
> To account for these costs, SECI Witness Crowley assumed that each time CSXT's 2008 car/train movement data showed that a train carrying SFRR traffic dropped off or picked up a SFRR car at an intermediate point, the SFRR incurs a switching cost. As a surrogate for this cost, Mr. Crowley used CSXT's 2008 system-average I&I switching cost. The total number of I&I switches incurred by the SFRR's trains in the base year equal 419,164, and

> the total I&I switching cost assigned in the base year is $7.3 million. (emphasis added)
>
> As discussed in Part III-C-2, SECI's experts have also included costs associated with yard trains and local trains that move SFRR traffic but that were not included in the RTC Model simulation. In the 2008 base year this includes 2,134 yard trains and 3,246 local trains (defined as trains that begin and end operations at the same location which carry SFRR cars). The cost associated with these trains is based on the costs of switching activities included in the transfer payments between CSXT and CSXI under the TSA, which CSXT provided in discovery. The total cost included for yard and local switching in 2009 equals $9.3 million. *See* e-workpaper "SFRR Switch Expense additive.xls" for the details of this calculation." SECI Opening at D-108 – 109. (emphasis added)

i. Intermediate (I&I) Switching

Although it provided for none of the required facilities, SECI assumed that I&I switching would occur at 22 locations across the SFRR. SECI's estimate of the number of cars handled in I&I switching was derived from its convoluted and arbitrary methodology of attempting to match revenue waybill records with CSXT's 2008 train event file, described in Section III-C. SECI describes development of its I&I estimate as follows:

> "Each train [from SECI's peak period train list] was evaluated to determine if the cars on the train originated, were interchange received or forwarded, or terminated at the SFRR start or end point for each CSXT train in the list. For any train whose cars were not originated, received, forwarded or terminated, the activity at the SFRR start or end point was determined to be an I&I switch." SECI Opening at III-C-24, 25.

In other words, SECI witness Crowley – not SECI operating expert, Mr. Reistrup – apparently attempted to identify On-SARR and Off-SARR locations that he assumed were not origin, destination or interchange points. He then compared the number of cars on a merchandise or

intermodal train departing the origin point and arriving at the destination point. Witness Crowley then assumed that the difference in the car counts (train departure to train arrival) represented the number of I&I switches that had occurred. Witness Crowley then summed the car counts for each location and multiplied that figure by 52/2 to annualize it, resulting in his conclusion that 444,000 cars would require intermediate switching.

Thus, in a guess at how many I&I switches would be performed by the SFRR, Mr. Crowley counted the difference in the number of cars between the beginning and end of a train run, eliminated the cars he knew were originated, terminated, forwarded or received, and assumed that the difference was I&I switches. Because Mr. Crowley only kept track of SFRR's "selected" cars, he could only tell if those cars had been originated/ terminated/ forwarded/ received. Because he was only counting the difference in the total number of cars, he could not know whether CSXT had actually performed many more intermediate switches – especially for the merchandise trains that carry the same train ID for lengthy hauls. As the CSXT operating plan, with some 2 million general freight car switches demonstrates, SECI's guess at 444,000 switches grossly understates the switching activity that a least-cost carrier could expect to perform to handle this volume of traffic.

Witness Crowley then multiplied this contrived number of I&I switches by the 2008 system average CSXT URCS variable cost for I&I switching. The system average URCS variable costs include operating cost elements as well as ownership costs for both locomotives and road property. Thus, while SECI's use of URCS costs purports to provide for the cost components associated with I&I switching, no effort was made to tie the level of costs to the actual operations of the SFRR. SECI's flawed data matching exercise resulted in a massive

understatement of the number of cars requiring I&I switching. Nor did SECI make any attempt to support the idea that CSXT historic URCS costs are representative of the forward-looking costs required by the SAC exercise.

CSXT's switching cost estimates for the SFRR do not suffer from these deficiencies. This is because CSXT did not have to "guess" at the number of I&I switches that the SFRR would be required to perform. CSXT's train plans are built upon the service requirements of each car, loaded and empty, handled by the SFRR. Those plans, developed from the bottom up, provide the locomotive, crew and other operating activities required to handle each car. Using those activities, the operating expenses and the real property expenses (*i.e.*, the necessary yards and other facilities) associated with intra- and inter-train switching that a least-cost, hypothetical competitor would incur were developed.[2] In short, the CSXT costs are forward-looking, take account of all the cars moving on SFRR trains, and are developed in a manner consistent with the principles of the SAC test, whereas SECI's by definition are not.

ii. Yard & Local (Origination/Termination) Switching

SECI acknowledged that its "selected" revenue traffic group would require yard and local train service. However, rather than designing an appropriate yard/local train operating plan, SECI proffers "surrogate" costs for local and yard train service. Specifically, rather than develop the number of yard and local switches required (SECI had to assume a number because it did not develop any plan from which it could directly count switches), SECI instead assumed SFRR system total yard and switching minutes.

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[2] *See* CSXT WP "Seminole Block and Yard Volumes.xls" and "General Freight SFRR 2018 Yard Switching Crews/Locos.pdf."

SECI started the estimation of yard and local switching minutes using its SFRR subset of 2008 CSXT trains. It identified Yard trains as CSXT trains whose identifier started with "Y" and Local trains as non-yard trains for which the ON-SFRR point was the same as the OFF-SFRR point. Applying these assumptions produced estimates of 2,282 yard trains and 3,609 local trains for 2008. SECI then eliminated 148 yard and 363 local trains whose ON-SFRR point was at what SECI labeled as "existing" yards, reducing the total to 2,134 yard and 3,246 local trains. SECI then arbitrarily assumed that eight hours would be required to switch each train, and indexed from 2008 to 2009 using its tonnage index, to arrive at a total of 2.4 million yard and local train switching minutes.

In order to develop the cost associated with yard and local train switching, SECI used CSXT-CSXI transfer price documents (produced in discovery) and calculated a purported cost per switch minute that it applied to the switch minutes it had estimated for yard and local trains. SECI developed a cost per switch minute of ${{ }}. *See* SECI WP "SFRR Switch Expense additive.xls". Although the derived price per switch minute technically provided for cost components attributable to local and yard switching, SECI made no effort to tie the level of costs to the operations of the SFRR. It simply asserted that the application of its costs were appropriate; it made no attempt to test whether the costs asserted were consistent with what a least-cost hypothetical carrier would incur. It made no attempt to develop the stand-alone forward looking costs. It simply took a 2008 internal transfer price between corporate affiliates and asserted that it was a stand-alone cost.

CSXT's SFRR local and yard costs suffer no such deficiencies. CSXT's operating plan takes account of the local and yard service requirements for all the traffic handled – at the car

and train level – based upon the requirements of customers served.[3] CSXT's costs include the forward-looking locomotive, crew and other operating expenses, and the real property costs required to perform this service for the SFRR customers – consistent with the principles of the SAC test.

B. SECI's Treatment of SFRR Intermodal Lift and Ramp Costs

SECI's operating expense estimate included approximately $11.5 million in 2009 intermodal operating costs associated with lifts and certain other intermodal terminal related activities. As with many other operating expense items, SECI's intermodal costs are based both upon assumptions that are unsupported and costs that are not forward-looking.

SECI proposed a cost per lift based upon materials produced in discovery related to the CSXI East St. Louis intermodal terminal facility. The East St. Louis terminal is, primarily, an outsourced operation and, as such, is not representative of the cost structure of any of the CSXI terminals located along the portions the CSXT system replicated by the SFRR.[4] SECI developed a cost per lift of ${{ }}, indexed to 1Q 2009 level, by taking the lift-related vendor costs for 2006 and dividing that figure by the total lifts performed in 2006, at East St. Louis. CSXI has one additional outsourced terminal where the materials produced in discovery enable a calculation of a cost per lift – Cleveland. Performing the same calculations as SECI did for East St. Louis, for Cleveland results in a 1Q 2009 per lift cost of ${{ }}. While neither the East

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[3] *See* CSXT WP "Seminole Block and Yard Volumes.xls" and "Seminole - Train Category Statistics.xls."

[4] It is important to note that even in many outsourced terminal operations, such as East St. Louis, the clerical operations are performed by CSXI employees. SECI makes no accounting for such functions in its per lift cost for the SFRR.

St. Louis nor Cleveland cost is representative of the costs incurred by CSXI along the territory replaced by the SFRR, CSXT accepts that a least cost competitor may be able to achieve such low costs using totally outside contracted services. To develop the lift expenses for its SFRR, CSXT uses the weighted average cost of East St. Louis and Cleveland, indexed to 2009 levels ${{ }}.

SECI also included an allocation of other terminal related expenses to SFRR intermodal operations, which it derived from CSXT-CSXI transfer price spreadsheets produced during discovery. Basically, SECI took {

} and developed "other terminal costs." SECI's other terminal costs included{

.} SECI totaled the 2008 billings from CSXT to CSXI for these functions and divided that figure by total 2008 units handled to arrive at a 1Q 2009 cost of ${ } per unit. There are problems with both SECI's cost calculations and application.

First, SECI's assumption that the { }can simply be adopted by the SFRR is a violation of SAC principles. While the Board's SAC rules may permit a SARR to "step into the shoes" of the incumbent (defendant) railroad, SECI assumed in the instant case that it could step into the shoes of both CSXT and CSXI (a non-party). Nothing in Board precedent even hints at such a notion. Nevertheless, even if the Board were to permit such an assumption, SAC rules

require that the SFRR must assume all of the obligations and responsibilities associated with { }, not simply "cherry-pick" the parts it finds to its liking.[5]

Second, SECI's development of "other terminal costs" assumes that the { } reflect all of the costs CSXI incurred during 2008 in connection with the functions identified. That assumption is wrong. Some facilities, such as the East St. Louis terminal used by SECI to calculate its direct cost per lift, are outsourced. Others are staffed by CSXI employees, still others are staffed by a combination of outside vendors, CSXI employees and CSXT employees. For example, in some locations CSXT switches CSXI intermodal terminals. In other cases, where the use of CSXT is inconvenient or impossible, CSXI contracts switching to a third party contractor. In developing the dollar numerator for its "other terminal costs," SECI did not include all of the expenses required to develop a complete per container/trailer cost. In particular, SECI failed to include { } in OS Security, { } in outside switching, and { } million in car inspection costs (all incurred by CSXI during 2008) in its calculated cost per load, understating the average cost by at least ${ }. *See* CSXT WP "CSXT Reply Intermodal Lift and Ramp Costs.xls."

Third, SECI assumed, in direct violation of SAC rules, that the property lease expenses – { } – were representative of the forward looking costs that a least-cost competitor would incur. The purpose of the SAC test is to

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[5] SECI assumes, for example, that the revenues the SFRR would earn for intermodal traffic would be the CSXI revenues (not those earned by CSXT performing the same line-haul transportation function assumed to be performed by the SFRR) and yet the SFRR would only pay the transfer price costs paid by CSXI to CSXT, rather than testing to determine whether those transfer price costs are representative of forward-looking stand-alone costs.

determine the forward-looking costs – not to assume the historic costs. The rates that CSXI pays CSXT for terminal rental are based upon {

} not the current property value.

Finally, SECI combined its "other terminal cost" per unit figure with its calculated cost per lift and applied the combined amount to the number of lifts handled by the SFRR, rather than applying its other terminal cost figure to the total intermodal units handled by the SFRR, thus significantly understating costs during 2009. Thus, while SECI assumed that the SFRR would handle over 460,000 revenue intermodal units in 2009, only about 304,000 of those units are subject to lifts along the SFRR. Clearly, costs associated with security, switching, switching fuel, cargo theft, etc., are not driven by the number of lifts performed, but by the number of units handled.

As the foregoing suggests, for intermodal unit handling – much like it did for I&I, local and yard switching – SECI attempted to provide a "cost allowance" to account for certain intermodal service elements, but failed to develop the required operating and customer service plans, and consequently the forward-looking stand-alone costs, all as required by the SAC test.

CSXT accepts the SECI concept of an average cost per lift and an average cost per unit, but rejects SECI's use of CSXT-CSXI internal transfer prices as a "surrogate" for those costs. The SFRR intermodal costs presented by CSXT correct the deficiencies in SECI's analysis. First, CSXT requires the SFRR to construct its intermodal terminals, and, thus the property costs

are forward-looking, stand-alone costs.[6] Second, CSXT develops the full costs associated with outside contracted intermodal terminal operations. In the case of the per-lift cost, CSXT developed the weighted average cost per lift for an outside contractor, using Cleveland and East St. Louis costs and lifts, and applied that average per-lift cost to all the lifts performed by the SFRR. Finally, the CSXT per-unit costs for "other terminal expenses" are developed using all of the 2008 costs incurred by CSXI, not just the costs billed by CSXT under { }, and are applied to all 433,000 intermodal units (based upon CSXT's restated traffic volumes), not just the units that are lifted. CSXT's 2009 intermodal lift and terminal costs for the SFRR, excluding land costs, are $20.3 million. *See* CSXT WP "CSXT Reply Intermodal Lift and Ramp Costs.xls"

C. Manifest Line-Haul Credit

As detailed in Section III-C, SECI engaged in a convoluted, and ultimately fatally flawed, exercise whereby it attempted to match cars it selected for its revenue traffic group with actual CSXT trains operating during 2008, using CSXT train event data. When SECI was able to match at least 15 cars from the revenue traffic group with a particular train, it identified that train as one that would operate intact on the SFRR.[7] Clearly, other cars (or container/trailers) were on the selected trains, especially for manifest and intermodal traffic. Because SECI decided to operate the selected trains intact, SECI retained those "other" cars on the SFRR train and called

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[6] Requiring the SFRR to construct and own it intermodal terminals is consistent with the SAC test mandate that a complainant develop forward-looking costs. (*see* pp. III-C- 78-79, *supra*)

[7] As described above, SECI attempted to finesse this deficiency of failing to develop an operating plan by throwing dollars at functions, such as switching, that it recognized needed to be addressed.

them "non-revenue loads.". As described previously, SECI's non-revenue traffic included both empty and loaded cars/containers – loaded cars for SFRR customers as well as other customers – and even the flat cars on which intermodal containers/trailers were travelling.

> "The SFRR is assumed to operate only complete trains intact from origin to destination for purposes of the SECI's simulation of its peak-period operations using the RTC Model. The SFRR's trains may contain non-SFRR cars, to the extent they are received in interchange from CSXT or another railroad with traffic that is not included in the SFRR's traffic group. Any such non-SFRR cars remain on the SFRR's trains, and the SFRR carries them along with its own cars." (SECI Opening at III-D-107)

SECI developed operating expenses associated with the "non-revenue traffic," along with the revenue traffic, and then deducted from its operating expenses what it described as a "manifest line-haul credit," which was based upon gross ton miles (GTM's). {

} One of the internal transfer prices relates to the {

}. In other words

} Using the monthly intercompany billings for 2008, SECI calculated an average GTM price, indexed it to 1Q 2009 levels, and applied that price to its guess of the GTMs associated with the non-revenue cars handled by SFRR trains. In doing so, SECI took what is {

}, and expanded it into the basic compensation (actually "credit") for a huge proportion of the SFRR traffic.

SECI was forced to estimate the car-miles associated with "non-revenue" cars because it did not bother to track the individual movement of non-revenue cars. As a short-cut, Mr. Crowley took the average number of cars on a train, measured as the difference between the number of cars on a train between train departure and train arrival, and multiplied that average times the total miles the train travelled. (This assumption is not acknowledged by SECI, and certainly no attempt is made to defend it). Witness Crowley then arbitrarily allocated the estimated car-miles between revenue and non-revenue traffic. The assumed 2008 non-revenue car-miles were then indexed to 2009 tonnage levels, and multiplied times assumed weights per car (a single general freight car weight and a single intermodal car weight), to generate GTMs. SECI then applied the calculated average 2008 transfer price to the assumed GTMs. For 2009, SECI claimed a credit of $108.6 million.

The thought process that motivated SECI to include these cars on SFRR trains is uncertain. What is certain is that, having elected to include "non-revenue" cars on the SFRR trains, the SFRR was required to provide whatever service was necessary to meet the needs of the customers. SECI's assertions of data inconsistencies notwithstanding, CSXT was able – using the very same data produced to SECI during discovery, and SECI's own work papers – to identify the specific car initial and number, loaded or empty status, and even customers associated with the cars. From the perspective of the CSXT operating plan for the SFRR, the non-revenue loads were treated the same as SECI's "selected" loaded cars. Local and yard switching service was provided where required; I&I switching was provided where required;

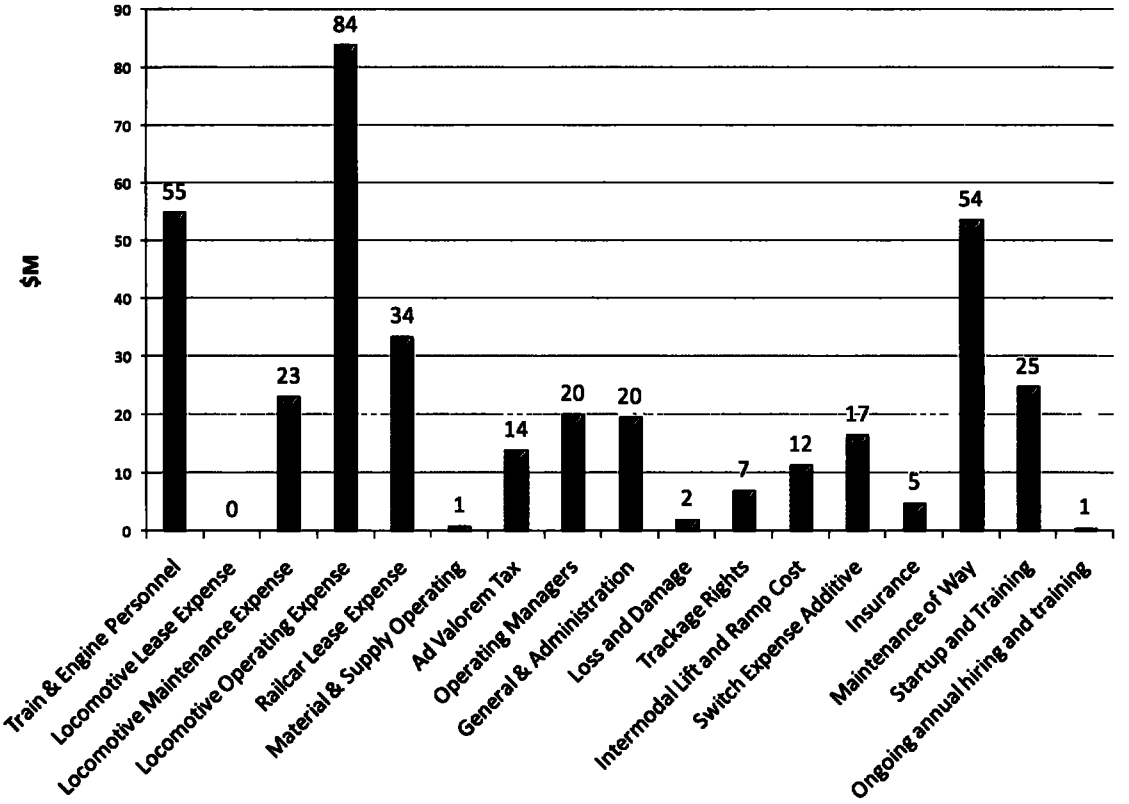
intermodal lifts and terminal services were provided as required; blocking and interchange with CSXT and other connecting carriers was provided as required. And, the appropriate forward-looking stand-alone costs associated with handling these cars were developed, as required by the SAC test.[8]

Operating Expense Categories

SECI listed 17 operating expense categories in its electronic work paper, "SFRR Operating Expense.xls". It also included the manifest line-haul credit (discussed immediately above) of $108.5 million for 2009. The SECI 2009 annual operating expenses are $264 million (net of the manifest line-haul credit).

[8] The calculation of the manifest line-haul credit is discussed in greater detail in Section III-D- 9, below.

SECI Estimate of SFRR Annual Operating Expenses



1. Locomotives

a. Ownership

SECI stated (SECI Opening at III-D-3) that the SFRR would require eight SW1500 locomotives for non-road service (*i.e.*, yard switching and work trains). Citing an article from the June 2008 issue of *Railway Age*, SECI selected a daily lease rate of $100 (the mid-range of

the article's estimates), multiplied $100 by 365 days, and then indexed to 2009 Q1 (using the AAR's RCR – East, Equipment index) for a 2009 total of $0.3 million.[9]

CSXT accepts SECI's designation of SW1500 units for use as yard/work train locomotives, as well as SECI's designation of a 2008 lease cost of $100 per day. As explained in Section III-C, SECI's failure to develop an actual operating plan resulted, among other things, in SECI failing to construct any of the yards required for the SFRR to handle merchandise traffic. CSXT corrected this deficiency, and Mr. Gibson designated 13 regional and local merchandise yards (as well as numerous field yards) to serve local customers. Analysis of the volume of loaded and empty cars to be handled at each regional and local merchandise yard, and the number of crews required per trick results in a peak year requirement of 41 SW1500 locomotives for merchandise yard switching and work train service. CSXT accepts SECI's calculated 3.7% spare margin.[10] At a daily rate of $100/per day indexed to 2009 levels, CSXT estimates 2009 lease costs for the SFRR yard locomotives of $1.3 million.[11]

With regard to line-haul locomotives, SECI designated that the:

> "SFRR purchases its AC4400 locomotives and capitalizes these locomotives in the DCF model. The SFRR purchase price for AC4400 is $1.83 million per locomotive. This purchase price is based on CSXT's most recent purchase price for these locomotives

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[9] *See* SECI Opening III-D-1 "Locomotive Cost.pdf": 2009 Q1/Average of Four Quarters for 2008 = 271.1/271.6; 8 locomotives * $100/day * 365 days * 271.1/271.6 = $291,462.

[10] In addition to the 39 units required for merchandise switching, including the spare margin, SFRR MOW forces require two work trains, adding 2 SW1500 locomotives, for a peak year total of 41 units.

[11] Adjusting the SW1500 2018 unit count to 2009, results in a 2009 locomotive count of 36 units.

> of ${ } million indexed to 1Q09 using AAR equipment rents index."[12] (SECI Opening at III-D-4)

CSXT witness Gibson accepts SECI's designation of 4400-type units for road and helper service. However, he corrects SECI's designation of AC4400CW units and instead uses ES4400AC model locomotives. The reason is quite simple: the CW model was not available in 2008-2009 – GE had discontinued manufacture of that model, and instead offered the ES model.[13]

As explained in Section III-C, the required number of ES4400AC units was determined by taking a "snapshot" of the peak period from CSXT's RTC simulation and counting the total number of units powering and helping trains. To this figure, the SECI 3.7% spare margin was added, resulting in a total 2018 requirement of 183 ES4400AC units. Using an actual 2008 CSXT ES purchase price of ${ } million each (indexed to 1Q2009 levels)[14] and reducing the 2018 count to 2009 levels results in total 2009 purchase costs of $350 million.

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[12] SECI estimated an investment cost for AC4400 locomotives based on costs in the "Locomotive Assets.xls" file that CSXT produced in discovery. That file included data for a total of 4,566 locomotives. SECI developed its assumed purchase price based on 25 CSXT - produced records for purchases made in 1Q 2003, although there were 10 AC4400CW records for 2005 (despite SECI's assertion that it used the "most recent" purchase price).

[13] Certainly SECI's operating witness Reistrup should have known of change by GE. One can only assume that one of SECI's other witnesses designated the specific CW model because indexing a 2003 purchase price to 2009 levels resulted in a lower per-unit purchase price than using an 2008 actual CSXT purchase price.

[14] The CSXT's 2008 AC purchases were for the heavy version of the ACs (CSXT is purchasing, and has plans to convert its fleet over time to, all heavy units) and included DP capability. In order to account for PTC, approximately $65,000 (2009 $) per unit was added in 2014.

Table III-D-1
Comparison of Locomotive Costs
2009

	SECI	CSXT	Difference
1. Number of AC4400 Locomotives	164	171	7
2. AC4400 Purchase Cost (Million)	$116.6	$350.0	$233.4
3. Number of SW1500 Locomotives	8	36	28
4. Per Unit SW1500 Cost	$36,433	$36,433	0.00
5. Total Sw1500 Lease Cost	$0.3	$1.3	$1.0

b. Maintenance

SECI assumed the SFRR locomotive fleet would be maintained through a full service maintenance agreement. Using materials produced during discovery, SECI selected an agreement { } for a maintenance cost for AC4400CW } and SW1500 locomotives { }. (SECI used a daily rate for GE manufactured Dash 7-type units as a surrogate rate for SW1500s, which were manufactured by EMD).[15]

CSXT accepts SECI's assumption of full-service maintenance agreements. The agreements require {

}. SECI specified a major SFRR locomotive shop at Folkston GA, with

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[15] The { } is dated Feb. 2000. SECI calculated an adjustment factor of { } using a formula provided in the agreement as follows: {

}

three smaller running repair/inspection facilities at Newell PA, Petersburg VA and Nashville TN. CSXT accepts the locomotive facilities specified, but because CSXT witness Gibson consolidated SFRR yard functions for Waycross, Folkston and Callahan at Callahan FL (where by far the largest number of switches would be performed) the SFRR major locomotive repair shop will be located at Callahan.

Table III-D-2
Comparison of Locomotive Maintenance – 2009

	SECI	CSXT	Difference
SW1500	**$806,738**	**$3,630,319**	**$2,823,581**
AC4400ES	**$22,399,612**	**$23,360,686**	**$961,074**

c. Servicing (Fuel, Sand & Lubrication)

i. Sand & Lubrication

SECI assumed that SFRR fueling and servicing would be performed by Locomotive Fuel & Service Trucks (LFST). CSXT believes this to be inefficient and not a practice a least-cost carrier would use, primarily because of the limited capacity of LFST trucks. CSXT experience is that a Locomotive Service Truck (LST) can service up to two more locomotives than an LFST before resupply. Because use of the LST makes more economic sense than the LFST operation used by SECI, a least-cost SFRR would use that option.

The locomotive servicing unit cost developed by SECI failed to include the 2008 lube oil costs incurred by CSXT.[16] In order to estimate the servicing costs for the SFRR, SECI took CSXT's 2008 R-1, Schedule 410 Line 411 (loco servicing train and helper costs) and Line 427 (loco servicing yard costs) totaled them and divided by CSXT's locomotive unit miles (LUMs) for road and yard service to develop costs per LUM. SECI then applied the LUM unit costs to the road/helper and yard LUMs developed for the SFRR. Thus, SECI's servicing costs accounted for the sand and water used by CSXT (and to be used by SFRR), but not for almost { } million in lube oil costs that CSXT reported within Line 202, repair and maintenance.[17]

As explained in Section III-C, CSXT accepts SECI's assumption that fueling and servicing locomotives will occur at 4 locations – Nashville TN, Callahan FL (moved from Folkston GA to be more efficient), Petersburg VA, and Newell PA. Under the CSXT plan, each of these locations is assigned one LST[18] which will service SFRR locomotives with water, sand and lube oil. SFRR will pay an outside contractor a weekly rate of $5,250 for each LST (based upon vendor quotes), which includes the trucks, insurance, maintenance and fuel for the trucks.

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[16] In the CSXT hierarchy of accounts for the R-1, account "52100800 MTL-LUBRICANTS-LOCO" is reported on line 202 (Locomotive Repair & Maintenance) of Schedule 410, Operating Expenses. This is the only place that this account appears in Schedule 410. Thus, all of the CSXT 2008 Lube Oil Expense { } is reported there and not included in Lines 411 and 427.

[17] The lube oil costs appropriately included within the numerator are two-fold: servicing lube oil and lube oil changes in the shop; the lube oil costs are <u>not</u> included in { } and are not accounted for anywhere in SECI's servicing costs.

[18] SECI's evidence does not take account of the cost of the trucks it specified. CSXT specifies Quality Rail Design trucks for the SFRR, which are straight-frame trucks, and includes the truck costs in its locomotive servicing expenses for the SFRR.

In order to develop the lube oil, water and sand unit cost associated with the LST operation, CSXT added the Line 202 lube oil costs that SECI failed to include to the Line 411 and 427 costs and divided by the CSXT LUMs to develop new costs per LUM. The new unit costs were applied to the LUMs generated from the CSXT operating plan for the road/helper and yard locomotives to provide for the SFRR servicing costs.

ii. Locomotive Fuel

Rather than calculating actual CSXT fuel consumption rates from the Event Recorder Automated Download (ERAD) data produced in discovery, or even using the traditional measure of fuel consumption based upon LUMs, SECI attempted to estimate SFRR road locomotive fuel consumption and fuel costs using a roundabout and inherently incorrect methodology, based upon its erroneous ton-mile assumptions. Basically: (1) SECI tried to estimate 2008 SFRR car-miles using its incomplete CSXT train analysis,[19] and adjusted to 2009 car-mile levels using SECI's 2008-to-2009 tonnage ratio; (2) SECI then assumed average tons per car figures, separately for coal, intermodal and merchandise freight (SECI used the same tons/car it assumed for the RTC simulation), and multiplied those assumed weights by the 2009 car-miles it estimated to generate 2009 GTMs; (3) then, using formulas from the {

} SECI attempted to derive { } figures. It applied

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[19] SECI's futile attempt to estimate car-miles was discussed above at III-D-5. The fact is that, although SECI was able to fairly accurately track many (but not all) revenue car movements, the revenue car-train event file match approach resulted in SECI losing virtually all visibility of individual non-revenue cars. As a result, SECI had to guess at the car-miles by taking car count averages, and then making arbitrary allocations of car-miles between revenue and non-revenue traffic. Because SECI's non-revenue cars out-number its revenue cars by more than 2-to1, the need to guess at car-miles is a significant problem, and makes car-mile, and thus ton-mile, driven results questionable.

those artificially derived consumption and fuel price figures to its estimated SFRR 2009 GTMs (calculated in step 1) to estimate 2009 SFRR fuel expenses for the AC4400 fleet.

In addition to being unnecessarily complicated, SECI's approach contains a number of conceptual and arithmetic mistakes. They include:

- using a formula from { };
- using a $/gallon calculation that weighted monthly };
- using unsupported tons/car factors that are multiplied by suspect car-miles to determine GTMs, based on peak week trains but applied to car-miles based on whole-year 2008;
- using factors clearly based upon { } but applying it primarily to merchandise and coal/bulk traffic.

Ironically, each of these manipulations is unnecessary, and seems to be nothing more than an attempt to develop unsupportable consumption rates and an unrealistic fuel price.

For example, using this complicated and inherently wrong methodology, SECI reached a 1Q 2009 fuel cost of $1.008 per gallon. To reach this artificially low number, SECI{ } for the fourth quarter of 2008 by the RCAF-U Fuel values and by{ }.[20] The relevance of a price derived from such a meaningless arithmetic exercise is elusive at best. And, the applicability of { } to the SFRR is clearly inappropriate. What is clear is that the resulting $1.008 per gallon was derived with the obvious purpose of producing a

[20] The inappropriateness of asserting an internal transfer price as being representative of forward-looking stand-alone costs was discussed above.

manifestly unrealistic price – a price that has nothing to do with market-based, forward-looking costs. SECI's reliance upon an artificially derived fourth quarter 2008 fuel price indexed to first quarter 2009 levels for a filing made at the end of August of 2009 is clearly results-driven, and not representative of market prices. All SECI needed to do was to use the actual first quarter average paid by CSXT. That information was produced to SECI in discovery.

More fundamentally, SECI's reliance, once again, upon an internal transfer price as representative of forward-looking stand-alone costs, or market prices is utterly inappropriate. SECI made no attempt to tie its fuel costs to market conditions, or even to the SFRR's operating characteristics. It merely asserted that those were the costs the SFRR would incur. There is no precedent in the Board's SAC cases to support this approach.

In contrast to SECI's approach, CSXT used the ERAD data produced in discovery. The STB has accepted fuel consumption based on event recorder data in *TMPA*, *Excel*, and *AEP Texas*. Use of the ERAD data is preferable because it reflects geographic and train-type characteristics, *e.g.*, a locomotive's fuel consumption rate decreasing as the number of locomotives on the train increases. Using the ERAD data, CSXT calculated separate fuel consumption rates, measured in gallons/LUM, for coal, intermodal and merchandise trains, and for the number of AC locomotives powering those train types, over the specific line segments replicated by the SFRR. The specific train type ERAD consumption rates were applied to the LUMs generated from CSXT's operating plan. Specifically, separate LUMs were developed by service train type, and by the number of locomotives powering those trains. Thus, for example, a separate set of LUMs were generated for coal trains with 2 AC units versus coal trains powered with 3 AC units. Separate LUMs were also calculated for helper and yard units. In short, CSXT

calculated the fuel to be consumed by the SFRR on the basis of the specific characteristics of the SFRR operating plan.

The price per gallon that CSXT uses for the SFRR for 1Q 2009 is the average price per gallon CSXT reported, $1.39.[21] *See* CSXT WP "CSX Quarterly Financial Report, First Quarter 2009.pdf," at p. 11. To this price, CSXT added { }/gallon to reflect the average CSXT drayage cost for having an outside vendor deliver fuel to locations where SFRR will fuel.[22] In addition to the price per gallon, SFRR would pay weekly rates for the 8 fuel trucks it requires.[23] Based upon CSXT's experience renting 7000 gallon DTL trucks at each of the 4 fueling locations, the 1Q 2009 weekly rates were: { } per truck at Nashville, ${ } per truck at Richmond, $6,463 per truck at Newell and ${ } per truck at Callahan.[24]

In addition to line-haul fuel costs, SECI calculated a 2009 fuel expense of $0.622M for the SFRR's SW1500 switching locomotives. Ironically, in developing fuel costs for switching service, SECI did rely upon the traditional LUM-based methodology and switching fuel consumption used by the Board (by assuming operations 24 hrs/day * 6 mph * 365 days * 4

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[21] CSXT's operating plan specifies that the SFRR will own two 30,000 gallon fuel storage tanks located at Callahan, FL. The proximity of the other fueling locations on the SFRR to fuel pipelines and large suppliers enables the SFRR to take advantage of more favorable prices and obviates the need to store its own fuel.

[22] The use of DTL fuel trucks results in a slightly higher overall per gallon cost than the cost CSXT realizes from direct fuel facilities. However, the cost to construct direct fuel facilities is quite significant and would not be justified for an operation the size of the SFRR. This is particularly true given that, of the SFRR fueling locations, only Nashville is proximate to a pipeline.

[23] SECI's operating expenses do not account for the cost of the trucks it assumes will provide fueling services, or lube oil, sand and water servicing.

[24] The weekly rates per truck include the vehicle, the driver, fuel for the truck, insurance, etc.

locations). CSXT accepts this historic URCS approach to calculating fuel consumed by switch engines.

Table III-D-3
Comparison of Fuel and Sand and Lubrication for Locomotive Servicing

	SECI	CSXT	Difference
Locomotive Fuel	$78,095,232	$77,283,642	($811,589)
Locomotive Sand & Lube Oil	$5,909,258	$7,269,014	$1,359,756

2. Railcars

a. Leasing

i. Coal Cars

SECI used a different approach to estimate car lease expenses for each of the three coal car ownership types (system, foreign, and private) assumed to operate on the SFRR. For system coal cars, SECI assumed an annual lease expense of $4,620 for hopper cars and $4,235 for equipped gondolas, based upon materials CSXT produced in discovery. *See* SECI Opening at III-D-8. SECI converted the annual lease costs to an hourly cost {

}. For foreign-owned coal cars, CSXT 2008 Schedule 755 R-1 data was used to calculate a cost per mile.

SECI then allocated its estimated SFRR coal car-miles and coal car-hours (*see* SECI WP "SFRR Operating Statistics.xls") into system, foreign and private ownership groups, with the allocation percentages based upon car-mile allocations. The units were multiplied by the unit costs, with peaking and spare factors included for system-owned cars, to arrive at total 2009 coal

car lease expenses of $2.35 million. CSXT accepts SECI's approach, percentages, 5% spare margin and 10.7% peaking factor, and applies them to the car-miles and car-hours developed from the CSXT SFRR operating plan.

ii. General Freight Cars

SECI's methodology for developing general freight car costs was similar to what it used for coal cars – full service leases – with the main difference being that privately-owned general freight car costs were included. CSXT also accepts SECI's approach, values and spare margin for general freight cars and applies them to the car-miles and car-hours developed by the CSXT operating plan.[25] Even though CSXT and SECI use the same full service lease dollar values for each car type, by car ownership, there are two primary differences between SECI's and CSXT's calculations. First, as explained in detail in Section III-C, CSXT developed an actual operating plan that provided the required services to the customers served by the SFRR, and as such, the CSXT operating plan reflects the required empty car movements associated with the SFRR's "selected" merchandise traffic.

Second, notably absent from SECI's calculations is any customer "dwell" time, *i.e.*, the time from when the railroad delivers an empty car to a customer until the carrier picks up the loaded car at origin, and the time from when the railroad delivers a loaded car to a customer until the carrier picks up the empty car at destination. To correct this significant deficiency, CSXT analyzed the train/car event data produced to SECI in discovery. Using that data, average origin

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[25] SECI assumed an annual full service lease cost of $3,000 for boxcars, $4,068 for covered hoppers, $5,196 for open-top hoppers, and $5,292 for flat cars, based upon the June 2008 *Railway Age Guide to Equipment Leasing*, with costs indexed to 1Q09 using the AAR Equipment Register-East Region.

and customer dwell times were calculated by car type, by car ownership and applied to all originations and terminations along the SFRR.[26] In order to generate the car-hours for the time while the cars were along the line of road, CSXT used the train speeds from its RTC simulation.

SECI also made an error in its calculation of car costs related to multilevel auto cars, specifically private multilevel payables. While the flat cars underlying the multilevel cars are private, the racks on the flat cars, in which the finished vehicles actually ride, are provided by the carriers. SECI failed to include foreign rack dollars in its calculation of payables per private car-mile. CSXT corrected this error.

iii. Intermodal Cars

SECI assumed that all intermodal containers and trailers were either foreign or privately and that all intermodal flat cars are system-owned. CSXT accepts these assumptions for purposes of developing the SFRR intermodal car costs, as well as the intermodal flat car rates assumed by SECI.

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[26] The results of the customer dwell study can be found at CSXT Reply WP "detail Sarr customer dwell(1).xls."

Table III-D-4

Comparison of SFRR Freight Car Costs - 2009

Traffic Type	SECI	CSXT	Difference
Coal Cars	$2,348,902	$2,272,568	($76,334)
Merchandise Cars	$15,708,590	$23,925,102	$8,216,512
Intermodal Cars	$14,321,978	$10,547,638	($3,774,340)
Total	$32,379,470	$36,745,309	$4,365,839

b. Maintenance

As described above, CSXT accepted SECI's designation of full service leases which include maintenance costs for rail cars.

c. Private Car Allowance

CSXT accepts SECI's approach to private car allowances: SFRR coal moves in private cars, which effectively travel free of charge to CSXT and would also do so to the SFRR for privately owned non-coal cars, the SFRR pays a per-mile allowance by car type based upon data contained in CSXT's 2008 R-1.

d. Other

As did SECI, CSXT assigns one EOTD to each locomotive. *See* SECI WP "SFRR Operating Expenses.xls."

3. Personnel

a. Operating

Table III-D-5
Comparison of Operating Personnel - 2009

Number of Employees	SECI	CSXT	Difference
Train Crews	502	804	302
Non-Train	220	543	323
Total	722	1,347	625

i. T&E Requirements

SECI estimated that the SFRR would need 502 T&E personnel, and assumed an average 2008 salary of $74,000. It indexed the salaries to 2009 Q1 and added fringe benefits of 39.8%, resulting in total T&E expenses of $52 million. SECI used a compensation level for Trainmen of $74,219. This represents the average of Engineer (Line 617) and Conductor (Line 608) compensation from CSXT Wage Form A&B, discounted by roughly 10%. SECI attempts to justify this "discount factor" on the basis of a comparison of NS and CSXT average compensation – SEC presumes that the SFRR would not need to pay more than the NS average. SECI's proposed "discount factor" should be rejected.

First, and most importantly, SECI's discount is based upon a comparison of aggregate salary data at the Line 600 Transportation level, but applied to just two specific positions, Line 617 Engineers and Line 607 Conductors. Engineers and Conductors represent only about 50% of the employees included in the Line 600 group. Moreover, Engineers and Conductors are compensated at rates higher than the average of all employees in the Line 600 group. Thus, it is

entirely possible that NS Engineers and Conductors are compensated at a higher level than those at CSXT and it is the other Line 600 categories that pull the average down.[27] Second, CSXT understands that CSXT and NS use slightly different methods of accounting for compensation in several categories. For example, CSXT reports training in the "Other" category, while NS reports these hours and dollars as "Straight Time". Also, NS excludes vacation and personal leave paid in the current year (for prior or future years) while CSXT includes these items in the "Other" category for 2007 and 2008.[28] CSXT converts constructive allowance codes with zero hours to hours if the "con" code dollar amount is more than $100, while NS' program does not convert dollars to hours unless specific hours or miles are associated with the "con" code. Finally, NS reports transfer allowance dollars in the "Other" column, while CSXT does not report transfer allowance dollars. If CSXT's numbers are restated to reflect the reporting differences between itself and NS with respect to Line 600, the vast majority of the dollar difference is eliminated. Such a restatement is set forth in CSXT WP "TE Data CSX vs NS.xls." As that workpaper demonstrates, there is no justification for applying a 10% reduction to the average CSXT Engineer and Conductor salaries.

SECI developed the number of line-haul crews it assumed the SFRR would need counting the trains in its (incomplete) subset of 2008 CSXT trains in which the SFRR's "selected" traffic moved,[29] reducing that number of trains by the 2008-2009 tonnage index,

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[27] Wage Form A and B are only publically available at the summary, not the detail level.

[28] Beginning in 2009, CSXT will exclude these codes from the Form A&B.

[29] As discussed above and in Section III-C, because of the minimum 15 car match between selected revenue cars and the train event file required by SECI's methodology, SECI cannot even

increasing the number of crew starts by 1.51% (presumably to reflect crews that outlaw), and then dividing by 270 starts per crew, per year.[30]

The 270 start per-year figure was adopted by the Board in *WFA/Basin II.* CSXT believes that 270 is too high to use for an average starts per year. This is especially true going forward because of the effect of the FRA hours of service rules that became effective in July 2009. Under the new regulations, not only are train employees limited to the historic maximum of 12 hours per day, but also a variety of other restrictions including mandatory 10-hour periods of undisturbed rest, 48 or 72 hour mandatory rest requirements, and a cap on maximum hours per month.[31] Even in calendar year 2008, before the new hours of service regulations took effect, CSXT only had seven T&E employees who achieved 270 annual starts.[32] Witness Gibson believes that a much more realistic assumption, even for a least-cost, most efficient railroad, is 260 starts per year. CSXT uses that figure to develop the required T&E employees for the SFRR. However, like the 270-start employees, the 260 start employees earned a higher than average wage during 2008 - $85,599. Accordingly, CSXT uses that average wage, indexed to

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assure that the trains in its subset of the CSXT train event file handles all of the cars selected for its revenue traffic base.

[30] Any relationship between the crew districts defined by Mr. Reistrup and SECI's 2008 CSXT train subset is elusive, at best.

[31] *See* CSXT Reply WP "New FRA Hours of Service Regulations.pdf."

[32] It is important to note that the T&E personnel on CSXT who were paid for 270 starts in 2008 earned an average of $91,061, or 14% more than the average T&E wage reported in 2008 CSXT Wage Form A and B. The difference in earnings between T&E personnel paid for 270 starts and the average wage during 2007 was even greater.

1Q 2009, as the average T&E wage for the SFRR.[33] Besides being much more specific to the actual pay for the number of starts, use of this data also obviates the need for the Board to reconcile the 10% pay discount alleged by SECI.

SECI states (SECI Opening at III-D-23) that its fringe benefit factor of 39.8% is based on CSXT data. In fact, it is based on all freight rail employees (the data in the AAR document SECI used is not broken out by railroad). Nevertheless, CSXT believes this is a representative fringe benefit factor for the purposes of this case.

In order to determine the number of line-haul crews required by SFRR, consistent with the crew districts defined by witness Gibson (*see* pp. III-C – 108-112), *supra*), CSXT determined the SFRR line-haul crew requirements by "flowing" each 2018 train over the SFRR network and calculating crew starts by crew home terminal. The total crew starts were multiplied by two members per crew to develop total crew person days. That number was divided by 260 to calculate the 2018 T&E line-haul personnel required. *See* CSXT WP "Train Statistics and T&E Crew.xls" and "Helper Locomotive, Crews and Miles.xls." Because the coal and other bulk unit trains operating along the SFRR have a 100% empty return, crew utilization between T&E line-haul home terminals in coal service is balanced. The same is not true for the SFRR's general freight and intermodal traffic. Therefore, it will be necessary for the SFRR to deadhead some crews operating intermodal and merchandise trains back to their home terminals. These deadhead calculations are also detailed within CSXT's electronic work papers showing the T&E line-haul crew development.

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[33] Should the Board decide that the 270-start figure is correct, it should also use the 270-start wage level of $91,061 per employee (2008).

In addition to the line-haul crew requirements, the SFRR has 13 regional and local yards where merchandise traffic is switched and blocked. Each of those yards operates 24 hours per day, 7 days per week and is staffed by two-person crews operating SW1500 switch locomotives.[34] Based upon the daily average number of cars requiring switching at each facility, an additional 294 T&E personnel were added to the line-haul T&E personnel (246 when indexed to 2009). *See* CSXT WP "General Freight SFRR 2018 Yard Switching Crews/Locos.pdf."

Table III-D-6
Comparison of Operating Personnel - 2009

T&E Employees	**SECI**	**CSXT**	**Difference**
Personnel	502	804	302
Compensation	$55,015,654	$103,502,880	$48.487,226

ii. Overnight and Taxi Expenses

SECI estimated hotel stays (approximately 21,000 overnights, with two hotel rooms booked per overnight) and taxi trips (one round trip per overnight) based upon the number of crews, hotel rates and taxi trip distances. *See* SECI WP "SFRR Crews and Overnights.xls."

CSXT did not have to guess at the number of overnight stays and taxi trips required for the SFRR's line-haul T&E personnel. Under CSXT's line-haul crew development methodology, the trains necessary to handle customer requirements for the peak year annual volume were specifically designed in the CSXT operating plan. Thus, the crews required to handle the 2018

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[34] CSXT considered the possibility of installing remote technology on the SW1500 locomotives and reducing yard crews to a single member. The capital expenditure for equipping the locomotives with remote technology did not justify the change.

trains were a direct result of flowing those trains across the SFRR and counting the crews required to handle them. Crews that operated in straight-away service were taxied from the train at their away terminal to and from a hotel and two nights of hotel costs were charged. In addition to expenses for crews operating in straight-away service, certain SFRR trains will outlaw (the crew will reach its daily maximum 12 hours of service) and the crew will need to be relieved. *See* Section III-C-108 -113. The relief crew will be taxied from the destination terminal, and the taxi will drive the outlawed crew to the destination terminal for its overnight.

CSXT accepts the taxi and per-night hotel costs presented by SECI, and applies those location-specific costs to the overnights and taxi trips derived from the CSXT operating plan. *See* CSXT WP "Train Statistics and T&E Crews.xls."

iii. Operating Management and Compensation.

SECI estimated that the SFRR would need 220 non-train operating personnel.[35] SECI estimated the 2009 cost of those employees (including a 39.8% fringe benefit) to be approximately $20 million. For SFRR non-train operating personnel, SECI witness Reistrup identified the positions. For compensation levels, SECI relied largely upon data from CSXT Wage Forms A and B. One exception appears to be Dispatcher salaries, where SECI "cherry-picked" a figure from the CSXI data produced in discovery (it used the 10 highest Dispatcher

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[35] The 220 non-train personnel figure does not include 17 equipment inspectors, whose cost SECI claims is equivalent to the credit it would receive from CSXI for the cost of inspecting CSXI intermodal trains. (SECI Opening at III-D-21, n.15). As explained above, SECI used an intermodal direct cost per lift and cost per unit (applied incorrectly only to lifts) for "other terminal costs." The other terminal costs included the car inspection function.

salaries in the spread sheet, at an average of ${ } each).[36] The salaries were then indexed to 2009 Q1 and fringe benefits added, as was done for T&E crew personnel.

Like much of SECI's Opening Evidence, the number of non-train operating personnel posited by SECI significantly understates what would be required of a least-cost, hypothetical competitor. In no small part, this is due to SECI's hypothesis that a merchandise operation can be run in the same manner as a unit coal train operation. As Section III-C above convincingly demonstrates, it simply cannot. The complexities of moving more than 1 million individual cars (or small groups of cars), for nearly a thousand customers, spread over several thousand route miles, in multiple states requires substantial resources – both train and non-train. For example, as detailed in Section III-C, the need to classify and switch an average of over 5,800 merchandise cars daily requires the construction and operation of 13 regional and local flat switching yards along the SFRR, even assuming the most efficient merchandise train design possible. Those yards required 294 T&E personnel, as well as supervision, inspectors and other support

Following is a brief description of each non-train operating position, and the minimum number of people required to staff those positions, that would be required by the SFRR.

Vice-President Transportation. Like SECI, witness Gibson assigns a Vice-President responsibility for all transportation functions. Reporting directly to this position are the Directors of Operation Control and two administrative assistants, as well as the Manager of Inter-Carrier Relations.

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[36] The CSXI Dispatcher salaries are for truck dispatchers – not train dispatchers – and thus aren't remotely comparable.

Director of Operations Control. There are two Directors of Operation Control, one each for the East and West operating divisions. These individuals are responsible for all train and terminal operations on their respective divisions, and for all Managers of Train Operations, Terminal Superintendents, Managers of Locomotive Operations, Crew Managers, Chief Dispatchers, Directors of Operating Rules, Safety and Training, and the Managers of Testing and Environmental.

Manager of Train Operations (Line-of-Road). Each of the eleven (11) SFRR crew districts will have two Managers of Train Operations (MTO) – one for each 12 hour period, as the SFRR is a 24/7 operation – for a total of twenty-two (22) positions. The MTO position is equivalent to the Trainmaster on a Class I railroad, and has responsibility for all line-of-road train operations in their territory, including supervising crews, investigating accidents and handling the day-to-day operating problems encountered by any railroad.

Manager of Locomotive Operations. Each crew district also has a Manager of Locomotive Operation (MLO) – a total of 11 positions. They are stationed at the same locations as the MTOs, and are responsible for the safe and efficient handling of locomotives and trains by the SFRR engineers. Each MLO is a FRA-certified locomotive engineer and qualified for his territory. MLOs assist with mandated training and are responsible for observation of engineers in train handling, efficiency testing and other assistance.

Terminal Superintendent. The SFRR will have 20 Terminal Superintendents – assigned to its regional and local merchandise yards. Merchandise yards that switch a daily average of 500 or more cars (Callahan FL, Princeton IN, Alexandria Jct. MD, Demmler PA, Nashville TN, and Atlanta GA) each have two Terminal Superintendents, providing 24/7

coverage. The remaining major merchandise yards (Pembroke NC, Jacksonville FL, Richmond VA, Bostwick FL, Charleston SC, Rocky Mount NC, and Savannah GA) and Newell, PA each have one Terminal Superintendent. Terminal Superintendents are responsible for all activities within their yard limits, primarily the switching and classification of cars into blocks and trains, the operation of trains through the yard limits, and the removal/replacement of bad-ordered equipment.

Yard Master. Each of the 13 major merchandise yards will also have Yard Masters, who are responsible for implementing the yard plans of the Terminal Superintendents for the switching and blocking of cars. A Yard Master interfaces directly with the T&E yard crews operating the SW1500 locomotives and makes sure that cars are correctly switched and blocked in accordance with the SFRR's train plans. The six SFRR yards that would switch an average of 500 or more merchandise cars per day will have three Yard Master positions, thus requiring a total of five individuals per yard.[37] The remaining seven flat switching merchandise yards will each have two positions per day requiring a total of three individuals. Although these smaller volume yards will also operate on a 24/7 basis, the number of cars, and in particular the frequency of train arrivals and departures, local train sizes and switching required, allow two positions to cover the 24 hour period.[38] Further, with three individuals assigned to each, third trick coverage can be provided as needed.

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[37] One position x 3 shifts/day x 365 days divided by 250 days/individual per year = 5 positions.

[38] One position x 2 shifts/day x 365 days divided by 250 days/individual per year = 3 positions.

Crew Managers – Crew Callers. Each division (East and West) has a Crew Manager. (The two positions translate into three individuals). The SFRR will have an automated crew-management system, which is designed to handle the basic crew interactions via automated calling and response systems, including calling crews, routing calls from dispatchers to crews, selecting the correct crew for the job. Nevertheless, individuals are needed to augment the system, to assure it is working and to interface in person (via face-to-face or phone or computer) with the crews.

Each division also has one crew caller per shift to assist the Crew Manager, resulting in a total of nine Crew Callers.[39]

Dispatchers. Each of the SFRR's 11 major crew districts has one Dispatcher per shift, who reports to a Chief Dispatcher, resulting in 48 Dispatchers and five Chief Dispatchers.[40] The Dispatchers are responsible for controlling the movement of all trains or vehicles operating along the track within their respective territories – line-haul trains, local trains, work trains and track inspection vehicles.

Operating Rules, Safety and Training. Each division has a Director of Operating Rules, Safety and Training (a total of two individuals); and each crew district has a Manager of the same title (a total of 11 positions). These positions are responsible for the safety and training of T&E and non-train operating personnel developing and maintaining the SFRR's operating

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[39] One caller/shift x three shifts/day x 365 days x 2 divisions divided by 250 days/year/person = 9 callers.

[40] 11 districts x one position/shift x 3 shifts/day x 365 days divided by 250 days/year/persons = 48 dispatchers.

timetable, operating rules and instructions, interfacing with the FRA and other regulatory agencies; and monitoring the safety and conduct of operating personnel.

Manager Inter-Carrier Relations. The SFRR interlines traffic with CSXT, NS, several regional carriers and numerous short line railroads at 58 separate locations. The individual responsible for relations with these connecting carriers and for administering interchange and other inter-carrier agreements is the Manager of Inter-Carrier Relations.

Vice-President Mechanical. The VP-Mechanical is responsible for all of the SFRR's mechanical functions, including specification of the equipment to be purchased, negotiating and implementing run-through power agreements with other railroads, administration of the SFRR's compliance with ARR interchange rules, and interface with the outside vendors from whom the SFRR is assumed to purchase various mechanical services. He has an administrative assistant.

Director Mechanical Services. The SFRR has a Director Mechanical Services for each of its two divisions. These positions are responsible for the supervision of equipment repair and the Equipment Inspectors located at the various merchandise, coal and other bulk train yards located throughout the system. One Director of Mechanical Services is located at Richmond, VA, and the other is located at Atlanta, GA. Reporting to each Director Mechanical Services is a Manager Testing and Environmental (2 individuals) who is responsible for testing of materials and environmental compliance, including any problems involving cars handling hazardous materials. Those managers are also located at Richmond and Atlanta, respectively.

Manager Mechanical Services. The SFRR has 15 Managers of Mechanical Services, with two located at Callahan and one at each of the other 12 regional and local yards (Princeton, Alexandria Jct., Demmler, Atlanta, Pembroke, Richmond, Jacksonville, Charleston, Nashville,

Bostwick, Savannah and Rocky Mt.). In addition, one Manager Mechanical Services is assigned to Newell, where many coal trains will be inspected – most, if not all, stopping at that location for a 1500 mile inspection.

Equipment Inspectors. SECI designated four locations for equipment inspection. The locations specified by SECI seem to be based upon the SFRR's assumed coal operations. SECI posits that the equipment inspection function would require a total of 141 employees. Although SECI provides the calculations underlying its estimate, it does not (and in all likelihood, cannot) establish any link between that number and any of the inspection activities required on the SFRR. Without an actual operating plan, it is virtually impossible for SECI to determine where inspections would be need to be performed, much less the number of inspectors required at each location.

Based upon its detailed blocking/origination/termination/classification plan, CSXT was able to estimate the number of cars that would require inspection at each location along the SFRR system – ranging from an average of 1150 merchandise/coal/other bulk cars inspected per day at Callahan to an average of 35 cars per-day at Grafton and Chattanooga. Using those daily averages, CSXT determined the number of inspection teams needed to inspect cars at each location.[41] Specifically, based upon the daily average number of cars, an hourly average was developed and from that the number of required inspection teams per shift and per day was

[41] The cost of inspection of intermodal cars/units is included within the unit cost per load for other intermodal terminal costs discussed above.

developed for each location.[42] The result was a total of 329 inspectors to handle the SFRR's peak year volumes.[43] *See* CSXT WP "Inspection – GF and Coal/Bulk.pdf."

In large measure, CSXT accepts the compensation levels for operating personnel proposed in SECI's Opening Evidence. There are some exceptions. First, SECI's proposed 10% reduction of average T&E wages is wrong for the reasons discussed above at III-D. Second, CSXT uses a proposed 260 starts per year per T&E crew member based, in part, upon the FRA new hours of service requirements. Consistent with the 260 start assumption, CSXT uses T&E compensation based upon the average wage for CSXT T&E employees who had 260 starts in 2008. Third, CSXT rejects SECI's use of the CSXI truck dispatcher wage; instead CSXT applies the Wage Form A/B average for train dispatchers. Finally, for those positions that CSXT adds, not included by SECI, appropriate Wage Form A/B lines are used.

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[42] For unexplained reasons, SECI specified that each inspection team would consist of four individuals. CSXT believes that only two individuals per team are required.

[43] There are numerous other locations on the SFRR where equipment inspection will need to be performed by the train crew – SFRR volumes do not justify locating full-time inspectors at those points. Those locations are included within the inspection category of CSXT Reply WP "SFRR Facilities Matrix – Consolidated.xls."

III. STAND-ALONE COST

H. Results of SAC DCF Analysis

1. Results of SAC DCF Analysis

SECI deployed a variation of the Board's DCF model to develop SFRR capital recovery and operating expense related revenue requirements. Certain of the problems with SECI's model were discussed in Section III-G. There are other problems with SECI's DCF inputs and assumptions that could also fall under the Section III-G Discounted Cash Flow Analysis purview. However, because SECI's Opening discusses these other issues under Section III-H Stand Alone Cost, CSXT includes its Reply to those issues in III-H as well. The DCF implementation problems discussed under Section III-H include SECI's misapplication of bonus depreciation to the SFRR assets and its use of the wrong tax depreciation lives for certain of the SFRR road property assets.

a. Cost of Capital

As discussed above in III-G-1, the most significant cost of capital adjustment CSXT made to SECI's figures was to eliminate SECI's use of a separate debt rate for locomotives. CSXT also made two minor adjustments -- updating the 2008 figures with those in the Board's September 2008 Decision and adding equity flotation costs. The cost of capital figures used by CSXT in its Reply are set forth in Table A of CSXT's Reply DCF.

b. Road Property Investment Values

The calculations for road property investment values are detailed in Table C and summarized below. CSXT replaced SECI's the road property investments with those specified in Section III-F. CSXT accepts SECI's SFRR proposed construction schedule.

Table III-H-1

Road Property Investment Values

	2006	2007	2008 1/	Total
SECI	$1,073,841,123	$2,229,293,008	$2,734,038,786	$6,037,172,916
CSXT	$2,909,438,205	$3,757,445,287	$3,901,688,056	$10,568,571,547
Difference	$1,835,597,082	$1,528,152,280	$1,167,649,270	$4,531,398,631

1/ Includes locomotives

For Land investments, SECI's land valuation witness estimated 2009 land values and discounted those values back to 2006 using a contrived quarterly index factor derived from estimates of price changes for agricultural properties between the years 2000 and 2008. In its Reply, CSXT land valuation expert Tesh develops SFRR real estate values as of 2006 – the year in which the SFRR would actually acquire the land – thereby eliminating any purported need in the DCF to index land values. The road property values exclude PTC investments because they are incurred several years after the SFRR begins operations.

c. Interest During Construction

The interest during construction (IDC) was calculated on construction funds outstanding during 2006, 2007 and 2008 using the same methodology as that employed by SECI. Interest during construction for PTC investment is calculated assuming investment occurs in equal increments throughout 2014.

d. Amortization Schedule of Assets Purchased with Debt Capital

The primary difference between SECI's and CSXT's amortization schedules is SECI's treatment of locomotives. SECI amortized locomotives separately, using a 15 year amortization period rather than 20 years, 100% debt ratio instead of 21.5%, and a debt rate of 8.09%. CSXT

includes the locomotive investment with the other road property investment for 2008 and amortizes it over 20 years.

Because PTC investments are expected to be made in 2014, CSXT created a separate debt amortization table for the debt portion of that investment, using a 20 year term and the SFRR's cost of debt for 2014, which is 6.29%.

e. Present Value of Replacement Cost

SECI also includes a separate schedule to compute locomotive replacement costs. CSXT included the calculation of locomotive replacement costs in the standard DCF replacement cost tab.

CSXT created a separate replacement cost worksheet for PTC that uses the composite cost of capital. The initial investments are in 2014 dollars so that the replacement cost calculations reflect the later implementation date for the investment.

f. Tax Depreciation Schedules

SECI's tax depreciation schedules contain two errors. The more significant of the two relates to SECI's assumptions regarding the applicability of bonus depreciation to the SFRR investment assets. In its Opening, SECI assumes that the SFRR will take advantage of additional or "bonus" depreciation provisions enacted in 2008 and 2009 as part of federal economic stimulus legislation. The Economic Stimulus Act of 2008 ("Stimulus Act") provided bonus depreciation on capital investments with Modified Accelerated Cost Recovery System ("MACRS") recovery periods of 20 years or less. The American Reinvestment and Recovery Act ("ARRA") extended this bonus depreciation into 2009. Under both the Stimulus Act and the ARRA, qualifying investments are allowed a 50 percent depreciation bonus in the year that they are placed into service. Tax depreciation for the remaining 50 percent of the cost, or the remaining cost basis, is calculated using the standard MACRS schedules. In applying the bonus

depreciation to the SFRR assets, SECI assumes that because the DCF model is predicated upon all assets being placed into service in the first year of the 10-year DCF period, that the majority of the SFRR's investment qualifies for the bonus depreciation. This assumption is, however, incorrect.

The standard for qualifying for bonus depreciation is not (as SECI asserts) when an asset is placed in service, but rather when the asset is acquired. IRS rules clearly specify that assets acquired in 2006 and 2007 do not qualify:

> Certain qualified property (defined below) acquired after December 31, 2007 is eligible for a 50% special depreciation allowance. If a binding contract to acquire the property existed before January 1, 2008, the property does not qualify. (2009 IRS Form 4562, page 4).[1]

Because the SFRR is assumed to be built over three years, many of the assets are assumed within the DCF to be acquired prior to the January 1, 2008 qualification date. SECI ignored this restriction on prior year purchases and included over $1.3 billion in investments from 2006 and 2007, which overstates the year one 2009 bonus depreciation by $662 million. This overstated depreciation contributes to an enormous tax carry forward in the first several years of SECI's SFRR. CSXT corrected this error and only recognized 2008 investments purchased on or after January 1, 2008 as being eligible for the bonus depreciation.

The other problem relates to the tax depreciation schedules for certain accounts assumed by SECI to qualify for 15 year lives when, under IRS rules, they actually qualify as 20 year properties. Internal Revenue Code § 168(e) specifies to rules for the classification of property for purposes of computing the cost recovery allowance provided by MACRS. Property is classified according to class life as determined in Revenue Procedure 87-56 unless statutorily classified otherwise in § 168. *See* CSXT WP "IRC 168.pdf" There are no exceptions to this

[1] *See* CSXT WP "IRS Form 4562.pdf"

rule. The following assets are specifically listed under asset class 40.2, each carrying a 20-year tax life.

- Account 6 - Bridge & Trestles
- Account 13 - Fences & Roadway Signs
- Account 17 - Roadway Buildings
- Account 19 - Fuel Stations
- Account 20 - Shops & Enginehouses
- Account 39 - Public Improvements

For each of these CSXT changed the depreciation period from 15 years to 20 years and updated the depreciation percentages to comply with the proper 20-year MACRS table.

g. Average Annual Inflation in Asset Prices

Because the discounted cast flow calculations require inflation rates for each year, CSXT expanded SECI's inflation spreadsheet to cover 20 years rather than just 10 years.

h. Discounted Cash Flow

As explained in detail above in Section III-G-4, CSXT expanded SECI's discounted cash flow calculations to the Board's original 20 year timeframe. If for some reason the Board were to reject the use of a 20 year DCF, it is critical that the future tax depreciation and interest payments are discounted to the last year of the DCF. Otherwise these tax deductions will be significantly overstated.

CSXT included a separate discounted cash flow for PTC investments. These levelized capital carrying charge requirements are added to the SFRR's SAC requirements in years 2015-2018 in the Netting tab.

i. Computation of Tax Liability – Taxable Income

CSXT accepts SECI's assumed federal tax rate of 35%. For state taxes, SECI calculated a composite rate based on the number of miles of track in each state. CSXT accepts SECI's calculation of the composite state tax rate.

As elsewhere, CSXT expanded SECI's federal and state tax tables to 20 years and included a separate table for PTC.

j. Operating Expenses

CSXT updated the base year operating expenses as detailed in Section III-D. For the annual adjustment of operating expenses, SECI used ton miles instead of the Board's standard use of tons to more accurately account for the mix of traffic on the SFRR. CSXT accepts SECI's use of ton miles and updates the calculations in the DCF using the updated and corrected ton miles from Section III-A-2.

k. Summary of SAC

CSXT's stand-alone costs are presented in Table L of Exhibit III-H-1 on a quarterly and annual basis. Capital investments for road property and PTC are from Table I and annual operating expenses are from Table L.

2. Maximum Rate Calculations

Table III-H-2 shows the results of the DCF analysis. In each year in which the SFRR operates during the 10-year analysis period, SFRR SAC exceed SFRR revenues. The detailed calculations underlying this Table are found in Exhibit III-H-1.

Table III-H-2

Year (1)	Annual Stand-Alone Requirement (2)	Stand-Alone Revenues (3)	Over-payments or Shortfalls (4)	PV Difference (5)	Cumulative PV Difference (6)
2009	$1,821.3	$942.0	-$879.2	-$834.2	-$834.2
2010	1,835.4	1,035.4	-800.0	-683.3	-1,517.5
2011	1,908.9	1,058.5	-850.5	-653.9	-2,171.4
2012	1,988.3	1,153.4	-835.0	-577.9	-2,749.3
2013	2,061.5	1,274.1	-787.5	-490.7	-3,240.0
2014	2,144.5	1,361.6	-782.9	-439.1	-3,679.1
2015	2,218.3	1,434.5	-783.9	-395.8	-4,074.9
2016	2,289.2	1,508.5	-780.8	-354.9	-4,429.8
2017	2,357.9	1,592.5	-765.3	-313.2	-4,742.9
2018	2,426.9	1,680.7	-746.2	-274.9	-5,017.8

Because stand-alone costs exceed revenues, there is no rate prescription and no need to run the MMM model. However there are several modifications that need to be made to the MMM model that SECI submitted in its Opening evidence. While not necessary to determine the outcome of this case, CSXT submits a corrected MMM workpaper with the following changes made.

First, SECI improperly used the STB's URCS index instead of the RCAF-A as instructed by the Board in its May 15, 2009 *AEP Texas* Decision. *See AEP Texas* at 14. In that Decision the Board determined that RCAF-A is the proper index to forecast the defendant railroad's variable costs in order "to correctly calculate the degree of differential pricing needed by the defendant railroad to recover the total SAC costs over the DCF analysis period." *Id.* at 14. CSXT corrected this index for variable costs in the MMM model using the Board's December 16, 2009 RCAF Decision.

Second, CSXT updated the revenues and variable costs for each move in the MMM model based on the adjustments made in III-A-2 and III-A-3. These adjustments include those made to account for re-routed traffic, which impacted the SFRR and residual mileages. For re-routed traffic that is split over multiple routes, additional moves were added to the MMM spreadsheet as they were for the URCS input files. For revenues to match the records used in the MMM model, CSXT allocated the SFRR revenues for each O-D Pair in III-A-3 to the moves in the MMM based on the 2008 tons.

Finally, the variable costs for each move were updated using the 2008 URCS.

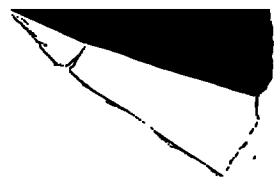


Table III-D-7: Comparison of 2009 Non-Train Operating Personnel Costs

	SECI Opening		CSXT Reply		Difference	
POSITION	Head Count	Compensation	Head Count	Compensation	Head Count	Compensation
Vice President Transportation	1	$ 458,000	1	$ 2,082,797	0	$ 1,624,797
Assistants	2	$ 164,501	2	$ 164,450	0	$ (51)
Directors Operation Control, 1 east, 1 west	2	$ 289,538	2	$ 289,447	0	$ (90)
Managers & Asst Managers Train Operations	16	$ 1,825,605	22	$ 2,509,424	6	$ 683,820
Managers Locomotive Operations	6	$ 684,602	11	$1,254,712	5	$570,110
Terminal Superintendents		$ -	20	$2,281,295	20	$ 2,281,295
Yardmasters	20	$ 2,282,006	54	$5,764,420	34	$ 3,482,414
Crew Managers	1	$114,100	3	$342,194	2	$228,094
Crew Callers	9	$791,064	9	$790,817	0	$(246)
Dispatchers	28	$ 1,902,302	53	$6,587,500	25	$ 4,685,198
Directors Operating Rules, Safety & Training	1	$144,769	2	$289,447	1	$ 144,679
Managers Operating Rules, Safety & Training	2	$ 228,201	11	$1,254,712	9	$1,026,511
Manager of Inter-Carrier Relations	1	$114,100	1	$114,065	0	$ (36)
Vice President Mechanical	1	$458,000	1	$1,563,446	0	$ 1,105,446
Assistant	1	$ 82,251	1	$ 82,225	0	$(26)
Director of Mechanical Services	1	$ 144,769	2	$ 289,447	1	$ 144,679
Manager of Testing & Environmental	2	$228,201	2	$228,129	0	$ (71)
Manager Mechanical Services		$ -	15	$1,710,971	15	$ 1,710,971
Equipment Inspectors	124	$ 9,808,047	329	$26,014,856	205	$16,206,808
Vice President Engineering	1	$ 458,000	1	$1,563,446	0	$ 1,105,446
Assistant	1	$ 82,251	1	$82,225	0	$(26)
Total	220	$ 20,260,304	543	$55,260,027	323	$34,999,723

iv. Materials, Supplies, Equipment

Materials, supplies and equipment for operating personnel (other than maintenance of way) include office furniture and equipment, office supplies, safety equipment, EOTDs, motor vehicles, tolls and supplies. The total 2009 operating expense for these items is $4.4 million. Detailed development of these expenses can be found in CSXT WP "CSXT View of SFRR Personnel.xls."

Table III-D-8: Comparison of Materials and Supplies for Operating Personnel

Expense Item	SECI	CSXT	Difference
Autos	$240,765	$843,823	$603,058
Desks	$23,351	$80,584	$57,233
Copier	$1,134	$1,134	0
Utilities	$260,000	$260,000	0
Office Supplies	$55,021	$135,802	$80,781
Personnel Safety Equip	$12,220	$23,288	$11,068
EOT devices	$169,992	$204,583	$34,591
Inspection Supplies, including carts, tools, gasoline, car parts inventory	$270,340	$692,414	$422,074
Travel Expense	$48,000	$2,172,811	$2,124,811[44]
Total M&S	$1,080,823	$4,414,439	$3,333,616

[44] SECI provided vehicles for many of its operating personnel, but made no provision for gasoline, oil changes, tires, meals away-from-home or overnight expenses. The CSXT SFRR materials and supplies expenses take account of these missing items, based upon the costs CSXT actually incurs.

b. Non-Operating

CSXT accepts SECI's determination that all SFRR personnel would be operating personnel (including maintenance-of-way employees) or General & Administrative ("G&A") personnel. Those employees who might be considered non-operating personnel are included in the SFRR's G&A staff.

c. General & Administrative

Throughout its case in chief, SECI grossly understates the costs to operate the SFRR. This pattern continues in SECI's oversimplification of the cost and complexity of managing a major corporation in the 21st century. SECI postulates that the SFRR could minimize general and administrative ("G&A") costs to levels that are totally unprecedented given the size and scale of the SFRR rail network and the complexity of its operations. SECI posits that the SFRR would be a substantial Class I railroad with approximately 2,100 route miles, 1,100 employees, and revenues of $1.3 billion per year.[45] Yet it claims a mere $20.5 million of ongoing annual G&A expenses for 71 G&A employees, or approximately 2 percent of gross revenue. This is a ludicrously low amount for a railroad of this size and complexity. And indeed, SECI does not supply any peer benchmarks, administrative work flow analyses, comparable transportation or other industry benchmarks, or recognized performance metrics to support such a low G&A

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[45] As discussed above in Section III-A, SECI's proposed SFRR revenues are substantially overstated and predicated on unreasonable assumptions and reroutes that are impermissible under the Board's rules. After making adjustments to correct these errors, CSXT calculated the SFRR's 2009 revenues to be $942 million.

expense level.[46] Even the most efficient peer railroads, other similar network-based businesses (such as less-than-truckload carriers), and best-practice benchmark companies operating in the United States today are unable to achieve G&A expenses of less than 10 percent of revenue for a standalone operation not linked to a holding company parent.[47] Here, as in so many aspects of its stand-alone cost presentation, SECI's effort to justify a supposed "least-cost, most-efficient" operation fails the test of feasibility and credibility. The Board simply cannot accept purported G&A costs that completely depart from real world experience and requirements.

By contrast, CSXT's evidence is firmly grounded on real world experience and industry standards, which demonstrate that a least-cost estimate of G&A expenses for the SFRR would be $57.5 million annually for 210 G&A employees, or approximately 6.1 percent of the SFRR's gross revenue. This figure assumes that the SFRR is optimally efficient and capable of achieving high levels of economic efficiency in every area. But it also assumes – as SECI does not – that the SFRR complies with the minimum legal, regulatory, commercial, and administrative requirements that would apply to it. Like any railroad, the SFRR must comply with all applicable federal and state laws and regulations in the various states in which the SFRR operates and has employees. Ensuring that the SFRR has sufficient resources to satisfy these requirements is an essential element of demonstrating that it would be a feasible railroad. As explained below, SECI's skeletal G&A staffing plan is plainly not capable of satisfying the

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[46] Some of the publicly available sources for G&A benchmarking include: The Hackett Group, Best Practices LLC, IOMA, Kennedy Information, Corporate Leadership Council, PricewaterhouseCoopers Saratoga, Hildebrandt, and Oliver Wyman.

[47] The Controllers Report, Issue 09-03, IOMA, March 2009.

requirements that the SFRR would have to meet in the real world. CSXT's evidence corrects those deficiencies by assigning the minimum G&A expenses that would be necessary for the SFRR to operate given the size and scale of the SFRR network.

CSXT's analysis of the G&A expense requirements for the SFRR is based on the experience of CSXT witnesses Joseph Schuppert, William J. Rennicke, John Krupar, and Richard W. Brown. Mr. Schuppert is responsible for budgets and financial performance monitoring of G&A activities at CSXT. Mr. Schuppert is a 25-year veteran serving in various administrative and planning positions at rail, trucking, and commercial businesses. Mr. Rennicke, a Partner with the international consulting firm of Oliver Wyman, has held a number of senior and operating positions at Class I railroads and motor carriers and has been an advisor on railroad restructuring in North America, Europe, South America, and Australia for more than 25 years. Mr. Krupar, also a Partner with Oliver Wyman, has held Six Sigma productivity and restructuring positions at General Electric and Citicorp and is a recognized expert in corporate center (G&A) process improvement and the introduction of lean management techniques. Mr. Brown, a Director with FTI, has 28 years experience working in the North American railroad industry for Burlington Northern Santa Fe and predecessor carriers, where he had significant experience managing functional reorganizations and implementing technological solutions to streamline administrative functions. For the last ten years, he has managed rail carrier strategic planning and merger and acquisition studies.

Below CSXT details the essential business requirements to which the SFRR must devote G&A expenses in order to feasibly operate and discusses the CSXT expert G&A team's approach to estimating G&A expenses for the SFRR. Section i discusses the staffing

requirements for the SFRR. Section ii describes compensation for the G&A staff. Section iii describes materials, supplies, and equipment costs. Section iv discusses other SFRR G&A costs, and Section v compares SECI's estimated G&A expenses and the CSXT expert G&A team's overall proposed G&A expenses to the G&A of other comparable railroads, and demonstrates convincingly that CSXT's estimate is reasonable and supported, whereas SECI's estimate is grossly understated.

G&A encompasses essential core functions that support the management of the enterprise, including governance, direction, employee relations, internal control, and fiscal activity. Most G&A functions are the direct result of the need for companies to comply with a legal, regulatory, administrative, or commercial requirement. For example, a major company must track and comply with all federal, state, and local regulations and statutes that govern the business. A railroad like the SFRR must ensure compliance with regulations specific to railroads, such as recently expanded security and hazmat procedures. It must conduct financial activities in accordance with Generally Accepted Accounting Principles ("GAAP") and follow the rigorous compliance requirements of Sarbanes-Oxley.[48] It must manage even ordinary business practices like hiring and firing in compliance with strict guidelines dictated by the need for background checks, Homeland Security regulations, and hazardous materials regulations. It must administer a variety of employee programs, ranging from training to benefits to workers' compensation. It will need to acquire customers, maintain these relationships, sell its

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[48] The SFRR will require a significant amount of financing and investors will require a Board of Directors that accurately reflects their interests and stake in the company and will insist that it employ corporate governance requirements commensurate with a company of its size.

transportation services, and administer payments. It must assess and manage risks and control losses. Changes in FRA safety regulations, such as hours of service rules, must be monitored, implemented, and managed. It must provide efficient corporate governance, adhere to organizational principles (*e.g.*, span of control),[49] and manage local relations (including taxation). The railroad must create and continually manage a comprehensive and proactive environmental program, not only to comply with EPA regulations, but also to ensure good customer and community relations. All companies – and particularly railroads – must provide an increasing level of security for their assets, employees, and the products they transport. Managers and employees alike must be trained in legal requirements that affect their work, and information systems are often required to ensure compliance. These are just a few examples of the substantial G&A demands on any efficient large transportation company that SECI's evidence completely ignores.

These requirements dictate a minimum scope and breadth for the G&A activities of a maximally efficient SFRR no different than the requirements that govern rail operations, maintenance of equipment, and maintenance of way. It is not possible to reduce G&A activity – or its associated expense – below the minimum efficient level while ensuring that all of the complex requirements of a modern business enterprise are fully met, as demonstrated by the experience of even the best peer companies.

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[49] "Span of control" is a management concept meaning "that a manager or supervisor can effectively man[a]ge only a limited number of subordinates under his or her direct control." http://www.businessdictionary.com/definition/span-of-control.html.

The execution of core enterprise G&A functions is not a matter of choice. Federal, state, and local government authorities; regulators; the courts; accounting practice boards; industry associations (*e.g.*, the Association of American Railroads and the American Short Line Railroad Association) and others provide guidance and requirements with which all U.S. businesses must comply. Exhibit III-D-2 provides a partial list of the mandatory governmental, rail industry, and third-party requirements that drive G&A activity.

The CSXT expert G&A team undertook an independent analysis of the SFRR's G&A costs. Their analysis posits a lean, highly efficient G&A organization that meets essential business and rail industry requirements with the lowest realistic level of resources. Using a three-step approach, CSXT made staffing and costing determinations necessary to equip the SFRR with the minimum G&A staffing levels required to make its operations feasible. Those three steps are:

1. **Establishing underlying administrative requirements.** As noted previously, a billion-dollar, multi-state, 2,000+ employee business must comply with an enormous range of administrative requirements as part of its daily existence. In this step, CSXT's expert G&A team assessed the unavoidable and specific requirements that drive G&A expenditures in order to determine the minimum level of administrative resources and costs necessary to address these requirements.

2. **Linking administrative requirements to job categories/expenditures.** After identifying the administrative requirements that drive the SFRR's G&A needs, CSXT's expert G&A team related those requirements to specific job categories or expenditures. This step linked, for example, the range of required hiring, training, layoff, retirement, and rehiring

requirements of a Human Resources function to the specific job classifications that provide these essential services.

3. **Benchmarking to determine appropriate staffing/expenditure levels.** After linking administrative requirements to job descriptions and G&A expense categories, CSXT's expert G&A team analyzed nationally recognized third party and peer G&A best practice benchmarks to determine the appropriate SFRR staffing and expenditure levels. These industry benchmarks are U.S.-based performance benchmarks for best-in-class companies and form the basis for achieving world-class performance. CSXT also examined staffing levels at railroads that would be comparable to the SFRR like the Kansas City Southern ("KCS") and RailAmerica. Together, these benchmarks provide inspirational performance targets used to set improvement goals for G&A activities. In all cases, CSXT's expert G&A team assumed that the SFRR would achieve the most efficient performance possible and take "full advantage of modern technology." SECI Opening at III-D-10. This assignment of top performance in all categories ensured that the SFRR is right-sized on all performance metrics.

In summary, CSXT's G&A evidence is not a simple argument that the SFRR replicate CSXT's G&A structure, an approach that the Board rightly has rejected in past cases. Instead, CSXT has taken a "bottom-up" approach: first identifying the minimum requirements that the SFRR would need to satisfy to operate in the real world, and then assigning the minimum staff and expense that a highly efficient organization would need to meet those requirements. Because CSXT's expert G&A team assumed that the SFRR would achieve best-in-class performance in every respect, the result of their analysis is a calculation of the minimum required G&A expense for an optimally efficient stand-alone railroad.

i. Staffing Requirements

CSXT's Exhibit III-D-1 contains detailed support for the SFRR's G&A staffing requirements. For each G&A position, Exhibit III-D-1 includes a description of the position's responsibilities and function, the staffing principles and requirements that necessitate the position, and applicable benchmarks demonstrating that the SFRR's staffing would be optimally efficient. The narrative below briefly discusses the CSXT expert G&A team's staffing plan for the SFRR.

Table III-D-9 summarizes the SFRR's G&A staff.

Table III-D-9
SFRR GENERAL & ADMINISTRATIVE STAFF HEADCOUNT

FUNCTIONAL AREA	Employee Headcount		
	SECI	CSXT	Difference
EXECUTIVE	**4**	**4**	**0**
MARKETING	**5**	**18**	**13**
Customer Service	**16**	**32**	**16**
FINANCE & ACCOUNTING	**3**	**3**	**0**
Treasury	**3**	**3**	**0**
Controller	**10**	**61**	**51**
Car Accounting	**2**	**4**	**2**
Purchasing	**3**	**7**	**4**
LEGAL & ADMINISTRATION	**9**	**13**	**4**
Environmental	**0**	**4**	**4**
Police	**0**	**16**	**16**
Human Resources	**3**	**17**	**14**
IT	**13**	**28**	**15**
Total	**71**	**210**	**139**

(a) Executive Department

SECI proposes that the SFRR Executive Department consist of the President's Office and the Board of Directors. *See* SECI Opening III-D-28-29. Under SECI's proposal, the President's Office consists of the President, two Directors of Corporate Relations, and an Administrative Assistant. The President serves as the CEO and chairs a five person Board of Directors, consisting of the President, the Vice President-Transportation, and three outside directors. SECI posits that the outside directors will include a member of the SFRR's customer group, a representative of its investors, and an independent director with no other connection to the SFRR. CSXT's expert G&A team agrees that the number and composition of the President's Office and Board of Directors is appropriate for the SFRR G&A organization

(b) Marketing and Customer Service

SECI proposes that the SFRR – a railroad transporting over 100 million tons annually for a broad mix of coal, general freight, and intermodal customers – could function with a Marketing and Customer Service Department of only twenty-one employees. Under SECI's proposal, the SFRR Director of Marketing and Customer Service would manage a department consisting of a mere four marketing managers and sixteen customer service managers. SECI asserts that "the bulk of the marketing function" could be outsourced. SECI Opening at III-D-30. This assertion is as unreasonable as it is unsupported. No railroad of the SFRR's size and complex traffic mix could realistically outsource the marketing function, and the consulting firm that SECI claims could handle the SFRR's marketing function has no experience handling such an unprecedented outsourcing assignment. SECI's proposed level of resources for the SFRR is insufficient to cover all of the essential daily requirements of an operation of SFRR's scope and complexity.

In the first place, SECI's suggestion that the Board has "accepted" outsourcing arrangements like that proposed here is false. *See* SECI Opening at III-D-30 n.19. On the contrary, the Board has recognized that marketing is an "important" function and that even a specialized coal-only SARR would require marketing personnel skilled in tasks as diverse as "understanding highly technical and specialized contracts," negotiating contract renewals, and "constantly monitor[ing] the coal and energy markets" of its customers. *See Xcel*, STB Docket No. 42057, at 67 (June 7, 2004) (holding that proposal to outsource SARR's entire marketing department was infeasible). The Board has only recognized that a partial outsourcing of the marketing function would be feasible where a SARR served "a limited and repetitive traffic group consisting primarily of originated unit-train coal traffic moving to a known set of power plants" (and where the railroad's alternative would "gold-plate" the SARR's marketing system). *AEP Texas North Co. v. BNSF Ry. Co.*, STB Docket No. 41191 (Sub-No. 1) Here, where the SFRR would serve a broad range of not only coal customers, but also general freight and intermodal customers, SECI's assumption that it will completely outsource the SFRR marketing functions to a third party is not feasible.

It is both unrealistic and unprecedented for a railroad of this size and traffic base (*i.e.*, well over a million carloads, interchange with two Class I railroads and 29 regional/shortline connections) to outsource the marketing function. Similarly unprecedented – and unrealistic – is the assumption that a small staff could manage all of the commercial relationships generated by over a million carloads of coal, general freight, and intermodal traffic. Highroad Consulting, the proposed marketing outsource provider for the SFRR, has no experience handling such an unprecedented outsourcing assignment. Highroad characterizes itself as "a full service

transportation and logistics consulting firm that has been helping clients develop effective transportation strategies since 1996."[50] Highroad's website does not indicate that it has any experience in managing an outsourced marketing organization, let alone for a carrier the size of the SFRR.[51] A survey of rail carriers with $100 million or greater revenue did not reveal any carrier outsourcing a function as critical as marketing. Because SECI's proposed outsourcing of the marketing function is unrealistic, the CSXT G&A expert team developed a least-cost most-efficient in-house marketing department.

Vice President – Marketing and Customer Service. SECI proposes that the SFRR's Director of Marketing and Customer Service report to the Vice President - Transportation.[52] To ensure that the voice of the customer is represented and balanced with that of the internally focused operations function (which is led by a Vice President), the chief commercial officer should be elevated from the proposed Director level to a Vice President of Marketing and Customer Service. The chief commercial officer then would have a comparable position in the company to interact as a peer with the Vice President - Transportation. The organizational relationship of equals in the commercial and operating functions is a key characteristic of all railroads with annual revenue in excess of $100 million, as well as of virtually all other forms of network transportation businesses in North America, such as less-than-truckload and truckload

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[50] *See* http://www.highroadconsulting.com/homepage.php (emphasis added).

[51] *See* http://www.highroadconsulting.com/services.php.

[52] *See* SECI Opening at III-D-29.

motor carriers, inland barge, and third-party logistics providers.[53] Major railroads such as the SFRR that depend on significant flows of general freight and intermodal traffic require a focus on the customer service function that is not consistent with SECI's demotion of the chief commercial officer. As the chief commercial officer, the Vice President of Marketing and Customer Service is responsible for overseeing revenue generating activities – selling customers a transportation service. The customer service department supports the "ship to pay" processes,[54] including problem resolution for customers. The marketing department is the customer's main point of contact and directs customers to the appropriate customer service and operation resources to resolve operational issues. Therefore, it is important that the marketing and customer service functions align under a Vice President, and it is not feasible to think that the SFRR could operate effectively without such a focus on customer service. The Vice President of Marketing & Customer Service should also have an administrative assistant to assist with the management of the Vice President's substantial responsibilities.

Sales and Marketing Staff. The CSXT G&A expert team developed a least-cost marketing staff after a review of railroad industry staffing standards and experience with both high-performing regional railroads and Class I railroads. This review demonstrated that a general freight or intermodal marketing or sales manager typically manages a portfolio of $100

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[53] For example, the KCS has an Executive Vice President of Sales and Marketing. *See* http://www.kcsouthern.com/en-us/KCS/Pages/DirectorsandOfficers.aspx (retrieved January 15, 2010).

[54] "Ship to Pay Process" is the steps that are required to be followed by a railroad from the point in time when a shipper decides to make a shipment until the shipper tenders a payment for the transportation services provided. They would include all the necessary actions from ordering the freight car and tendering the load through the final settlement and payment of the freight bill.

million or less in revenue, and that a coal marketing or sales manager typically manages less than $150 million in coal revenue. For example, even though RailAmerica's Class I connections are responsible for marketing more than 40 percent of its traffic, it still requires {{ }} marketing managers to handle $500 million of revenue.[55] Other railroads are less efficient. For example, the KCS employs {{ }} marketing and sales personnel in the United States – approximately one full time marketing employee for each {{ }} of United States revenue. Taking a conservative approach, CSXT proposes that the SFRR could achieve the efficiencies of RailAmerica and employ one sales and marketing manager for each $100 million of non-coal revenue and one for each $150 million of coal revenue. Therefore the SFRR requires a minimum of nine sales and marketing managers. The SFRR will also need two Directors of Sales and Marketing to manage and coordinate the efforts of the staff. With a typical span of control of three to six,[56] two Directors are required to coordinate the efforts of a staff of nine managers.

Marketing Administration Managers. SECI proposes that the SFRR will have an annual outsourcing cost of $260,000 for "Marketing and Contract Administration," which SECI estimates would be the cost of full-time coverage by four marketing and contract administration personnel. *See* SECI WP "SFRR GA Outsourcing.xls. CSXT agrees that the SFRR would need full-time personnel to administer contracts and tariffs, activate prices in internal systems,

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[55] *See* CSXT WP "RA 2009 Citi North American Credit Conference.pdf".

[56] *See* Booz Allen Hamilton, *Management Spans & Layers: Streamlining the Out-of Shape Organization*, at 1 (2003) (CSXT WP "Management Spans.pdf") (typical span of control for director is "3 to 6"). CSXT's expert G&A team conservatively assumed a span of control at the middle of that range as hiring a partial management full-time employee is not possible.

interface with RAILINC, administer refunds and suspended bills, and maintain reference files. CSXT also agrees that four full-time personnel would be adequate to manage this task at a least-cost, most-efficient railroad. However, this function cannot be outsourced feasibly. Marketing Administration Managers will have access to highly sensitive commercial data and will need to work closely with CSXT marketing managers. It is important that an in-house marketing administration staff, co-located with other commercial employees, maintain access to essential documentation that provides the underpinning of all commercial relationships. There is no evidence of any rail carrier or other transportation company with revenues in excess of $100 million outsourcing this critical function.

E-Commerce Manager. SECI's proposed SFRR resource plan focuses solely on the sales and marketing functions and ignores essential support activities and functions required to maintain a traffic base at the levels SFRR proposes. For example, SECI has not provided personnel to manage the e-commerce program. Most shippers today demand a web-based customer interface for functions like tracking and tracing shipments and billing. This is especially necessary for a railroad with significant general freight and intermodal shipments. Moreover, this position will improve overall SFRR efficiency by allowing customer self-service. Therefore the SFRR would require an E-Commerce Manager with expertise in web-based applications.

Customer Service Managers. SECI proposes that the SFRR customer service staff consist of 16 Customer Service Managers. Such a small staff might be sufficient to cover the functions of a 24-hour day/7-day week customer service call center, if that is the focus of their efforts and nothing else. But SECI's customer service staffing plan overlooks many other

essential customer-related requirements, such as preparing work orders for the traffic tendered to SFRR, reporting car status information into the transportation and revenue streams, inputting and managing bad orders, providing required hazmat reporting, and other critical information requirements. Real-world railroads require significant staffing to perform these tasks; for example, RailAmerica employs {{ }} customer services representatives. *See* CSXT WP "20091029 RailAmerica GA Benchmarking Survey." But SECI has not provided the SFRR with the staff to perform these critical functions.

CSXT agrees with SECI that 16 Customer Service Managers could effectively staff a 24-hour day/7-day week customer service call center. However, SECI failed to provide any layer of management between call center workers and its Director of Marketing and Customer Service (who, as discussed above, should be a Vice President). It is not reasonable to think that the customer service managers would operate efficiently without direct supervision from a manager who can monitor call center operations and address customer issues that require escalation. CSXT's expert G&A team provided for one Customer Service Operations Director to supervise call center operations.

Customer Operations Managers: SECI does not propose that its customer service managers will be responsible for anything but "monitoring train locations, maintaining contact with the origin mine operators and destination facilities, answering customers' questions concerning the locations of specific trains and cars, and responding to customers' requests for diversion of trains/cars to different origins or destinations." SECI Opening at III-D-32-33. These functions are only a small part of the critical customer service functions that a feasible SFRR would need to operate. The SFRR also must have customer service staff for a wide

variety of operations-related tasks, including issuance of work orders, hazmat reporting, interchange reporting, and resolution of AEI discrepancies and data reporting errors. The SFRR would need Customer Operations Managers available well beyond normal business hours (if not 24/7) in order to ensure efficient operations. CSXT's expert G&A team determined that the SFRR would need a minimum of ten Customer Operations Managers to fulfill these responsibilities, and one Customer Service Operations Director to supervise the Operations Managers.

Customer Business Systems Managers. The RMI technology applications SECI proposes for the SFRR (like all other existing rail system technologies) require manual intervention to correct essential information. Neither RMI nor any existing rail system can automatically update information such as assigning traffic to a particular block, assigning the block to trains, and then managing the variation of network and block definitions as traffic changes on an almost daily basis. This required business systems maintenance function must be staffed by SFRR Customer Service personnel not working in the call center, as they will be required to work with RMI and other service providers to maintain and update the files and network definition and data structure of critical operating and reporting systems. Customer Business Systems Managers often would need to be available well beyond normal business hours (if not 24/7). The SFRR would require three Customer Business System Managers to fulfill this

function, and one Customer Business Systems Director to supervise the Customer Business Systems Managers.[57]

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The 32-person SFRR customer service organization proposed by CSXT's expert G&A team would be significantly more efficient than the organization for any comparable railroad. For example, at RailAmerica, where the connecting Class I railroads originate or terminate most traffic and often provide compensation through a fixed line haul revenue factor or simple haulage fee, {{ }} customer service employees are required to manage revenue and day-to-day information system interactions for $500 million of revenue.[58] Under CSXT's restatement of costs, the SFRR still would have {{ }} of RailAmerica's customer service personnel for a traffic base with nearly twice RailAmerica's revenues.

(c) Finance and Accounting

SECI proposes a Finance and Accounting department that consists of 21 employees. Under its proposal, the Vice President – Finance and Accounting heads the department and has an Administrative Assistant/Secretary, a Treasurer, a Controller, a Director of Budgets and Purchasing, and a Director of Internal Auditing with various support positions reporting to these sub-department heads. As explained below, CSXT's expert G&A team concluded that SECI's proposed staffing level for the SFRR's finance and accounting functions provides insufficient

[57] SECI's suggestion that the SFRR can have a small customer service staff because "a large percentage of the SFRR's traffic is interchanged with other railroads that have their own customer personnel that interact with the same customers" is meritless. SECI Opening at III-D-33. It is deeply at odds with the purpose of the SAC test for SECI to assume that other carriers would shoulder part of the SFRR's customer service obligations.

[58] *See* CSXT WP "20091029 RailAmerica GA Benchmarking Survey.pdf."

resources to perform the necessary finance and accounting functions for a railroad of this size and complexity.

SFRR's Finance and Accounting Department would be responsible for the financial and accounting functions of a major railroad with over a billion dollars in annual revenue, including taxation, revenue accounting, STB and SEC[59] reporting, disbursements, purchasing, and budgeting. SECI's proposal that a mere 21 employees could perform all these functions is not reasonable, and its claim that the "SFRR's accounting and finance functions are performed using computerized packages and programs" does not justify SECI's gross underestimation of the SFRR's finance and accounting staff. SECI Opening at III-D-33. "[C]omputerized packages and programs" do not operate on automatic pilot – they require human beings to input data, correct errors, address exceptions, and manage those programs. CSXT's expert G&A team assumed that the SFRR would employ an even greater level of finance and accounting automation than that proposed by SECI, but the SFRR will still require a sufficient number of personnel to operate those programs and manage the SFRR's many finance and accounting demands.

As detailed below, CSXT's expert G&A team concluded that the minimum Finance & Accounting personnel for a company of the size and complexity of the SFRR is 78 people. CSXT's expert G&A team assumed that the SFRR will utilize a significant level of finance and accounting automation – not only using computerized systems for standard corporate accounting

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[59] As discussed below, a least-cost most-efficient SFRR would almost certainly issue publicly-traded debt, because the significantly reduced cost of public debt vis-à-vis private debt would far outweigh the cost of compliance with greater regulatory obligations.

and finance functions, but also utilizing a wide series of specialized productivity based systems not contemplated by SECI (*e.g.*, automated cross tie purchase, accounting and inventory management systems, state required ethanol tax reporting systems).[60] The CSXT expert G&A team's proposed SFRR finance and accounting department would be even more efficient than levels for best-in-class performers provided by internationally recognized right sizing advisory firms such as the Hackett Group to CSX in 2006 and 2009.[61] Indeed, CSXT's proposed staff for the SFRR is more productive as that employed by RailAmerica, which employs {{ }} Finance and Accounting staff to manage a company with less than half the revenue of the SFRR.[62]

Vice President – Finance and Accounting. CSXT's expert G&A team agrees with SECI that the SFRR's Finance and Accounting Department should be headed by a Vice President – Finance and Accounting (or Chief Financial Officer), and that the Vice President should have a dedicated Administrative Assistant.

Treasury Function. CSXT's expert G&A team accepted SECI's proposal that the SFRR's Treasury Function could be managed by a three-person team: a Treasurer; an Assistant Treasurer; and a Cash Manager.

Controller Function. SECI proposes that the SFRR's Controller function would be headed by a Controller, who would be assisted by four Assistant Controllers for Revenue

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[60] Some of the computerized packages and programs that the SFRR would need to use are described in CSXT WP "SFRR Application List."

[61] "Finance Shared Services: Key Performance Metrics and Hackett Findings," The Hackett Group, 2006 (CSXT WP "Hackett Finance SS Report"); "Hackett's 2009 Perspectives on World-Class Finance Organizations," The Hackett Group, 2009 (CSXT WP "Hackett 2009 Perspective on World Class Finance Organizations.pdf").

[62] *See* CSXT WP "20091029 RailAmerica GA Benchmarking Survey"

Accounting, Disbursements, Taxes, and Financial Reporting. CSXT's expert G&A team agreed that the Controller and four Assistant Controllers proposed by SECI are an appropriate leadership team for the Controller function.[63] But SECI's claim that a mere five "Analyst/Clerks" would be sufficient to execute the substantial responsibilities that fall within the Controller function is ludicrous. SECI produced no benchmarks or comparable railroad data to suggest that such a bare-bones staff could manage revenue accounting, financial reporting, taxes, disbursements, and property accounting for a Class I railroad with nearly a billion dollars in annual revenue and (in SECI's estimation) nearly $6 billion in assets.[64]

One of the significant problems caused by SECI's failure to staff the Controller function is that the SFRR would be unable to comply with basic SEC regulations, including Securities Act filing and registration requirements and Sarbanes-Oxley (SOX) requirements and procedures. SECI asserts that the SFRR would not be publicly traded – a highly questionable assumption given the proposed size of the SFRR. But even if the SFRR were a private company it would still be subject to SEC/SOX regulations and reporting requirements if its debt obligations were publicly traded, as they surely would be. By raising capital in public debt markets, a borrower obtains access to dramatically larger investor pools that can buy and sell publicly issued debt

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[63] As discussed below, CSXT's expert G&A team provided that the Assistant Controller – Taxes would also supervise the SFRR's Property Accounting, Expenditures Recovery, and Car Accounting personnel.

[64] As discussed in Section III-F, SECI grossly underestimated the SFRR's land and other road property investment costs, and thus the SFRR's asset base would be far greater than that posited in SECI's evidence.

instruments.[65] If the SFRR did not issue publicly traded debt it would face significantly higher interest costs; private debt would be at least 0.25 percent higher than public debt (and likely more). For every $1 billion in debt, a 0.25 percent higher interest rate would equate to annual pre-tax costs of $2.5 million per year, meaning that an entity like the SFRR that would issue over $6 billion in debt would pay at least $15 million in additional interest costs simply by issuing private debt instead of public debt.[66] The cost of private debt thus far outweighs the incremental regulatory cost of complying with SEC/SOX controls and filing and reporting requirements, and the "least cost-most effective" option is for SFRR to issue publicly traded debt.[67]

Revenue Accounting. SECI proposes that the Assistant Controller - Revenue Accounting will "oversee[] all customer and interline billing and collection," "supervis[e] billing for demurrage, storage, and easements and utility crossings," and "input[] contract and tariff rate and payment terms into the SFRR's billing system" with the aid of only two Analyst/Clerks. SECI Opening at III-D-35. Two clerks could not possibly carry out these functions for a 2100 mile, billion-dollar, million-plus carload railroad. The SFRR will need sufficient revenue accounting staff to ensure the accurate and timely reporting of all operating revenue; to resolve issues and exceptions on interline settlements, waybills, and supplemental bills; to interact with auditors assessing internal controls pursuant to SOX 404; and to monitor and estimate all

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[65] *See* CSXT WP "SFRR – SOX and Utility Cost Analysis."

[66] *Id.*

[67] Indeed, even if the SFRR made the inefficient choice to issue private debt, the bondholders on $6 billion of private debt would almost certainly require the SFRR to provide them with audited financial statements and reports on internal controls that would approximate the cost of regulatory compliance.

revenue-related and receivable reserves pursuant to Financial Accounting Standards (FAS) guidelines. These revenue accounting functions will be carried out by a Revenue Accounting group consisting of a Director and three Managers of Revenue Accounting.

In addition, the SFRR will require significant personnel dedicated to rail billings and collections. CSXT's expert G&A team provided for a Rail Billing and Collection group responsible for the preparation, invoicing and collection of all freight transportation charges as well as all incidental charges such as demurrage, switching, and various other services as prescribed by tariff or contract. The Rail Billing and Collection Group would be responsible for processing customer shipping documents to create waybills; managing waybill exceptions, supplemental bill exceptions, and reconciliations; handling collection calls; processing customer overcharge claims; and testing and maintaining SOX 404 key controls – all for a carrier handling over a million carloads per year. With the assistance of a full suite of rail revenue IT systems, a least-cost and highly-efficient Rail Billing and Collection group consists of a Director, five Managers, and twenty-one Analysts. This total staff of twenty-seven for a carrier handling well over a million carloads per year is considerably more efficient than the rail billing and collection staff for the DM&E, {{

}}.[68]

Disbursements. SECI proposes that the SFRR's Assistant Controller - Disbursements will be assisted by only one Analyst/Clerk. *See* SECI Opening at III-D-35-36. One Assistant Controller and one Analyst/Clerk could not feasibly handle "all accounts payable and payroll

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[68] *See* CSXT WP "DME Benchmark.doc"

processing," issue all "vendor payments," advise senior management on cash requirements, and "review[] all contracts with outside suppliers." *Id.* at III-D-35. The Accounts Payable and Disbursement function will require at least one manager and five clerical staff, which would be considerably more efficient than recent Hackett target benchmarks of 9.3 staff per $1 billion of revenue.[69] These staff would be responsible for tasks including processing invoices, mailing checks or handling wire transfers, issuing IRS Form 1099s to contractors, handling account reconciliations, and processing expense reports.

Payroll Accounting. The SFRR would also require at least 2 Payroll Managers reporting to the Assistant Controller - Disbursements. Even accepting SECI's assumption that the SFRR would utilize Paychex for payroll processing,[70] Paychex only processes payroll; it does not manage the payroll function. While Paychex will process pay and issue W-2s and tax payments, the SFRR still needs in-house personnel to handle a range of payroll issues, including the following:

- Responding to employee questions about their compensation. SFRR must have staffing to respond to these questions since Paychex will only process the time approved by SFRR supervisors.
- Coordinating with Paychex on garnishments, child support, and tax liens. SFRR staff will be responsible for receiving these items and making sure they are for valid SFRR employees prior to forwarding them to Paychex for processing.

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[69] "Finance Shared Services: Key Performance Metrics and Hackett Findings," The Hackett Group, 2006 (CSXT WP "Hackett Finance SS Report"); "Hackett's 2009 Perspectives on World-Class Finance Organizations," The Hackett Group, 2009 (CSXT WP "Hackett 2009 Perspective on World Class Finance Organizations.pdf").

[70] SFRR's claim that Paychex would handle payroll processing for $44 an employee is incorrect. CSXT contacted Paychex and was informed that the price would be $50 per employee.

- Coordinating employee changes such as direct deposit, garnishments, address and payroll deductions. While Paychex will process requested changes, SFRR is responsible for ensuring that the changes are correct.

- Answering questions from SFRR management regarding payroll expense. Such questions will be frequent since labor costs are one of the SFRR's largest expenses.

- Interacting with Internal Audit and with external auditors for year end audits and SOX testing.

- Making journal entries and performing account reconciliations. A company with well over a thousand employees and over a billion dollars in revenue will need to reconcile the payroll accounts and make adjusting journal entries for payment errors. These exceptions will require monthly analysis of accounts resulting in journal entries and the accompanying explanations and justifications.

- Responding to government inquiries. States and federal agencies like the Department of Labor periodically request payroll information. Responses to these requests are not optional and are required by federal and state laws.

- Responding to IRS requests. The SFRR, and not Paychex, is ultimately responsible for ensuring that the taxes are calculated and paid correctly. This area will require monitoring for compliance.

- Responding to Railroad Retirement Board ("RRB") requests. The RRB will require periodic reports and will request information related to employees for a variety of issues.

These substantial responsibilities – none of which can be outsourced to Paychex – easily justify the CSXT expert G&A team's determination of the need for two Payroll Managers. This staffing is predicated on conservative assumptions that these two managers will handle their many tasks with a high level of efficiency and that the SFRR will realize significant savings from Paychex, given that the Hackett high performance staffing levels are 3.94 payroll personnel for each $1 billion of revenue.

Tax Function. SECI proposes that the SFRR's Assistant Controller – Taxes and one Analyst/Clerk would manage the preparation of all SFRR federal income tax returns, state

income tax returns, state sales and use tax returns, and ad valorem property tax returns by outside vendors. Even accepting SECI's proposal to use outside tax preparation services, the SFRR will require sufficient internal staff to effectively manage the preparation of ninety-six annual income and operating tax returns, hundreds of state sales tax returns, and many thousands of property tax bills. *See* CSXT WP "SFRR Tax Returns." This will require staff to provide information to outside vendors, respond to information requests, review draft tax returns, and generally oversee the outside vendors' work. SFRR would also need sufficient staff to respond to audits by state and federal authorities. The SFRR's tax function will also need staffing to prepare the monthly transporter, terminal operator, and exporter returns required by many states.[71] SECI did not provide for any outside vendors to handle this function. CSXT's expert G&A team determined that these monthly reports would be most efficiently handled by in-house staff. It is not possible for a single Analyst/Clerk to assist the Assistant Controller – Taxes with these significant responsibilities. The CSXT expert G&A team determined that at least four dedicated Tax Accountants would be required for the SFRR to manage preparation of necessary tax forms. This staffing is comparable to that of best-in-class companies with similar revenues to the SFRR – few of which have tax compliance obligations as extensive as the SFRR's.[72]

Property Accounting. SECI does not identify any SFRR staff to handle the accounting for fixed assets, instead simply stating that "[a] financial accounting computer is used to track all

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[71] Several of these reporting requirements are summarized in CSXT WP "SFRR-State Tax Reporting rqmts."

[72] "Key Findings from the 2009 Tax Department Budget, Staffing and Spend Benchmarking," Corporate Executive Board, September 2009.

of the SFRR's physical assets and asset replacements." SECI Opening at III-D-35. But a computer cannot track and account for fixed asset additions and retirements without SFRR employees to properly administer fixed assets and operate the computer system. While an automated system will calculate depreciation expense once assets are established in the system, the system cannot set up assets and evaluate that the asset entry is correct.

Moreover, tracking property depreciation expense is only one of the critical functions for which the SFRR's Property Accounting group would be responsible. Individual construction projects require monitoring and proper classification to ensure accurate financial reporting, and individual cost components must be reviewed to ensure that they are properly classified as operating/maintenance expense or new capital assets. As new assets are constructed, old assets must be identified and properly retired. The SFRR's property accounting staff must prepare account reconciliations and analysis to ensure accurate and timely reporting, and must generate journal entries to record depreciation, and reconcile adjustments. This work – which will often require coordination with other departments such as Engineering and Mechanical – is essential for the SFRR to account for fixed asset activity for purposes of reporting and taxation.

Furthermore, Class I railroads are required to perform life studies for equipment assets every 3 years and road and track assets every 6 years. *See* 49 C.F.R. Part 1201 Instruction 4-2(b). Development of these studies requires accurate fixed asset addition and retirement records. Once these studies are complete, they are filed with the STB for review and approval.

CSXT's expert G&A team determined that the SFRR would need three managers to properly perform the accounting function for fixed assets. These managers would report to the Assistant Controller – Taxes. This staffing assumes that the SFRR can achieve best-in-class

efficiencies. As a comparison, the KCS, which is similar in size to the SFRR, has {{ }} full time employees in the United States devoted to the property accounting function.

Expenditure Recovery. SECI fails to provide any SFRR staff to handle the SFRR's Expenditure Recovery function. The SFRR would require sufficient staff to bill a variety of projects such as DOT crossing projects, damage to railroad property, scrap billings, pool billings, and other miscellaneous billings, and to ensure that billings are issued in compliance with federal and state regulations.[73] Regulatory compliance is particularly challenging in this area because many of the bills are issued to governmental entities. Among other things, applicable regulations would require the SFRR to file annual reports in Florida and North Carolina and an annual audit report with the federal government. The SFRR would also need staffing to respond to audits by government entities. CSXT's expert G&A team determined that a staff of one director and four managers could handle this function for the SFRR.

Equipment Accounting. SECI proposes one Manager of Equipment Accounting to manage car hire and receivable issues with RMI as the car hire system. As with many of its other technology assumptions, SECI significantly understates the need for human intervention and oversight of this critical process. While RMI provides a Car Hire system that could track SFRR cars off the SFRR system and non-SFRR cars on the SFRR system and compute charges due SFRR from other railroads and the SFRR's payables to other roads, this system does not run on autopilot. A single person cannot handle the administrative burden of the car accounting function, which includes a myriad of accounting interfaces (accounts receivable, accounts

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[73] *See* CSXT WP "SFRR Railroad – Expenditure Recovery Department" for a summary of the requirements that would govern the SFRR's expenditure recovery function.

payable, R-1 Schedules 414 & 755, Tax Reporting, Journal Entries, general ledger account reconciliations, and SOX and audit requirements); the physical mailing of reports, payments, statements and collection letters; handling of TTX and third party billing issues; reconciliation of statements from other railroads; and resolution of discrepancies and data reporting errors. In addition, handling exceptions and adjustments, maintaining files, and responding to audits and external inquiries all require human effort not automatically provided by the RMI system. Exceptions are not something that can be avoided by a SARR – they are the natural result of differences between internal processing and others' external processing. Even a 'perfect' internal processing system cannot prevent exceptions. Examples of exceptions would include system, foreign, private mileage and equalization claims. CSXT's expert G&A Team determined that the SFRR would need a minimum of one Manager of Equipment Accounting supported by three Analyst positions to oversee and manage the Equipment Accounting process. This staffing assumes that the SFRR would be considerably more efficient than real-world railroads. As a comparison, RailAmerica – half the size of the SFRR – has four positions in this area.

Financial Reporting. SECI proposes that the Assistant Controller – Financial Reporting would only be supported by one Analyst/Clerk. *See* SECI Opening at III-D-36. This assumption is grossly unrealistic in light of the significant reporting responsibilities that the SFRR would have as a Class I railroad with over $6 billion in debt. The SFRR's Financial Reporting function will be responsible for complying with the following requirements:

- Monthly Closing of Books. The process of closing the books includes the sub-processes of preparing, reviewing, approving and posting journal entries; maintaining the financial system and chart of accounts; preparing balance sheet account reconciliations; and the preparation of financial statements.

- Surface Transportation Board (STB) reporting. Because SFRR anticipates its annual revenues to be greater than $1 billion, it would be subject to all the STB reporting requirements of a Class I railroad. These include at least thirty-two reports to the STB each year, as detailed below:

Principal Financial And Statistical Documents Required Of Railroads By The Surface Transportation Board[74]

DOCUMENT	DUE DATE
Form R-1	March 31 Of The Following Year
Form R-1 Sch. 250	April 30 Of The Following Year
Quarterly RE&I	50 Days After Close Of Quarter
Quarterly Cbs	30 Days After Close Of Quarter
Annual Qcs	90 Days After End Of Year
Quarterly Qcs	60 Days After End Of Quarter
Annual Wage Form A&B	45 Days After End Of Year
Quarterly Wage Form A&B	30 Days After End Of Quarter
M-350 Monthly Report Of Employees	15 Days After End Of Month

- Financial statement audit. SFRR will have an annual financial statement audit prepared by Certified Public Accountants. The completion of an annual audit is not a task that can be completely outsourced to a CPA firm. In order to complete the audit, the financial reporting staff will be required to prepare schedules and analyses requested by the auditors, as well as answer questions, provide documentation for transactions, and draft the financial statements and footnotes.

[74] See http://www.stb.dot.gov/stb/faqs.html.

- Benefit plan reporting. IRS regulations require Form 5500 and audited plan financial statements to be filed for all Pension Benefit plans (including 401(k) plans) covered by ERISA even if benefits no longer accrue, contributions were not made during the plan year or contributions to the plan will no longer be made. Because SFRR anticipates an employee count in excess of 1,100, it will need to provide a 401(k) plan to employees to remain competitive in the labor market. The financial reporting staff will be required to maintain records, prepare analyses and draft financial statements and footnotes in support of the Form 5500 filing and audited plan financial statements.

- SEC reporting. As discussed above, a least-cost most-efficient SFRR would seek out the most cost-effective source of financing, which would be public debt. According to Section 13 of the Securities Exchange Act of 1934, if a non-public company issues public debt, the non-public company is required to register with an exchange and file quarterly and annual financial statements with the SEC.

- SOX compliance. An organization that is required to file quarterly and annual financial statements with the SEC must comply with SOX. This includes the preparation and maintenance of financial process documentation, development of key internal controls and monitoring compliance with key internal controls.

- Bondholder reporting. SECI has indicated that the SFRR will require approximately $5.7 billion in bonds to finance its road property investment. *See* SECI Opening Ex. III-H-1 Table C.[75] Bond placement agreements often contain provisions for periodic (quarterly) reporting of the financial results of the issuer in order for the holders of the bonds to monitor the ongoing creditworthiness of the issuer.

- Accounting research. Periodically new accounting standards are issued by various accounting standard setters. The Financial Reporting group will be responsible for monitoring new pronouncements and developing accounting policies and procedures to comply with new standards.

CSXT's expert G&A team concluded that the minimum staff required to assist the Assistant Controller – Financial Reporting with these substantial responsibilities is four Staff Accountants. This staffing assumes that the SFRR utilizes a full range of financial systems (with

[75] As demonstrated in Section III-F, the true road property investment for the SFRR would be considerably higher.

capabilities above the SECI-proposed PeachTree technology suite) and is consistent with Hackett performance benchmarks for a company with high performance accounting IT systems.[76]

Budgets and Purchasing Function. SECI proposes a Budget and Purchasing Department that consists of a Director of Budgets and Purchasing responsible for preparation of the annual budget and for the company-wide purchasing function, who oversees two Managers of Budgets and Purchasing (one focused on budgeting and one on purchasing) and two Managers of Equipment Accounting. CSXT accepts SECI's proposed staffing, with two exceptions. First, CSXT's expert G&A team determined that the Manager of Budgets and Purchasing who "works primarily on budgeting" should be a Financial Planning & Analysis manager completely devoted to overseeing the budget and performance reporting process. Second, and more importantly, a single Manager of Budgets and Purchasing is grossly inadequate to handle purchasing for a railroad of the size and scope of the SFRR. CSXT's expert G&A team determined that additional purchasing staff are necessary for the SFRR to operate efficiently, as detailed below.

A company with revenues of nearly a billion dollars requires purchasing personnel that can focus on groups of commodities and become specialists in each category of procurement. Given the wide range of mechanical, engineering, operating, and administrative products and services that will need to be procured, there is no evidence from railroads, transportation, or similar industries in general that a purchasing generalist could manage complex purchasing relationships with thousands of vendors of materials and services. High performance in

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[76] "Finance Shared Services: Key Performance Metrics and Hackett Findings," The Hackett Group, 2006 (CSXT WP "Hackett Finance SS Report"); "Hackett's 2009 Perspectives on World-Class Finance Organizations," The Hackett Group, 2009 (CSXT WP "Hackett 2009 Perspective on World Class Finance Organizations.pdf").

purchasing is achieved only when purchasers can specialize and develop expertise in an area. Not only does understaffing the purchasing function increase what the SFRR would pay for materials, but stock-outs can be very costly given the urgency of many railroad material purchases. In some cases, the cost of one stock-out can be equal to the cost of providing a purchasing manager – for example, a stock-out that shuts down a mechanized rail or tie gang is far more expensive and inefficient for the SFRR than having adequate purchasing resources to prevent such stock-outs. CSXT's expert G&A team provided for a Purchasing Department headed by one director overseeing a staff of 6 buyers who would be sourcing specialists for critical purchasing needs such as mechanical, fuel, and technology. This staffing level is well below Hackett's top performers and is consistent with peer staffing. For example, RailAmerica has {{ }} purchasing staff for revenue and cost levels half those of SFRR.[77]

Internal Audit. CSXT's expert G&A team accepts SECI's proposed Director of Internal Auditing. One internal auditor should be sufficient to ensure adequate oversight of the company's various accounting and financial activities, provided that the SFRR maintains a sufficient level of outside auditing coverage.

(d) Law and Administrative

Vice President – Law and Administration. SECI proposes that the Vice President – Law and Administration would serve as the SFRR's General Counsel and oversee the legal, human resources, and information technology ("IT") functions. *See* SECI Opening at III-D-37. CSXT's expert G&A team agrees that a Vice President- Law and Administration is necessary for

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[77] *See* CSXT WP "20091029 RailAmerica GA Benchmarking Survey"

the SFRR, but the Vice President cannot effectively manage a broad portfolio spanning the SFRR's legal, human resources, and IT functions. This is particularly so because the Vice President – Law and Administration will also need to supervise essential SFRR functions for which SECI did not provide, such as environmental and public safety personnel. For this reason, CSXT's expert G&A team removed IT from the Vice President – Law and Administration's portfolio and created a separate IT department headed by a Vice President – Information Technology. CSXT's expert G&A team also determined that the Vice President – Law and Administration requires a dedicated administrative assistant.

Legal Function. SECI proposes that the SFRR's legal needs will be met by the Vice President – Law and Administration (who is also the SFRR's General Counsel), assisted by three in-house General Attorneys and two Paralegal/Administrative Assistants. SECI proposes that the SFRR will outsource "[m]ost of the railroad's legal work," claiming that the SFRR will only need to spend $575,000 annually on outside law firms. SECI Opening at III-D-37; SECI WP "SFRR GA Outsourcing.xls."

CSXT's expert G&A team determined that SECI has significantly underestimated the SFRR's legal expenses. Legal expenses are not something that can be avoided or ignored by an efficient railroad – they are a cost of doing business. A billion-dollar company must have an adequate staff of in-house and outside counsel to handle issues ranging from property disputes to employment litigation, from contract negotiation to environmental issues, from tax work to regulatory compliance. Indeed, as a Class I railroad the SFRR would likely have significantly higher legal expenses than a non-railroad. In the first place, the SFRR will need resources to ensure compliance with FRA, TSA, environmental, and STB regulations. Railroads face

significantly more regulation than most other industries, and the SFRR will need sufficient legal staff to navigate the complex regulatory regimes with which the SFRR must comply.

The SFRR also will confront litigation expenses not faced by non-railroads. For example, railroads, and railroads alone, are subject to the Federal Employers Liability Act ("FELA"), which supplants state workers' compensation schemes with a fault-based liability mechanism. FELA requires that compensation for death or injury be obtained by individual litigation establishing the employer's fault. With very limited exceptions, all other major U.S. companies absorb employee injury costs through a no-fault workers' compensation system that does not require the expenditure of significant litigation resources. The fault-based FELA system generates an enormous employee injury litigation docket for railroads that other companies simply do not have. The SFRR's outside legal expenses must reflect the extraordinary transaction and handling costs of processing employee injury claims in this litigious model. Although certainly there are transaction costs associated with processing workers' compensation claims, those costs are not comparable to the expense of litigation and typically would not be reflected in a company's legal expenditures.

In addition, SECI's assertion that a Class I railroad like the SFRR will only require "minimal STB work" is not reasonable. SECI claims in a workpaper that the SFRR would face "no max[imum] rate proceedings,"[78] but even if that were true a Class I railroad like the SFRR would need to devote significant resources to filings with the STB in a variety of matters. For example, the KCS, whose U.S. operations are roughly comparable to the SFRR's, filed 35

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[78] SECI WP "SFRR G&A Outsourcing."

pleadings with the STB during 2008 (not one of which was in connection with a rate case).[79] And SECI's assumption that a billion-dollar Class I railroad will face no prospect of rate litigation over the next ten years is unjustified. Indeed, many of the movements in SECI's traffic group were part of the movements at issue in *E.I. du Pont de Nemours & Co. v. CSX Transp., Inc.*, STB Docket No. 42112.[80]

After consulting an array of benchmarking sources on legal spending and management, CSXT's expert G&A team determined that comparable best-in-class United States companies have a total legal spend of at least 0.25% of annual revenue. A recent Altman Weil survey showed median legal spend of 0.275% for all companies with $1 to $4.9 billion in annual revenues.[81] The median legal spend for utilities (the most comparable category to a transportation utility with significant regulatory burdens like SFRR) was 0.35%, and even the best-performing quartile of utilities spent 0.29%.[82] In light of the additional railroad-specific legal burdens on the SFRR described above, SECI's projection that the SFRR would only spend 0.1% of revenue on legal costs is hopelessly unrealistic – indeed, it is not likely that a railroad with the SFRR's significant legal needs could achieve a total spend of only 0.25% of revenue. The CSXT expert G&A team also determined from the well-regarded Hildebrandt Law Department Survey that typical United States companies have 7 to 13 in-house legal staff for

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[79] *See* CSXT WP "KCS 2008 STB"

[80] *Compare* SECI Ex. III-A-2 at lines 1041, 1551, 1604, 1648, 1752, 2187, 2221 & 2460 *with* First Amended Complaint, *DuPont v. CSXT*, STB Docket No. 42112, Ex. A lines 2, 5-6, 8-11, 13 (filed Dec. 16, 2008).

[81] *See* CSXT WP "Altman Weil 2007" at 117.

[82] *See id.*

each $1 billion in revenue and spend roughly 40% of total legal spending on in-house counsel and 60% on outside counsel. Of course, companies in regulated industries (like the SFRR will be) typically require many more in-house lawyers than the average company – an Altman Weil survey showed that utilities employed an average of over 25 in-house lawyers and that even the best-performing quartile employed over 12.[83] Conservatively assuming that the SFRR will be staffed at the low end of the Hildebrandt range (despite the greater legal needs of a regulated railroad), the CSXT expert G&A team determined that the SFRR would require four General Attorneys and four Administrative Staff. In addition to conservatively assuming a staff of only eight, CSXT's expert G&A team further made the conservative assumption that many functions that would ordinarily be performed by in-house lawyers could be delegated to Administrative Staff paralegals, thus permitting a split of four attorneys and four administrative staff rather than typical law department staffing where attorneys outnumber support staff. The CSXT expert G&A team also determined that the SFRR would need to devote $2.075 million to outside counsel fees, conservatively assuming that the SFRR would be able to maintain a 40%-60% split of in-house and outside counsel spending despite its lean legal staffing.

Claims. CSXT accepts SECI's proposal that the SFRR would require a Director of Claims and two in-house Claims Managers, and would expend $250,000 for outsourcing claims investigations.

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[83] *See* CSXT WP "Altman Weil 2007" at 28.

Police Force. SECI provides the SFRR with no railroad police, infrastructure protection personnel, or hazardous material training personnel.[84] These are essential functions for the SFRR that cannot be ignored. The security environment in the United States has changed dramatically in recent years, and the federal government considers securing the freight rail network a critical national security issue.[85] Indeed, the SFRR has particularly pressing security needs. In the first place, it would transport 53,000 carloads of TIH traffic. The transportation of TIH products is uniquely risky, a fact that is well-recognized by Congress.[86] The inherent riskiness of TIH transportation imposes significant costs associated with railroads' potential liability resulting from an accidental TIH release. Not only does the SFRR transport this

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[84] Although SECI proposes a Director and two Managers of Safety & Training, SECI does not propose any dedicated hazardous material or chemical safety training personnel.

[85] GAO, Freight Rail Security, Actions Have Been Taken to Enhance Security, but the Federal Strategy Can Be Strengthened and Security Efforts Better Monitored, http://www.gao.gov/new.items/d09243.pdf. (April 2009).

[86] *See* H.R. 2095, The Rail Safety Improvement Act of 2008, sections 103 and 104, 110th Cong, 2d Sess. (October 16, 2008) (requiring implementation of costly and complex, interoperable "Positive Train Control" on rail lines over which TIH materials are transported.) (49 USC 20157). *See also* The 9/11 Commission Act of 2007, section 1551: Railroad Routing of Security-Sensitive Materials, 110th Cong. (August 2008) (requiring steps to further secure the freight rail system, including TIH shipments); 6 U.S.C. § 1201.

uniquely risky cargo, the SFRR will operate in **eight**[87] High Threat Urban Areas ("HTUA") – geographic areas that warrant special consideration with respect to transportation security.[88]

Any railroad that operates in 12 states and the District of Columbia and will traverse eight HTUAs requires a functioning railroad police department staffed with special agents with jurisdiction over crimes against the railroad. All of the Class I railroads in the U.S. employ a railroad police department. Railroad police help ensure the security of people, property, and freight. They are essential if the SFRR is to have effective loss control and emergency response capabilities. While the security-sensitive nature of railroad policing makes it difficult to obtain publicly-available benchmarks of best-practice railroad police staffing, it is clear that the SFRR will require at least some railroad police.

CSXT's expert G&A team determined that a Chief of Police should oversee the SFRR Police Department, consisting of two unit commanders (one for the east and one for the west) and a minimum of thirteen special agent police officers – one for each state and the District of Columbia in which the SFRR operates. Special agents typically investigate major incidents such

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[87] Based on the 2009 HTUA list, the SFRR operates in Pittsburgh, PA; Nashville, TN; Washington, DC; Atlanta, GA; Richmond, VA; Baltimore, MD; Louisville, KY; Indianapolis, IN. However, TSA's rail transportation security rules that require positive and secure handoff of certain hazardous materials is based on the 2006 HTUA list. *See* 49 C.F.R. § 1580.107, Appendix A. The 2006 list did not include Richmond, VA or Nashville, TN but includes Memphis, TN.

[88] As used by TSA, the term High Threat Urban Area ("HTUA") means the geographic areas that warrant special consideration with respect to transportation security. TSA derived its list of high-threat urban areas from the Urban Areas Security Initiative (UASI) program. Under the UASI, program, DHS designates metropolitan areas as high-threat urban areas based on a consideration of the relative threat, vulnerability, and consequences from acts of terrorism faced by each metropolitan area. *See* TSA Supplemental Security Action Item No. 1 (http://www.tsa.gov/assets/pdf/Supplement_No%201TIH-SAI.pdf. (November 21, 2006).

as derailments, sabotage, grade crossing accidents, hazardous material accidents, trespassing, vandalism / graffiti, cargo theft, and theft of company property. Special Agents are also responsible for maintaining working relationships with municipal, county, state, and federal law enforcement and emergency service agencies. These relationships will serve as "force multipliers" that will permit the SFRR to protect SFRR employees and keep SFRR assets secure with a low number of in-house police officers.

Environmental and Hazardous Material Operations. The SFRR would also require sufficient G&A staff to manage compliance with a host of regulations governing the transportation of hazardous materials and other environmental regulations. Unlike the SARRs in past SAC cases, the SFRR would transport significant volumes of hazardous materials and as such it would need resources to comply with the substantial regulatory regime that applies to railroads transporting hazardous materials.[89] In addition, as part of serving the chemicals industry, the SFRR must have a professional team available to respond to environmental, hazardous material, safety, and security issues that might occur during the transportation of these materials. The SFRR would also need resources to comply with assorted environmental regulations, from the Clean Water Act to the Resource Conservation and Recovery Act.

SECI provides virtually no staffing to handle these functions. SECI posits that the SFRR's Operating staff will have two Managers of Testing and Environmental responsible for "testing of materials," "environmental compliance," "investigation of any problems involving cars containing hazardous commodities" and "federal reporting requirements." SECI Opening at

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[89] The most important laws and regulations with which the SFRR would need to comply are included in CSXT Exhibit III-D-2.

III-D-20. While CSXT accepts the need for these positions, *see supra* at III-D.3.a., they are far from sufficient to handle the SFRR's environmental needs. Consistent with their location in the SFRR Mechanical Department, the Managers of Testing and Environmental will focus on issues relating to hazardous materials, and their responsibilities will include responding to hazmat incidents, ensuring compliance with regulations associated with transportation of hazardous materials, developing SFRR hazardous materials operating rules, and providing appropriate training to employees responsible for inspecting or transporting hazardous materials. Similarly, the "Manager Environmental/Safety/Training" in the SFRR's maintenance of way department will be fully occupied by the substantial responsibility of managing environmental training and compliance for the maintenance of way department. But the SFRR has substantial other environmental compliance needs, including the need to develop and administer a federally-required security plan and the need to comply with the substantial environmental inspection and reporting requirements at the SFRR's multiple locations. The SFRR's Environmental Department is responsible for these functions.

SECI justifies its failure to provide additional staff with the assumption that the SFRR would only require "infrequent environmental cleanup" because "derailments are less likely to occur on the SFRR . . . because the SFRR begins operations in 2009 with a brand-new track structure." SECI Opening at III-D-92. This betrays a fundamental misunderstanding of the causes of derailments and hazardous material releases. In the first place, only a third of

derailments are track-related.[90] Moreover, SECI wrongly assumes derailments are the cause of all incidents involving the release of hazardous materials – completely ignoring non-accident release ("NAR") incidents caused by leaks, splashes, improperly secured or defective tank car valves, or other causes.[91]

A least-cost most-efficient SFRR would require staff to respond to environmental incidents and manage compliance with applicable regulations. The costs of failing to comply with applicable regulations – including potential fines, liability, and heightened risk of accidents – far outweigh the cost of employing staff necessary to ensure compliance. Therefore the CSXT expert G&A team developed a least-cost environmental operations staff after a review of industry standards and experience with both high-performing regional railroads and Class I railroads.

Director of Environmental and Hazardous Material Systems. The CSXT expert G&A team determined that the SFRR's environmental function should be headed by a Director of Environmental and Hazardous Material Systems (EHMS). The Director of EHMS is responsible for overseeing the environmental and hazardous materials department and managing

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[90] FRA data from 2008 shows that only 33% of Class I derailments were track-related. Other significant causes of derailments are human error (a factor in 37% of derailments); equipment issues (a factor in 13% of derailments), and signal problems (a factor in 2% of derailments). *See* Federal Railroad Administration (FRA): http://safetydata.fra.dot.gov) (data from 2008) (CSX WP "FRA Safety Report 10 yr.pdf").

[91] NAR means "the unintentional release of a hazardous material while in transportation (including loading and unloading) and does not involve an accident." Non-Accident Releases consist of "leaks, splashes, and other releases from improperly secured or defective valves, fittings, and tank shells, and also include venting of non-atmospheric gases from safety relief devices." *See* AAR Non-Accident Risk Reduction Program definitions, http://nar.aar.com.

a team of three Managers, whose functions are described below. The Director will have overall departmental responsibility for the numerous regulatory compliance issues facing a Class I railroad.

Manager of Infrastructure Protection and Chemical Safety. CSXT's expert G&A team also determined that a railroad of the size, complexity, and diverse traffic mix of the SFRR would need a Manager of Infrastructure Protection and Chemical Safety to coordinate rail security issues at the federal and state level. DOT regulations require the SFRR to develop a security plan that includes an assessment of possible transportation security risks and appropriate measures to address the assessed risks.[92] The security plan must also address personnel security, unauthorized access, and en route security. The Manager of Infrastructure Protection and Chemical Safety will be responsible for developing and refining the SFRR's security plan, performing in-depth security training, and ensuring compliance with numerous other requirements that apply to rail transportation of hazardous materials.

Environmental Field Services. The SFRR will need personnel to perform environmental monitoring and inspections in the field. Several of the SFRR's facilities will require regular environmental inspections pursuant to federal laws such as the Clean Water Act and various state laws and regulations.[93] Specifically, the SFRR will require waste water

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[92] 49 C.F.R. Parts 171-179.

[93] The EPA's Office of Compliance outlines some of the environmental regulations with which railroads must comply in PROFILE OF THE GROUND TRANSPORTATION INDUSTRY: TRUCKING, RAILROAD, AND PIPELINE pp. 55-60, 78-83, *available at* http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/ground.html (CSXT WP "EPA Profile"). *See also* Environmental Compliance Handbook for Short Line Railroads (CSXT WP "Env Compliance Handbook").

treatment facilities at its locomotive servicing shop as well as at yard facilities where fuel is stored and waste disposed of. *See* 40 C.F.R. § 122.1(b). These waste water treatment facilities require regular inspections. Moreover, while the SFRR will refuel locomotives by truck, this mobile fueling will trigger storm water permitting requirements and regular inspections and reporting requirements under federal and state law. Two Managers of Environmental Field Services will be required to perform these routine inspections required by the Clean Water Act, Clean Air Act and hazardous waste regulations. These positions will also be responsible for hazardous and special waste management; wastewater treatment facility (WWTF) operations; spill prevention and control and countermeasures; petroleum storage tank and transfer facility inspections; cleaning and inspection of above ground tanks; periodic facility environmental inspections, audits, environmental training for field personnel and response to facility spills. CSXT's expert G&A team determined that one Manager of Environmental Field Services could not feasibly perform field environmental inspections and services for the entire SFRR network – which requires environmental field services in geographically distant states like Florida, Pennsylvania, Tennessee, and Virginia. The work would have to be divided between a minimum of two managers in order to ensure adequate response time and coverage over the multiple locations on the SFRR's network that require regular environmental field services.

Human Resources and Training Function: The core human resource functions of a railroad require staff to manage recruiting, compliance, compensation and benefits programs, employee relations, and training. SECI proposes a human resource staff for the SFRR that

consists of a single Director of Human Resources[94] and two Managers of Training – a patently insufficient staff for a railroad with over 2000 employees. SECI states this level of human resource staffing "is sufficient" since most of the human resource functions "will be out-sourced." SECI Opening at III-D-38. While SECI claims that the SFRR will utilize Optimum Solutions to manage its human resources operations, that software only handles a fraction of the SFRR's human resources needs. Optimum Solutions does not provide any outsourcing services – it is a software program that must be operated by in-house personnel.[95] As elsewhere, SECI's assumption that a computer program can serve the SFRR's needs without human beings to operate and manage that program is unreasonable.

CSXT's expert G&A staff accepts SECI's proposal to use Optimum Solutions to assist in managing the SFRR's human resources function.[96] But Optimum Solutions is just a software program – the SFRR must have adequate human resources staff to operate the program, enter data, and correct errors and exceptions. Moreover, the SFRR must have human resources personnel to perform the many functions that Optimum Solutions does not. Human resources staff are required to handle the recruiting and hiring process; to investigate and resolve employee complaints; to administer disciplinary procedures; to set compensation; to comply with federal

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[94] While the human resources departments of most comparable railroads are managed by a vice-president-level position or higher, CSXT conservatively accepts SECI's assumption that the SFRR's Director of Human Resources would report to the Vice President – Law and Administration.

[95] *See* CSXT WP "Optimum Solutions Memo.doc"

[96] SECI significantly understates the cost of purchasing Optimum Solutions – estimating that it will cost less than $30,000. Optimum Solutions informed CSXT that the program would cost over $100,000, not including annual maintenance fees. CSXT conservatively assumes a purchase cost of $100,000 for Optimum Solutions. *See* CSXT WP "Optimum Solutions Memo.doc"

immigration law (which include the completion of a Form I-9 and E-Verify screening[97] for each worker); to administer benefits programs, to manage company policies and procedures; and to ensure compliance with a host of federal and state laws and regulations.[98] The SFRR cannot function without adequate human resources personnel to handle these tasks.

CSXT's expert G&A team developed a least-cost, most-efficient human resources staff for the SFRR by consulting industry benchmarks for high performing human resources departments provided by the Hackett Group, the Corporate Leadership Council, and the Saratoga 2008/2009 Human Capital Effectiveness Report. These best-practice benchmarks all support a human resource level of a Director and fifteen staff, whose positions and responsibilities are further described in CSXT Exhibit III-D-1.

CSXT's expert G&A team determined that the SFRR's human resources department would require at least one doctor to administer the many tests and certifications that the SFRR would be required to administer. For example, the SFRR would be required to administer FRA-mandated random drug tests, post-accident drug tests, and reasonable cause/reasonable suspicion drug tests (49 C.F.R. Part 219); FRA-mandated engineer certifications (49 C.F.R. § 240.121); regular physical examinations for hazmat response team (49 C.F.R. §§ 172.702—172.704); and regular audiograms for all T&E employees (49 C.F.R. Part 227). CSXT's expert G&A team conservatively assumed that only one doctor would be necessary to perform the hundreds of tests

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[97] E-Verify compliance is but one of the many functions the SFRR would be required to meet as a condition of being a federal contractor. The SFRR would be a federal contractor for several reasons, including the fact that its traffic group includes 1,886 carloads of military impedimenta. *See* CSXT WP "2008 SECI Transportation – Military Traffic.xls"

[98] The most significant of these regulations are summarized in CSXT Reply Ex. III-D-2.

and certifications for SFRR employees. As a comparison, KCS has a medical department of four. *See* CSXT WP "KCS_Medical_Services."

(e) Information Technology

SECI proposes that the SFRR could function with an Information Technology ("IT") systems staff of only thirteen employees, with a single Director of Information Technology managing a department consisting of a mere twelve IT Specialists. SECI's proposed staffing plan for the IT function is wholly insufficient to provide adequate staffing for an organization the size of the SFRR, which CSXT's experts determined would require an IT department of 28 to provide the minimum level of service required by a railroad of the size and complexity of the SFRR.

A strong IT department is an essential prerequisite for modern, efficient railroad service. Strong IT capabilities support a railroad's ability to accomplish tasks effectively and productively despite unplanned disruptions. SECI claims that the SFRR will "take[] full advantage of modern technology," SECI Opening at III-D-10, but the plain fact is that it cannot do so without an IT organization capable of fully supporting the SFRR's technological needs. Every aspect of the SFRR's business – from operations to marketing, from finance to customer service – requires adequate IT support.

Staffing for a least-cost, most-efficient IT organization is determined by a variety of factors, including the geographic scope of company operations, number of employees needing IT support, communication requirements, volume of data processed, and the specific hardware and software required to run the business. The SFRR's IT organization must be sufficiently staffed to respond to help desk calls and service needs for a 2140-person organization; to employ IT

personnel with the expertise and skill level to support and implement a wide range of programs and systems; to protect the data network, computer equipment, email systems and voice communications from security threats; and to maintain and develop IT solutions to business needs and regulatory requirements.

As detailed below, SECI's bare-bones IT staffing could not possibly provide a minimum level of adequate IT service for an operation of SFRR's scope and complexity. Because SECI's proposed IT systems staff is unrealistic, the CSXT G&A expert team developed a least-cost IT staff after a review of industry standards and experience with both high-performing regional railroads and Class I railroads. Benchmarking studies show that the average company spends 4.2% of revenue on IT; the average transportation company spends 3.7%. *See* CSXT WP "Gartner IT Key Metrics." In contrast, SECI proposes that the SFRR would spend just 0.6% of revenue on IT. SECI provides no explanation for how the SFRR could have an IT spending rate less than one-sixth that of other transportation companies. CSXT's expert G&A team, in contrast, proposes a much more realistic – but still optimally efficient – IT organization for the SFRR.

Vice President - Information Technology. SECI proposes that the SFRR's chief IT officer be a Director - Information Technology reporting to the Vice President - Law and Administration. As discussed infra, it is not reasonable to expect that the Vice President – Law and Administration could effectively supervise such disparate functions as legal, public safety, HR, and IT. For this reason, and because of the importance of IT to the overall success of the SFRR, CSXT's experts placed the IT function in a separate IT department. CSXT elevated the chief information technology officer from Director - Information Technology to Vice President -

Information Technology. The Vice President - Information Technology is responsible for the overall IT strategy and tactical direction of the department and is involved in the strategic business plan of the SFRR as part of the executive team.

Application Director. The SFRR's IT Department requires three director-level positions to oversee three primary functions: Applications, Technology Support, and IT Security. The Director – Applications is responsible for managing and recommending technical solutions for the SFRR's business needs, including the dozens of applications essential to the SFRR's business. The Director – Applications will interface with the SFRR's business teams to analyze strategic business requirements, will work with software vendors as necessary to resolve issues with SFRR applications, and manage a staff of nine employees, whose positions and functions are described below. This staff includes three Business Analysts, two Application Support Managers - Crew & Dispatch, two Application Support Managers - Accounting Software, a Database Manager, and an Interface Support Manager.

Business Analysts. SECI proposes a single "Lead RMI Technician" who is "responsible for all RMI applications . . . and serves as a liaison to RMI and the user Departments." *See* SECI Opening at III-D-40.[99] CSXT's expert G&A team agrees that this position is necessary, because the IT business needs of the SFRR require in-house personnel responsible for maintaining critical SFRR applications and for interfacing with software providers and SFRR business departments to respond to problems or issues with those applications. However, CSXT disagrees that a single "RMI Technician" is sufficient to support the IT business needs of every business

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[99] SECI proposes that the SFRR would use RMI's Transportation Management System to assist with managing many of the SFRR's rail operations. *See* SECI Opening III-D-46.

department. The RMI software application crosses many departments and is just one of many systems that the SFRR will require to accomplish tasks effectively and productively. CSXT's expert G&A team determined that a minimum of three Business Analysts would be required to support the technology needs of the SFRR, including working with the executive team to identify process improvement opportunities, and translate business needs into IT solutions. CSXT's expert G&A team accepts SECI's proposed Lead RMI Technician as one of the three Business Analysts, and adds two Business Analysts who are responsible for supporting the technology needs of the other business departments.

Database Management. SECI does not provide any staffing for database management. Designing, maintaining, and optimizing database management systems comprise a vital function in any IT organization, and the SFRR would require IT personnel to perform this function. CSXT's expert G&A team determined that the SFRR would need a Database Support Manager to design, configure, and implement database systems; backup databases for recovery; perform recovery; monitor system performance; and configure the database for optimal performance.

Interface Support. SECI similarly ignores the need for IT staff to manage interfacing between the SFRR's many disparate IT systems. The SFRR's various programs and software systems often will need to share information. Disparate programs are not automatically compatible, and the SFRR will require skilled personnel to ensure that in-house systems can communicate with other in-house and external systems. CSXT's expert G&A team determined that one Interface Support Manager is necessary to perform this function.

Application Support Managers. SECI proposes two "Programmers/Development" who are "responsible for maintaining and upgrading the crew calling and dispatching systems." SECI

Opening at III-D-40. CSXT accepts SECI's two proposed Programmers/Development with the caveat that these employees' responsibilities would have to be limited to maintaining and upgrading the crew calling and dispatching systems. These two programmers could not possibly handle the applications support necessary for the SFRR's other business functions such as finance, accounting and budgeting. CSXT's expert G&A team determined that an additional two Applications Support Managers - Accounting Systems are required to support and manage the SFRR's accounting software applications and reporting needs.

Technology Support. SECI proposes a single Help Desk PC Technician to handle all incoming calls for technical support, and five "Programmer/PC Technicians" responsible for providing "24/7" user support. SECI Opening at III-D-40. This skeletal staffing is not sufficient to provide technical assistance, support, and advice to the SFRR's 2140 employees – much less "24/7" support. This is particularly so because the IT department will need to maintain computer and network infrastructure over a twelve-state, 2000+ mile railroad. The SFRR will require sufficient technicians to maintain all field PC, printer, router, and other IT equipment over the geographically dispersed SFRR organization. CSXT's expert G&A team determined that the SFRR would need a team of at least ten Support Technicians to provide around-the-clock help desk responsibilities, and one Director of Technology Support to supervise the Support Technicians. The Director of Technology Support would also be responsible for coordinating daily activities for the staff, processing equipment orders, managing staff travel, and assisting with infrastructure needs. CSXT accepts SECI's single Help Desk Technician as one of the ten Support Technicians that the SFRR will require to provide constant 24x7 user support. In

addition, CSXT accepts SECI's five Programmer/PC Technicians[100] as part of the ten Support Technician positions required with the exception that the scope is limited to general PC system and software support.

Server Management. SECI proposes a single Exchange 2007 Engineer "responsible for messaging design and implementation of the Windows 2007 Exchange (server) environment," and suggests that this engineer would be able to assist with other functions because "[h]andling the Exchange server is not a full time job." SECI Opening at III-D-40. However, SECI does not provide any staffing to perform general server maintenance work for the SFRR. *See id.* SECI ignores the critical need for server infrastructure support to manage network efficiency, monitor and adjust the performance of existing networks, and determine future network needs and system infrastructure upgrades. This function is particularly critical because the SFRR would require a minimum of sixty-three servers.[101] CSXT's expert G&A team determined that the SFRR would require a full-time Server Support Manager to provide server infrastructure support and maintenance for the SFRR. This individual would be responsible for email server support, Windows operating system support, operating system patching for servers, building and configuring new servers, refreshing existing hardware and software on servers, capacity

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[100] CSXT notes that SECI's "Programmer/PC Technician" job title combines two very different functions. Programmers write code and develop programming on a system-wide basis; support technicians resolve user-specific questions and help requests. Because SECI's description of the SFRR's "Programmer/PC Technicians" describes the functions of a support technician, CSXT's expert G&A team classified these positions as Support Technicians.

[101] *See* CSXT WP "SFRR Servers.xls"

management, performance tuning of the server base, and coordinating the scheduling, ordering and installation of all server equipment and ancillaries.

IT Security. SECI has provided almost no staffing for one of the SFRR's most critical IT needs – network security. A billion-dollar railroad – particularly one that carries TIH and other hazardous materials – must have adequate IT security architecture, including anti-virus and anti-spyware support, access management, firewalls, laptop encryption, and threat and vulnerability response. SECI proposes a mere two Network Engineers that are responsible for "overseeing network security matters and local area network (LAN) and wide area network (WAN) functionality." SECI Opening at III-D-40. This slim staffing is not sufficient to manage the SFRR's many information security needs.

CSXT's expert G&A team determined that the SFRR would require a minimum of four IT Security Technicians and one Director of IT Security to support the minimal security processes and technology for the SFRR's network. The Director of IT Security is responsible for defining the security model to protect against cybersecurity vulnerabilities, protecting internal and external railroad data from malicious attack and managing a staff of four security technicians. The four Security Technicians will monitor and implement solutions to protect against cyber attacks, homeland security threats, and system lock down; provide terrorist intrusion protection; support new user access; terminate employee access; and provide support and direction for activities associated with the ISO17799 standard for IT security best practice.

This is consistent with the growing attention to technology security breaches and need for cybersecurity enhancements.[102]

SECI attempts to justify its failure to provide IT Security staff by claiming that the SFRR would use the "Watchguard Firebox X6500e UTM Software Suite" to protect the SFRR network from exterior intrusion. However, this product only provides perimeter security defense (*i.e.*, it only addresses risks at the point of entry into an organization's network), and as such it is insufficient to protect a large enterprise like the SFRR.[103] CSXT's expert G&A team evaluated the adequacy of SECI's proposal to use the Watchguard UTM security solution software in lieu of providing adequate IT security staffing by considering National Institute of Standards and Technology ("NIST") recommendations for minimal information security and standard security technologies used by Class I railroads. *See* www.nist.gov. CSXT's expert G&A team determined that SECI's proposed approach would leave a number of security gaps, including internal access control; audit and accountability for internal traffic and devices; systems and information protection from internal threats; vulnerability management; network segmentation; chokepoints to control and response to internal security incidents; encryption on laptops to protect confidential data; and the ability to monitor or prevent viruses introduced into the internal network. In order to fill these gaps, several additional security products and processes would be

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[102] In fact, the President of the United States identified cybersecurity as "one of the top priorities of his administration and directed an early 60-day, comprehensive review to assess U.S. policies and structures for cybersecurity." See "Cyberspace Policy Review, Assuring a Trusted and Resilient Information and Communications Infrastructure." The report is available at http://www.whitehouse.gov/assets/documents/Cyberspace_Policy_Review_final.pdf.

[103] SECI admits that WatchGuard is designed "for mid-size businesses." SECI Opening at III-D-53. The 1000+ employee SFRR is certainly not a "mid-size business."

required for the SFRR, including additional server or appliance infrastructure to support the security environment and end-use client licenses for anti-malware, access management technology, and laptop encryption. SFRR Security Technicians would support these required processes and technology.

ii. Compensation

CSXT accepts SECI's proposed salaries and benefits for the SFRR's personnel,[104] with the exceptions noted below. First, while CSXT accepts SECI's proposal to base compensation for the SFRR's President and Vice Presidents on the compensation paid to similar positions by KCS, SECI only included the salaries of these KCS personnel in its calculations – leaving out important compensation elements such as bonuses and stock grants. CSXT corrects SECI's calculations by including total compensation for these positions.

[104] Where CSXT's expert G&A team corrected SECI's G&A staffing by adding positions, CSXT set salaries for those positions at a level consistent with salaries for other positions at that level.

Table III-D-10
SFRR GENERAL & ADMINISTRATIVE STAFF COMPENSATION

FUNCTIONAL AREA	Employee Compensation		
	SECI	CSXT	Difference
EXECUTIVE	$1,048,974.70	$3,770,211.00	$2,721,236.30
MARKETING	$458,328.70	$2,640,848.48	$2,182,519.78
Customer Service	$1,419,226.70	$2,882,914.31	$1,463,687.61
FINANCE & ACCOUNTING	$410,219.40	$1,259,954.90	$849,735.50
Treasury	$332,773.70	$335,179.00	$2,405.30
Controller	$805,343.80	$4,300,089.15	$3,646,745.35
Car Accounting	$163,182.70	$265,540.10	$102,357.40
Purchasing	$266,704.70	$469,014.10	$202,309.40
LEGAL & ADMINISTRATION	$1,022,411.60	$2,095,623.10	$1,073,211.50
Environmental	$ 0	$265,540.07	$265,540.07
Police	$ 0	$1,114,413.50	$1,114,413.50
Human Resources	$266,704.70	$1,120,774.20	$854,069.50
IT	$834,506.10	$2,833,726.70	$1,999,220.60
Total	$7,028,376.78	$23,505,828.60	$16,477,451.80

iii. Materials, Supplies and Equipment

CSXT accepts the SFRR's proposed unit costs for the various categories of materials, supplies and equipment necessary for SFRR employees. The additional employees in CSXT's corrected SFRR staffing will require a corresponding increase in the total expenditure of

materials, supplies, and equipment, as demonstrated in CSXT WP "CSXT View of SFRR Personnel."

Table III-D-11
SFRR GENERAL & ADMINISTRATIVE MATERIALS AND SUPPLIES

	SECI	CSXT	Difference
Desks	$32,508	$88,367	$55,859
Supplies	$24,048	$71,129	$47,081
Copy Machines	$756	$2,236	$1,480
Autos	$31,205	$187,230	$156,025
Travel	$232,000	$1,288,805	$1,056,805
Utilities	$40,000	$118,310	$78,310
Outsourced Services	$1,684,324	$3,027,693	$1,343,369
Information Technology	$6,889,904	$8,033,327	$1,143,423
Total	$8,934,746	$12,817,097	$3,882,352

iv. Other

(a) IT Systems

CSXT's expert G&A team accepts SECI's proposed IT systems, with the exceptions noted below. As discussed above, the primary difficulty with SECI's reliance on "outsourcing" is its failure to provide sufficient in-house staffing to perform the many essential tasks that are not outsourced. CSXT's expert G&A team has therefore accepted SECI's proposed IT systems with the understanding that sufficient in-house G&A staff will be required to fill in and perform the functions that the software will not.

SECI proposes that the SFRR would use the Peachtree MAS 200 package as a general accounting system. However, Peachtree's products are designed for small businesses, and even the largest Peachtree system supports no more than 40 named users. *See* CSXT WP "Peachtree.pdf." Because more than 40 SFRR personnel will require access to the accounting/finance system, it cannot meet the SFRR's needs. Moreover, Peachtree could not effectively interface with feed-in IT systems such as RMI. CSXT's expert G&A team determined that a more sophisticated accounting package would be necessary. The least-cost, most-efficient accounting package with the capacity to serve the SFRR's needs is an Oracle or SAP package, which would include the functionality of Accounts Payables, Accounts Receivables, General Ledger, Purchasing & Materials, Treasury, Fixed Assets, Project Management, Tax, and Financial Reporting. The purchase, implementation, and maintenance cost of the necessary system is detailed in CSXT's workpapers.

CSXT accepts SECI's proposal that the SFRR use Optimum Solutions to perform certain human resources functions. However, SECI understates the cost of Optimum Solutions. As indicated above, Optimum Solutions informed CSXT that it would cost approximately $100,000 to implement the software at a company the size of the SFRR, and would cost about $20,000 annually to maintain the software. *See* CSXT WP "Optimum Solutions Memo.doc" CSXT has included the correct costs in its G&A calculations.

SECI also fails to account for the costs of purchasing servers for the SFRR. The SFRR would need to purchase a minimum of sixty-three servers to manage its considerable technological needs. CSXT has included the costs of servers in the SFRR capital budget.

SECI understated the SFRR's expected communications costs in multiple ways. First, SFRR used *monthly* costs for pager and telephone service instead of *annual* costs. CSXT's calculations correct this error. Second, SECI failed to include costs for any toll-free telephone numbers and long distance calls. Toll-free telephone service is essential to the SFRR's daily business and would regularly be used by SFRR customers and SFRR crew members and other employees calling in from the field. Long distance service is similarly critical for customer contact, communications between SFRR locations, and calls out to field staff. CSXT's expert G&A team estimated that an 800 number along with long distance service would cost at least $300,000 per year. This cost assumes a per minute charge of $.03 and 27,400 minutes per day. This is an extremely conservative estimate of long distance minutes per day for 2140 SFRR personnel – many of whom would spend much of their day receiving or placing long-distance calls. As a comparison figure, CSX averages more than 750,000 long-distance or toll-free minutes each day. Third, the SFRR would require support for disaster management and back-up of the voice and data communications. This cost is for ongoing monthly costs associated with simply having these capabilities in the event of an emergency situation.

CSXT also adjusts SECI's communications capital and operating expenses to account for CSXT's corrected SFRR staffing.

(b) Workstations and Printers

SECI unreasonably assumes that the SFRR would not have to replace any desktops or laptops over the ten-year DCF period. Computer hardware has a limited life expectancy, due to factors like equipment failure and inability to support software enhancements. Failure to replace outdated hardware would substantially impede the SFRR's productivity. Research by Gartner

indicates that typical life expectancy for a laptop is three years, and typical life expectancy for a desktop is four years. While best practices therefore would indicate a laptop replacement every three years and a desktop replacement every four years, CSXT's expert G&A team determined that a least-cost, most-efficient SARR could "stretch" the life expectancy of its equipment by having SFRR employees use their computers for one year longer than best practices would suggest. CSXT's expert G&A team conservatively assumed that the SFRR would replace laptops after four years and desktops and printers after five years. CSXT's corrected SFRR operating budget accounts for the cost of the replacement equipment and a reasonable salvage value for computers being replaced.

(c) Start-Up and Training Costs

CSXT's expert G&A team accepts the training costs suggested by SECI for train and enginemen, maintenance of way workers, and IT workers. However, the $3,498 training cost SECI proposes for dispatchers is entirely unsupported. SECI asserts that it based its dispatcher training costs on a Johnson County Community College "14-week training course for new untrained dispatchers." SECI Opening at III-D-56. But Johnson County Community College has no such course.[105] SECI's workpapers contain information on railroad conductor training programs, but there is no basis to equate the costs of conductor training and the costs of dispatcher training. Dispatchers require intensive on-the-job training to prepare for their complex job duties and significant responsibilities for keeping trains moving in a safe and

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[105] *See* JCCC: Degree and Certificate Program List, at "Railroad Operations," available at http://www.jccc.edu/home/catalog.php/default/careerprograms#h_101. The National Academy of Railroad Sciences, which is affiliated with JCCC, also does not have such a course for dispatchers. http://www.railroadtraining.com/careers_fastTrack.html.

expeditious manner. It is not realistic to posit that less than a month of training is adequate to prepare dispatchers for such a critical position. Dispatchers need time not just to learn the dispatching system, but also to become familiar with the details of operations in their specific territories. CSXT's expert G&A team determined that dispatchers would need no less than 30 weeks of on the job training, which at the $88,907 salary would result in costs of $51,293 per dispatcher.

SECI similarly attempts to lowball training for equipment inspectors, asserting that it would cost only a $5000 training fee plus one week wages. This is not realistic, as equipment inspectors need significant on-the-job training, CSXT's expert G&A team determined that equipment inspectors would require nine weeks of on the job training, which at the accepted level of compensation for Equipment Inspectors would be $9789. And SECI provides no training costs whatsoever for Yardmasters, or Assistant Managers of Train Operations. These front line operating management positions must have full understanding of railroad systems, operating procedures, and safety protocols. CSXT's experts determined that twenty-one weeks of training would be required for these critical front line positions. Based on the agreed compensation level of $81,591, training would cost $32,950 per yard master position.

(d) Ongoing Restaffing cost

CSXT accepts SECI's basic methodology for calculating the SFRR's ongoing restaffing costs – *i.e.*, multiplying the attrition rate by the start up costs. However, SECI's assumed attrition rate of only 3% is unreasonably low. SECI is unable to point to a single railroad (or other major corporation) that experienced such low attrition; instead, it points to the alleged attrition rate for training programs at MODOC Railroad Academy. There is no justification for

equating the drop-out rate for a training program (which lasts a few months and where a drop-out would cost the student thousands of dollars in tuition) to the expected annual attrition rate in a railroad. Indeed, SECI does not even attempt to explain why the MODOC dropout rate is an appropriate proxy for the SFRR attrition rate.

Third party benchmarks show that an average attrition rate for companies the size of the SFRR is 11.1%. *See* CSXT WP "IOMA Guide to HR Benchmarks.pdf" at 102. Average attrition rates for the transportation sector are markedly higher – 16%. *See id.* CSXT has experienced attrition of approximately {{11%}}. *See* CSXT WP "Annual Attrition Impact." After considering these benchmarks, the CSXT expert G&A team conservatively assumed that the SFRR would experience attrition at 11%.

(e) Bad Debt

SECI's SAC evidence assumes that the SFRR will receive 100% of the revenue that it bills to customers. SECI makes no provision for the fact that some SFRR customers will fail to pay their bills (or will fail to pay bills in their entirety). Given the many customers that the SFRR will serve, it will have some uncollectible accounts. Indeed, applicable accounting standards would require the SFRR to maintain an allowance for doubtful accounts. Statement of Financial Accounting Standards No. 5 (FAS5 – Accounting for Contingencies) requires companies to maintain allowances for doubtful accounts for the estimated probable losses on uncollectible accounts and other receivables. The allowance is based on the creditworthiness of customers, historical experience, the age of the receivable and current market and economic conditions, as well as any known trends or uncertainties related to customer billing and account collectibility.

CSXT estimated the uncollectible accounts for the SFRR by considering uncollectible accounts from R-1 Schedule 410. KCS, which as discussed above is an appropriate benchmark for the SFRR, had a charge for Writedown of Doubtful Accounts of approximately 0.2% of Revenue during 2007 and 2008. *See* CSXT WP "SFRR Workpaper Bad Debt." CSXT's writedown of doubtful accounts was relatively smaller during those years – 0.11% of CSXT's revenues. Because the SFRR would serve CSXT customers, it is reasonable to assume that the SFRR would experience a similar rate of collectability problems. That assumption is also the most conservative one, since CSXT wrote down a lower percentage of its revenues than the most comparable benchmark railroad. For these reasons, CSXT conservatively assumed that the SFRR would have a charge for Doubtful Accounts equivalent to 0.11% of revenue, or $1.0 million.

v. The CSXT Expert G&A Team's G&A Analysis Would Make the SFRR A Best-In-Class Efficient Railroad

CSXT's bottom-up analysis of the specific minimum G&A staffing requirements and expenses for each Department of the SFRR defines an SFRR G&A expense level of 6 percent of revenue for the SFRR, not 2 percent of revenue as proposed by SECI. This results in a total G&A cost of $57.5 million.

A G&A expense level of 6 percent is well below actual G&A expense levels across a wide range of transportation and other industry sectors. In the transportation sector for example, a 2006 analysis of G&A expenses found that, with the exception of one feeder airline that contracted its services to major trunk air carriers, all G&A expenses were greater than ten

percent.[106] Even outside the transportation sector, there is no evidence that companies operate at G&A expense levels below ten percent. A March 2009 comprehensive analysis by the Institute of Management and Administration (IOMA) and the Risk Management Association (RMA) of 86 North American Industry Classification System (NACIS) industrial segments found no companies with G&A expenses of less than ten percent. In fact, most segments had G&A expense levels in the high teens, while others operated in the 20 to 30 percent G&A expense range.[107]

The two regional railroad networks most similar to that proposed by SECI are RailAmerica and Genesee & Wyoming (G&W). An analysis of G&A performance for these two networks for the years 2007-2008 demonstrated G&A expense levels in the range of 15 to 20 percent of revenue (Table III-D-12).

Table III-D-12: G&A Expenses as a Percentage of Revenues for Regional Railroads, RailAmerica and Genesee & Wyoming, 2007-2008[108]

	RailAmerica		Genesee & Wyoming	
	2007	**2008**	**2007**	**2008**
Revenues	$479.9M	$508.5M	$516.2M	$602.0M
G&A Expenses	$95.9M	$102.9M	$82.2M	$93.6M
G&A as % of Revenue	20.0%	20.2%	15.9%	15.6%

[106] Seeking Alpha survey, May 12, 2006 (http://seekingalpha.com/article/10535-chart-freight-transportation-companies-sg-a-margin-mrq) (CSXT WP "Seeking Alpha.pdf").

[107] The Controllers Report, Issue 09-03, IOMA, March 2009 (CSXT WP "The Controllers Report, Issue 09-03, IOMA.pdf").

[108] RailAmerica: SEC Form S-1, September 29, 2009, page 36; Genesee & Wyoming: SEC 2008 10-K (filed February 27, 2009), at F-5.

Both RailAmerica and G&W are considered to be highly efficient railroads (*e.g.*, low operating ratios, high employee productivity) and have streamlined cost structures with many of the efficiency advantages proposed for the SFRR. For example, a September 2009 analyst report from Deutsche Bank commented on G&W's response to the economic downturn in terms of its productivity: "Genesee & Wyoming's efforts have increased the company's earnings power due to increased productivity, reduced fixed costs, more nimble organizational structure (relying on fewer train-and-engine [T&E] employees, administrative staff, and corporate overhead), and increased fuel efficiency."[109]

Similarly, RBC commented that: "Given the sharp decline in carloads, we have seen the rail industry get very aggressive at reducing costs through headcount reductions, fleet rationalization (both horsepower and cars) and a culling out of discretionary costs throughout their respective networks. GWR has been no exception, employing these very same initiatives early in 2009 as carloads weakened. . . . We believe that GWR's recent results demonstrate the resilience of the business model and suggest that there is little further risk to earnings in the near term."[110]

In RailAmerica's recent public equity offering the company explained the drivers of its efficient operating model as a competitive strength stating: "Our focus on continuously

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[109] "Genesee & Wyoming Inc.," 30 September 2009, Deutsche Bank Analyst Report, at 4 (CSXT WP "Genesee & Wyoming Deutsche Bank Analyst Report").

[110] "Genesee & Wyoming," RBC Analyst Report, August 17, 2009, at 3 (CSXT WP "Genesee & Wyoming RBC Analyst Report").

improving the operating efficiency and profitability of each of our 40 railroads has allowed us to significantly increase our operating margins and grow our cash flow. . . . Additionally, due to the operational simplicity of our railroads, we have more predictable and lower capital expenditures when compared to the complex, high service requirements of many Class I networks. As a result of our focus on improving operating efficiency and our predictable capital expenditures, we expect to continue to be able to grow our earnings and cash flow over the long term."[111]

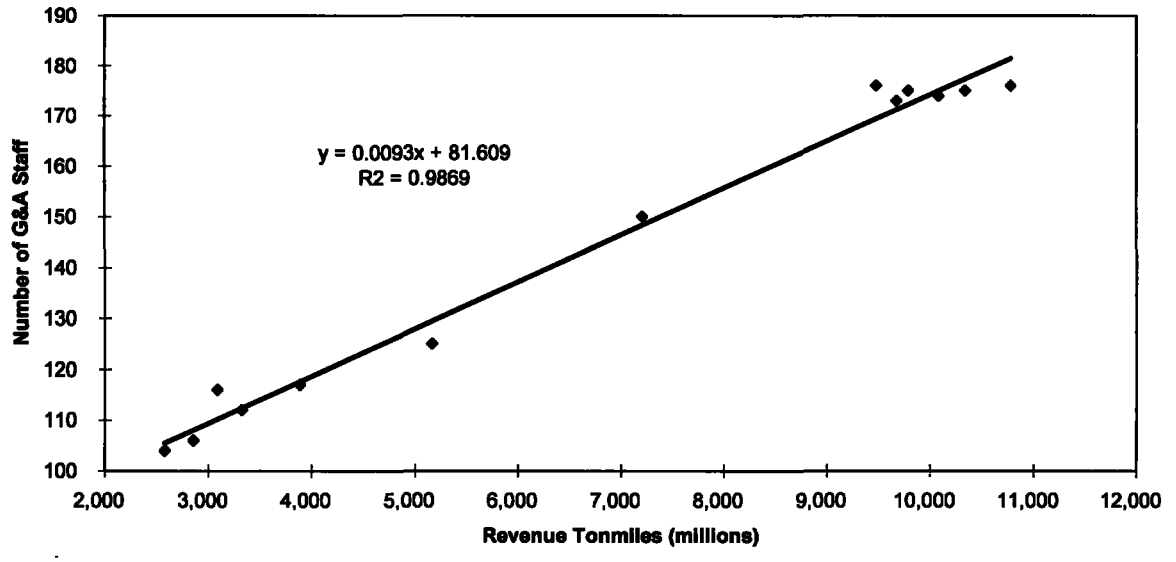
Even with these efficiency and performance advantages, these railroads' G&A expense levels are **at least eight to ten times larger than the G&A expenses that SECI claims for the SFRR**.

Additionally, a ten-year analysis of G&A staffing levels at the Wisconsin Central (a regional railroad now owned by Canadian National) reveals that SECI's proposed G&A staffing levels for the SFRR are less than half of what was required by the Wisconsin Central, a highly regarded carrier considered to be a model for regional railroad development worldwide (Table III-D-13).

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[111] RailAmerica, Inc., SEC Form S-1, July 27, 2009, at 2 (CSXT WP "RailAmerica, Inc. Form S-1 July 27, 2009").

Table III-D-13
Wisconsin Central's G&A Staff vs. Revenue Ton-Miles, 1988-2000[112]



Source. 10-K reports filed with the SEC

Using Wisconsin Central's G&A staffing as a model, and based on the 30 billion gross ton-miles that SECI projects for the SFRR in 2009, a G&A staff for the SFRR of 357 people, or five times SECI's proposed staffing level, would be required.

The KCS and the SFRR are of similar size, as shown in Table III-D-14.

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[112] Wisconsin Central SEC 10-K reports,: 1) Staffing headcounts: 1988 to 1992 from 1992 10-K, page 7(adding General and Administrative and Marketing), 1993 to 1996 from 1996 10-K, page 6(adding General and Administrative and Marketing), 1997 to 2000 from 2000 10-K, page 8; 2) Revenue ton-miles: 1988 to 1992 from 1992 10-K, page 22, 1993 to 1996 from 1996 10-K, page 18, 1997 to 2000 from 2000 10-K, page 29, Oliver Wyman analysis.

Table III-D-14 Comparison of 2008 KCS and SECI Proposed 2009 SFRR[113]

Operating Statistic	KCS	SFRR	Percent
Net Tons	79,239	123,021	155.3%
Net Ton-Miles (000s)	29,624,261	29,778,668	100.5%
Revenues	$1,029,503	$1,116,106	108.4%
Track Miles	3,165	3,037	96.0%

KCS and SFRR revenue ton-miles are almost identical. The SFRR has slightly fewer miles and slightly more revenue overall. However, claimed tonnage on the SFRR is 53 percent greater than on KCS, suggesting a much higher level of traffic, which drives higher administrative resource requirements and costs.

While a higher level of traffic should result in greater G&A requirements, SECI claims administrative cost levels for the SFRR that are less than a third of KCS administrative costs, a wholly irrational and unsupported differential:

Table III-D-15
Comparison of 2008 KCS and Proposed 2009 SFRR G&A Salary Expense[114]

		Salary Expense in Thousands		
STB	Category	KCS	SFRR	Percent
100	Executive, Officials, & Staff Assistants	$35,994	$10,211	28.4%
200	Professional & Administrative	$25,766	$4,687	18.2%

[113] KCS data: KCS 2008 R-1; SFRR data: Seminole Opening Evidence. As discussed elsewhere in this filing, SECI's projected tonnage, revenues, and mileage for the SFRR are unsupported and have been corrected by CSXT in various respects. After CSXT's corrections, KCS and SFRR continue to have roughly equivalent revenues and the SFRR continues to be projected to have higher tonnage numbers than KCS.

[114] KCS data: KCS wage form A and B. SFRR data: SECI Opening Evidence.

The disparity in employee numbers for the KCS and SFRR is similar. SECI proposes a fraction of the actual resources required to operate the KCS:

Table III-D-16
Comparison of 2008 KCS and Proposed 2009 SFRR G&A Employees[115]

		Employees		
STB	**Category**	**KCS**	**SARR**	**Percent**
100	Executive, Officials, & Staff Assistants	227	96	42.3%
200	Professional & Administrative	341	65	19.1%

Less-than-truckload (LTL) motor carrier networks have many of the same characteristics as regional railroads and the SFRR: Their networks cover multiple states and have corporate centers with functions very similar to those proposed for the SFRR. An analysis conducted by Stifel Nicolaus of the top publicly traded, high-productivity LTL carriers found that none have G&A expense ratios of less than 20-25 percent, or even higher when all expense items are considered.[116]

Finally, as mentioned above, CSXT's expert G&A team reviewed best practice benchmarks that report G&A costs from across the transportation sector. Even in these cases, CSXT did not find any transportation company benchmarks with similar revenues to have G&A expenses of less than 10 percent (Table III-D-17). The conclusion is inescapable: SECI has claimed G&A expenses for the SFRR that are unsupported, unprecedented, and completely

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[115] KCS data: Mid-month employee count from Wage Form A&B on the STB website. SFRR employee count from SECI Opening Evidence.

[116] *See* CSXT WP "Robert Alexander Baggio Email 10192009"

untethered from real-world G&A staffing and expenses of even the most efficient and comparable transportation companies.

Table III-D-17
Leading Transportation Companies' G&A Expenses as a Percent of Revenue[117]

Company	Quarter Ending	Revenue ($M)	SG&A Expense ($M)	SG&A Expense (%)
UTI Worldwide, Inc.	1/31/2006	$253.7	$139.2	55%
United Parcel Service Inc.	12/31/2005	$11,521.	$6,055	53%
FedEx Corporation	2/28/2006	$8,003	$3,162	40%
TNT NV	12/31/2005	$3,203	$1,045	33%
LAN Airlines S.A.	6/30/2005	$589	$181.7	31%
EGL Inc.	12/31/2005	$835.1	$222.4	27%

4. Maintenance of Way

SECI's evidence on maintenance-of-way operating costs falls far short of satisfying its responsibility to provide a realistic and feasible estimate of such costs for the SFRR. While SECI's evidence is riddled with errors and omissions, three fundamental flaws are of particular importance. First, SECI adopted a one-size-fits-all approach to maintenance-of-way costs, assuming that each roadmaster territory will consist of approximately 200 route miles and that each four-person track crew will be responsible for 100 route miles – regardless of terrain, weather conditions, accessibility, traffic levels, or even the number of track miles in each route mile segment. SECI adopts similarly simplistic assumed "averages" to estimate the necessary number of signal maintainers and bridges and buildings field staff. The result of SECI's one-

[117] CSXT WP "Seeking Alpha.pdf"

size-fits-all approach is a wholly unrealistic maintenance-of-way plan in which many roadmasters and track crews would have maintenance responsibilities far greater than they could manage in the real world. Reliable maintenance-of-way costs cannot be developed using such a cookie-cutter approach. Instead, maintenance-of-way costs must take account of the unique characteristics of the track and facilities to be maintained, including tonnage, topography, and climate. CSXT's maintenance-of-way plan – which is based in significant part on direct observations of the terrain over which the SFRR would operate and facilities that the SFRR would replicate – accounts for the unique features of the SFRR and is therefore a far more realistic assessment of the SFRR's maintenance needs.

The second fundamental flaw in SECI's evidence is a failure to account for the significant efforts required to maintain tracks handling a mix of heavy coal, general freight and high-speed intermodal trains at FRA Class 4 standards. The SFRR is a heavy axle-loading, high tonnage Class I railroad, and as such it requires increased remedial and preventive maintenance to address the impact of heavy tonnages and high speed on track structure and components. SECI's maintenance-of-way plan does not recognize the need for the SFRR to respond to the wear and tear caused by operating heavy-axle load unit trains, and as such it would be inadequate to maintain the SFRR.

Third, SECI systematically underestimates the SFRR facilities requiring maintenance. For example, SECI allocated track crews by route miles – not track miles – and therefore ignored the need to maintain nearly a thousand miles of second main tracks, passing sidings, interchange tracks, yard tracks, and setout tracks. Similarly, SECI has significantly undercounted the number of failed equipment detectors requiring maintenance and failed to take into account the

maintenance requirements of the SFRR's internal telephone system. SECI has also undercounted the number of bridges the SFRR requires and taken no account of the maintenance requirements of the SFRR's tunnels

CSXT's maintenance-of-way experts James D. Bagley and Michael R. Baranowski (the "CSXT Maintenance Experts") explain these flaws and the many other flaws in SECI's proposed maintenance-of-way plan below. Their critique demonstrates that SECI's proposal is hopelessly unrealistic and not feasible. Mr. Bagley and Mr. Baranowski have developed a least-cost, most efficient maintenance-of-way plan for the SFRR that corrects SECI's flaws and would provide sufficient support for the SFRR's essential maintenance needs. Mr. Bagley has many years of experience constructing and maintaining the rail lines SECI selected for inclusion in the SFRR, as well as similar lines carrying associated heavy tonnages. He is familiar with the myriad railroad maintenance challenges faced by a network traversing terrain ranging from mountainous to coastal plain. Moreover, in preparing this evidence Mr. Bagley personally inspected most of the lines that the SFRR would replicate. He is thus well positioned and highly qualified to review and critique the evidence submitted by SECI, and to opine on the actual maintenance requirements for these lines.[118] Mr. Baranowski is a Senior Managing Director at FTI Consulting, and he has experience in various aspects of transportation analysis including engineering and maintenance requirements.[119]

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[118] Mr. Bagley's experience and credentials are described in more detail in his Statements of Qualification.

[119] Mr. Baranowski's experience and credentials are described in more detail in his Statements of Qualification.

Section a details the major flaws in SECI's maintenance of way plan and why it would not be adequate to maintain the SFRR in the real world. In Section b, the CSXT Maintenance Experts describe the maintenance-of-way plan they developed for the SFRR, which will meet the essential maintenance needs of the SFRR in the least-cost, most-efficient way possible. Table III-D-18 summarizes the annual costs for maintenance-of-way organization developed by the CSXT Maintenance Experts and compares those costs to the annual costs for the maintenance-of-way organization proposed for the SFRR by SECI.

Table III-D-18: Comparison of Maintenance-of-Way Annual Costs

Cost Category	SECI	CSXT	Difference
Personnel	42,481,339.48	75,526,371.79	33,045,032.31
Equipment	4,535,400.40	9,711,991.78	5,176,591.38
Contract Services	6,758,973.68	15,572,718.83	8,813,745.14
Total	53,775,713.56	100,811,082.39	47,035,368.83

a. SECI's Maintenance-of-Way Plan is Unrealistic and Infeasible.

SECI proposes that a headquarters/supervisory staff of 17 and a field production staff (track, signals and bridges) of 328 could maintain the SFRR's entire 2,000+ route mile railroad traversing 12 states and consisting of over 3,000 miles of track,[120] centralized train control ("CTC"), equipment failure and detection and communications systems,[121] four yards with

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[120] Table III-B-2, page III-B-9

[121] SECI Opening at III-B-16.

fueling and locomotive and car maintenance and repair facilities,[122] buildings and yard facilities for eleven roadmasters and twenty-six track crews, and headquarters and dispatch facilities at Folkston.[123] This staffing is far too low for a railroad the size and breadth of the SFRR.[124]

In the first place, SECI fails to account for the enhanced maintenance needs caused by the large number of high-tonnage unit trains on the SFRR. SECI also does not account for the often-challenging geography on the SFRR, which presents different but in many ways no less daunting maintenance requirements from those in prior SAC cases. In addition, SECI's simplistic assumptions of one roadmaster for every 200 route miles and one four-person track crew for every 100 route miles are unreasonable and would leave the SFRR's maintenance of way workforce severely understaffed. SECI uses similarly unrealistic assumptions to develop communications and signals and bridges and buildings workforces that are far from adequate to serve the SFRR's needs. Because of these systematic flaws and unreasonable assumptions, under SECI's proposal it would be impossible for the SFRR to maintain its facilities to the level necessary for it to operate safely and efficiently.

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[122] SECI Opening at III-B-12.

[123] SECI WP "MOW Costs.xls," at tab MOW Staff.

[124] As explained above, SECI significantly underestimated the number of yards and other facilities required to serve the SFRR traffic group. But its minimal maintenance of way force could not adequately maintain even the limited facilities that SECI proposed for the SFRR – let alone the full set of facilities that the SFRR would need to serve its customers.

i. SECI's Maintenance-of-Way Plan Does Not Account for the Essential Maintenance Required for a Railroad of the Size and Tonnage of the SFRR.

SECI proposes to maintain the SFRR's track to FRA Class 4 standards (which would allow freight cars to move at train speeds of up to 60 miles per hour). However, SECI fails to account for the extensive maintenance required to maintain track at this standard on a railroad of this density through this terrain. Unit coal trains loaded to 286,000 pounds per car, operating over curves that routinely exceed 6 degrees, would subject the SFRR track structure to tremendous pressures, requiring far more extensive, sophisticated and repetitive maintenance programs than those assumed by SECI. SECI's maintenance plan is simply not consistent with the SFRR's proposed operations as a heavy-axle-loading, high-tonnage Class I railroad. SECI cannot claim that the SFRR could realize the revenue benefits of a high-tonnage, high-density system without accounting for the maintenance costs that are part and parcel of such a high-density network.

The impact of increasingly heavy tonnages on track structures and the increased remedial and preventive maintenance required by such loadings have been the subject of extensive discussion in the industry. As one article notes, the increases in heavy axle-load traffic in recent years "have led many railroads, and especially track and structure managers, to a growing interest in the area of track maintenance in relation to heavy haul loads."[125] It is well recognized that increased train lengths and high tonnages cause severe stress on the track structure and contribute to high rates of fatigue and failure for track components. *Id.*

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[125] "Heavy Haul Loads Require Top-Notch Track Maintenance," Rail Track & Structures, December 1998 at 21. *See* III-D-4 Maintenance-of-way Workpapers.

Starting in the early 1990s, the introduction of 286,000 pound coal cars and high-adhesion AC locomotives caused tremendous changes in the dynamics and forces exerted on the track structure. The result was that track structures that had been used for many years were found to be inadequate in the high curvature-severe grade terrain. These problems caused CSXT to completely change some of the maintenance practices on the route specified for the SFRR. CSXT found that more frequent and better rail grinding and rail lubrication practices (including top-of-rail lubrication) were essential to avoiding track failure and low-rail rollovers. CSXT also took steps to improve the track fastening system and to reduce tie spacing in some cases. Even with these changes, it was still necessary to reduce speeds on some of the more difficult routes, including some of those specified for the SFRR.

While such advanced materials, techniques, and measures help, they do not eliminate the need for constant attention to and repair of the track structure. Mr. Bagley knows from personal experience – as Chief Engineer of both CSXT and Norfolk Southern – that the railroad track structure of the SFRR will be subjected to enormous forces from the heavy unit-coal and high-speed intermodal trains it is assumed to carry over its curves and grades. Combined with the swings in weather conditions – hot dry summers that parch the earth and cause problems with the rail subgrade; wet rainy seasons that regularly cause flooding and erode the soil and ballast and cause subgrade failures; rapid mountain runoff resulting from sudden and severe thunderstorms that often produce rock slides and washouts, and snow and ice storms – the impact of heavy and high-speed trains causes sudden, severe damage to roadbed, track structure, bridges and signal

systems, and results in ongoing need for unscheduled maintenance.[126] The SFRR will not be immune from such regular occurrences, and thus it must provide a maintenance-of-way work force sufficient to deal with these problems.

As explained in more detail in Section III.D.4.b. below, keeping trains regularly moving over a rail system that is characterized by daily unit coal trains operating with head- and rear-end power requires a substantial maintenance effort, including a maintenance-of-way field force that will be on call 24 hours a day to deal with the myriad unplanned maintenance issues that inevitably will arise on a large, high-density network like the SFRR's. There is no reason to assume that the SFRR could somehow avoid the tremendous amount of non-program maintenance that routinely would be required on such high tonnage routes through rugged terrain. The SFRR could not possibly maintain over 3,300 miles of railroad track to standards sufficient to accommodate the high volume of coal and intermodal traffic postulated by SECI and satisfactorily maintain the required service levels with an internal maintenance-of-way force of only 238 field employees. As detailed below, the CSXT Maintenance Experts have determined that a field force of 412 persons is needed to properly maintain the SFRR.

ii. SECI's Maintenance-of-Way Plan Is Based on Incorrect Assumptions About Track Maintenance Requirements for the Terrain and Geography of the SFRR.

The second fundamental flaw in SECI's maintenance-of-way plan is caused by SECI's misunderstanding of the geography and climate of the terrain traversed by the SFRR. SECI

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[126] Adverse weather compounds the engineering challenge on heavy haul lines. "Despite the number of premium components used on the line, wear and degradation and the high level of maintenance associated with them persist." "Optimizing the System on CPR's BC South Line," Railway Track & Structures, July 2001 at 25. *See* III-D-4 Maintenance-of-way Workpapers.

asserts that the SFRR "predominantly traverses relatively level terrain" (SECI Opening at I-32 n.17) and suggests that the SFRR's maintenance needs are therefore less extensive than those in *Duke v. CSXT*. *See id.* at III-D-59. This attempt to understate the maintenance needs of the SFRR is disproven by the direct observations of CSXT Maintenance Expert Bagley. In the Summer and Fall of 2009, Mr. Bagley extensively examined the West and East Division routes SECI proposes for the SFRR, mostly by hy-rail car. Far from the impression SECI seeks to give, much of the SFRR, in fact, lies in the mountainous regions of the northern and southern Appalachians - 47% of the East Division and 46% of the West Division. Moreover, the coastal plains of the Middle Atlantic and Southeast where most of the remainder of the SFRR lies present maintenance-of-way challenges nearly equal to those of the Appalachians.

The SFRR West Division runs 934 route miles from Princeton, Indiana to Bostwick, Florida. The segment from Princeton to Nashville, Tennessee is approximately 187 route miles in length. This segment has approximately 47 route miles of curved track (25%) constructed through hilly, mountainous, and low-lying terrain across vertical grades of up to 1.38%. The segment from Nashville to Chattanooga, Tennessee is some 147 route miles in length, constructed through mountainous and low-lying terrain. Approximately 36 route miles (24%) are curved track ranging from light to heavy curvature across vertical mountain grades of up to 2.5%. From Chattanooga to Manchester, Georgia the West Division runs approximately 214 miles. Approximately 104 route miles (49%) are curved track constructed through the north Georgia mountains, across the undulating grades of rolling hill terrain of west and central Georgia with vertical grades of up to 1.20%. From Manchester to Waycross, Georgia on the West Division is some 200 route miles in length. Approximately 51 route miles (25%) are

curved track constructed through the hill terrain of central Georgia and the low-lying swampy areas of south Georgia with some vertical grades reaching 1.51%. From Waycross to Bostwick is some 120 route miles with approximately 13 route miles (11%) of curved track constructed through low-lying coastal and swampy terrain.

The SFRR East Division runs 1,166 route miles from Haywood (west of Clarksburg), West Virginia to Folkston. Georgia. From Haywood to McKeesport, Pennsylvania, a distance of approximately 99 route miles, the East Division has approximately 63 miles (63%) of curved track, much of it constructed on a bluff cut into a mountainside along the Monongahela River. From McKeesport to Cumberland, Maryland is some 134 route miles in length. This segment has some 85 miles of curved track (63%) with light to heavy curvature ranging from 1° to 10° over heavy mountain grades in excess of 1.3% across the western Allegheny Mountains. Cumberland to Washington, D.C. is approximately 150 route miles in length. Approximately 87 route miles are curved track (53%) ranging from light to heavy curvature and severe vertical grades across mountainous terrain through the eastern Allegheny Mountains. Washington to Richmond, Virginia is approximately 120 route miles in length. This segment has approximately 37 route miles (30%) of curved track with light to medium curvature ranging from 0° 30' to 5° 30' and moderate grades. Richmond to Folkston, Georgia is some 601 route miles in length with approximately 70 route miles (11%) of curved track with light to heavy curvature ranging from 0° 22' to 7°. The track on this portion of the East Division is constructed through the coastal plain of eastern North Carolina, South Carolina and Georgia, of which approximately 250 route miles (42%) is through the low-lying coastal and swampy terrain of South Carolina and Georgia.

All of the regions traversed by the SFRR present significant maintenance challenges of terrain and climate. The extreme summer heat of the central Lowlands, Appalachian Plateau and Coastal Lowlands causes track to move out of alignment and even buckle. The floods of spring and the hurricane season undermine and washout track in the same regions. The extreme winter cold of the Appalachians causes track to move out of alignment, and the spring rains bring rockslides and washouts. The mountainous terrain of the Appalachian Plateau, Mountains and Piedmont requires that track be laid in often extreme curvature and at significant vertical grades. Such track is much more prone to move out of alignment than is the relatively level and straight track laid in the Central and Coastal Lowlands, particularly under high tonnage loads. In transporting the tonnages proposed for it by SECI, the SFRR will experience very high maintenance-of-way requirements and will require a large and well-equipped workforce in order to satisfactorily maintain the track through these regions and climates.

iii. SECI's Simplistic Assumptions for Roadmaster Territories Are Unreasonable and Do Not Provide Sufficient Staff to Maintain the SFRR.

A principal driver of SECI's maintenance of way understaffing is its unsupported assumption that the SFRR would be divided into eleven roadmaster territories averaging approximately 190 route miles each. While SECI describes the purported factors that it supposedly took into account in developing its MOW field staffing (*see* SECI Opening at III-D-62), in reality SECI developed its staffing requirements using simplistic assumptions that ignore the very factors enumerated by SECI. For example, SECI developed its Roadmaster territories

by simply assuming an average size of approximately 190 route miles[127] and its Track Crew territories using an equally arbitrary and simplistic metric of two Track Crews per roadmaster district (equating to about 95 route miles per four-person Track Crew).[128] Each Roadmaster Territory is staffed identically – headed by a Roadmaster who supervises two Assistant Roadmasters, two four-person Track Crews, one two-person Welding and Grinding Crew, and a roadway machine operator. *See* SECI Opening at III-D-66.[129] These arbitrary metrics are not consistent with real-world railroading. Maintenance needs cannot be determined by simply counting route miles, because maintenance requirements are a function of factors like geography, climate and tonnage. As the CSXT Maintenance Experts explain in Section III.D.4.a.(4) below, the amount of first and second main, and yard track that can be effectively maintained by an appropriately-sized track crew[130] can vary between 65 and 115 miles depending on tonnage, terrain, and climate.

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[127] SECI WP "MOWRoadmaster Territories.xls" states that "Roadmaster territories were divided so that each roadmaster would have approximately 200 track miles." SECI's claim that roadmaster territories were divided on a "track mile" basis is incorrect – the mileages in "MOWRoadmaster Territories.xls" plainly demonstrate that SECI only considered route miles when dividing roadmaster territories.

[128] *See* SECI WP "MOWTrackCrewTerritories.xls" (stating that each roadmaster was assigned two track crews).

[129] SECI assumes other track field production staff consisting of six Lubricator Repairmen, eight Roadway Equipment Mechanics, six two-person Ditching Crews and five three-person Smoothing Crews, presumably operating under the supervision of four Assistant Track Engineers in coordination with the roadmasters. *See* SECI Opening at III-D-70.

[130] As the CSXT Maintenance Experts explain in Section III.D.4.b.(3)(ii) below, given the tonnage, geography and climate, and mix of track in a track crew territory the most efficient and effective staffing of a track crew can vary from four to seven persons.

Moreover, in using these arbitrary route-mile assumptions, SECI failed to account for the key driver of maintenance-of-way requirements. It is miles of track, not route miles, that determine the SFRR's track maintenance requirements. By using route-mile assumptions, SECI failed to properly consider the maintenance requirements of 725 miles of second main and passing siding track, and 484 miles of interchange and yard track – a total of 1,209 miles of track, more than half again as much track as the 2092.4 miles of first main track that is accounted for in the route miles covered by SECI's roadmaster territories. SECI's oversight is even more significant because (as discussed above in section III-B) the SFRR will require substantially more interchange and yard tracks than SECI originally proposed. In total the SFRR's maintenance-of-way organization will be required to maintain over 3300 miles of track.

Below the CSXT Maintenance Experts discuss three roadmaster territories that illustrate the fallacies of the one-size-fits-all assumptions on which SE CI built its maintenance-of-way plan.

SECI's Roadmaster Territory 3. This territory runs from Chattanooga, TN to Manchester, GA and covers, according to SECI, 213.7 route miles of the SFRR.[131] In reality the territory covers 223.9 route miles – SECI failed to include the Stilesboro and Georgia Power branches. The territory also encompasses 52.5 miles of second main and passing track, for a total of 276.4 miles of track.[132] SECI estimates that two track crews would be required for this territory – Track Crew 6 is responsible for the track between MP 00J 147.0 and MP OWA 22.4

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[131] SECI WP "MOWRoadmaster Territories.xls"

[132] CSXT WP "SECI Roadmaster Territories corrected.xls"

(117.3 route miles) and Track Crew 7 for the track between MP 0WA 22.4 and MP ANB 786.1 (96.4 route miles).[133] These crew territories actually cover, respectively, 150.1 first and second main track miles and 126.3 first and second main track miles.[134]

Mr. Bagley has examined the actual terrain and tonnage to which the track in this territory is subjected. 112 route miles (50%) of the track experiences medium to heavy grades up to 1.20% and 104 route miles (46%) of the track is curved.[135] This terrain is typical severe mountainous Appalachian terrain, totally unlike the "rolling terrain of western Kentucky and Central Tennessee . . . [or] the flat terrain of northeastern Florida" that SECI would have the Board believe characterizes the entirety of the SFRR's Western Division. SECI Opening at III-D-59. Moreover, the SECI proposed tonnages over the SFRR track in this territory range from 30 to 58 MGT with a track-mile weighted average of 49 MGT.[136] Thus, this is mountainous track under heavy loading and it is wholly unrealistic to think that a single four-person track crew could handle the maintenance requirements of 126 miles, let alone 150 miles, of this track. Based on his real-world experience and examination of the track terrain and as explained in detail in Section III.D.4.b.3.ii below, Mr. Bagley judges that a five-person track crew with occasional assistance from a welding crew and backhoe with operator at best could adequately maintain approximately 75 first and second main track miles of this type of track. Thus, to meet the track MOW needs of SECI's Roadmaster Territory 3 would require not two four-person track

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[133] SECI WP "MOWTrackCrewTerritories.xls"

[134] CSXT WP "SECI Roadmaster Territories corrected.xls"

[135] *Id.*

[136] *Id.*

crews, but rather three and a half five-person track crews with assistance from welding crews and backhoes with operators. Further, the single Roadmaster and two assistant Roadmasters would be wholly inadequate for the supervision of four track crews. In short, SECI's Roadmaster Territory 3 simply fails to recognize and account for the actual conditions to which the SFRR track within the territory will be subjected and thus grossly underestimates the field supervisory and work force that will be required to maintain that track.

SECI's Roadmaster Territory 7. SECI's proposed Roadmaster Territory 7 demonstrates even more starkly how the arbitrary and simplistic assumptions used by SECI to estimate maintenance-of-way requirements fail to capture the real-world needs of the SFRR. This territory runs from Western Pennsylvania at Rockwood to Washington DC and covers, according to SECI, 209 route miles of the SFRR. SECI fails to properly consider the fact that this territory is almost entirely double-tracked, with over 180 miles of second main and passing track. Thus, this territory actually encompasses a total of 389 miles of main track requiring maintenance. Using its simplistic metric of two crews per roadmaster territory, SECI again estimates that only two four-person track crews would be required for this territory – Track Crew 15 is responsible for the track between MP 0BF 226.8 and MP OBA 123.0 (98.4 route miles), while Track Crew 16 has the track between MP 0BA123.0 and MP CFP 114.8 (105.4 route miles).[137] These crew territories actually cover, respectively and incredibly, 208 first and second main track miles and 181 first and second main track miles.[138]

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[137] SECI WP "MOWTrackCrewTerritories.xls"

[138] CSXT WP " SECI Roadmaster Territories corrected.xls"

Mr. Bagley again examined the actual terrain and tonnage to which the track in this territory will be subjected. The western end of this territory, covered by Track Crew 15, is characterized by the extreme track grades and curves typical of the Northern Appalachian region – grades of up to 2.12% and 57 percent curved track.[139] The SECI proposed tonnages over Track Crew 15's territory range from 26 MGT to 40 MGT with a track mile weighted average of 33 MGT. Thus, this is mountainous track in terrain more challenging than in Roadmaster Territory 3, but under somewhat less severe tonnage loading. It is wholly unrealistic to assume that a single track crew could handle the maintenance requirements of 208 miles of this track, particularly given the constraints of work windows and challenging climatic conditions. Based on his real-world experience, Mr. Bagley judges that a six-person track crew and associated welding crew and roadway equipment operator could at best adequately maintain approximately 90 miles of first and second main track of this type of geographically challenging terrain handling up to 40 MGT annually. As a whole Track Crew 16's portion of the territory is somewhat less challenging with grades of only 0.5 to 1.5% and slightly less curved track (53%) and SECI proposed tonnage in the range of 27 MGT annually. However, the western end of Track Crew 16's territory is similar in terrain and tonnage to Track Crew 15's territory and will require similar maintenance. Based on his real-world experience and as explained in detail in Section III.D.4.b.(3)(ii) below, Mr. Bagley judges that a five-person track crew and associated welding crew and roadway equipment operator could at best adequately maintain approximately 90 miles of first and second main track of the western end of Track Crew 16's territory. The

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[139] CSXT WP " SECI Roadmaster Territories corrected.xls"

eastern end of the territory, which encompasses the metropolitan region of Washington, DC, will require five-person track crews responsible for approximately 75 first and second main track miles. Thus, Mr. Bagley judges that to meet the track MOW needs of SECI's Roadmaster Territory 7 would require not two, but rather four and a half track crews (four five-person and half of one six-person) with associated welding crews and equipment operators. Further, the single Roadmaster and two assistant Roadmasters would again be wholly inadequate for the supervision of five track crews.

SECI's Roadmaster Territory 10. SECI's Roadmaster Territory 10 presents a different pattern of maintenance-of-way requirements. Territory 10 encompasses SFRR track from Pembroke, NC to Charleston, SC – 202 route miles of the SFRR. In reality, the territory actually covers 226.3 route miles – SECI failed to include the Cross and Charleston branches. The territory also encompasses 72.6 miles of second main and passing track for a total 298.9 miles of track.[140] Once again using its arbitrary metric of 100 route miles per crew, SECI estimates that two track crews would be required for this territory – Track Crew 22 is responsible for the track between MP A 241.0 and MP A 340.0 (103.9 route miles), while Track Crew 23 has the track between MP A 340.0 and MP A 443.0 (119.2 route miles).[141] These crew territories actually cover, respectively, 136 miles and 163 miles of first and second main track.[142]

Mr. Bagley again examined the actual terrain and tonnage to which the track in Territory 10 will be subjected. Much of the track along this route runs through the low-lying swampy

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[140] CSXT WP " SECI Roadmaster Territories corrected.xls"

[141] SECI WP "MOWTrackCrewTerritories.xls"

[142] CSXT WP " SECI Roadmaster Territories corrected.xls"

coastal plain of North and South Carolina, which is subject to both seasonal and hurricane flooding and track washout. The SECI proposed tonnages over the track in this territory range from 11 to 13 MGT with a track-mile weighted average of 11 MGT.[143] Thus, this is low-lying terrain subject to seasonal flooding and washouts and track misalignment due to extreme summer heat and given work windows. It is not realistic to assume that a single four-person track crew could handle the maintenance requirements of 136 miles or 163 miles of the track in Territory 10. Based on his real-world experience and examination of the track terrain and as explained in detail in Section III.D.4.b.(3)(ii) below, Mr. Bagley judges that a six-person track crew with occasional assistance from a welding crew and backhoe with operator could adequately maintain approximately 100 miles of first and second main and yard track through this lowland terrain. Thus, to meet the track MOW needs of SECI's Roadmaster Territory 10 would require, not the two four-person track crews proposed by SECI, but rather three six-person track crews with assistance from welding crews and backhoes with operators.

SECI's understaffing of its proposed Roadmaster Territories 3, 7, and 10 illustrates the systematic flaws of its "one-size-fits-all" maintenance assumptions. The SFRR would be unable to maintain its network with the low staffing proposed by SECI, and this inadequate maintenance inevitably would cause service disruptions, safety problems, and substantial declines in efficiency.

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[143] CSXT WP " SECI Roadmaster Territories corrected.xls"

iv. SECI's Estimate of C&S Field Supervisory Staff and Workforce Is Predicated on a Simplistic and Unsupported Methodology.

SECI developed signals maintenance requirements using a simplistic and outdated methodology – assuming 2000 AAR units per maintainer – and committed a number of errors of omission. AAR units provide a relative measure of the complexity of the different kinds of signal devices. They were not developed for the purpose of determining maintainer workloads, but rather for purposes of apportioning costs between parties to a joint facility agreement, where an interlocking's installation or operation cost was distributed among the parties in proportion to the equipment at the facility.[144] SECI takes the approach of summing the total AAR signal units for the signals devices on the SFRR and then, to determine the number of maintainers required for the SFRR, SECI assumes that one maintainer can service 2000 AAR units of signal devices. Taking this approach, SECI calculates that the SFRR will require 85 signal maintainers. SECI Opening at III-D-74.

Quite apart from the fact that SECI offers no evidence in support of that assumption, this is an unrealistic and inappropriate way to determine the SFRR's signal maintainer requirements. Maintainer requirements are determined, not simply by the relative complexity of the devices involved, but also by the absolute complexity of the devices, the types of inspection and testing

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[144] With manual mechanical interlocking, costs were distributed by the number of interlocking levers the operator had to pull for the routes of a given railroad. With the introduction of electromechanical and relay-based systems, a system was needed that apportioned joint cost based on the number of track circuits, switch machines, signals and other devices. The predecessor organization to the AAR Communication & Signal Division developed a unit based system that assigned values to the various signal devices and was published in the AAR C&S Manual.

required, and the geographical distribution and density of the signal devices. Many Class I and regional railroads, in developing their signal maintenance requirements, use a work-loading model based on "asset/test type weighting factors" that take into consideration the systems maintained, the complexity of the FRA and the SFRR required tests and inspections, and other human factors. The CSXT Maintenance Experts determined that this accepted model was a far more appropriate method to develop the SFRR's maintenance requirements than SECI's unsupported AAR unit method.

To make matters worse, SECI significantly undercounted the number of FEDs requiring maintenance. While SECI does not state in its narrative the total number of FEDs on the SFRR, it does state that FEDs are "spaced approximately every 25 miles along the SFRR's route . . . Two FEDs are provided at each location that has two main tracks." SECI Opening at III-B-18. On these assumptions, the CSXT Maintenance Experts determined that SECI's SFRR would require 78 FEDs. But SECI uses a much lower (and constantly varying) count of SFRR FEDs on its signal schematic plan (64 FEDs),[145] its route diagrams (69 FEDs),[146] and in its calculation of AAR units for the SFRR (only 58 FEDs). Thus, even if its unsupported methodology were appropriate (which it is not), SECI has significantly understated the SFRR's signal maintainer requirements by failing to take account of 20 FEDs.

SECI proposes just five communication technicians for the C&S Department. SECI Opening at III-D-75. SECI offers no explanation of how this staffing was developed and no

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[145] *See* SECI WP, "SFRR Straightline.xls"

[146] *See* SECI Exhibit III-B-3.

evidence in support of it. This workforce staffing is wholly inadequate to the SFRR's communication system, which, in addition to the communications systems located at SFRR yards, includes communications links for 78 FEDs; 43 AEI scanners and all signal and powered switch control points; 91 microwave towers, each with two antennas and associated microwave equipment[147]; telephone communication systems at 11 roadmaster and 22 track crew locations (of which SECI failed to take account[148]); and the land mobile radio equipment assigned to track crews and train operating personnel. SECI's five communications technicians would effectively be servicing four 500-route-mile territories. Considering travel time and that the bulk of the communications equipment to be serviced is located along the SFRR's two routes and not concentrated at yard locations, it would simply be impossible for a single technician to adequately maintain the communication equipment in a territory that size. Assuming that the technicians are centrally based within these territories (which they are not, because SECI bases them at the four yards it proposes), it could take a technician more than half a work day just to travel to the location requiring repair or maintenance.

As with the signal and detection systems, proper development of staffing requirements for communication systems requires an approach that takes into account not only the complexity of the equipment involved, but also inspection and test requirements, the geographical distribution and density of the system components, and potential travel and asset outage time. As the CSXT Maintenance Experts explain below, on the basis of a detailed examination of the

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[147] SECI WP, "SFRR C&S Spreadsheet.xls" Tab Components & Tabulation

[148] *See* SECI WP, "SFRR C&S Spreadsheet.xls" which contains no equipment for non-yard locations.

type and distribution of communications equipment for the SFRR and taking into account travel time, the CSXT Maintenance Experts have determined that in order to properly maintain the SFRR's communication system, the SFRR would require a field work force of 23 communication technicians, not the 5 proposed by SECI.

Moreover, as it did with FEDs, SECI undercounts the communications equipment that would have to be maintained by the C&S Department. While SECI states in its narrative that the SFRR has 36 AEI scanners (SECI Opening at III-B-18), SECI's route diagrams for the SFRR show 43 AEI scanners (SECI Exhibit III-B-3), and SECI's workpaper that develops the communication device counts for the SFRR shows only 28 AEI scanners.[149] Similarly, while SECI's signal schematic plan shows 91 microwave towers, the SECI workpaper that develops the communication device counts for the SFRR shows only 89 microwave towers.[150] Thus, SECI's maintenance workforce fails to take account of the maintenance requirements of 15 AEI scanners, two microwave towers and the SFRR's internal telephone system.

v. SECI's Proposed B&B Field Supervisory Staff and Workforce Is Unsupported and Predicated on Unexplained Assumptions.

The SFRR has 786 bridge structures (West Division 330; East Division 456)[151] and 26 tunnels.[152] These bridge structures and tunnels require periodic inspection and routine repair as a result of damage from buckled track, dragging equipment, derailments, highway vehicle and

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[149] SECI WP, "SFRR C&S Spreadsheet.xls" Tab Page Counts.

[150] SECI WP, "SFRR C&S Spreadsheet.xls" Tab Page Counts.

[151] SECI WP, "Bridges by Subdivision.xls"

[152] CSXT WP, "SFRR Tunnels.xls."

equipment strikes, fatigue of steel bridge components, high water, and ice build-up during the winter. The SFRR Bridge & Building Department's field supervisory and work force is responsible for seeing that the bridge and tunnel structures and buildings are maintained to the required standards. For the SFRR's B&B Department, SECI proposes a B&B field supervisory staff consisting of two B&B Supervisors who are responsible for supervision of two B&B Inspectors, two B&B Machine Operators, and four three-person B&B Crews.

Other than the statement that "all of the SFRR's bridges will be constructed using concrete and steel components, resulting in virtually no annual maintenance to the structures," SECI offers no explanation or supporting evidence for the B&B field staffing it proposes. The reality is that concrete and steel are as subject to environmental degradation and fatigue as any other material and, more importantly, most routine repairs to bridges and tunnels are the result of events that are indifferent to the material used in the construction, *e.g.*, derailments, dragging equipment, flooding and winter freezing.

vi. SECI Has Underestimated the Equipment Needs of the Maintenance-of-way Field Forces.

As a direct consequence of its understaffing of the maintenance-of-way personnel requirements of the SFRR, SECI has underestimated the SFRR's maintenance-of-way equipment requirements. In Section III-D-4.b.iii below, the CSXT Maintenance Experts detail the SFRR's equipment requirements and compare these to the equipment requirements and costs proposed by SECI.

vii. SECI Has Underestimated the Amount of Contract Maintenance the SFRR will Require.

SECI's development of the SFRR's contract maintenance requirements and annual expense of contract maintenance contains numerous errors, omissions and flawed assumptions. In several cases SECI failed to take account of the contractor production rates achievable given work windows and travel time.[153] In some cases, SECI failed to provide any support or explanation of the unit costs assumed.[154] In other cases, SECI simply errs in the calculation of the unit cost used.[155] In Section III-D-4.b.iv, the CSXT Maintenance Experts detail these errors and omissions for each of the contract services the SFRR would require. The sum of these errors and omissions is that SECI significantly underestimates the SFRR's annual operating expenses for contract maintenance-of-way services.

b. Overview of The CSXT Maintenance Experts' Estimate of SFRR's Maintenance Needs.

i. The CSXT Maintenance Experts' Approach Is Based on a Real-World View of the Maintenance Needs of a High-Tonnage, Class 1 Railroad Operating in the Challenging Appalachian and Coastal Regions.

It is crucial that a railroad have an adequate internal maintenance force comprised of skilled and well-trained individuals who can routinely inspect and familiarize themselves with the facilities within a limited territory, detect and correct problems early, and handle any emergencies that might arise. The work of the internal maintenance force is not sporadic, but

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[153] *See* Section III-D-4.b.iv - Track Geometry Testing, Shoulder Ballast Cleaning.

[154] *See* Section III-D-4.b.iv - Bridge Inspection, Snow Removal, Storm Debris Removal.

[155] *See* Section III-D-4.b.iv - Rail Ultrasonic Testing, Shoulder Ballast Cleaning.

continuous. To successfully detect potential maintenance problems before they occur requires the combination of regular, frequent inspections by supervisors and daily inspections by track/structure inspectors who know the territory. In the CSXT Maintenance Experts' experience, every day broken rails, broken ties, irregularities in line or surface of track, or signal indications stop all rail traffic until the cause is identified and corrected. Excessive heat, cold or rain regularly causes rail failures or other track and signal irregularities that require immediate attention. In late spring and summer, the heat can cause the rail to expand and move track out of alignment. During inclement weather conditions, the Assistant Roadmasters and maintenance forces must perform additional track inspections and repairs to prevent track outages and derailments. Accidents on the line from overheated journal bearings, dragging equipment, flat wheels and similar occurrences can also damage the integrity of the track structure which must be inspected and repaired immediately.

In the real world, despite a carrier's best efforts to prevent problems, problems often are discovered only when detected by a signal indication. The signal is tripped if there is a broken rail or joint, or a short in the signal. Because defects that trip the signal could cause a derailment, traffic must be stopped or ordered to proceed at severely restricted speeds until the problem is identified, at which point it must be attended to immediately by readily-available track, signal, communication and bridge personnel. Maintenance must be ongoing, prompt and performed in ways that minimize delays in rail traffic to the greatest extent possible, especially over high-density lines. Based on the CSXT Maintenance Experts' personal experience on these lines, they developed from the bottom up the minimum maintenance force needed to handle the numerous, varied situations that would inevitably, and frequently, arise on the SFRR.

Based on their personal experience and Mr. Bagley's 2009 on-the-ground survey and examination of the CSXT line segments replicated by the SFRR, the CSXT Maintenance Experts identified the key positions in the SFRR maintenance-of-way organization that would be required and the number of persons in each position needed to handle the maintenance requirements of the SFRR. The structure of the organization designed by the CSXT Maintenance Experts is similar to that proposed by SECI: an SFRR Engineering Department with three Groups – Maintenance-of-way ("M/W"), Communications & Signals ("C&S") and Bridges & Buildings ("B&B"). They then calculated the average salary applicable to each job title, based on experience and the CSXT wage data produced in discovery that includes overtime payments, indexed to first quarter 2009 levels. They then multiplied the average salary times the number of persons in each job title to arrive at total salary and wage cost.[156]

ii. CSXT Maintenance-of-Way Personnel

(a) Engineering Department General Office Personnel

The CSXT Maintenance Experts' estimate of the Engineering Department's organization includes 22 persons in the general office. In the general office, the CSXT Maintenance Experts have identified 17 key engineering and management positions needed on the VP-Engineering's staff.[157] Each of these positions plays a vital role in establishing an efficient and safe maintenance program.

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[156] CSXT WP, "SFRR MOW Compensation.xls"

[157] In their workpapers, the CSXT Maintenance Experts include an organizational chart of the Engineering Department and details of their estimate of the SFRR's personnel requirements.

For the VP-Engineering's direct subordinates, the CSXT Maintenance Experts have allocated an average of 66 percent of their time to operating expenses because of the amount of time spent on managing operating budgets and dealing with operating spending and projects.[158] Their jobs entail coordinating train schedules with maintenance work; managing and reducing slow orders; analyzing derailment causes and prevention; safety and health efforts and initiatives; interacting with governmental agencies concerning projects and reports; and participation in AAR, AREMA and technical committee work, all of which are operating activities. Significant work is also involved in addressing proposals for state regulations that affect railroad operations. These activities have no impact on capital spending but consume significant resources from operating expenses and thus a 66 percent allocation to operating expenses is conservative. The same logic applies for clerical staff reporting to these positions, because they primarily support the upper engineering staff. The CSXT Maintenance Experts estimated that the SFRR would need five clerks to perform support functions for the engineering general office staff. The clerks handle correspondence for utility permits, track leases, right of way occupancies and other operating permits; human resources matters such as training logs, efficiency tests, safety scheduling and logs, and rules testing; word-processing activities; tracing company service cars that distribute and pick up materials and scrap; manpower planning; maintenance of FRA and DOT records; and miscellaneous activities such as mailing, faxing, and other administrative work, including some database support services.

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[158] Although railroad general offices generally spend more time on capital work projects than on day-to-day maintenance projects, a significant effort is nonetheless expended by the general office staff managing projects and budgets associated with operating expenses.

The Chief Engineer - Maintenance-of-Way ("MOW") would have overall responsibility for all track maintenance and capital track work. He would make periodic inspections of the railroad and would work with the key Transportation Department managers to plan maintenance and program activities. He would also assume management of the Department when the VP-Engineering is on vacation or otherwise away from the railroad. The Chief Engineer Maintenance-of-Way (MOW) will plan and manage the capital programs. He will manage the distribution of material ahead of programs and the cleanup after the work in complete. He will manage the work done by the contractors on capital programs and ensure that the work is performed in accordance with appropriate standards. He will work with the Transportation Department to obtain maintenance curfews or windows for company and contract forces doing capital track work. The CSXT Maintenance Experts have determined that 60% of his time will be charged to operating expenses.

The Division Engineer – MOW would have overall responsibility for inspection and maintenance of the track structure. He would also be responsible for ensuring that all tests are completed at the frequency required by the FRA and for maintaining records of inspections and geometry data for all curves on main tracks. He establishes policies, procedures, specifications, and standards for field maintenance practices to ensure compliance with FRA and SFRR standards. The CSXT Maintenance Experts have determined that 60% of his time will be charged to operating expenses.

The Chief Engineer - Communications & Signals ("C&S") will be responsible for the inspection and maintenance of all signal and communication systems. He will ensure compliance with all FRA and FCC regulations as well as SFRR policies, standards and

procedures. Any new grade crossing installations will be handled as a design-build project. He will also conduct training and annual testing on Operating and FRA Rules. He will spend 60% of his time on operating expense activities.

The Division Engineer – C&S reports to the Chief Engineer - C&S. He is responsible for design, installation, and maintenance of communications and signal systems to ensure safe and efficient movement of trains, and to ensure a reliable and dependable communications system to meet other operating requirements of the railroad. He establishes policies, procedures, specifications, and standards in regard to field construction and maintenance practice, systems, and equipment to ensure compliance with FRA, State, and industry standards. He coordinates oversight and implementation of training activities for field personnel and oversees activities of field supervisory personnel. He represents the railroad and maintains liaison with the FRA, state agencies, various AAR Signal & Communication Division committees, the National Committee of Uniform Traffic Control Devices, and other professional organizations. He will spend 70% of his time on operating expense activities.

The Assistant Engineer – Signals reports to the Division Engineer - C&S. The Assistant Engineer - Signals manages the activities of the Signal Supervisors and Maintenance personnel to ensure effective repair and maintenance of signal systems to ensure safe and efficient train operations. Specifically, he is responsible for management of railroad-wide activities pertaining to the Train Control System, the Centralized Dispatching Center and Signal Supervisory personnel and oversight of implementation, testing, and modifications to the CTC signal systems, Track Permit Systems, MIS interfaces, and Equipment Defect Detector systems as they interface with the overall Train Control System. He analyzes and diagnoses reported signal

malfunctions, including roadway-railroad warning devices, to develop root cause analyses and determine corrective action to be taken and provides field supervisory and maintenance personnel "on-call" assistance in troubleshooting problems. He will spend 90% of his time on operating expense activities.

The Assistant Engineer – Communications reports to the Division Engineer - C&S. The Assistant Engineer - Communications manages the activities of the Communication Supervisors and Maintenance personnel to ensure effective repair and maintenance of communication systems. He is specifically responsible for management of railroad-wide activities pertaining to the microwave communication system, the internal telephone system and the land mobile radio system, and oversight of implementation, testing, and modifications to those systems. He analyzes and diagnoses reported communications malfunctions to develop root cause analyses and determine corrective action to be taken and provides field supervisory and maintenance personnel "on-call" assistance in troubleshooting problems. He will spend 90% of his time on operating expense activities.

The Assistant Chief Engineer - Bridges and Buildings ("B&B") would be responsible for the inspection and maintenance of all bridges, facilities, and culverts in excess of 24" in diameter. He would plan the annual maintenance of bridges and facilities and schedule the SFRR B&B maintenance forces or outside contractor forces. Any new bridge or facilities will be handled by outside contractors as design-build projects. He will also ensure training and annual testing on Operating and FRA Rules of all B&B personnel. He would spend 50% of his time on operating expenses activities.

The Assistant Division Engineer – B&B reports directly to the Assistant Chief Engineer B&B. He is responsible for supervising the four B&B Supervisors and is responsible for the inspection and maintenance of all bridges, facilities, culverts in excess of 24" in diameter, and all tunnels. He works in conjunction with the Assistant Chief Engineer B&B in planning the annual maintenance of bridges, facilities, culverts, and tunnels. He is also responsible for coordinating with the Transportation Department to ensure track time is available for field B&B forces to provide timely inspections and repairs for bridge, culvert, and tunnel maintenance. He will spend 70% of his time on operating expense activities.

The Manager - Mechanical Operations/Work Equipment manages the large amount of equipment that must be maintained on the SFRR. He would be responsible for supervising the work of the mechanics maintaining this equipment and for maintaining an inventory of parts for all the different pieces of equipment. He would also be responsible for the timely dispatch of those parts to mechanics and to equipment in need of repair to ensure that the work crews are not impeded by the breakdown of a key piece of work equipment. He would be directly responsible for the selection of equipment to be purchased and leased. He would also handle the lease of equipment to ensure that the SFRR is properly charged for repairs and damage on returned equipment. The CSXT Maintenance Experts have allocated 60 percent of his time to operating expense activities.

The Manager - Administration & Budgets will be responsible for the day-to-day administrative work in the Engineering Department. The Manager Budgets is responsible for keeping payroll records, material accounts, and invoices for goods and services. He applies charges to the proper account and tracks actual expenses against budget. He will prepare weekly

reports of charges to operating and capital expenses by maintenance forces and contractors working on both maintenance and capital projects. His time is charged 50% to operating expense activities.

The Manager - Environmental/Safety/ Training reports to the VP-Engineering. He is responsible for developing environmental and safety programs for all the Engineering groups. He is responsible to ensure compliance programs are in place for environmental regulations, ensure EPA environmental reporting requirements are filed timely and properly, run hazmat spills and prevention programs for Engineering employees, facilitate emergency response education and training for Engineering employees, and respond to engineering related hazmat spills. This position must also work closely with field Engineering Managers to ensure compliance with Safety Rules/Regulations, Operating Rules, and FRA Rules. He must establish close working relationships with all federal, state and local environmental agencies, performing critical duties that are required by law and that help to minimize unexpected environmental liabilities (which can be extremely costly). He works with all contractors who perform work for the SFRR Engineering Department to ensure the contractors' employees are trained and comply with 49 C.F.R. § 214 On-Track Worker Protection Rules. He will also work closely with field Engineering Managers to conduct training and annual testing on Safety, Operating and FRA Rules. He will spend 70% of his time on operating expense activities.

The Engineer - Programs & Contracts will handle all leases and right of way encroachments by outside parties. He will correct and approve all requests from utilities and governmental agencies for crossings and encroachments. He will arrange for surveys for new tracks and facilities. He is responsible for preparing all contracts for outside services, including

the requisition for purchase of materials. He is also responsible for investment recovery of scrap materials such as rail and steel components. He handles contracts for major annual programs such as vegetation control, rail grinding, and ditching. He is responsible for managing rail and geometry testing, including planning and making testing schedules. He also handles short term contracts such as grade crossing paving behind maintenance work. The CSXT Maintenance Experts have determined that 90 % of his time will be charged to operating expenses.

The Engineer - Public Projects interfaces with governmental agencies and other entities in handling requests for various types of public projects including rail highway grade separations, new grade crossings, utility projects, and right-of-way encroachments. He also provides engineering expertise and support to the Roadmasters for issues related to such projects in their territory. The CSXT Maintenance Experts have determined that 30 % of his time will be charged to operating expenses.

The Track Engineers (located in Atlanta, Nashville, Fayetteville and Martinsburg) report to the Division Engineer and are responsible for supervising the Roadmasters and Assistant Roadmasters and the inspection and maintenance of all the track structure. The Roadmasters and Assistant Roadmasters report directly to the Track Engineers. They will manage and assign the system floating forces to the Roadmasters as needed. The Track Engineers are responsible for supervising the daily movement of vehicles and coordinating with the Transportation Department to obtain track time for testing. They will spend 90% of their time on operating expense activities.

The Manager-Welding & Grinding reports to the Chief Engineer and is responsible for supervising all rail and switch grinding by contractors. He would be responsible for training and

certifying maintenance welders in both blacksmith and thermite welding. He will work with vendors to keep up to date with the rapidly changing field of welding techniques and methods to reduce field weld failures. The CSXT Maintenance Experts have assigned 70 percent of the Manager-Welding & Grinding's time to operating expenses.

The Supervisors-Work Equipment (located in Atlanta and Fayetteville) report to the Manager Mechanical/Work Equipment and are responsible for proper maintenance and repairs to the fleet of work equipment on the SFRR. The CSXT Maintenance Experts have assigned 75% of their time to operating activities.

Consistent with SECI's compensation methodology, the CSXT Maintenance Experts have conservatively assigned a 39.5 percent fringe benefits ratio to General Office staff personnel and added an allowance for travel and meals equal to 10 percent of base salary. They also add $669 to base salary to cover costs for office supplies and equipment. In sum, the CSXT Maintenance Experts' restatement of the SFRR's annual operating expenses for MOW management includes $1.8 million for General Office staff.

Table III-D-19 compares the CSXT Maintenance Experts' engineering office personnel requirements for the SFRR to those proposed by SECI.

Table III-D-19
COMPARISON OF HEADQUARTERS/SUPERVISORY AND SUPPORT STAFF

Position	SECI	CSXT	Difference
Chief Engineer – M/W	-	1	1
Division Engineer – M/W	-	1	1
Track Engineer	1		-1
Chief Engineer – C&S	-	1	1
Division Engineer - C&S	-	1	1
Communications & Signals Engineer	1		-1
Assistant Engineer - Signals	1	1	-
Assistant Engineer - Communications	1	1	-
Chief Engineer – B&B		1	1
Assistant Division Engineer – B&B		1	1
Bridge Engineer	1		-1
Engineer of Programs and Contracts	1	1	-
Public Project Engineer	2	2	-
Manager of Administration and Budgets	1	1	-
Manager of Environmental/Safety/Training	1	1	-
Manager of Welding & Grinding	1	1	-
Manager of Mechanical Operations	1	1	-
Supervisor of Work Equipment	1	2	1
Administrative Assistant/Clerk	4	5	1
Total	17	22	5

(b) Track Maintenance Field Personnel

The Track Department analysis includes ongoing operating maintenance only, and reflects the railroad's personnel requirements for the routine activities involved in the day-to-day inspection and repair of the track structure. [159] For operating expense track maintenance, the CSXT Maintenance Experts have divided the railroad into 17 Track Roadmaster Districts,[160] each covering an average of 123.1 route miles of main track plus yards and interchange tracks

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[159] CSXT WP "SFRR Track Employee Table.doc"

[160] CSXT WP, "SFRR Roadmaster Territories.xls"

and supervised by a Roadmaster. Nine of the Roadmaster Districts contain rail segments that have high tonnages, severe grades, and curves. Each Roadmaster is responsible for all track maintenance within his territory, including planning, employee training, coordination with other internal departments, and interaction with outside agencies. The CSXT Maintenance Experts have also determined that the SFRR would need 21 Assistant Roadmasters to perform required SFRR and FRA track inspections and to address specific problems that arise.

Each of the Roadmaster Districts would have track crews at the Roadmaster's disposal to perform the required daily track maintenance repairs and repair emergency minor defects as they are detected. Track crew size varies from four to six persons depending on the nature of track for which the crew is responsible. Two to three of these track crews are assigned to each district based on the amount and type of track to be maintained, including walking inspections of yards, and turnouts. At times several track crews would be combined to respond to major derailments, washouts and other larger track problems. The Roadmasters also have at their disposal welding crews to perform electric blacksmith welding/field thermite welding, and smoothing crews to perform mechanized track smoothing and lining maintenance to the track structure to ensure safe train operations.

The CSXT Maintenance Experts have stationed SFRR track maintenance crews at strategic points along the route to ensure that there is substantial coverage at the most problematic points – *i.e.,* line segments with the highest traffic densities, those with the sharpest curves, and those in areas susceptible to problems due to the soil, erosion or weather

conditions.[161] The track crews would be required to handle routine repairs and to replace broken or defective track components not covered under the annual scheduled maintenance program for asset replacement. In addition, they would be required to repair track geometry defects as they are detected; repair and remove slow orders; make derailment and washout repairs; stabilize slopes where needed; cut brush; make minor repairs to grade crossings; inspect track in accordance with FRA standards; clean up debris and maintain drainage facilities less than 24" in diameter; maintain right of way fences; regularly inspect, adjust and lubricate all switches on the territory; replace damaged and missing signs; clean switches in the event of snow accumulation; spot raised bridge approaches or areas of poor subgrade; maintain orderly material stock piles; maintain safe walkways in the vicinity of buildings, platforms, switching leads, and sidings; replace defective insulated joints and joint plugs; maintain access roads; and gauge track, which is especially important on curves.

Track maintenance crews must be on call for emergencies 24 hours a day, 7 days a week. Track maintenance personnel will include separate welding crews that are responsible for maintaining the condition of all frogs and switch points on the specified territory, and keeping the territory free of rail joints. Welding crews are responsible to weld and repair frogs; grind switches and stock rails; slot rail ends where necessary; and field weld rail joints created as a result of replacement of defective or broken rails. On high-tonnage, severe-curvature segments of the SFRR, joints on welded rail cannot be tolerated for extended periods because they quickly become battered and chipped and result in geometry defects and possible broken joint bars.

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[161] CSXT WP, "SFRR Track Maintenance Crews.xls"

Therefore, where joints are created as a result of repairs to defective rail found by the detector car, welders must follow-up immediately to field weld all rail joints, preferably within 72 hours of the occurrence of the defect. Detector cars inspect the high-tonnage portions of the railroad three times per year. Welding crews also provide the equipment to grind switches, frogs and crossings when thermite welding is not required. Roadway Equipment Operators run backhoes, front-end loaders, dozers, and tractors, which are needed for day-to-day activities and to keep the territory clean of scrap rail and other materials. They also operate spot tampers, switch tampers, regulators, brooms, weed movers, and cranes that are needed seasonally. All truck drivers who operate larger over-the-road vehicles – whether they be welders, section foremen, or others in the track, B&B or signals departments – must possess DOT and CDL licenses, which require yearly renewal, training and testing.

The CSXT Maintenance Experts concluded that the minimum SFRR track maintenance force would consist of 342 employees to perform the daily OE maintenance of the more than 3400 miles of mainline, siding, interchange and yard track on the SFRR. The CSXT Maintenance Experts' labor costs for track personnel are taken from documents and information CSXT produced in discovery and conservatively assume the same level of overtime currently experienced by CSXT, even though the SFRR has fewer maintenance-of-way employees along these routes to move almost the same or more tonnage than CSXT.

Consistent with SECI's compensation methodology, the CSXT Maintenance Experts have assigned a 39.5 percent fringe benefits ratio to track field personnel and added an allowance for travel and meals equal to 10 percent of base salary. They also add 35 percent of base salary as a small tools & materials additive to base salary. In sum, the CSXT Maintenance Experts'

restatement of the SFRR's annual operating expenses for MOW includes $42.5 million for track field personnel.

The CSXT Maintenance Experts determined that the SFRR would require track maintenance field staffing of 342, rather than the 216 proposed by SECI. Table III-D-20 compares the CSXT Maintenance Experts' track maintenance field personnel requirements for the SFRR to those proposed by SECI.

Table III-D-20
COMPARISON OF TRACK MAINTENANCE FIELD PERSONNEL

Position	SECI	CSXT	Difference
Track Engineer (Field Production)	-	4	4
Assistant Track Engineer (Field Production)	4	-	-4
Roadmaster	11	17	6
Assistant Roadmaster	21	21	-
Track Crew	104	182	71
Roadway Machine Operators	13	21	8
Welder/Helper/Grinder	22	34	12
Lubricator Repairman	6	8	2
Roadway Equipment Mechanic	8	10	2
Ditching Crew	12	16	4
Smoothing Crew	15	24	9
Vehicle Operator (Semi-tractor)	-	1	2
Vehicle Operator (Material truck)	-	4	4
Total	216	342	124

(c) Communications & Signals Maintenance Field Personnel.

The CSXT Maintenance Experts estimate that a total of 151 communications and signals field personnel would be required to maintain the CTC and communications systems on the

SFRR.[162] Based on the network configuration of the SFRR provided by CSXT's operating witnesses, the CSXT Maintenance Experts determined that the SFRR territory would require 8 Signal Supervisors, 10 signal inspectors, 105 Signal Maintainers, 2 Communications Supervisors and 23 Communications Technicians.

The signal maintainers would be required to keep the specialized equipment relating to the centralized traffic control ("CTC") system, wayside signals, crossing signals, FEDs, and power switches in good working condition. They would also follow track maintenance crews to repair damaged track wires and to perform other signal maintenance repairs. These crews work directly with track department employees on line outages relating to broken rail and switch problems. Signal maintainers are also required by FRA to perform a number of periodic tests on all wayside signals and wayside crossings. The SFRR would be required to comply with these FRA regulations, but SECI's estimates and costs for maintenance personnel fail to take these requirements into account.

The communications maintenance personnel are responsible for maintaining the relay microwave system, the telephone system, the infrastructure of the data network, the radios (diesel locomotive radios, portables, etc.), the AEI scanner sites, and all other train yard cameras and scanning equipment. Communications personnel are also responsible for maintaining a radio repair shop with parts and supplies for repairing locomotive and portable radios. Although the communications maintenance personnel are assigned to specific reporting locations by the CSXT Maintenance Experts, most of their time is spent out in the field.

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[162] CSXT WP "SFRR C&S Employee Mancount.doc"

Consistent with SECI's compensation methodology, the CSXT Maintenance Experts have assigned a 39.5 percent fringe benefits ratio to C&S field personnel and added an allowance for travel and meals equal to 10 percent of base salary. They also add 35 percent of base salary as a small tools & materials additive to base salary. In sum, the CSXT Maintenance Experts' restatement of the SFRR's annual operating expenses for MOW includes $22.5 million for C&S field personnel.

Table III-D-21 compares the CSXT Maintenance Experts' communications and signals field personnel requirements for the SFRR to those proposed by SECI.

Table III-D-21
COMPARISON OF COMMUNICATIONS & SIGNALS FIELD PERSONNEL

Position	SECI	CSXT	Difference
C&S Supervisor	4	-	-4
Signal Supervisor	-	8	8
Communication Supervisor	-	2	2
Signal Maintainer	85	108	23
Signal Inspector	-	10	10
Communication Technician	5	23	18
Total	94	151	57

(d) Bridge and Building Maintenance Field Personnel.

The CSXT Maintenance Experts estimate that a total of 71 Bridge and Building field personnel would be required for the SFRR.[163] They divided the B&B maintenance department into four territories under four B&B Supervisors located at Nashville, Atlanta, Fayetteville and Martinsburg, which are centrally located to most of the major structures. There are four Bridge Inspectors, reporting directly to the four B&B Supervisors, who are responsible for inspecting all

[163] CSXT WP "SFFR B&B EMPLOYEE TABLE.xls"

bridges and large culverts, and arranging for instant repairs as needed. When identified, major repairs will be referred to the Chief Engineer Bridges & Buildings, and to the appropriate B & B Supervisor. The SFRR B&B forces will be responsible for inspection and maintenance of culverts greater than 24" in diameter.[164] The CSXT Maintenance Experts have assigned eight B&B work crews to the SFRR system supported by one steel crew and two machine operators.[165] All the bridge forces would be able to work on both bridges and facilities. They would be deployed to the location where there was scheduled work. Each of the bridge crews will have boom trucks and hydraulic tools. The SFRR bridge forces will handle routine maintenance and repair with major repairs and replacements contracted out.

Shop complexes, buildings, and treatment plants require piping testing, inspections, repairs, routine cleaning and pumping of systems, and lubrication of parts to keep in proper working order. For emergency plumbing, HVAC, and electrical repairs to facilities the B&B Supervisor would obtain the services of a local contractor.

The B&B Supervisors oversee the work of the B&B maintenance crews as well as the yearly bridge rebuilding and scheduled maintenance programs. The CSXT Maintenance Experts have assigned 100 % of the B&B supervisors' time to operating expenses.

Consistent with SECI's compensation methodology, the CSXT Maintenance Experts have assigned a 39.5 percent fringe benefits ratio to B&B field personnel and added an allowance for travel and meals equal to 10 percent of base salary. They also add 35 percent of

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[164] The track department is responsible for inspecting, cleaning and maintaining culverts less than 48 inches.

[165] CSXT WP "SFRR Bridge Maintenance Crews-Workforce.xls"

base salary as a small tools & materials additive to base salary. In sum, the CSXT Maintenance Experts' restatement of the SFRR's annual operating expenses for MOW includes $8.7 million for B&B field personnel.

Table III-D-22 compares the CSXT Maintenance Experts' bridges and buildings field personnel requirements for the SFRR to those proposed by SECI.

Table III-D-22
COMPARISON OF BRIDGES & BUILDINGS FIELD PERSONNEL

Position	SECI	CSXT	Difference
B&B Supervisor	2	4	2
B&B Inspector	2	4	2
B&B Machine Operator	2	2	-
B&B Crew	12	37	25
B&B Bridge Tenders	-	22	22
Total	18	69	51

iii. Maintenance-of-Way Equipment Expense

In order to maintain the SFRR, the maintenance-of-way forces described above require a variety of equipment for which the CSXT Maintenance Experts have made provision in their maintenance plan. All of the field forces require vehicles to perform daily inspections of track, track structures, signals and communications systems and to transport personnel, equipment and materials to work sites.[166] All of the field forces also require hand and powered tools with which to perform the SFRR's routine daily maintenance tasks described above.[167] The track and bridge

[166] CSXT WP, "SFRR Engineering Vehicles Requirements.xls

[167] CSXT WP, "SFRR Personnel Tools and Equipment.xls,"

maintenance crews also have a variety of specialized equipment requirements (ballast tampers and regulators, gradalls, trackhoes and backhoes).[168]

Table III-D-23, below, compares the CSXT Maintenance Experts' estimates of the SFRR's maintenance-of-way equipment costs to those proposed by SECI.

Table III-D-23
COMPARISON OF EQUIPMENT COSTS

Equipment Type	CSXT	SECI	Difference
Vehicles	14,846,536.00	25,351,621.00	10,505,085.00
Personnel Tools & Equipment	1,139,139.00	3,915,702.50	2,776,563.50
MOW Equipment	6,691,327.00	13,424,336.00	6,733,009.00
Total	22,677,002.00	42,691,659.50	20,014,657.50

SECI estimates the annual expense for maintenance-of-way equipment to be 20 percent of the purchase price of the equipment.[169] The CSXT Maintenance Experts accept this methodology and have used it to calculate the annual expense for the equipment specified in their plan.[170]

The CSXT Maintenance Experts also provide in their plan for annual operating expenses for the SFRR's buildings maintained by the SFRR's B&B field forces, which they estimate to be 3 percent of the cost of the buildings.[171] In its Opening Evidence, SECI did not consider the operating expenses for the SFRR's buildings that are maintained by the SFRR's B&B field staff.

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[168] CSXT WP, "SFRR MOW Equipment Requirements.xls."

[169] SECI WP "MOW Costs.xls" Tab "Annual MOW Expense"

[170] CSXT WP "SFFR MOW Tools and Equipment.xls"

[171] CSXT WP "SFFR MOW Contract Services.xls" tab "Building Maintenance"

Table III-D-24 below compares the CSXT Maintenance Experts' annual maintenance and operating expenses to those proposed by SECI.

Table III-D-24
COMPARISON OF ANNUAL EQUIPMENT EXPENSE AND BUILDING OPERATING EXPENSES

Expense	SECI	CSXT	Difference
Equipment Expense	4,535,400.40	8,538,331.90	4,002,931.50
Building Operating Expense	-	1,173,659.88	1,173,659.88
Total	4,535,400.40	9,711,991.78	5,176,591.38

Work Trains. Surfacing and shoulder ballast cleaning operations require the distribution of ballast via work trains. The CSXT Maintenance Experts have developed the work train requirements for these operations.[172]

iv. Maintenance-of-Way Contract Expense

SECI specified that the SFRR would use contractors for track testing (geometry and ultrasonic), rail grinding, ditch cleaning, ballast cleaning, yard cleaning, crossing repaving, equipment maintenance, communications inspection & repair, bridge inspection, building maintenance, snow removal, storm debris removal, building repair, derailments, wreck clearing, washouts and environmental cleanup.[173] The CSXT Maintenance Experts concur that the SFRR would most efficiently meet these maintenance needs through contract services.

The differences between the CSXT Maintenance Experts' estimates of contract work and those of SECI witness Crouch are set forth below. The CSXT Maintenance Experts' total annual

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[172] CSXT WP "SFRR - MOW Work Trains"

[173] SECI WP "MOW Costs.xls."

operating expense contract work estimate is $15.6 million. As discussed below, SECI underestimated in some cases the unit costs and in others the amount of contract services that would be required.

Table III-D-25
COMPARISON OF ANNUAL CONTRACT EXPENSE

Contract Activity	SECI	CSXT	Difference
Track Geometry Testing	287,669.20	298,500.00	10,830.80
Ultrasonic Rail Testing	980,664.30	838,378.67	-142,285.63
Rail Grinding (DCF)	1,944,533.61	1,858,205.37	-86,328.24
Yard Cleaning	8,800.00	100,913.04	92,113.04
Vegetation Control (Spray)	251,560.35	1,628,835.85	1,377,275.50
Ditch Cleaning	60,549.67	101,121.66	40,571.99
Ballast Cleaning	236,536.20	1,556,473.25	1,319,937.05
Brush Cutting		923,435.52	923,435.52
Crossing Repaving (DCF)	1,425,000.00	4,170,400.00	2,745,400.00
Equipment Maintenance	1,133,850.10	2,134,582.97	1,000,732.87
Communications System Inspection and Repair	700,705.32	752,523.84	51,818.52
Bridge Inspections	84,015.15	263,614.10	179,598.95
Bridge Repair (DCF)	5,600.00	12,000.00	6,400.00
Building Maintenance	486,358.39	782,439.92	296,081.53
Snow Removal	10,000.00	45,200.00	35,200.00
Storm Debris Removal	10,000.00	90,000.00	80,000.00
Road Property & Equipment Damage (derailments, washouts and other)	2,479,465.00	3,644,700.00	1,165,235.00
Environmental Cleanup	28,800.00	2,400,000.00	2,371,200.00
Total	10,134,107.29	21,601,324.19	11,467,216.90
Total less DCF	6,764,573.68	15,572,718.83	8,808,145.15

Track Geometry Testing. Major railroads must regularly test track geometry to ensure that the track alignment, profile, cross level, super-elevation, gauge and twist all meet FRA and corporate track safety standards. CSXT's policy is to test from two to four times per year on lines with the densities proposed for the SFRR. The SFRR line segments with densities greater

than 30 MGT would be tested at least twice a year and the segments with densities less than 30 MGT would be tested at least once a year. Some track with less than 30 MGT would be tested twice a year given the amount of track with curvature and vertical grade. Thus, 4,995.3 miles would have to be tested.[174] SECI asserts that the geometry testing policy for the SFRR would be to test track with 5-30 MGT once per year, with 30-60 MGT twice per year, and with over 60 MGT three times per year – consistent with the CSXT policy. SECI Opening at III-D-81. In calculating annual geometry testing costs, however, SECI tested all first main track three times annually and second main/passing siding/branch line track once annually – testing a total of 7191.7 miles annually.[175] This is clearly excessive under either CSXT's policy or the policy SECI proposes for the SFRR.

SECI uses a geometry testing unit cost of $40.00 per pass mile, which it asserts is based on a CSXT long-term contract.[176] SECI Opening at III-D-82. But this assertion is not supported by SECI's workpapers. SECI's contract maintenance workpaper does not list a CSXT contract for geometry testing[177] and SECI's contract maintenance calculation workpapers do not show the calculation of the $40 figure from a CSXT contract.[178] Moreover, SECI's $40 figure appears to erroneously assume that the track testing vehicles will operate continuously during an 8 hour day. The CSXT Maintenance Experts estimate that given travel time and work windows the

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[174] CSXT WP "SFRR Contract Services.xls" tab "Track Geometry Testing"

[175] SECI WP "MOW Costs.xls," Tab "Annual MOW Expenses"

[176] CSXT WP "SFRR – CSXT Holland Contract.pdf"

[177] SECI WP "MOWContract Maintenance Bates Nos.xls"

[178] SECI WP "MOW Costs.xls" Tabs "Annual MOW Expense" and "Notes 6-30-09"; *see also* SECI WP "Geometry Car Testing.xls"

testing vehicles could operate at most 5 hours in an 8 hour day at an average speed of 22.5 miles per hour. Accordingly, the CSXT Maintenance Experts revised the unit cost to $59.76 per pass mile and applied it to the 4,995.3 miles for a total cost of $0.3 million.[179]

Rail Ultrasonic Testing. Rail lines which handle the tonnage levels proposed for the SFRR should be tested every 15 MGT or a minimum of two times per year. With this policy, 4980.2 miles would have to be tested annually on the SFRR.[180] This frequency is required to locate internal rail defects and remove portions of rail that are defective prior to service failures, which can result in derailments and interruption of service. SECI asserts that the ultrasonic testing policy for the SFRR should be to test on all main lines and twice yearly on track with 40-80 MGT. SECI Opening at III-D-82. In calculating annual ultrasonic testing costs, however, SECI tested all first main track three times annually and second main/passing siding/branch line track once annually – testing a total of 7191.7 miles annually.[181]

SECI's ultrasonic testing unit cost of $136.36 per pass mile is allegedly based on a CSXT long-term contract {{ }}.[182] While the SECI workpapers do not show the development of this unit cost,[183] SECI evidently developed the unit cost by dividing the contract bid value of the original contract {{( )}}[184] by the minimum miles to be tested

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[179] CSXT WP "SFRR Contract Services.xls" tab "Track Geometry"

[180] CSXT WP "SFRR Contract Services.xls" tab "Ultrasonic Rail"

[181] SECI workpaper "MOW Costs.xls," Tab "Annual MOW Expenses"

[182] CSX-SE-HC-018402 to 018441

[183] SECI workpaper "MOW Costs.xls" Tabs "Annual MOW Expense" and "Notes 6-30-09";

[184] CSX-SE-HC-018412

under the contract {{( )}}.[185] In so doing, SECI ignored {{

}}. The CSXT Maintenance Experts revised the unit cost to {{ }} per test mile to properly reflect actual costs under the contract[188] and applied it to the 5310.9 miles for a total cost of $0.8 million.

Rail Grinding. Head checking and spalling as a result of mechanical wear of the track rail create detail fractures in the railhead. This problem is even more critical in premium rail, which is harder and more brittle. This type of rail defect is very dangerous since it starts in the gauge corner of the rail head and is very difficult to detect with rail test equipment. It is recognized throughout the railroad industry that frequent grinding can greatly reduce this type of defect and the potential for derailments. If left to deteriorate when not ground regularly, additional passes would be required to properly profile the rail which results in added cost.

SECI assumes a rail grinding policy of grinding straight track every 60 MGT, 30 MGT for non-premium curved rail and 100 MGT for premium curved rail greater than 3 degrees; tangent and curved rail less than 3 degrees receive one pass and curved rail greater than 3 degrees receives two passes. SECI Opening at III-D-83. SECI calculates annual rail grinding

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[185] CSX-SE-HC-018430

[186] CSX-SE-HC-018402

[187] CSX-SE-HC-018429-30

[188] CSXT WP, "SFRR Contract Services.xls" tab "Ultrasonic Rail"

miles for the SFRR of 1,023.4.[189] Examination of the SECI rail grinding workpaper, however, revealed that SECI calculated only one pass for curved track greater than 3 degrees. The correct figure is 1,079.7 rail grinding miles.

Current best practice among Class I railroads is for straight track to be ground every 45-60 MGT, for moderately curved (less than 2 degrees) to be ground every 30-50 MGT, and for extreme curved (greater than 2 degrees) track to be ground every 15-25 MGT.[190] The CSXT Maintenance Experts have calculated rail grinding for the SFRR using the mid-range best practice frequencies of every 52.2 MGT for straight track and 40 MGT for curves less than 2 degrees and 20 MGT for curves greater than 2 degrees. Applying this policy to the SFRR, the CSXT Maintenance Experts calculate that 1432.8 miles of SFRR track would require grinding each year.[191]

SECI used a unit cost of $1900 per pass mile. This is excessive. In 2008 CSXT ground 16,662 pass miles of track at a total cost of $19.6 million or $1296.94 per pass mile. The CSXT Maintenance Experts applied the CSXT 2008 unit cost to 1432.8 pass miles to estimate annual SFRR rail grinding costs of $1.9 million.[192]

Yard Cleaning. For safety and health reasons, yard tracks must be cleaned at least annually to remove all foreign materials that fall from rail cars when cars are moved during

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[189] SECI workpaper "MOW Costs.xls," Tab "Rail Grinding Cap. Cost"

[190] *See* "Guidelines To Best Practices For Heavy Haul Railway Operations, Infrastructure Construction And Maintenance Issues," The International Heavy Haul Association, June 2009, at Chapter 6.3 Rail Grinding, pp. 6-18 through 6-42.

[191] CSXT WP "SFRR Contract Services.xls" tab "Rail Grinding"

[192] CSXT WP "SFRR Contract Services.xls" tab "Rail Grinding"

handling operations. In addition, coal dropped from cars must be removed routinely between annual cleanings. SECI states that the annual cost of cleaning the SFRR's yards is {{ }}, based on a long term CSX contract. SECI Opening at III-D-84. The CSXT Maintenance Experts found on examination of the SECI workpaper developing this cost that the annual cost calculated by SECI based on the CSXT contract is actually {{ }}.[193] The CSXT Maintenance Experts accept this figure.

Vegetation Control. All SFRR main and secondary tracks must be sprayed annually with EPA-approved pesticides. Chemicals must be rotated periodically to provide adequate vegetation kill from year to year. Certain areas require second applications and crossing areas, signals and signs require additional coverage to provide increased kill to improve sight distance for both motorists and train crews at road crossings. In addition to regular weed spraying, railroads must also provide for noxious weed spraying. Noxious weeds are those which have a harmful effect on agricultural productivity or to human health and welfare, and therefore are "outlawed" by state governments. In some areas, noxious weeds must be controlled from right-of-way line to right-of-way line, which results in increased application costs. In Kentucky and portions of Tennessee, a special application is required to control Thistle, which is classified as noxious. SECI states that the SFRR would spray once annually in its northern territory and twice annually in its southern territory (Tennessee, Alabama, Georgia, North Carolina, South Carolina and Florida) and assumes a unit cost of $120.22 per route mile for weed spraying. SECI Opening at III-D-85. SECI's workpaper calculation of the annual cost assumes a single annual

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[193] SECI WP "MOW Costs.xls," Tab "Notes 6-30-09"

spraying pass over the entire system calculating total miles to be sprayed annually as 2092.4.[194] The CSXT Maintenance Experts' corrected number of spraying miles consistent with the stated policy is 3408.5.[195]

The CSXT Maintenance Experts adopt SECI's weed spraying policy, but reject SECI's weed spraying unit cost. SECI developed the spraying unit cost on the basis of two vegetation control contracts provided by CSXT:[196] {{

}}.[197] SECI divided the bid value of each contract by the term of the contract and then by 23,000 (the approximate CSXT total route miles) to calculate the unit cost of {{ } per mile, and in doing so committed two errors. First, in the case of the {{ }} contract, SECI divided the bid value by 13 years, rather than the {{ }} covered by the contract. Second, for both contracts SECI used a mile denominator for the entire CSXT system to divide contract values that covered only a portion of the CSXT system. CSXT in 2008 sprayed a total of {{ }} at a total expenditure of {{ }} for a unit cost of {{ }}. Applying this corrected unit cost to

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[194] SECI workpaper "MOW Costs.xls," Tab "Annual MOW Expense"

[195] CSXT WP "SFRR Contract Services.xls" tab "Vegetation Control"

[196] SECI workpaper "MOW Costs.xls," Tabs "Annual MOW Expense" and "Notes 6-30-09"

[197] CSX-SE-HC-018261 to 018275 and 018223 to 018241.

the corrected total annual miles to be sprayed, the SFRR would require annual weed spraying at a total cost of $1.5 million.[198]

Brush Cutting. SECI assumes that the SFRR would incur little or no brush cutting costs, because spraying of construction-cleared right of way would completely control all vegetation. SECI Opening at III-D-85. There are, however, some areas where herbicide brush control cannot be used due to proximity to urban areas where there are ornamental shrubs and in locations where there are crops growing. Most towns have vegetation ordinances that require brush to be maintained to a certain height. It is therefore necessary to cut mechanically portions of the route where the SFRR is located.

SECI's workpapers erroneously assert that the cost of brush cutting is included in its vegetation control unit cost $120.20, but examination of the calculation of that unit cost revealed that only the vegetation spraying contracts were used.[199] CSXT's 2008 unit cost for brush cutting of 1,558 route miles was $1,351 per mile.[200] The CSXT Maintenance Experts estimate that the SFRR would require approximately 684 miles of brush cutting annually for a total annual cost of $0.9 million.[201]

Ditching. Ditch cleaning work is performed to keep railway ditches defined and clear so that water runoff will be effectively drained away from the subgrade. Maintaining the subgrade on track with tonnages in excess of 35 MGT is of the utmost importance, and subgrade stability

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[198] CSXT WP "SFRR – Contract Services.xls" tab "Vegetation Control"

[199] SECI WP, "MOW Costs.xls," Tabs "Annual MOW Expense" and "Notes 6-30-09"

[200] CSXT WP "SFRR Contract Services.xls" tab "Brush Cutting"

[201] CSXT WP "SFRR Contract Services.xls" tab "Brush Cutting"

the corrected total annual miles to be sprayed, the SFRR would require annual weed spraying at a total cost of $1.5 million.[198]

Brush Cutting. SECI assumes that the SFRR would incur little or no brush cutting costs, because spraying of construction-cleared right of way would completely control all vegetation. SECI Opening at III-D-85. There are, however, some areas where herbicide brush control cannot be used due to proximity to urban areas where there are ornamental shrubs and in locations where there are crops growing. Most towns have vegetation ordinances that require brush to be maintained to a certain height. It is therefore necessary to cut mechanically portions of the route where the SFRR in located.

SECI's workpapers erroneously assert that the cost of brush cutting is included in its vegetation control unit cost $120.20, but examination of the calculation of that unit cost revealed that only the vegetation spraying contracts were used.[199] CSXT's 2008 unit cost for brush cutting of 1,558 route miles was $1,351 per mile.[200] The CSXT Maintenance Experts estimate that the SFRR would require approximately 684 miles of brush cutting annually for a total annual cost of $0.9 million.[201]

Ditching. Ditch cleaning work is performed to keep railway ditches defined and clear so that water runoff will be effectively drained away from the subgrade. Maintaining the subgrade on track with tonnages in excess of 35 MGT is of the utmost importance, and subgrade stability

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[198] CSXT WP "SFRR – Contract Services.xls" tab "Vegetation Control"

[199] SECI WP, "MOW Costs.xls," Tabs "Annual MOW Expense" and "Notes 6-30-09"

[200] CSXT WP "SFRR Contract Services.xls" tab "Brush Cutting"

[201] CSXT WP "SFRR Contract Services.xls" tab "Brush Cutting"

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depends on good drainage. Therefore, a yearly ditching program is necessary, particularly in cuts, culverts and tunnels to avoid blocked drainage and pockets of water that soften and erode the subgrade. Ditches tend to fill up with silt, weeds, vegetation, rocks and other debris and clog due to sloughing of cut slopes. In the absence of regular, frequent ditch cleaning, this results in saturated embankments, which leads to slow orders, increased surfacing or undercutting of track and potential derailments. Ditch cleaning is a cost-effective preventive maintenance procedure that reduces costs by eliminating unnecessary grade repairs or surfacing cycles and prevents derailments.

SECI asserts that the SFRR has few ditches because "most of the CSXT roadbed for the lines being replicated by the SFRR that was observed during field inspections by Mr. Crouch's team in late 2008 and early 2009 is perched, meaning the roadbed is on fill or embankment with no parallel ditches except in cut sections. Thus, most of the SFRR's route does not have any ditches that need cleaning or repairing." SECI Opening at III-D-71. While SECI does not explicitly describe and explain its estimate of SFRR annual cost of contract ditching, its workpapers indicate SECI assumes that the SFRR being approximately one-tenth the size of CSXT, the SFRR ditch cleaning requirements and costs will be one-tenth of CSXT's requirements and costs.[202] SECI bases the estimate of ditching cleaning costs on {{

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[202] SECI WP "MOW Costs.xls," Tabs "Annual MOW Expense" and "Notes 6-30-09"

[203] CSX-SE-HC-018277 to 018299 and 0182301 to 018307

SECI has taken a tenth of the annual value of the original contract as its estimate of annual SFRR ditch cleaning costs.

The CSXT Maintenance Experts accept this methodology, but reject SECI's calculation of the annual cost. SECI makes two incorrect assumptions in its calculation. SECI assumes that the annual contract value represents the full cost to CSXT of the services covered by the contract and that the contract was extended at the same annual value. In fact, {{

}} The CSXT Maintenance Experts estimate that the SFRR annual cost of ditch cleaning would be approximately $100,000.[204]

Shoulder Ballast Cleaning. Coal is loaded in open top cars and the cars are loaded to capacity. The coal extends above the top of the cars and some of it spills out in transit. This spillage falls onto the shoulders of the ballast section. The spillage is worse on the low side of curves due to the super elevation in the curves. As a result there is a large amount of coal in the ballast where the water should drain from the track structure. This coal and other fine material, including airborne dirt, must be removed from the ballast to keep the ballast from becoming clogged and causing mud.

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[204] CSXT WP "SFRR Contract Services.xls" tab "Ditching"

As the CSXT Maintenance Experts explain, the most economical method to clean the ballast is with the shoulder ballast cleaner, large machines with 30" wide ditching wheels on each side of the track, which pick up all of the ballast from the ends of the ties to the toe of the ballast section. The ballast is then placed on conveyors and moved to a large screen, where contaminating debris is separated from the ballast. The debris is deposited on the right of way and the clean ballast is returned to the track by a conveyor system. Most of the ballast can be salvaged in this operation. Where there is a large amount of fine material removed, it is necessary to unload additional ballast behind the operation. If the shoulder ballast cleaner is not operated on a regular cycle, the track will become contaminated with mud, which causes geometry defects, increased maintenance costs, and potential for derailments. Once the ballast gets in this condition, the track must be undercut and all the ballast replaced.

SECI does not explain in its narrative how it developed its estimate of SFRR annual ballast cleaning costs, but in a workpaper states that it is based on {{ }}[205] and the assumptions that (1) the SFRR being approximately one-tenth the size of CSXT, the SFRR ballast cleaning requirements and costs will be one-tenth of CSXT's requirements and costs and (2) that the contract is for {{ }} years.[206] The contract, however, is {{ }}. In the workpaper calculating the ballast cleaning costs,

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[205] CSX-SE-HC-018308 to 018328

[206] SECI WP "MOWShoulderBallastCleaning.xls"

SECI develops a unit cost correctly assuming a {{ }}, but then uses a different and lower unit cost to actually calculate the SFRR's annual ballast cleaning cost.[207]

The CSXT Maintenance Experts accept that the {{ }} contract is the appropriate basis for estimating SFRR ballast cleaning costs, but rejects all three of SECI's calculations of the annual cost. As with ditch cleaning, SECI again makes the false assumption that the annual contract value represents the full cost to CSXT of the services covered by the contract. In fact, {{

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The CSXT Maintenance Experts estimate that the SFRR would require ballast cleaning of 806.78 main and passing siding pass miles annually.[209] Assuming an average productivity rate of 1.4 miles cleaned per hour, and that given travel time and work windows the ballast cleaning equipment works 5 hours per 10 hour day, the CSXT Maintenance experts calculate a per day cost of $13,534.55 assuming 7 miles cleaned per day and calculate that the SFRR would incur annual ballast cleaning costs of $1.6 million.[210]

Crossing Repaving. When the track is resurfaced, it is necessary to rework grade crossings at least every other cycle. This is required to maintain track geometry through the

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[207] SECI WP "MOW Costs.xls," Tabs "Annual MOW Expense" and "Notes 6-30-09"

[208] CSX-SE-HC-018324

[209] CSXT WP "SFRR Contract Services.xls" tab "Ballast Cleaning"

[210] CSXT WP "SFRR Contract Services.xls" tab "Ballast Cleaning"

crossing. When the grade crossing is on a curve, as is the case with many of the crossings on the SFRR route, the crossing must be reworked each time the track is surfaced. The railroad pays for the cost of the work including the pavement. Even on capital projects like rail and tie replacement gangs, the cost of paving crossings is performed as an operating expense. The work of paving the crossings and disposing of the old asphalt is contracted.

SECI assumes that annually one tenth of the SFRR crossing paving will be replaced, beginning with the first year of operation for the SFRR. SECI Opening at III-D-86. SECI estimates the SFRR's annual cost of crossing repaving to be $1.4 million, assuming $14.250 million cost for SFRR crossing paving and a ten-year life for crossing paving. The CSXT Maintenance Experts accept SECI's per track-foot paving cost of $543.96, but found that SECI had failed to account for over 23,000 track-feet of crossing paving, and calculate the cost of the additional crossing paving of $12.618 million.[211] In addition, the CSXT Maintenance Experts total detour signage and barricades costs of $14.836 million.[212] The CSXT Maintenance Experts accept SECI repaving cost methodology, include the cost of the additional crossing paving and required construction detour signage, and calculate annual repaving costs for SFRR to be $4.2 million.[213]

Contract MOW Equipment Maintenance. SECI proposes that the SFRR would contract for routine maintenance of its maintenance-of-way equipment. SECI estimates that the annual cost of this contract service would be 5 percent of the equipment purchase price. SECI

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[211] CSXT WP "SFRR Grade Crossing Cost on Letterhead.doc"

[212] CSXT WP "SFRR Grade Crossing Cost on Letterhead.doc"

[213] CSXT WP "SFRR Grade Crossing Cost on Letterhead.doc"

Opening at III-D-87. The CSXT Maintenance Experts accept this methodology and estimate the annual contract equipment maintenance cost to $2.1 million.[214]

Communications System Inspection and Repair. SECI estimates the cost of contract repair and maintenance of the SFRR's communication systems to be 2 percent of the original purchase cost. SECI Opening at III-D-87. The CSXT Maintenance Experts accept this methodology, but reject the SECI's communications systems acquisition cost. CSXT's construction team estimates that the SFRR's communications systems acquisitions cost to be $3.8 million. The CSXT Maintenance Experts therefore estimate the SFRR's annual communications contract expenses to be $0.7 million.[215]

Bridge Inspections. The SFRR's B&B supervisors and inspectors will perform ongoing and annual inspections of all bridges on the SFRR. In addition to these routine inspection activities, the major bridges on the SFRR will require periodic thorough inspections of the structural integrity of the bridges. SECI proposes that these inspections will be conducted by outside contractors.

To develop the SFRR's annual costs for these inspections, SECI erroneously assumes that only seven of the SFRR's bridges, comprising a total of 46,988 track feet, will require structural integrity inspections. SECI assumes a five-year inspection schedule for these bridges and further assumes an unsupported unit cost for inspections of $8.94 per track foot of bridge length. SECI Opening at III-D-88.

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[214] CSXT WP, "SFRR Contract Services.xls" tab "Equip Maint"

[215] CSXT WP "SFRR Contract Services.xls" tab "Comm Insp & Repair"

The CSXT Maintenance Experts have examined the SFRR bridges and determined that, in fact, on the SFRR there are a total of 19 major bridges and bridge structures comprising 52,723 track feet, that will require structural integrity inspections.[216] Further, based on a conservative estimate of the contract costs for bridge inspection, the CSXT Maintenance Experts estimate that the per foot cost of integrity inspections for the SFRR would be $25[217] and the SFRR annual cost for bridge inspections would be $0.3 million.[218]

Bridge Contract Repair. SECI proposes a contract cost for repairs to major bridges of $4,000 per bridge every five years. SECI Opening at III-D-95. The CSXT Maintenance Experts accept this cost and methodology and calculate an annual cost for repairs to the SFRR's 19 major bridges and structures of $12,000.[219]

Building Maintenance. SECI estimates the annual cost of contract building maintenance for the SFRR to be 2 percent of the total cost of construction. SECI Opening at III-D-89. The CSXT Maintenance Experts accept this methodology. The CSXT construction team estimates the total cost of buildings for the SFRR to be $39.1 million. The CSXT Maintenance Experts estimate the SFRR annual cost for contract maintenance of buildings to be $0.8 million.[220]

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[216] CSXT WP "SFRR Contract Services.xls" tab "Bridge Insp & Repair"

[217] CSXT WP "SFRR – Bridge Inspection Costs.pdf"

[218] CSXT WP "SFRR Contract Services.xls" tab "Bridge Insp & Repair"

[219] CSXT WP, "SFRR Contract Services.xls" tab "Bridge Inspection & Repair"

[220] CSXT WP "SFRR Contract Services.xls" tab "Building Maintenance"

Snow Removal. SECI provides no support for its estimate of annual contract expenses for snow removal. SECI Opening at III-D-89. In 2008 CSXT incurred expenses of $904 thousand for contract snow removal. Because a considerable portion of the SFRR lies in the southeast, the CSXT Maintenance Experts estimate that the SFRR would incur only 5 percent of CSXT's contract snow removal costs or $45,200 annually.

Accidents and Wreck Clearing. No matter how carefully and well a railroad is maintained, derailments and collisions are unfortunately inevitable. Thus, accidental damage to road property and equipment must be taken into account and the realistic, reasonable costs included in the SFRR's MOW costs. CSXT's record of FRA reportable accidents shows that in 2008 there were a significant number of derailments, collisions and other accidents resulting in damage to equipment and track on the proposed SFRR lines. SECI proposes that contract workforces will repair accident damage to SFRR equipment and track and erroneously assumes that these will result only from mainline derailments and washouts. On this erroneous assumption SECI estimates the SFRR's annual cost of accident damage using CSXT's 2008 costs for mainline derailments as reported to the FRA in the states in which the SFRR will operate and CSXT's 2008 R-1 reported costs for wreck clearing. SECI Opening at III-D-91. To estimate the SFRR's costs, SECI applies to CSXT's 2008 total mainline derailment costs in each state that the SFRR operates a percentage figure calculated by dividing the SFRR mainline miles in the state by CSXT's total track miles in the state. [221] As regards washouts, SECI assumes with

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[221] SECI WP, "SFRR Contract Services.xls" tab "Property & Equip Damage"

no support that the annual cost of washouts on the SFRR will be $20,000. SECI Opening at III-D-92.

The CSXT Maintenance Experts reject both SECI's methodology and SECI's calculation of the annual costs. The CSXT Maintenance Experts observe that damage to equipment, track, roadbed and associated track-side facilities occur from various kinds of accidents (derailments, collisions, explosions, fires, etc.), not just derailments and various kinds of natural events (washouts, rockslides, etc), not just washouts. On SECI's erroneous assumption it fails to take account of the SFRR's track and equipment damage repair expenses. CSXT incurred in 2008 $36.447 million in road property and equipment damage and wreck clearing costs.[222] The CSXT Maintenance Experts estimate that the SFRR's annual costs for repair of road property and equipment damage and wreck clearing would be 10% of CSXT's costs or $3.6 million.

Debris Removal After Storms. Much of the SFRR is in regions prone to winter ice storms and more generally seasonal storms with high winds, such as hurricanes. Where SFRR's route runs through wooded terrain these storms often lead to trees being uprooted across the roadbed. This results in all or portions of the route being out of service until the trees can be cut and removed. Contractors use specialized equipment and hand cutting crews to remove the trees from the track. There are both large contractors (like Asplundh) and small contractors (like Utilco and RJ Corman Railroad Group) who specialize in this work. Because the railroad is out of service until the track is clear, the work continues around the clock until traffic is restored.

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[222] Per CSXT 2008 R-1 Report; CSXT WP "SFRR Accident and Other Damage.xls"

SECI assumes that storm debris removal requirements will arise only in the northern portion of its routes and provides an unsupported estimate of $10,000 for the SFRR's annual storm debris removal costs. SECI Opening at III-D-90.

In addition to the threat of winter ice storms in the northern portions of its routes, virtually all of the SFRR lies in the areas vulnerable to Atlantic and Gulf of Mexico hurricanes. In 2008 CSXT incurred storm debris removal costs of $600 thousand due to a single storm, Hurricane Gustav. The CSXT Maintenance Experts estimate that the SFRR's annual storm debris removal costs will be approximately 10 percent of CSXT's annual costs or $60,000 annually.

Environmental Cleanup. While SECI acknowledges that the SFRR could incur environmental cleanup costs due to derailments, it provides no estimate of the costs for clean-up of accidental toxic releases and estimates the SFRR's annual costs for environmental clean-up as the cost of drip pads for locomotive re-fueling locations. SECI Opening at III-D-92. In 2008 CSXT incurred environmental clean-up costs of $23 million. The CSXT Maintenance Experts estimate that the SFRR's environmental cleanup costs will be approximately ten percent of CSXT's costs or $2.3 million annually.

5. Leased Facilities

The SFRR has no leased track facilities. However, SECI's configuration specifies that SFRR will share a joint facility with NS in the MGA territory. Specifically, SFRR is to operate over the Loveridge Secondary between Brownsville PA and Rivesville/Loveridge Mine. SECI developed costs for cars operating over this territory from Bailey, Emerald, Blacksville 2 and Federal mines. Depending upon the mine there is a per-car transportation charge, maintenance

charge or both.[223] Interestingly, SECI did not include any movements over the Loveridge Secondary to Consol 95, Grafton or Haywood. No explanation is offered for this omission; perhaps it is because those moves historically move east across the CSXT Cumberland Subdivision. However, under the SECI configuration and routing plan, the SFRR is posited to move many of those cars north across the subject track and those cars would be subject to the charges. CSXT applies the appropriate 4Q 2008 rates to all of the SFRR traffic that uses the facilities.[224]

SECI's configuration also calls for the SFRR to operate over an NS connecting track to serve Chapparal Steel at Petersburg VA. CSXT also accepts SECI's designation of the {per car fee paid to NS for all steel cars originating and terminating} at the plant and applies it to the 2009 volume forecasted to be handled by SFRR. *See* CSXT WP "Trackage Rights and Handling Carrier Payments.xls."

6. Loss and Damage

CSXT accepts SECI's methodology for calculating the SFRR's annual loss and damage cost. As discussed above in Part III-A, SECI overstates the tonnage that would be transported by the SFRR. Using CSXT's corrected tonnage numbers and SECI's methodology, CSXT calculates Loss and Damage at $1,685,801. This number is significantly lower than SECI's initial calculation of Loss and Damage.

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[223] SECI developed the payments using the 4Q 2008 rates paid by CSXT times the number of cars that would use the facilities (by zone) for 2009.

[224] The agreement calls for rates to adjusted July of each year, so 4Q 2008 and 1Q 2009 rates are the same.

7. Insurance

SECI asserts that the SFRR will be able to obtain insurance costs similar to CSXT's, calculating the SFRR's insurance costs as the average of CSXT's 2007 and 2008 ratio of insurance to operating expenses. *See* SECI Opening at III-D-106. But while the SFRR would be a Class I railroad, it is far smaller than a major Class I railroad like CSXT. Major railroads are able to achieve significant economies of scale when purchasing insurance – for example, CSXT and NS have significantly lower insurance costs than KCS, Genesee & Wyoming, and RailAmerica. *See* CSXT WP "III-D-7 Insurance." SECI does not produce any evidence that the SFRR would be able to achieve the same economies of scale as CSXT. Instead, it simply asserts that the SFRR will "self-insure[] for most types of claims." SECI Opening III-D-106. But self-insurance is not limited to large Class I railroads – railroads more comparable to the SFRR like the KCS also utilize self-insurance.[225] KCS's, Genesee & Wyoming's, and RailAmerica's revenues are more equivalent to the SFRR's than CSXT, and they are a more apt benchmark for SFRR insurance costs than CSXT. CSXT therefore corrects SECI's insurance cost calculations by replacing CSXT with an average of these three more comparable railroads. Using this corrected approach, CSXT calculated insurance cost for the SFRR as 5.99% of operating expenses, or $31,675,201.

8. Ad Valorem Taxes

SECI's simplistic methodology for calculating the SFRR's anticipated ad valorem taxes grossly understates the taxes that the SFRR would pay in the real world. While the SFRR would operate – and pay taxes in – twelve states and the District of Columbia, SECI estimates the

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[225] *See* KCS 2008 10-K at 65.

SFRR's tax liabilities without any reference to how each of those jurisdictions calculates taxes. Instead, SECI uses CSXT's 2008 taxes and route-miles to calculate a "per- route-mile" ad valorem tax expense that it extrapolates to the SFRR. *See* SECI Opening at III-D-106-07. This crude methodology significantly understates the SFRR's tax liability in states that use the "unit method" to value railroad property.

States generally determine the market value of railroad property for tax assessment in one of two ways. The "summation method" individually values each tract of property in a state and then adds the values to derive a total value for the taxing jurisdiction. The "unit method," on the other hand, seeks to derive a single system-wide value for the railroad, and then to assign a portion of that system-wide value to the particular state. *See, e.g., Norfolk & W. Ry. v. Mo. State Tax Comm'n*, 390 U.S. 317, 324 (1968). This allocation of value generally is proportional to the percentage of a railroad's property located within a state, often measured by track mileage. The unit method is used by most states, in part because it allows a more ready consideration of a railroad's going concern value.[226] While unit-method states use a variety of valuation approaches, nearly every state considers some version of going-concern value when determining a railroad's unit value.[227]

The SFRR operates in nine states that use the unit method (Alabama, Florida, Georgia, Kentucky, Maryland, N. Carolina, S. Carolina, Tennessee, and West Virginia) and in four

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[226] *See* N.Y. State Office of Real Prop. Servs., *Survey of Railroad and Utility Taxation Practices Among the States*, Table 1 http://www.orps.state.ny.us/ref/pubs/railroadutility/table1.pdf (demonstrating that majority of state use unit method to assess railroad property).

[227] *See id.* at ¶ 6, http://www.orps.state.ny.us/ref/pubs/railroadutility/section1.htm ("The income approach is a primary approach to valuing railroads in much of the nation").

jurisdictions that use a version of the summation method (Indiana, Pennsylvania, Virginia and the District of Columbia) In the latter four jurisdictions, where tax assessments are driven by the across-the-fence value of a railroad's real property, SECI's methodology roughly approximates the SFRR's tax liability. CSXT therefore accepts SECI's ad valorem tax calculations for Indiana, Pennsylvania, Virginia and the District of Columbia.

For unit method jurisdictions, however, SECI's assumption that the SFRR would pay the same taxes as CSXT on a route-mile basis is unwarranted. CSXT's taxes in these states are derived from each taxing authority's determination of CSXT's unit value. Accordingly, the SFRR's taxes in these states would be driven by the SFRR's unit value. CSXT therefore has corrected SECI's tax calculations for these states by estimating a going concern unit value for the SFRR (based on CSXT's corrected SFRR revenues and operating expenses) and allocating this unit value to the individual states using each state's chosen allocation ratio. These calculations are included in CSXT WP "SFRR Ad Valorem Tax.xls."

With these corrections, total ad valorem taxes for the SFRR are $22,376,608.

9. Other

a. Manifest Line-Haul Credit

SECI's application of the CSXT-CSXI intercompany {

} to interactions between the SFRR and CSXT is incompatible with SAC principles and Board precedent. As explained above, SECI has attributed to the SFRR both CSXT and CSXI traffic and revenues, as well as CSXT and CSXI costs. Thus, the SFRR seeks to "step into the shoes" of both entities and combine them as one. CSXT contends that CSXI is a separate entity, and that the inclusion of CSXI revenues into this rate case should not be

permitted. Nevertheless, CSXT adopts, for purposes of this case, that the SECI premise may attribute CSXI revenue to the SFRR. SECI must, however, be required to develop costs consistent with SAC principles and not be allowed to adopt the internal transfer prices associated with { }.

To allow SECI to use { } in the way it proposes would be akin to taking any CSXT agreement with another carrier or customer, extracting one apparently favorable provision in isolation, substituting the carrier or customer with an entirely different carrier or customer in the stand-alone case, altering the defined service of the provision in a fashion that suits the SARR, and claiming that such a practice is acceptable under SAC rules and Board precedent, when of course it is not. As the Board has stated, "there are limits on the creativity with which a complainant ... may develop its SARR." *AEPCO*, Decision served August 20, 2002, at 7.

In order to develop its manifest line-haul credit, SECI counted the total number of cars on a train when the train first departed its origin (or ON-SARR station), and the number of cars on that train when it arrived at its destination (or OFF-SSRR station), and determined the difference between these car counts.[228] Based upon the car count differences, SECI assumed an average number of cars per train. SECI limited this exercise to line-haul merchandise and intermodal trains, and excluded coal trains and trains designated as local or yard. Because { } SECI used was based on GTMs, and because SECI did not maintain visibility at the individual

[228] The reader will recall that SECI identified trains for the SFRR by attempting to match at least 15 cars from its waybill revenue selected traffic group with cars moving on trains in CSXT's the 2008 train event file.

car level (in the data it chose to carry forward in its 2008 train subset), SECI developed a process to estimate GTMs.

Specifically, using the average number of cars per train, from departure to arrival, car-miles were calculated. For example, if a train departed with 100 cars and arrived with 70 cars, SECI assumed that 85 cars had travelled the full distance from departure to arrival, and calculated car-miles for those 85 cars.[229] If 50 of those cars at departure were in SECI's selected revenue traffic group, and thus the other 50 were so-called "non-revenue" cars, SECI assumed that of the car-miles associated with its assumed 85 car total, the car-miles associated with 50 cars would be assigned to its revenue traffic (so-called "SARRMILES") and the car-miles associated with 35 cars would be assigned to the non-revenue traffic (so-called "NONSARRMILES"). *See* SECI WP "SFRR Base Year Service Units.xlsx." SECI engaged in this exercise for each of the line-haul intermodal and general merchandise trains in its 2008 CSXT trains subset. There is no logic for these assumptions, and, of course, no proof for it is possible. SECI then totaled the 2008 estimated car-miles associated with non-revenue traffic, and adjusted for the tonnage difference between 2008 and 2009.[230] SECI then multiplied 2009

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[229] Such an assumption clearly ignores the probability, - indeed, for merchandise trains, likelihood - that multiple cars had been picked-up and set out, or switched en route.

[230] Despite its assertion that it captured the full costs associated with SFRR operations, SECI's arbitrary allocation of car-miles between SFRR revenue cars and non-revenue cars makes any operating costs that SECI calculated on the basis of car-miles highly questionable.

car-miles by an assumed weight for general freight cars and for intermodal cars to estimate GTMs.[231]

{

} price to the GTMs it had estimated for the 2009 non-revenue traffic (including loaded intermodal flatcars and empty cars) and calculated a 2009 manifest line-haul credit of $108.6 million. It deducted that amount from the SFRR estimated 2009 operating expenses.[233]

As discussed at III-C-18, n.15, CSXT was faced with the decision of what to do with the SECI non-revenue traffic in its Reply Evidence. Board/ICC precedent has made clear that it is the prerogative of the complaining shipper to select what traffic to include in its SAC presentation, and SECI clearly included the non-revenue traffic on its SFRR trains. Therefore, CSXT allowed the SECI non-revenue traffic to remain with the SFRR, but made several corrections to the specific cars/containers selected by SECI. First, as explained in Section III-C, CSXT removed all "non-revenue loads" that were, in reality, empty cars or containers.[234] {

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[231] SECI used the same weight assumptions for general freight and intermodal as it had assumed for its 2018 RTC simulation.

[232] {

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[233] *See, e.g.*, SECI Opening Table III-D-1, SECI Opening Ex. III-H-1, at 23, line 13.

[234] The CSXT SFRR merchandise operating plan develops the empty cars associated with the SFRR loads using the CSXT empty return ratios by car type and car ownership.

} does not apply to such movements, and logic dictates that CSXT would not pay the SFRR for moving empty cars where CSXT is receiving the revenue for the loaded movement. Second, the SFRR would not receive a cost credit for the flat cars carrying its intermodal traffic as SECI's calculations assumed – such a notion is totally ludicrous. Third, certain other non-revenue cars were eliminated: those where the CSXT origin and destination were the same (CSXT would clearly not pay, and the SFRR clearly would not handle, a CSXT local movement where CSXT received all the revenue); certain intermodal moves (*i.e.*, between New Orleans and Jacksonville that do not touch the SFRR); and, certain general freight movements where it was clear that the cost to the SFRR would substantially exceed any GTM payments it could receive.[235]

Once CSXT had "cleaned-up" SECI's non-revenue traffic data, some 470,000 non-revenue general freight cars and 88,000 non-revenue intermodal units remained. Each of those cars was separately included within the appropriate SFRR train operating plan and the car-miles and GTMs separately developed.[236] Because the non-revenue loads are 2008 volumes, CSXT adjusted them to reflect the tonnage difference between 2008 and 2009 (as did SECI) and then

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[235] For example, there was an average of 3-4 non-revenue cars per day that were included on SFRR trains originated in the Haywood, WV area. In order to handle those cars, the SFRR would need to design service out of Grafton to originate the cars, and then travel back to Grafton, and then provide service from Grafton to Demmler to connect with other merchandise service. The cost of the crews and locomotives for such service would be prohibitive. CSXT assumed that those non-revenue cars would, instead, be received by the SFRR at Demmler.

[236] For the remaining non-revenue traffic, 11% of the general freight cars originate on the SFRR, and 20% terminate on the SFRR. Those originated and terminated cars were included within CSXT switching service design for the SFRR. For intermodal traffic, 33% of the non-revenue traffic originates, and 29% terminates, on the SFRR. Lift and other terminal services were provided for that traffic in the CSXT operating plan.

calculated the credit associated with that traffic. CSXT's 2009 credit is $73.8 million. *See* CSXT WP "CSXT Reply Manifest Line-Haul Credit.xls."

Notwithstanding that the CSXT SFRR operating plan incorporated the above corrections relating to non-revenue traffic, CSXT urges the Board to make clear in its Decision in this case that it will affirmatively disallow this type of practice in future rate cases for the reasons set forth herein.

b. Cost for Intermediate Switching

CSXT's response to SECI's treatment of I&I, Yard and local switch costs is detailed at III-D-3-8. In short, the use of historic URCS costs and internal transfer prices is a violation of SAC principles and should be rejected by the Board.

c. Intermodal Lift and Ramp Costs

CSXT's response to SECI's treatment of intermodal lift and ramp costs is detailed at III-D-8-11. In short, while it may be appropriate under the SAC test to use third party costs, those cost must reflect the full costs associated with the services, not just the cost of the services provided by one party to another. Further, the use of historic property costs, rather than the current property costs, and of internal transfer prices is a violation of SAC principles and should be rejected by the Board.

d. Cost for Re-Routed Traffic

With the exception of SECI's various coal re-routes, discussed in Section III-A -1, and the re-route of certain non-revenue traffic originated/received by the SFRR north of Pembroke

NC and destined for points north of Atlanta/west of Nashville,[237] CSXT accepts SECI's proposed traffic routings. Although some of the proposed routings may result in additional off-SFRR costs, especially to CSXT, CSXT does not attempt to quantify those costs. The CSXT operating plan for the SFRR designs the least-cost service possible, not only by taking into account not only blocking and classification along the SFRR, but also by optimizing the blocking and classification between the SFRR, on the one hand, and CSXT and other connecting carriers, on the other hand.

e. EVWR Car Costs

Pursuant to the {

} to originate and deliver interchange traffic. Consistent with {

}. As the hypothetical replacement for CSXT, SFRR would also pay the fee. SECI's operating expenses ignore this cost; CSXT's do not. *See* CSXT WP "Trackage Rights and Handling Carrier Payments.xls."

[237] The CSXT operating plan does not route that traffic south on the East division and then north on the West division, but instead interchanges the traffic to CSXT at Pembroke and then back to the SFRR at Atlanta.

III. STAND-ALONE COST

E. NON-ROAD PROPERTY INVESTMENT

1. Locomotives

SECI assumes that the SFRR purchases road and helper locomotives and includes the associated capital carrying costs in the DCF model and that it leases switching/work train locomotive and includes the annual lease cost as an operating expense. CSXT accepts both the assumption of purchased road locomotives and leased switching/work train locomotives.

2. Railcars

SECI assumes that SFRR leases all of the system railcars needed to serve the traffic group which are not supplied by the shippers themselves and includes the annual lease cost as an operating expense. CSXT accepts the assumption that the SFRR will lease required railcars not otherwise provided by the shippers themselves.

3. Other

SECI's Opening explains that it assumes that most of the SFRR's other equipment, including company vehicles, maintenance-of-way equipment such as hi-rail trucks, radios and telephones will be leased and includes the annual lease cost for this equipment as an operating expense. It also explains that some items of equipment will be purchased, in particular computers and related hardware. SECI Opening III-E 1. In fact, SECI's work papers suggest that much of the other equipment assumed to be required for maintenance of way and general and administration is, in fact, purchased by the SFRR. In its Reply, CSXT accepts at the line item level SECI's assumption of lease or purchase of specific other equipment items.

SECI assumes that the SFRR has operating rights over two joint facilities, which are owned by NS. One is the former Monongahela Railway line between Brownsville, PA and Catawba Jct. (Rivesville), WV and extending on to Loveridge Mine, WV, over which the SFRR

(like CSXT) has operating rights. The second covers NS trackage at Petersburg, VA, which connects with industrial trackage. SECI includes payments to NS for these operating rights, which are calculated on a usage basis, in the SFRR's operating expenses.

CSXT accepts SECI's assumption regarding its treatment of the NS trackage at Petersburg, VA and also accepts the assumption that the SFRR will have operating rights over the lines of the former Monongahela Railway between Brownsville, PA and Catawba Jct. (Rivesville), WV and extending on to Loveridge Mine, WV. However, in addition to including payments to the NS for operations over these lines, CSXT includes 50 percent of the replacement cost of the Monongahela Railway lines to cover the road ownership portion of the CSXT Monongahela Railway operating rights not otherwise covered by the operating payments made to NS.

III. STAND-ALONE COST

F. ROAD PROPERTY INVESTMENT

CSXT's SARR road property investment reply testimony is sponsored by a number of valuation and engineering experts. The cost of land acquisition for the SFRR is sponsored by Arnold S. Tesh, CRE, FRICS of FTI Consulting. Construction costs are sponsored by James D. Bagley, former Vice President Engineering and Chief Engineering Officer of CSXT, Michael R. Baranowski of FTI Consulting and Robert C. Phillips and Randall G. Frederick of STV/Whitehead Engineering with specialized assistance from Dennis K. Prewitt on earthwork, George T. Zimmerman on track, Roberto Guardia of Shannon and Wilson on tunnels, Daniel A. Doty, Willis S. White and David A. Magistro on bridges, John T. Sharkey of Campbell Technology Corporation on signals and communications and Richard C. Dummar on facilities. Individual witnesses' qualifications are set forth in Part IV.

These experts have reviewed in detail SECI's proposed construction cost for the SFRR and have identified a number of significant flaws in SECI's opening evidence. These problems range in size and scope from minor omissions of SFRR inventory items to the failure to account properly for the cost of major SFRR bridge structures over navigable waterways. The most egregious of SECI's errors include:

- Faulty real estate appraisal techniques that rely on oversized parcels and superficial valuation classifications.
- Extrapolation of earthwork unit costs from a small railroad construction project in rural Tennessee to the entire 2,000 - plus mile SFRR.
- Failure to recognize and properly cost major SFRR bridge structures over navigable waterways.
- Failure to provide for any road ownership cost for SFRR access to the Monongahela Railroad.

These as well as other errors and omissions identified by the CSXT experts are described and corrected throughout the remainder of this narrative.

The SFRR proposed by SECI replicates existing CSXT rail lines in West Virginia, Pennsylvania, Maryland, Washington, D.C., Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky and Indiana. SECI attempts to downplay the effort required to construct the SFRR by asserting that most of the lines being replicated traverse terrain that is not difficult from a construction perspective. This assertion is wrong. The SFRR posited by SECI traverses mountainous terrain on several large segments, and also introduces a variety of significant acquisition and construction challenges not considered by the Board in previous cases. When properly considered, these and other challenges (along with the necessary and proper configuration and attributes of the SFRR) push its capital requirements far beyond those posited by SECI. These challenges include significant SARR segments through major metropolitan areas, large bridges over navigable waterways, significant stretches through swamp and poor drainage areas, and other adverse conditions. In many respects, these new challenges and obstacles are more costly to overcome than otherwise straightforward excavation and embankment through mountainous terrain from which SECI attempts to distance itself.

Table III-F-1 below compares the engineering construction costs for the SFRR included in SECI's opening evidence with the properly developed engineering construction costs detailed in this Reply. Details of the calculations in Table III-F-1 are included in Exhibit III-F-1.

Table III-F-1
Comparison of SFRR Road Property Investment Cost
($millions)

	SECI	CSXT[1]	Difference
1. Land	$921.1	$2,408.3	$1,487.2
2. Roadbed Preparation	$1,072.0	$1,954.3	$882.3
3. Track	$1,907.1	$2,373.8	$466.7
4. Tunnels	$261.3	$429.4	$168.1
5. Bridges	$819.1	$1,485.2	$666.1
6. Signals & Communications	$227.0	$367.5	$140.5
7. Buildings & Facilities	$27.2	$131.2	$104.0
8. Public Improvements	$43.5	$44.9	$1.5
9. Subtotal	$4,357.2	$6,786.4	$2,429.2
10. Mobilization	$117.6	$237.5	$119.9
11. Engineering	$435.7	$678.6	$242.9
12. Contingencies	$491.0	$770.3	$279.3
13. Total Road Property Investment	$6,322.6	$10,881.1	$4,558.5

1. Land

SECI estimates the SFRR land acquisition costs to be $921,080,434. CSXT witness Arnold Tesh[2] evaluated SECI's estimate of the land acquisition costs, including SECI's workpapers, and has performed independent valuation analysis of the required SFRR land in the major metropolitan areas traversed by the SFRR. Mr. Tesh's Report is included in CSXT's III-F-1 workpapers. CSXT witness Tesh — a Counselor of Real Estate and a Fellow of the Royal

[1] CSXT Reply road property investment costs are as of First Quarter 2009, except for land investment costs, which are as of 2006. As explained below, SFRR right-of-way would be acquired in 2006. *See* III.F.1, *infra.*

[2] Mr. Tesh has extensive experience in land valuation, having worked in various aspects of real estate since 1962, and has valued tens of thousands of miles of right-of-way and dozens of yards for railroads in rate cases before the Board. His extensive qualifications in the real estate appraisal field are set forth in Part IV.

Institution of Chartered Surveyors[3] — concludes that the land acquisition costs for the SFRR will be $ 2,408,302,519, or $1,487,222,085 more than SECI estimated.

Mr. Tesh has determined that SECI's land property valuation, based on a report prepared by Stuart Smith of Millennium Real Estate Advisors, Inc. ("Millennium"), is severely flawed and unreliable in a number of ways, including the fact that from Atlanta to Cordele, and in portions of Chattanooga and Savannah, SECI witness Smith appraised the wrong right-of-way ("RoW"). For example, from Atlanta to Cordele, GA, Smith appraised the land along Norfolk Southern's RoW through Griffin and Macon rather than the SFRR RoW along CSXT's Manchester and Fitzgerald Subdivisions. Millennium Appraisal at 29-34, 103-106. Smith then assigns an acquisition cost for SFRR RoW based on that appraisal. Millennium Appraisal at 135. Smith made similar mistakes in Chattanooga, TN and Savannah, GA. Millennium Appraisal at 22, 44-45, 102-103. Maps showing the incorrect appraisal routes taken by Smith can be found in Exhibit III-F-1.

Another fundamental failing in SECI's real estate valuation is that SECI's witness Smith valued the RoW as of January 1, 2009. Millennium Appraisal at 2. However, SECI elsewhere states — correctly for a stand-alone railroad which would begin operations at the beginning of 2008 — that the land will be acquired in 2006 over a seven month period so that construction can begin at that time. SECI Opening at III-F-82. SECI's workpapers reflect the assumption that

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[3] Only 1100 real property specialists worldwide are awarded the designation of CRE (Counselors of Real Estate). It is a recognition by one's professional peers and clients of outstanding commitment, knowledge, experience, wisdom, and integrity in the field of real estate advising.

Mr. Tesh is one of the very few Fellows designated by acclamation. The Fellow designation represents the highest level of achievement in the Royal Institution of Chartered Surveyors. It is awarded to about 1 percent of the more than 100 thousand members of this highly esteemed international organization of real estate experts. The Fellow designation is recognition that the individual is a highly respected leader with the utmost skill and expertise in real property consulting and valuation.

land acquisition began in May of 2006, more than two years before the date of Mr. Smith's valuation. SECI Workpaper "Complete Construction Schedule.xls."

Moreover, Smith carves the 2,092 mile subject area into 280 segments, averaging 7.5 miles in length. Each is assigned a single property classification and unit value ($/acre) without dealing with the dozens, sometimes hundreds of changes in use and unit value that occur within each segment. This is a gross oversimplification of the contiguous series of acquisitions that would be required in order to create this right of way. Reliably determining the cost of the many hundreds of acquisitions that would be involved requires inspecting, documenting and analyzing all individual abutting properties on both sides of the right of way and deriving a value from their specific characteristics. By grossly overstating the size of the valuation parcels, Smith glosses over many of the higher-priced residential and commercial areas traversed by the SFRR and thus understates costs.

In addition to relying upon parcel sizes that are too large, Millennium has also misclassified a number of these large parcels, further understating land values. For a number of parcels, Millennium classifies the parcel as "Open" or "Small Town", when in fact, the parcel traverses highly-developed urban or suburban areas. For example, the land along the entire RoW through Richmond, VA is classified as "Small Town", as is the RoW through North Charleston, SC. In addition, the land along the RoW through a highly developed portion of Savannah, GA is classified and valued as "Open" space. SECI Workpaper "MREA Final Pricing.xls" at tab "Pricing Details". Indeed, Millennium classifies the RoW in downtown and historic Nashville, TN, which passes by the LP Field football stadium (home of the Tennessee Titans) and the famous Hermitage hotel, as "Small Town" and residential. This is not a reliable application of ATF methodology.

a. Right-of-Way Acreage

According to SECI, the SFRR will need to acquire approximately 22,212 acres for its RoW at a cost of $913,136,003. SECI also included 2,642.81 acres that it assumed would be used by the SFRR pursuant to easement for a one-time payment of $3,911.36. SECI proposed using a 100-foot wide RoW, except for industrial, commercial, and urban areas in and around Washington, D.C., Richmond, Charleston, Savannah, Atlanta, Nashville, Jacksonville and other high-value urban areas. SECI Opening at III-F-4-5. CSXT assumes the same right of way widths and acreage as SECI has indicated.

b. Yard Acreage

Although SECI assumed that the 2,092-mile SFRR would be able to serve merchandise, coal, bulk commodity, and intermodal traffic with only four coal yards, CSXT witness John Gibson has determined that these proposed yards are insufficient to serve the SFRR's customers, as explained in Section III-C supra. CSXT witness Tesh assumed that the SFRR would require the yards in the configurations indicated by CSXT witness Gibson and that each yard would require the acreage specified by CSXT's engineering witness Don Bagley. The total yard acreage required is 2,878 acres. Details of the yard acreage calculations are included in CSXT Workpaper "CSXT Reply Track and Facilities Summary.xlsx." The following table summarizes the yard acreage required:

Table III-F-2
Yard Acreage

Location	Type	Milepost	Acreage Less RoW Width
Nashville, TN	Regional	000 182.5	266
Collier (Petersburg), VA	Regional	A 27.0	50
Newell, PA	Regional	PLM 47.7	30
Alexandria Jct., MD	Regional	BAA 36.4	284
Demmler, PA	Regional	PLY 11.4	259
Callahan, FL	Regional	A 625.7	287
Atlanta, GA	Regional	ANB 865/0WA 4.9	267
Jacksonville, FL	Regional	A 640.4	226
Pembroke, NC	Regional	A 243.3	170
Princeton, IN	Regional	0ZA 260.3	302
Atkinson (Madisonville), KY	Regional	0HC 274.4	38
Richmond, VA	Local	SRN 0.4	167
Charleston, SC	Local	A 388.2	216
Savannah, GA	Local	A 496.4	123
Bostwick, FL	Local	A 690.9	104
Rocky Mount, NC	Local	A 121.4	89
Total:			**2,878**

c. Other Acreage

CSXT witness Tesh does not address additional acreage.

d. Property Values

(i) Critique of Millennium's Valuation of SFRR's RoW

Mr. Tesh reviewed the evidence submitted by SECI on the cost to acquire land for the SFRR, and concluded that the appraisal made by SECI witness Smith was flawed in several respects. As noted above, Mr. Smith valued the wrong right-of-way, as of the wrong date, using the wrong methodology. Mr. Smith's error in taking the incorrect appraisal routes between Atlanta and Cordele and in portions of Savannah and Chattanooga was fundamental. However,

the impacts of his other errors are even more pervasive, and all serve to substantially understate the right-of-way costs for the SFRR.

(a) Mr. Smith Understated Acquisition Costs by Using the Incorrect Valuation Date and Applying Unsupported and Unprecedented "Market Condition Adjustments"

As noted above, a fundamental failing in SECI's real estate valuation is that SECI's witness Smith valued the RoW as of January 1, 2009. Millennium Appraisal at 2. This date is inappropriate, as the land would need to be purchased before the hypothetical railroad could be constructed and begin operations at the end of 2008. SECI Opening at III-F-82. Mr. Smith's valuation date was inconsistent with SECI's construction workpapers which reflect the assumption that land acquisition began in May of 2006. SECI Workpaper "Complete Construction Schedule.xls."

The difference in valuations between the time of acquisition and the valuation date was tremendous. SECI witness Smith recognized that real estate values plummeted during that time by more than 20% in some cases. Millennium Appraisal at 88. For example, for commercial real estate, Mr. Smith quotes "Fed Economic Research and Data" as identifying a market top in 2007 and stating that prices "have since declined by more than 20 percent." Millennium Appraisal at 88. For residential real estate, Mr. Smith quotes the Federal Reserve's November 2008 Letter as estimating a 15-20% drop in house prices from the peak (using Case-Shiller market data reports). As Millennium so starkly illustrates, valuations were quite different (and much higher) at the time of the planned acquisition date than they were at the valuation date.

In addition to choosing a valuation date of January 1, 2009, after the bulk of the effects of the real estate crash were felt in the market, Millennium adjusted its own valuations down for almost every valuation unit along the main line RoW by 15-20%. *See* SECI Workpaper "MREA

Final Pricing.xls," "Pricing Details" tab. Millennium neither explains nor justifies this downward adjustment.

Millennium states that it used a "Sales Comparison Approach" in order to "estimate[] the value of a property by comparing it with similar, recently sold properties in the surrounding or competing area." Millennium Appraisal at 90. By using this approach, the effects of the real estate market decline were already accounted for in Millennium's initial valuations through Millennium's choice of comparable sales and assignment of market value as of January 1, 2009. As it explained, Millennium chose many comparable sales with closing dates fairly close to the valuation date, including many sales at the end of 2008 and beginning of 2009. Any market decline would be reflected in the prices of the comparable sales – that's the purpose of the "Sales Comparison Approach." There is no justification for applying an additional broad deduction to the market values indicated by the actual sales. A chart illustrating the impact of Millennium's unsupported double-dip downward adjustment follows:

Impact of MREA Market Condition Adjustments For Purchased RoW (Excludes Easements)			
Market Condition Adjustment	Aggregate MREA Value Conclusion and Mileage for Those Segments to Which Each Adjustment was Applied		Corresponding Value Before Adjustment
-20%	Sum of Segment Value	$220,859,146	$276,073,933
	Sum of Construction Miles	169.2	
-15%	Sum of Segment Value	$435,909,729	$512,834,976
	Sum of Construction Miles	1,741.0	
0%	Sum of Segment Value	$314,070,212	$314,070,212
	Sum of Construction Miles	170.1	
Total Sum of Segment Value		$970,839,088	$1,102,979,120
Total Sum of Construction Miles		2,080.4	
Net Value Reduction Resulting From Market Condition Adjustments			$132,140,033

(b) Millennium Employs the Wrong Methodology and Does Not Analyze the Land in Sufficient Detail to Reach a Reliable Valuation in Metropolitan Areas.

SECI's witness Smith purports to employ an "across-the-fence" ("ATF") valuation methodology in his estimate of land acquisition costs. SECI Opening at III-F-7. The Board has stated its preference for ATF valuation based on contemporaneous comparable transactions. *Pub. Serv. Co. v. Burlington N. & Santa Fe Ry. Co. ("Xcel")*, STB Docket No. 42057, slip op. at 88 (served June 8, 2004); *Duke Energy Corp. v. CSX Transp., Inc.*, STB Docket No. 42070, slip op. at 74 (served Feb. 4, 2004) ("The land along the ROW is a prime indicator of a ROW's value and has been used in all prior SAC cases."). Millennium's creation of long generalized valuation units, however, is anything but ATF. Indeed, one of the main benefits of the ATF is to guard against use of such large imprecise generalizations in valuing the subject land.

SECI specified a stand-alone railroad that traverses more than 2,000 miles encompassing major metropolitan areas. However, SECI's witness Smith separates this extensive RoW into only 280 valuation segments, each assigned a single property classification and unit value ($/acre). These valuation segments are quite — long 7.5 miles on average — but some of these valuation segments are much longer, even in metropolitan areas. In so doing, Mr. Smith makes generalizations about the usage and value of each segment that do not correlate with the many uses and values indicated by a detailed ATF analysis. By grossly overstating the size of the valuation parcels, Smith glosses over many of the higher-priced residential and commercial areas traversed by the SFRR and thus understates costs.

Smith's broad generalizations have resulted in assigning long swaths of highly developed metropolitan areas, encompassing some of the most vigorous real estate development in the country, one single valuation by lumping disparate uses together, without regard to the actual highest and best use for the particular parcels along each side of the right-of-way. In such instances, Smith's values often fall short by more than 90%. For example, Smith assigned a single value to the 10 miles from Rockville, MD to the Maryland/District of Columbia line, in Montgomery County, Maryland. This area includes highly developed city properties in downtown Silver Spring, MD, the second largest city in Maryland, along with large stretches of residential, office, and retail uses. Yet, Mr. Smith lumps all these uses together and assigns a single value of $467,500/acre to land that would more accurately range from $283,140/acre to $4,573,800/acre for the individual parcels along the ROW.

Mr. Smith did not analyze the land in sufficient detail to accurately determine what it would cost to purchase any particular parcel in this valuation segment. In comparison, for the single 10-mile segment valued by Mr. Smith in Montgomery County, CSXT witness Arnold

Tesh identified 140 Valuation Units with distinct valuations based on the highest and best use (HBU) for the parcels on each side of the RoW. Mr. Smith's method of assigning a value to such a large heterogeneous section of land based on statistical analysis of sales without reference to the actual subject abutting parcels is simply much less reliable than the method Mr. Tesh employed – assigning values to each parcel on each side of the RoW based on its HBU and ATF value.

In employing such broad generalizations, Mr. Smith never determines the HBU of each of the many parcels that would have to be acquired. Mr. Smith does not attempt to classify the particular valuation units he identifies beyond the general descriptions of the areas. It is not possible to value real property for market value or acquisition cost without first designating HBU. Failure to do so violates the Uniform Standards Of Professional Appraisal Practice. Mr. Smith's use of broad property density classifications for valuation purposes is misleading and does not, under these Uniform Standards, remedy basic failure to determine HBU.

Mr. Smith furthermore assigned only a single value for particular RoW segments, failing to recognize that HBUs and/or values may differ for each side of the RoW. Mr. Smith's failure in this regard is puzzling as he clearly recognized that uses and values may differ on each side of the RoW side, stating that with regard to "area [it] described as 'retail/commercial' strip, . . . on side of the RoW may be low-end residential or industrial/warehouse, with the 'retail-side' being, at best, the lower priced backend of the site. . . ." Millennium Appraisal at 89. Yet, amazingly, not a single one of Millennium's valuation segments was classified as "Retail."

(ii) Examples of Millennium's Systematic Undervaluation of Urban Areas

(a) Savannah, Georgia Metropolitan Area

Representative of the steps Millennium took to systematically undervalue urban areas is its appraisal of the RoW through the Savannah, GA metropolitan area (from the desirable suburb

of Richmond Hill, GA to Hardeeville, SC). Millennium describes the area of the RoW going through the Savannah area as "open space / wooded with a mix of industrial and some retail as the RoW stays on the western outskirts of town." Millennium Appraisal at 44. Millennium accompanies this description with six supposedly representative pictures tailor-made to paint a picture of the RoW through Savannah as desolated. Millennium Appraisal at 45. Consistent with this portrayal, Millennium divided the area from Hardeeville, SC to McIntosh, GA (35 miles South of Savannah) into seven valuation units all classified as "open" or agricultural "rural" area with two exceptions, one unit classified as "small town" and one as "industrial." SECI Workpaper "MREA Final Pricing.xls," "Pricing Details" tab. An excerpt of Millennium's valuation unit worksheet for this area follows:

	From	To	Construction Miles	Use & Value/Acre/Unadjusted						Percent Mix						Mkt Cond's	Avg Value
				Resd	Grl Comm	Open *	Ind/Whr	Sm Twn	Retail	Resd	Grl Comm	Open	Ind/Whr	Sm Twn	Retail	Adjust.	Per Ac
207	Hardeeville	Mile Post 477	2 99			$500				0%	0%	100%	0%	0%	0%	-15%	$425
208	Mile Post 477	SC / GA Line	2 11			$500				0%	0%	100%	0%	0%	0%	-15%	$425
209	SC / GA Line	Central Jct	10 99			$5 000				0%	0%	100%	0%	0%	0%	-15%	$4,250
210	Central Jct	North Tower (N Southover Yard)	4 17			$0	$4,000	$0		0%	0%	0%	100%	0%	0%	-15%	$3,400
211	North Tower (N Southover Yard)	DA (S Southover Yard) / Savannah	2 45					$40,000		0%	0%	0%	0%	100%	0%	-15%	$34,000
212	DA (S Southover Yard) / Savannah	S Ogeechee	12 51			$5,000				0%	0%	100%	0%	0%	0%	-15%	$4,250
213	S Ogeechee	McIntosh	12 89			$5,000				0%	0%	100%	0%	0%	0%	-15%	$4,250

Millennium's characterization of the land along the RoW through Savannah is misleading, at best. CSXT witness Tesh found through inspection of the RoW in the Savannah metropolitan area that the HBUs of the land is quite varied, ranging between single-family residential, multi-family residential, industrial, retail, office, and hospitality uses. Indeed, witness Tesh classified very little of the land along the right of way as extreme or open land with marginal usage. As the following aerial photos (corresponding to Millennium's valuation units 209 and 210) illustrate, much of the land along the RoW in Savannah is quite developed:



In the above aerial photographs of Savannah, the SFRR right-of-way is highlighted in red.

Furthermore, Millennium's comparables in this area are woefully inadequate; indeed, Millennium only identified three "comparable" sales in the entire Savannah, GA metropolitan area (Chatham and Bryan Counties), providing more pictures than sales! Millennium Appraisal at 103, 105. These sales included two residential transactions from the end of 2008, after the effects of the great real estate crash were felt in the market, [4] but did not provide enough information to show where these sales were located. The last sale identified by Millennium was a commercial lot in the far southern end of the small picturesque suburb of Richmond Hill, "a thriving community along Georgia's colonial coast, [] among the fastest growing communities in the nation."[5]

[4] Millennium does not explain why its appraised market values based on these two residential comparable sales that closed at the end of 2008 would need to be adjusted downward by 15%. The market simply did not move that fast between November 2008 and January 2009.

[5] City of Richmond Hill, GA, http://www.richmondhillga.com/.

COUNTY: Chatham (Savannah)

Comp	Location	Highest & Best Use	Buyer	Sale Date	Sale Price	Site Size	$/Acre	Zoning
C1	1/4 mile NE of Rail Line	Residential	V. Berry Const	11/14/2008	$11,000	20 acre	$55,000	R-2
C2	1/4 mile NE of Rail Line	Residential	Smith&Latham	10/24/2008	$17,000	.40 acre	$35,000	R-2
				High	$17,000		$35,000	
				Low	$11,000		$55,000	
				Average	$14,000		$45,000	

COUNTY: Bryan (Pembroke)

Comp	Location	Highest & Best Use	Buyer	Sale Date	Sale Price	Site Size	$/Acre	Zoning
C3	US Hwy 17 & Harris Trail at RR Row	Commercial	North Godley Developers	1/31/2006	$569,600	22.77 acres	$25,015	Comm
				High	$569,600		$25,015	
				Low	$569,600		$25,015	
				Average	$569,600		$25,015	

One thing apparent from viewing the sales identified by Millennium along with Millennium's valuation units is that there is very little relation between them. While Millennium did not indicate where the two residential comparable sales were located, they were most likely used to inform the pricing of Millennium's valuation unit 211, classified as "small town," as Millennium did not classify any valuation unit as residential. As indicated by Millennium's description of valuation unit 211, one side of the RoW for that section is bounded by CSXT's Southover yard, a usage best categorized as industrial; the other side of the RoW in that section is properly classified as single-family residential HBU. It is inconceivable that Millennium failed to categorize any remaining valuation unit as residential; any proper inspection of the RoW through Savannah could not fail to see the portions of the RoW that border the many residential neighborhoods, such as the Richfield, Georgetown, and Richmond Hill areas.

Moreover, there does not seem to be any relationship between the value assigned to valuation unit 213, classified as "open" agricultural land and the comparable sale of a commercial lot next to the RoW in Richmond Hill along a strip of retail establishments and hotels on Route 17. Indeed, although Millennium states that portions of the RoW through the Savannah metropolitan area have "a mix of industrial and some retail" uses, there are no valuation units that reflect a retail HBU. Nor are there any comparable sales that would correspond to the $4,000/acre value Millennium assigns to the land it classifies as industrial, or

to the marginal $500/acre Millennium assigns to the "open" land from Hardeeville, SC to Savannah, or the other land mischaracterized as "open" and assigned a value of $5,000/acre. Millennium's completely unreliable appraisal of the Savannah metropolitan area is representative of Millennium's methodology in all of the major urban areas along the RoW and should be rejected.

(b) Montgomery County, Maryland – From Rockville to the MD/DC Border

Another example of the steps Millennium took to systematically undervalue urban areas is Millennium's appraisal of the RoW in the northern suburbs of Washington, D.C., in Montgomery County, MD from Rockville through Silver Spring to the MD/DC line. This area includes highly developed city properties in downtown Silver Spring, MD, the second largest city in Maryland, along with large stretches of highly desirable residential neighborhoods, office, and retail uses. Yet, Millennium lumps all these uses together and assigns a single value of $467,500/acre to land that would more accurately range from $283,140/acre to $4,573,800/acre for the individual parcels along the ROW. An excerpt of Millennium's valuation unit worksheet for this area follows:

	From	To	Construction Miles	Use & Value/Acre/Unadjusted						Percent Mix						Mkt Cond's	Avg Value
				Resd	Gnl Comm	Open *	Ind/Whr	Sm Twn	Retail	Resd	Gnl Comm	Open	Ind/Whr	Sm Twn	Retail	Adjust.	Per Ac
123	Gaithersburg	Rockville	4 87		$550,000					0%	100%	0%	0%	0%	0%	-15%	$467,500
124	Rockville	MD / DC Line	10 06		$550,000					0%	100%	0%	0%	0%	0%	-15%	$467,500

Millennium did not analyze the land in sufficient detail to accurately determine what it would cost to purchase any particular parcel in these valuation segments. Any reasonable inspection of the RoW in this area would show that the land along the RoW is not just "general commercial." As Millennium stated, "[t]he suburban Maryland uses are predominantly residential with some older retail adjacencies, [but i]n Silver Spring, the RoW passes through the center-city which is both commercial and high-rise residential." Millennium Appraisal at 70.

Large portions of the RoW outside of the Silver Spring central business district abuts single-family residential properties as well as retail shopping centers and office buildings. Indeed, between the MD/DC border and Rockville, the RoW travels through some of the Metro DC area's most desirable close-in residential property in Takoma Park, Silver Spring, Bethesda, and Kensington.

Millennium has not only lumped disparate uses together into the same valuation unit, without regard to the actual highest and best use for the particular parcels along each side of the right-of-way, but Millennium's valuation does not even acknowledge that there are different HBUs for the RoW along the 15 miles from Gaithersburg, MD to the Maryland/District of Columbia line. This is not rural agricultural land which could be expected to have large swaths of similar usage and value, but a large-city suburb with some of the most vigorous real estate development in the country. The land is located in one of the top two or three most affluent markets in the United States. In comparison to Millennium's one valuation unit, for the same area, CSXT's witness Tesh identified 231 Valuation Units with distinct valuations based on the highest and best use (HBU) for the parcels on each side of the RoW.

As with Millennium's appraisal of Savannah, the sales identified for suburban Maryland bore little relation to the valuation conclusions. Millennium included only one sale for the entire area of Silver Spring, MD, the second largest city in Maryland, and one of the most heavily developed, and only four comparable sales for Bethesda. Millennium Appraisal at 123. Millennium instead reserved its most in-depth analysis for the much further removed areas of Boyds, Clarksburg, Dickerson, and Poolesville, MD. *Id.* An excerpt of the comparable sales listing for suburban Montgomery County (from Millennium Appraisal at 123) is included below:

Comp #	Owner	Property Address	City	State	Zip	County	Property Type	Market Sale Date	Market Sale Price	Area (SF)	Price / SF	Area (Acre)	Price / Acre
I1	Hares M Sayed	7232 Arnat Dr	Bethesda	MD	20817-2108	Montgomery	Vacant Land (Nec	09/22/2007	$780,000	54,192	$14 39	1 24	$629 032
I2	William Houser	8300 Burdette Rd	Bethesda	MD	20817-2805	Montgomery	Vacant Land (Nec	12/15/2008	$1,038,384	29 989	$34 63	0 69	$1 504 904
I3	Artavr C Jamison	6910 Blasdell Rd	Bethesda	MD	20817-3039	Montgomery	Vacant Land (Nec	10/30/2008	$3 936 838	25 876	$152 14	0 59	$6 672 69
I4	Bip Llc	9007 Burdette Rd	Bethesda	MD	20817-2113	Montgomery	Vacant Land (Nec	09 11 2007	$1,125,000	68 715	$16 37	1 58	$712,025
											Average	$54.38		$2,379,661
											High:	$152 14		$6,672,681
											Low:	$14.39		$629,032
I5	Khodamorad Kamran	15316 Barnesville Rd	Boyds	MD	20841-	Montgomery	Vacant Land (Nec	03/26/2008	$4-0 000	72 230	$6 09	1 66	$265 06C
I6	Greener Pastures Llc	23400 Peach Tree Rd	Boyds	MD	20841-	Montgomery	Waste Land	07/26 2007	$550 000	54 090	$5 85	2 16	$254 630
I7	Classic Homes Of Maryland Inc	15501 Barnesville Rd	Boyds	MD	20841-	Montgomery	Vacant Land (Nec	04/28/2008	$325 000	120 661	$2 69	2 77	$117 329
I8	Greener Pastures Llc	23404 Peach Tree Rd	Boyds	MD	20841-	Montgomery	Vacant Land (Nec	07/26/2007	$550 000	130,680	$4 21	3 00	$183 333
I9	Cabin Branch Mgt LLC	22419 Clarksburg Rd	Boyds	MD	20841	Montgomery	Devlp/Public Park	39811	$735,000	231,304	$3 18	5 31	$138 418
I10	Toll MD X LP	W. Old Baltimore Rd & Clark	Boyds	MD	20841	Montgomery	Devlp / Mixed Use	39246	$79,432 947	5 717 686	$13 89	131 26	$605,157
I11	Daniel J Mallet	15429 Conrad Spring Rd	Boyds	MD	20841-	Montgomery	Vacant Land (Nec	01/14 2008	$250 000	159 430	$1 57	3 66	$68 306
											Average	$5 35		$233,176
											High:	$13.89		$605,157
											Low:	$1.57		$68,306
I12	Philip W Thomas	24530 Peach Tree Rd	Clarksburg	MD	20871-	Montgomery	Vacant Land (Nec	09/20/2007	$260 000	419,918	$0.62	9 64	$26 97-
I13	Montgomery County	13720 W. Old Baltimore Rd	Clarksburg	MD	20871	Montgomery	Public Park	39765	$4,000,000	1,425 719	$2 81	32 73	$122 212
I14	Montgomery County	25500 Frederick Rd	Clarksburg	MD	20871	Montgomery	Public Park	39112	$3 200,000	2 570 040	$1 25	59 00	$54 237
I15	EOR, LLC	Doctor Perry Rd	Ijamsville	MD	21754	Frederick	Commercial / Indus	39834	$360 000	149,454	$2 75	3 43	$250 729
I16	Donald R Kemps	21430 Big Woods Rd	Dickerson	MD	20842-	Montgomery	Vacant Land (Nec	06/23/2008	$500 000	1,584,644	$0.46	24 90	$20,080
I17	Tricia L Trapp	16611 Comus Rd	Dickerson	MD	20842-9769	Montgomery	Vacant Land (Nec	01/16/2007	$625 000	753 152	$0.83	17 29	$36 148
I18	Islamic Society Of Frederick	7561 Fingerboard Rd	Frederick	MD	21704-	Frederick	Residential Acreage	08/30/2007	$330 000	96,703	$3.10	2 22	$135 135
											Average	$2 12		$92,216
											High:	$5 75		$250,729
											Low:	$0.46		$20,080
I32	Stoney Springs Farm Llc	21100 W Orinx Rd	Poolesville	MD	20837-	Montgomery	Vacant Land (Nec	11/20/2008	$1,750,000	13,739,695	$0.13	315 42	$5,548
I33	Paz Castelle	18800 Jerusalem Church Rd	Poolesville	MD	20837-	Montgomery	Vacant Land (Nec	01/15/2008	$90,000	34,850	$2 58	0 80	$112 500
I34	J Maurice Carlisle	19615 Jerusalem Rd	Poolesville	MD	20837-	Montgomery	Vacant Land (Nec	07/12/2007	$275 000	559,273	$0 51	12 38	$22 213
I35	Futbol, LLC	17605 Noms Road	Poolesville	MD	20837	Montgomery	Commercial	39892	$1,100 000	143,312	$7.68	3 29	$334 347
I36	Marzieh A Scotts	18524 Beallsville Rd	Poolesville	MD	20837	Montgomery	Vacant Land (Nec	03/31/2008	$37,000	43,560	$0.85	1 00	$37 000
											Average	$2.35		$102,322
											High:	$7.68		$334,347
											Low:	$0.13		$5,548
I46	Elaine L Wada	11531 Georgia Ave 11531	Silver Spring	MD	20902-1943	Montgomery	Vacant Land (Nec	01 26 2009	$375 835	42 672	$8 81	0 98	$383 505

(iii) Summary of SFRR Land Acquisition Costs

The table below summarizes Arnold S. Tesh's determinations with respect to the acquisition cost of the subject rights of way (RoW) and yard properties:

Table III-F-3
SFRR Land Acquisition Costs

Property Type	SECI's Acreage	SECI's Cost Evidence	CSXT's Acreage	CSXT's Cost Evidence
ROW – Fee Simple	22,212	$913,136,003	22,161.75	$ 1,566,355,225
Yards	260.85	$6,061,105	2,878	$ 827,228,469
Microwave Towers	267	$1,879,415	267	$ 2,161,327
Easements	2,642.81	$3,911.36	2,064.01	$ 12,557,498 1/
Total	**25,382.66**	**$921,080,434**	**27,370.76**	**$ 2,408,302,519**

1/ $119,481,892.87 and 578.8 acres of the easement acquisition amounts are included in 'ROW-Fee Simple' because they were valued equivalent to fee. *See* Easements, at III-F-1 (b)(iv), *infra.*

As the above table shows, the estimated acquisition cost of SFRR's required RoW, yards, microwave towers, and easements is $ 2,408,302,519.

(iv) Land Acquisition Costs for SFRR Right-of-Way

Due to time constraints, CSXT witness Arnold Tesh focused his analytical efforts on determining the land acquisition costs in the major metropolitan areas traversed by the SFRR.[6] Mr. Tesh personally inspected and analyzed the land acquisition costs along the SFRR RoW in the following metropolitan areas: Atlanta, GA; Charleston, SC; Chattanooga, TN; Jacksonville, FL; Nashville, TN; Pittsburgh, PA; Richmond, VA; Savannah, GA; and Washington, DC. Mr. Tesh's valuation methodology is fully explained in his Report. CSXT Workpaper "Land Appraisal.pdf."

In each of these areas, Mr. Tesh personally drove or walked along both sides of SFRR's proposed RoW and classified the properties on abutting both sides of the RoW into highest and best use ("HBU") categories. Mr. Tesh and his associates collected and analyzed over 4,700 sales and other relevant market data illustrating the market value for each land use in each these markets. Based on his inspection, Mr. Tesh identified "Typical Parcels" on each side of SFRR's RoW, which best represent the value-determining characteristics (e.g. HBU, size, shape, topography, etc.) of those properties to be acquired, and determined a unit value for each Typical Parcel. Mr. Tesh then divided the subject into "Valuation Units," which begin and end whenever a change in HBU or unit value occurs on either side of SFRR's RoW, and determined each Valuation Unit's market value based on the combination of those Typical Parcels abutting each side of the Valuation Unit. The market values of the Valuation Units are added in each appraised metropolitan area to determine the land acquisition costs in that area.

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[6] Similarly, SECI witness "Smith concentrated his inspection efforts in the major metropolitan areas traversed by the SFRR." SECI Opening at III-F-8.

The table below summarizes Mr. Tesh's determinations of acquisition costs in each of the major metropolitan areas along the SFRR RoW. For the 387.7 miles of RoW in the appraised metropolitan areas, Mr. Tesh identified 2,720 Valuation Units[7] with a total acquisition cost of $1,420,588,700.

Table III-F-4
RoW Acquisition Costs in Major Metropolitan Areas

City	Total Cost	Total Miles	Acres	Valuation Units
Atlanta, GA	$ 105,107,250	55.65	551	481
Charleston, SC	$ 34,476,930	20.22	241	176
Chattanooga, TN	$ 25,576,140	22.82	262	85
Jacksonville, FL	$ 64,688,610	59.51	721	260
Nashville, TN	$ 105,001,090	68.61	769	546
Pittsburgh, PA	$ 19,234,360	27.44	333	164
Richmond, VA	$ 84,942,990	33.03	342	260
Savannah, GA	$ 23,131,510	36.65	444	149
Washington, DC	$ 958,429,820	63.79	606	599
TOTAL	**$ 1,420,588,700**	**387.72**	**4,269**	**2,720**

For properties not appraised by witness Tesh, CSXT adjusts SECI's value conclusion. CSXT witness Tesh has determined that:

- Millennium did not inspect the right of way in appropriate detail. For example, Millennium classifies all of Montgomery County, Maryland as General Commercial, even though elsewhere it states that "suburban Maryland uses are predominantly residential with some older retail adjacencies." Millennium Appraisal at 70.

[7] In comparison, Millennium identified only 280 valuation units for the entire 2,092 mile SFRR RoW. Mr. Tesh identified a change in use and/or value about 7 times a mile. For the same area, CSXT witness Tesh identified around 31 times as many changes in use and/or value as Millennium did. In these metropolitan areas, Millennium designated only 89 valuation units or segments, representing a change in use or value once nearly every 4.5 miles.

- Because he did not properly inspect the subject, SECI witness Smith has scant knowledge of the specific uses and unit values ($/SF) of abutting properties.
- Millennium did not identify highest and best land uses for each valuation unit identified.
- Millennium's appraisal did not differentiate the frequent instances of sharply-contrasting values on the opposite sides of the right of way, even though it acknowledges these differences.
- Millennium did not value the property as of the date it would have to be acquired.
- Millennium did not base its valuation on a sufficient number of relevant sales, but rather applied questionable statistical measurements to a limited number of transactions.

It is apparent from Millennium's own materials that Millennium undervalued the subject by use of an inappropriate valuation date during a period of unprecedented market volatility, and then applying a duplicative downward "market condition adjustment" from the values Millennium assigned. Because Millennium used such broad general categories for its purported highest-and-best-use, such as "Small Town" and "Open", it is impossible to ascertain with certainty the exact impact of Millennium's inappropriate valuation date. The impacts of Millennium's unprecedented and unsupported "market condition adjustment," however, are clear. CSXT witness Tesh has determined that there is no market support for applying a blanket deduction for the values indicated by a sales comparison approach. Millennium's real estate valuation estimates should not include that totally unsupported and unprecedented further downward adjustment. CSXT will accept Millennium's valuations for these sections after reversing the effects of Millennium's 15% "market condition adjustment."

For the 1,701 RoW miles (representing 20,535 acres) not appraised by Mr. Tesh, Millennium estimated the acquisition costs to be $126,753,500. After backing out Millennium's unsupported 15% "market condition adjustment," the acquisition costs are $145,766,525.

(v) Land Acquisition Costs for SFRR Yards

Wherever an SFRR yard was specified in one of the major metropolitan areas appraised by CSXT witness Tesh, Mr. Tesh determined the acquisition costs for the SFRR yards in accordance with the methodology he employed in appraising the RoW. The table below summarizes Mr. Tesh's determinations of acquisition costs for those yard properties he appraised.

Table III-F-5
Yard Properties Appraised by CSXT

Location	Milepost	Length	Width Less Existing RoW	Acres	Acquisition Costs
Nashville, TN	000 182.5	18,245	635	266	$ 56,776,104
Alexandria Jct., MD	BAA 36.4	22,040	562	284	$ 309,276,000
Callahan, FL	A 625.7	22,340	560	287	$ 3,750,516
Atlanta, GA	ANB 865 / 0WA 4.9	18,345	635	267	$ 34,891,560
Jacksonville, FL	A 640.4	18,095	545	226	$ 14,766,840
Richmond, VA	SRN 0.4	21,425	340	167	$ 363,726,000
Charleston, SC	A 388.2	17,895	525	216	$ 25,874,640
Savannah, GA	A 496.4	17,300	310	123	$5,089,986

For those SFRR yards located outside the major metropolitan areas appraised by Mr. Tesh, he utilized Millennium's unit value estimates for the yard location. As was necessary in the case of RoW, Millennium's value estimates need to be corrected to reverse undervaluation related to usage of the inappropriate valuation date and the unsupported "market condition

adjustment." The table below summarizes Mr. Tesh's determinations of acquisition costs for those yard properties he did not appraise or inspect.

Table III-F-6
Yard Properties Not Appraised by CSXT

Location	Milepost	Length	Width Less Existing RoW	Acres	Price per Acre	Acquisition Costs
Collier (Petersburg), VA	A 27.0	13,254	165	50	$ 5,850	$ 336,375
Newell, PA	PLM 47.7	13,254	100	30	$ 5,950	$ 205,275
Demmler, PA	PLY 11.4	21,725	520	259	$ 34,000	$10,126,900
Pembroke, NC	A 243.3	18,320	405	170	$ 2,550	$ 498,525
Princeton, IN	0ZA 260.3	21,730	605	302	$ 2,550	$ 885,615
Atkinson (Madisonville), KY	0HC 274.4	13,254	126	38	$ 1,275	$ 55,718
Bostwick, FL	A 690.9	17,500	260	104	$ 8,000	$ 956,800
Rocky Mount, NC	A 121.4	17,300	225	89	$ 3,400	$ 347,990

The following table summarizes the total acquisition costs for the land required to site the SFRR yards specified by CSXT witnesses Gibson and Bagley.

Table III-F-7

Appraised by CSXT	$ 814,151,646
Not Appraised by CSXT	$ 13,076,823
Total Yard Acquisition Costs	**$ 827,228,469**

(vi) Easements

SECI did not even pretend to employ accepted "across-the-fence" ("ATF") valuation methodology in determining the costs that SFRR would incur in acquiring easements along the RoW. SECI did not even bother to employ a real estate appraiser to value these easements. Instead of a valuation appraisal from Millennium, SECI proffers the testimony of Philip Burris, an economic consultant with L.E. Peabody, to support its easement acquisition cost evidence. SECI Opening at III-F-9, IV-22. Mr. Burris inspected the CSXT deeds and determined the actual costs incurred by CSXT when these easements were acquired. SECI Opening at III-F-9. Mr. Burris then calculated an average cost for these easements of $1.48 per acre. *Id.*

This valuation method is inappropriate. The Board has repeatedly stated that "all of a SARR's investments should be valued at current costs," rather than the historical costs proffered by SECI. *Xcel* at 88. SECI did not even attempt to index the costs of these easements acquired many decades ago to current prices. SECI's "evidence does not reflect the current value of obtaining the necessary easements." *Id.* Therefore, SECI's easement cost evidence should be rejected.

CSXT witness Tesh, a licensed real estate appraiser with the highest designations available in his field, has determined that because CSXT's easements are perpetual, there is no significant difference in valuation from fee. Indeed, Millennium apparently concurs, as it "separately valued [easement] areas by line segment" at values comparable to fee. Millennium Appraisal at 140. Therefore, Mr. Tesh's determination of the easement costs is subsumed in the RoW fee values. For those portions of the RoW not appraised by CSXT witness Tesh, the easement values "backed-out" of Millennium's acquisition costs should be added back in to that estimate, after adjusting to reverse the effects of Millennium's "market condition adjustment."

The acquisition costs for the 2,064.01 acres of easements that were not subsumed in Mr. Tesh's RoW value determination are $12,553,587.

(vii) Microwave Towers

As was necessary in the case of RoW, Millennium's value estimates for microwave tower land need to be corrected to reverse undervaluation related to usage of the inappropriate valuation date and the unsupported "market condition adjustment." CSXT will accept Millennium's valuations for this land after applying a 15% adjustment to reverse the effects of Millennium's "market condition adjustment," resulting in a value determination of $ 2,161,327.

2. Roadbed Preparation

SECI relies on witnesses Harvey Crouch and Charles Stedman (SECI Engineering Witnesses) for the development of SFRR roadbed preparation costs. Their witnesses argue at length that the SFRR is not the same stand-alone route that was addressed by the Board in the *Duke/CSXT* case. Specifically, they point out that most of the SFRR's grading quantities are categorized as common excavation (over 60% of total earthwork and over 70% of excavation) while the *Duke/CSXT* quantities contained more loose rock and solid rock excavation. SECI Open III-F-11. They go on to categorize much of the SFRR territory as similar to the SARR territories in recent Western cases such as *WFA/Basin* and *AEP Texas* insofar as working conditions and roadbed preparation are concerned. SECI Opening at III-F-12.

SECI Engineering Witnesses' comparison of much of the SFRR route to the *WFA/Basin* SARR is simplistic. Topography is only one of several factors that determine working conditions and roadbed preparation costs. The Powder River Basin area that comprised the majority of the *WFA/Basin* SARR route primarily consists of semi-arid grassland overlying sandstone, siltstone, shale and conglomerate rocks. That terrain is generally level to moderately sloping terrain with some localized steep slopes along drainages and at the base of plateaus.

Because it lacks steep rock slopes, the *WFA/Basin* area does not present either the rock slope stability challenges that characterize the Appalachian region or the more difficult to excavate igneous and metamorphic rocks. In addition, the *WFA/Basin* region is dry as opposed to the abundant rain and extensive wetlands found in the Coastal Plain region traversed by the SFRR. Finally, the *WFA/Basin* route does not traverse large areas of the carbonate rock types, known as Karst Topography, that are prone to solution cavities and sinkholes, which are present along the SFRR Western Division through Tennessee and Kentucky. *See* CSXT WP "Powder River Basin Surveys.pdf."

Further, in addition to the mountainous SFRR territory west of Point of Rocks, MD, the SFRR traverses mountainous territory in the Valley and Ridge and Appalachian Plateau as it crosses the West Division in Georgia, north-east Alabama and south-west Tennessee. This is confirmed by the need for four tunnels located in Tennessee and Georgia.

Beyond the mountainous terrain, portions of the Eastern and Western Divisions of the SFRR are in the Coastal Plain Physiographic Province, which is characterized by unconsolidated sand, silt and clay, and an abundance of wetlands and very soft coastal marsh and estuarine sediments. The Coastal Plain constitutes approximately 40 percent of the East and West Divisions' track mileage and is difficult construction terrain. The Coastal Plain introduces difficulties related to subsidence of soft soils, the need to muck and/or construct haul roads through the marshes/wetlands to support heavy earth-moving equipment, and the need to install deeper piles at bridges. *See* CSXT WP "Seminole Freight RR Surveys.pdf." None of these costs were considered by SECI.

SECI Engineering Witnesses also complain that defendant railroads, in recent SAC rate cases, have included additional grading cost items and increased the size or number of grading

equipment, allegedly increasing roadbed preparation costs above those that might be expected with a competitive bid process. SECI Opening III-F-12. They assert that the R.S. Means Handbook (Means) costs used in prior cases were generally "conservative" (apparently meaning high) vis-à-vis real world costs, but provide no supporting documentation or analysis in support of this conclusory assertion.

In fact, Means costs *are* real-world costs. To develop its annual average costs, Means contacts manufacturers, dealers, distributors, and contractors all across the US and Canada for input. Labor costs are based upon the average of wage rates from 30 major U.S. cities. Wage rates are determined from both union labor agreements and open-shop rates. Equipment costs are based on national rental rates and include operating costs such as servicing, fuel, and lubricants. Equipment rental rates are obtained from contractors, suppliers, dealers, manufacturers, and distributors throughout North America. *See* CSXT WP "RS Means Cost Data 2009.pdf" at 7.

Instead of Means, SECI proposes a significant divergence from Board precedent that would artificially reduce the cost of the common excavation cost component of earthwork by approximately $300 million. Specifically, SECI proposes that costs for common earthwork excavation for the SFRR should be based on a single 1.3 mile railroad line relocation project for the South Central Tennessee Railroad in Centerville, Tennessee, known as the "Trestle Hollow Project." SECI incorrectly cites the Board's 2007 decision in *WFA* as supporting this unprecedented approach.[8] In *WFA*, defendant BNSF produced actual construction unit costs for common excavation and embankment from the then-recently-completed Shawnee-to-Walker Third Main line construction project on the Orin line. The Orin line represented a substantial

[8] *See* STB Docket No. 42088, *Western Fuels Association, Inc. and Basin Electric Power Cooperative v. BNSF Ry.* (served Sept. 10, 2007), at 86.

portion of the actual route traversed by the relatively short SARR proffered by complainants in *WFA/Basin*, and the Shawnee-to-Walker construction was on the SARR route. As such, BNSF accepted the use of its own actual experience for common excavation costs in that proceeding. But the circumstances in this case are not comparable to those in *WFA/Basin*, because the unit costs proffered by SECI are not those of the incumbent on the SARR route as in *WFA/Basin*, but rather from a small, obscure and atypical short-line construction project in middle Tennessee.

Further, there are many reasons why the South Central Tennessee Railroad's experience on a *1.3 mile* line relocation project are inapplicable to the *2,000-plus mile* SFRR; including:

- Although the Trestle Hollow Project is within approximately 40 miles of the SFRR at its closest point just south of Nashville, it is over 600 miles away from other SFRR lines points (e.g., in Washington, DC).

- SECI's proffered low unit cost of $1.65 per cubic yard of common excavation is likely a function of the concentration of excavation volumes within a small geographic area. According to workpapers provided by SECI, the Trestle Hollow Project involved 787,223 cubic yards of common excavation over 7,000 feet, or an average of nearly 600,000 cubic yards per mile. The SFRR, on the other hand will average less than 44,000 cubic yards per mile, confirming that there were economies realized by the Trestle Hollow Project contractor that will not be available to the SFRR contractors. In fact, the Trestle Hollow Project specifically describes the required excavation as "Mass Excavation". SECI has not demonstrated that any of the common excavation required for the SFRR is properly characterized as "Mass Excavation".

- Grading contractors working on the Trestle Hollow Project had the luxury of a wide right-of-way which provided ample width for vehicle turning, inadvertent over-excavation and haul roads adjacent to the roadbed under construction. SECI limited rights-of-way to 75 and 100 feet, which significantly constrains grading operations and reduces productivity.

- The Trestle Hollow Project falls within the Interior Low Plateau region.[9] In addition to the Interior Low Plateau region the SFRR will traverse the following regions, all of which have materially different earthwork characteristics and, as such, different earthwork cost characteristics:

    - Central Lowland Region

[9] *See* CSXT WP "Seminole Freight RR Surveys.pdf" at 2.

- Coastal Plain Region
- Appalachian Plateau Region
- Valley and Ridge Region
- Blue Ridge Region
- Piedmont Region

Because of the very substantial differences between the Trestle Hollow project and the SFRR project, CSXT Construction Engineers reject the use of the Trestle Hollow Project as the source of SFRR common earthwork unit costs and instead follow long-established Board precedent of using Means as the source of earthwork unit costs when actual costs incurred by the incumbent are not available. However, some of the Trestle Hollow Project supporting documentation included by SECI in its work papers is instructive. For example, it confirms that the equipment typically used by earthwork contractors is more in line with the earthmoving equipment that, in prior SAC cases, defendant railroads have proffered than the oversized equipment that complainants have typically proffered, and which the Board has accepted. Specifically, even with the concentrated volumes of earth moved through the wide right-of-way of the Trestle Hollow Project, the haulers deployed to move excavated materials are not the gigantic 42 cubic yard haulers (realistically suitable only for strip mine operations) that SECI advocates here for loose and solid rock excavation costs, but rather more standard 22 cubic yard capacity haulers used universally by earthwork contractors across the county. (*See* CSXT WP "Off-road Hauler Exhibit.doc") In its Reply evidence, CSXT Construction Engineers develop earthwork excavation costs using Means, the source the Board has accepted in all prior cases in which the incumbents actual costs have not been used. CSXT experts adjust those costs to include the standard, conventional haulers as supported by SECI's Trestle Hollow Project work papers.

A summary comparison of CSXT's Reply SFRR roadbed preparation costs with SECI's opening evidence is presented in Table III-F-8 below. Total Roadbed Preparation cost is approximately $752.8 million higher than the cost from SECI's opening.

Table III-F-8
Roadbed Preparation Costs

Item	SECI 1/	CSXT 2/	Difference
1. Clearing and Grubbing	$38,545,779	$55,173,356	$16,627,577
2. Earthwork			
a. Common	$172,207,747	$568,995,498	$396,787,751
b. Loose Rock	$133,298,595	$153,704,357	$20,405,762
c. Solid Rock	$333,935,060	$404,934,402	$70,999,342
d. Borrow	$265,609,605	$326,878,859	$61,269,254
e. Land For Waste Excavation	$802,336	$988,959	$186,623
3. Drainage 3/			
a. Lateral Drainage	$6,633,969	$8,414,883	$1,780,914
4. Culverts 4/ 5/	$40,122,490	$153,619,617	$113,497,127
5. Retaining Walls	$63,787,212	$217,517,972	$153,730,760
6. Rip Rap	$11,674,118	$11,964,759	$290,641
7. Relocation of Utilities	$599,737	$905,521	$305,784
8. Topsoil Placement/Seeding	$804,283	$1,204,973	$400,690
9. Surfacing for Detour Roads	$3,215,280	$5,076,715	$1,861,435
10. Environmental Compliance	$722,905	$1,091,488	$368,583
11. Stripping	-	$11,048,002	$11,048,002
12. Undercutting - Subsidence	-	$16,993,442	$16,993,442
13. Finish Grading	-	$14,727,637	$14,727,637
14. Const. Access Roads	-	$1,043,092	$1,043,092
15. Total	$1,071,959,116	$1,954,283,532	$752,796,672

1/ See SECI WP "SFRR Grading.xls \
2/ Total Cost from "CSX Modified SFRR Grading.xls" + ("MGA Grading" x 50%)
3/ Yard drainage is included in building site development costs
4/ See SECI WP "Culvert Quantities and Costs.xls"
5/ Total CSXT cost from WPs "Modified Culvert Costs.xls" + ("MGA Culverts.xls" x 50%)

a. Clearing and Grubbing

i. Quantities of Clearing and Grubbing

SECI developed the clearing quantities (acres per track mile) by valuation section based on the clearing and grubbing quantities reported in the ICC Bureau of Valuation B.V. Form 561 (the ICC Engineering Reports), increasing those amounts by the ratio of the current roadbed specifications to the original construction specifications. SECI then applied the adjusted quantities by valuation section to the track miles (including yards and sidings) of the SFRR's line segments in the same manner as the grading quantities discussed below. CSXT accepts this approach for developing SFRR clearing quantities and applies the same method on Reply.

SECI followed a similar approach for grubbing, obtaining the acres per track mile of grubbing from the ICC Engineering Reports, adjusting and applying them to the SFRR in a similar manner. As with clearing, CSXT accepts and applies SECI's approach to grubbing quantities. CSXT's experts adjusted the SFRR clearing and grubbing quantities to reflect the additional route and track miles that the CSXT operating team determined would be required for the SFRR.

ii. Clearing and Grubbing Costs

SECI states that based on field trips in early 2009 by witness Crouch and others, it determined that some portions of the SFRR route run through wooded areas containing trees mostly less than 12 inches in diameter, while other portions traverse areas where grasses and brush predominate, such as Indiana, southern Georgia, coastal South Carolina, North Carolina, and Virginia. However, SECI provides no analysis or other documentation supporting or quantifying these conclusions. In fact, CSXT Construction Engineers inspected significant portions of the proposed SFRR route and identified and photographed many areas adjacent to the

right-of-way with trees greater than 12 inches in diameter and areas of dense forest growth. See electronic work papers 'Field Trip Documentation".

SECI notes that in recent stand-alone cost proceedings, complainants have applied two different costs for clearing and one cost for grubbing, and acknowledges that this approach has been accepted by the Board. Nonetheless, SECI rejects prior precedent in favor of an unverifiable combined unit cost of $2,000 per acre based on 30 acres of clearing and grubbing from the Trestle Hollow Project. Again, even though SECI witness Crouch apparently has access to all documents relating to the Trestle Hollow Project, SECI has failed to demonstrate that the clearing and grubbing cost per acre from that project is representative of the clearing and grubbing costs that would be incurred in the construction of the SFRR. In particular, SECI failed:

- to establish whether the 30 acre figure from the Trestle Hollow Project reflects the total project acreage for the approximately 7,000 foot line change, or just the acres that actually required clearing.
- to establish any link between the observed clearing and grubbing requirements along the SFRR route and the clearing and grubbing requirements from Trestle Hollow.

Because of these fundamental evidentiary failures, CSXT rejects SECI's proposed use of the Trestle Hollow Project as the source for the SFRR clearing and grubbing costs and instead relies on R.S. Means as the appropriate source. Based on their documented field observations, CSXT Construction Engineers develop grubbing costs based on the assumption that 80 percent of the trees would be 12 inches or less in diameter and 20 percent would be between 12 and 24 inches in diameter. *See* CSXT workpaper III-F-2 "CSX Modified SFRR Grading.xls". CSXT Construction Engineers also accept the conservative prior Board precedent that clearing costs are based on only the cost of a bull dozer equipped with a brush rake.

The SFRR requires 23,367 acres to be cleared and grubbed at a cost of $55.2 million at 1Q09 levels. *See* CSXT WP III-F-2 "CSX Modified SFRR Grading.xls"). Total clearing and grubbing costs are $16.6 million higher than in SECI's opening.

iii. Other

(a) Stripping

SECI acknowledges (at III-F-19) that stripping is a cost incurred in railroad construction projects, referencing the following quote from the Trestle Hollow Project documents, indicating that the contractor is responsible for removing:

> the existing topsoil to a depth of 6 inches or to the depth encountered from all areas in which excavation will occur. The topsoil shall be stored in stockpiles, separate from the excavated material, if the topsoil is to be respread. Otherwise material shall be disposed of off-site at the Contractor's expense.

SECI did not include a separate cost for stripping because it asserts that, in the Trestle Hollow Project, stripping costs were included in the clearing and grubbing unit cost. As demonstrated above, Trestle Hollow roadbed preparation costs are not representative of the work that would be required to construct the SFRR. CSXT rejects SECI's proposed use of inapposite Trestle Hollow Project clearing and grubbing costs and instead develops clearing and grubbing costs from R.S. Means. Because Means clearing and grubbing costs do *not* include costs for stripping related activities, CSXT's experts developed a separate cost for stripping and applies those costs to the SFRR acres requiring clearing as designated in the Engineering Reports and adjusted for current SFRR quantities. A separate cost for stripping adds $11.0 million to the total cost of the SFRR.

(b) Undercutting

Although the Trestle Hollow Project documents state clearly (*see* CSXT WP "TR-79 Trestle Hollow Specifications.pdf", p. 104) that undercutting is a standard railroad construction

cost component, SECI's engineers have not included a separate cost for undercutting. Indeed, many of the Engineering Reports for the line segments traversed by the SFRR identify additional earthwork quantities attributable to subsidence of the roadbed, confirming the presence of unsuitable soils at the time of the original construction. In addition to the subsidence recorded in the Engineering Reports, railroad roadbeds experience continual subsidence issues in areas of poor soil.

Specifically, secondary subsidence occurs as a result of factors such as oxidation of organic matter and drying of the surrounding soil. While initial subsidence occurs very rapidly, secondary subsidence takes longer, though the effects are similar. The ICC Engineering Reports account for initial subsidence by adding to the calculated quantities of embankment earthwork; however, this amount represents only the quantity needed to combat the initial subsidence of the soil. CSXT has calculated the amount of secondary subsidence to be 85% of the original subsidence quantity (see CSXT III-F-2 workpaper "Subsidence.pdf"). This additional amount of earthwork adds approximately $17.0 million to the total cost of the SFRR (see CSXT III-F-2 workpaper "CSXT Modified SFRR Grading.xls").

b. Earthwork

As has been the practice in most full SAC rate reasonableness proceedings before the Board, SECI has relied on the ICC Engineering Reports as the source for the majority of the earthwork quantities for its SARR. Because the earthwork quantities contained in the ICC Engineering Reports are based on design specifications that differ from those for modern railroad construction, they must be adjusted to reflect the more substantial roadbed required for today's heavier and faster trains. CSXT Construction Engineers have reviewed SECI's development of the earthwork and other grading quantities from the Engineering Reports, its assignment of

valuation sections to the SFRR route, and its adjustment of Engineering Report quantities to reflect modern day construction standards, and generally have accepted SECI's approach

(a) SFRR Line Segments

As discussed in Section III-B, CSXT generally has accepted the route and second main and passing track miles assumed by SECI for the SFRR. The single most notable difference stems from SECI's failure to account for any road property investment costs associated with CSXT's, and therefore SFRR's, access to the MGA.

(b) SFRR Yards

SECI has proposed only small yards for the SFRR located at Newell, PA, Petersburg/Collier, VA, Folkston, GA, and Nashville, TN. In addition, SECI has included numerous interchange locations, referring to those with two or more tracks as "yards". SECI's experts calculated the yard grading requirements for these yards based on an assumed average fill height of one foot. Interchange locations were also assumed to be an average fill height of one foot with 15-foot track centers. Although the topography for the SFRR yard locations selected by SECI would dictate earthwork requirements well in excess of the assumed one-foot fill height, CSXT recognizes that the Board has found a one-foot fill assumption reasonable for stand-alone railroad yards in previous cases, absent documentation that the topography at issue would require abnormal excessive earthwork activities. Although it disagrees with this assumption, CSXT is unable to locate the type of documentation required by the Board, and so will accept SECI's one foot fill assumption.

Based on CSXT's detailed operating plan and as detailed in Section III-B, the SFRR will require eight regional yards and five local yards to provide a mix of required services and three small coal only yard facilities. *See* CSXT Reply at III-B & III-C. Also, the SFRR will require seven more interchange locations than those identified by SECI. CSXT has developed earthwork

quantities for these additional yards using the same approach employed by SECI for its yards. *See* CSXT Reply WP "CSX Modified SFRR Grading.xls."

(c) Total Earthwork Quantities

SECI separates the earthwork requirements into four types of material: common, loose rock, solid rock and borrow based on the distribution percentages obtained from the ICC Engineering Reports. CSXT accepts this approach. Table III-F-9 below compares the restated earthwork quantities calculated by CSXT with those proposed by SECI.

Table III-F-9
SFRR Earthwork
Quantities by Type of Material Moved

Type of Earth Moved	SECI[10] Cubic Yards (000s)	CSXT[11] Cubic Yards (000s)	Difference Cubic Yards (000s)
1. Common Excavation	91,950,369	101,072,056	9,121,687
2. Loose Rock Excavation	13,103,629	13,435,987	332,358
3. Solid Rock Excavation	24,389,470	32,465,014	8,075,544
4. Borrow (incl. yards)	16,907,040	17,859,348	952,308
5. Total	146,350,508	164,832,405	18,481,897

(d) Earthwork Unit Costs

As demonstrated above, SECI's proposed use of common earthwork unit costs from the Trestle Hollow rail construction project is inconsistent with Board precedent regarding earthwork unit costs. In addition, SECI has failed to demonstrate that the Trestle Hollow experience is typical of common excavation that would be encountered in the construction of the SFRR. SECI suggests that the use of costs from an actual project might reduce the debates that occurred in prior cases over the selection of equipment suitable for a particular type of excavation. However, as discussed in more detail in the development of the correct common

[10] SECI Ex. III-F-9.

[11] CSXT total from WPs "CSX Modified SFRR Grading.xls" & ("MGA Grading.xls x 50%).

earthwork excavation costs below, SECI's supporting documentation for the Trestle Hollow project confirms the correctness of defendant railroads' position in prior cases concerning earthmoving equipment typically selected by complainants. While there is no doubt that complainants have routinely selected low cost earthmoving equipment, the equipment they have selected is not the type of equipment actually used in railroad roadbed construction projects. Instead, the gargantuan 42 cubic yard haul trucks posited by SECI are used only in large mine and quarry operations. Smaller, more versatile 22 cubic yard haulers, such as those depicted in the Trestle Hollow photographs, are actually used in normal railroad roadbed construction projects. The 42 cubic yard haul trucks proposed by SECI are impractical in railroad construction projects because they are difficult to turn and maneuver within the rail right of way (causing delays and other inefficiencies). CSXT's earthwork unit costs are based upon the more efficient and cost-effective 22 cubic yard haulers actually used in real railroad construction projects as demonstrated in SECI's Trestle Hollow photographs.

In addition to the substitution of 22 cubic yard haulers, CSXT made one correction to the Means based earthwork unit costs to take into account shrinkage and swell of earthwork materials. Depending on where it is in the earthwork process, common, loose rock and solid rock materials can have different volume characteristics typically defined as follows:

- The bank-measure volume *(BCY)* is the volume of the earth measured in the borrow pit, trench, canal, or cut prior to loosening. This is the volume on which payment usually is based.
- The loose-measure volume *(LCY)* is the volume of the earth after it has been removed from its natural position and deposited into trucks, scrapers, or spoil piles.
- The compacted-volume *(ECY),* or fill volume, is the volume of the earth after it has been placed in a fill, such as a dam or road, and compacted.

The difference among the above measures is attributable to shrinkage and swell. The volume and density of earth undergo considerable changes when the earth is excavated, hauled, placed and compacted. Because of these changes it is necessary to specify whether the volume is measured in its original position *(BCY)*, in the loose position *(LCY)*, or in the fill after compaction *(ECY)*. The quantities recorded in the ICC Engineering Reports and the SFRR adjusted take-off are bank-measure cubic yards (BCY) for cuts and borrow, and compacted-measure (ECY) for fills. CSXT adjusted the Means based earthwork costs to properly consider earthwork materials as BCY, LCY or ECY. The resultant earthwork unit costs are compared to SECI's costs in the table below.

Table III-F-10
SFRR Earthwork Unit Prices[12]

Type of Earth Moved	SECI	CSXT	Difference
1. Common Excavation	$1.78	$4.89	$3.11
Common Adverse	$2.21	$7.03	$4.82
2. Loose Rock Excavation	$10.10	$11.05	$0.95
Loose Rock Adverse	$10.38	$11.86	$1.48
3. Solid Rock Excavation	$13.70	$15.18	$1.48
Solid Rock Adverse	$13.84	$15.59	$1.75
4. Borrow	$15.71	$16.45	$0.74
Borrow Adverse	$15.71	$16.45	$0.74
Borrow Adverse (Drying Req'd)	$15.71	$19.74	$4.03

(i) Common Earthwork

SECI assumes a unit cost of $1.65 per cubic yard for all common earthwork excavation for the SFRR based on the Trestle Hollow Project. As discussed previously, CSXT rejects the use of the Trestle Hollow unit cost for the SFRR earthwork for a number of reasons, including the following:

- The Trestle Hollow project is not on the SFRR route and is hundreds of miles from the vast majority of the SFRR segments.

[12] *See* CSXT WP "CSX Modified SFRR Grading.xls", tab "IIIF_9 EW Cost"

- The high concentration of excavation volumes within a small geographic area that characterize the Trestle Hollow projects are not representative of the common excavation concentrations along the SFRR route.

- The wider dispersion of common earthwork quantities along the SFRR route will prevent the builders of the SFRR from achieving the production efficiencies implicit in the $1.65 per cubic yard Trestle Hollow quote.

- Grading contractors working on the Trestle Hollow Project had the significant advantage of a wide right-of-way which provided ample width for vehicle turning, inadvertent over-excavation and haul roads adjacent to the roadbed under construction, none of which would be available to the builders of the SFRR, which has a narrow (75-100 feet) right-of-way.

In place of the inapplicable Trestle Hollow unit price, CSXT developed common excavation costs from Means in a manner consistent with prior Board determinations, with two exceptions. CSXT substituted for earthmoving equipment typically selected by the Board in prior stand-alone proceedings, equipment documented by SECI as having been used by the contractor for the Trestle Hollow project. This documentation (proffered by SECI) persuasively demonstrates the type of earthmoving equipment actually used in real railroad construction projects. CSXT also refined the development of Means-based earthwork costs to account properly for shrinkage and swell of excavated materials.

In each of the diverse geographic regions traversed by the SFRR, its builders would encounter certain segments with adverse condition that would render it impossible to achieve the productivity rates implicit in the R.S. Means unit costs. SECI recognized that the SFRR construction segments west of Point of Rocks, MD would involve adverse conditions and developed an adjustment to the Trestle Hollow unit costs, based on Means, in an effort to account for the increased costs. In fact, in addition to the mountainous territory west of Point of Rocks, the SFRR traverses adverse mountainous territory in the Valley and Ridge and Appalachian Plateau as it moves through the West Division in Georgia, north-east Alabama and south-west Tennessee. In addition to mountainous terrain, the builder of the SFRR would

encounter adverse construction conditions along the portions of the Eastern and Western Divisions of the SFRR, in the Coastal Plain Physiographic Province. These areas are characterized by unconsolidated sand, silt and clay and an abundance of wetlands and very soft coastal marsh and estuarine sediments. Based on the foregoing, CSXT Construction Engineers determined that SECI's characterization of only the portion of the SFRR west of Point of Rocks, MD as adverse is far too limited. CSXT's same experts also conclude that SECI's calculation of the incremental costs of dealing with adverse conditions is flawed.

SECI developed from Means the ratio of excavation costs under adverse conditions to excavation costs under ideal conditions and applied that result to the Trestle Hollow average excavation costs. Because CSXT developed common excavation costs using Means, it has also used the actual Means-based unit costs for adverse conditions instead of estimating such costs using an *ad hoc* ratio of questionable validity and accuracy. CSXT adds to SECI designation of SFRR segments west of Point of Rocks, MD as adverse the portions of the SFRR traversing Valley and Ridge and Appalachian Plateaus, and the Coastal Plain Provinces. Table III-F-11 summarizes the common earthwork costs developed by CSXT for normal and adverse conditions. The total increase in common earthwork cost is $396.8 million.

Table III-F-11
SFRR Earthwork
Total Cost – Common Earthwork – Normal vs. Adverse Conditions[13]

	SECI	CSXT	Difference
Normal Conditions	$128,336,217	$214,525,033	$136,436,166
Adverse Conditions	$43,871,530	$354,470,465	$248,197,548
Total	$172,207,747	$568,995,498	$384,633,714

[13] CSXT total from WPs "CSX Modified SFRR Grading.xls" & ("MGA Grading.xls x 50%).

(ii) Loose Rock Excavation

CSXT accepts generally SECI's development of unit costs for loose rock excavation under ideal and adverse conditions from Means with the exception of the proposed use of the 42 cubic yard hauler and includes refinements to accommodate shrinkage and swell. As discussed above, there is no evidence that such huge equipment – used almost exclusively in massive mining operations – has ever been used in any railroad construction project. The total increase in loose rock excavation cost is $20.4 million.

(iii) Solid Rock Excavation

CSXT also accepts generally SECI's development of unit costs for solid rock excavation under ideal and adverse conditions from R.S. Means with the exception of the proposed use of the 42 cubic yard hauler and includes refinements to accommodate shrinkage and swell. The total increase in cost for solid rock excavation is $71.0 million.

(iv) Embankment/Borrow

CSXT accepts generally SECI's development of unit costs for borrow from R.S. Means, but adds costs for drying of the borrow soil where conditions warrant and refinements to accommodate shrinkage and swell.

Major portions of the SFRR route are in regions of high rainfall. The Annual Precipitation of the SFRR route is shown in CSXT WP "Seminole Freight RR Surveys.pdf" at PDF page 61 of 61. The SFRR route is generally exposed to between 40 to 60 inches of annual precipitation. Given this high precipitation, most soils in the region are wet (*i.e.* have excessive moisture content) and require drying to achieve adequate compaction. When the soil is too wet it cannot be adequately compacted. Often wet soil will not support rubber tired haul vehicles, and may be too muddy to allow construction personnel to walk on it. Achieving suitable water content in high plasticity clays ("fat clays") found along the SFRR route is more difficult than in

low plasticity clays because the soil retains more water. Earthmoving contractors who work in these regions routinely dry the soils by plowing and disking during warm dry weather, often for several days, to achieve adequate water content. If fat clays are encountered the drying process takes longer because of the amount of water fat clay can retain.

Typical equipment used for drying soils is a crawler tractor with wide tracks to bridge the load over the soft soil and disks to turn over and aerate the soil. On a typical site, at least one day per week will be spent aerating the soil by spreading it and disking the top layer to increase the exposure to sunlight and air circulation. If an embankment fill is being built during the rainy season, lime or fly ash is often added to the soil and mixed-in with disks. The lime or fly ash additive absorbs water in the soil, facilitates compaction and strengthens the soil. *See* CSXT WP "Soil Drying – Adverse Conditions.pdf" at PDF page 5, 6, 19, 15, 16 of 18.

In addition to the cost of these additives, there is a cost for hauling them to the drying site and the time and labor necessary to spread and disk (mix) the additive into the fill soil. After this has been accomplished, the soil can then be compacted. The drying process slows the progress of constructing of the embankment fills. In is not unusual for drying to increase the cost of placed embankment fill by 20 to 40 percent plus the cost of the additives.

CSX has identified the SFRR valuation sections traversing areas requiring soil drying to achieve optimal structural fill sections (embankment/borrow). *See* CSXT WP "Soil Drying – Adverse Conditions.pdf" at PDF page 17 - 19 of 19. CSX has also developed a cost for construction of structural fills in regions of adverse conditions. *See* CSXT WP "CSX Modified SFRR Grading.xls", tab"IIIF Unit Costs." The total increase in the cost for embankment/borrow is $61.3 million.

(v) Fine Grading

SECI has not included costs for fine grading. The common, loose rock and solid rock excavation and borrow costs developed from Means by CSXT for reply do not provide for the equipment or activities required to finely grade the roadbed to specification. The construction of fills/embankments on the SFRR would be accomplished through the use of scrapers and dump trucks to deposit materials, dozers to spread materials, and sheep's foot and steel drum rollers to compact the materials. The fill material would be spread by the dozer in 8 inch to 12 inch layers as close to the layout lines as possible. The grade foreman and/or the GPS enabled dozer could spread the loose material to the nominal footprint and grades of the embankment, but this initial placement is never exactly on finished grade. After placement of the loose layers by the dozer, the rollers then make several passes to compact the material. The fill materials do not compact or compress evenly across the layer due to the difference in the types of materials and/or voids in the materials as spread by the dozer across the layer. This compaction effort thus causes an uneven surface with ridges, valleys, depressions, and high spots. The layers also tend to push out at the unconfined edges of the embankment slopes during compaction. As a result, embankments are built slightly fat and high and require trimming or finish grading. *See* CSXT WP "Finish Grading.pdf" at PDF page 4 of 8, CSXT WP "TR-79 Trestle Hollow Specifications.pdf" at Qore Geotechnical Report at PDF sheet 235 of 289.

The construction of the embankment and the finish grading of the embankment are two separate and independent operations. The equipment selected by SECI to spread fill material and construct embankments is a 200HP dozer.[14] If the dozer were GPS enabled, it could complete the finish grading of the cut and embankment slopes, swales, and ditches to a neat and trimmed

[14] Means 31-23-23.17-0020, Crew B-10B.

condition, but not to the final specification. Similarly, the equipment selected by the SFRR to excavate cuts is a 3CY power shovel and an elevating scraper. These machines are not equipped with six-way blades and are not maneuverable enough to construct the subgrade in cuts to the specification tolerances. As SECI's Trestle Hollow documents specify:

> 3.5.15 Finishing and Trimming (Final Grading)
> All cuts, embankments, swales and ditches shall be left in a neatly trimmed condition to the specified width, elevations, and slopes. Waste and stockpile areas shall be left in a neat trimmed condition to the satisfaction of the ENGINEER.
>
> The finished roadway surface shall be compacted and finished to a true surface with no depressions that will hold water or prevent proper drainage. The finished top of subgrade shall conform to the grades shown on the Plans with a tolerance of plus or minus 0.10 feet from the profile grade, shall be uniform, and free from sharp breaks in the surface.

The Trestle Hollow specifications state that fine grading of the roadway surface is necessary to within 0.10 feet of the profile grade, which is consistent with CSXT's current construction specifications. Fine grading of the roadway surface is necessary to assure proper drainage (no depressions to hold water) and to assure that an adequate thickness of sub-ballast (base stone) is placed for support of train loadings. The sub-ballast is installed to a finished plan elevation and is checked (inspected) accordingly by elevation. A motor-grader is the traditional equipment of choice by contractors for tight-tolerance finish grading.[15]

CSXT Construction Engineers determined the quantity of fine grading required for the SFRR based on SECI's proposed 24' and 39' subgrade widths for fill. This approach conservatively does not include fine grading quantities for slopes, swales, ditches, and yards.

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[15] The photographic record of Trestle Hollow Project provided by Crouch Engineering includes a large time gap. The record jumps from showing the near completion of the cuts and fills to showing the finished roadbed after fine grading and the placement of the subballast, with new grass growing on the slopes. No photos showing the fine grading of the site and the placement of erosion controls (seed & mulch) are included, even though those activities clearly occurred.

To determine costs for fine grading, CSXT Construction Engineers select Means line item "31-22-16.10-0200, Grade subgrade for base course, roadways, Crew B-11L". Because the B-11L Crew does not contain any equipment or labor for collecting and hauling the fine grading spoils to waste, the CSXT Construction Engineers add appropriate costs for those necessary tasks. The total cost increase due to fine grading is $14.7 million.

(e) Land for Waste Excavation

Because not all of the excavated material is re-used as fill, SECI's earthwork calculations assumed a 30 percent waste ratio. CSXT accepts SECI's method for determining the amount of land required for waste materials and adjusts the quantities to account for additional earthwork resulting from the additional track miles required by CSXT's detailed operating plan. CSXT also accepts SECI's cost of $500 per acre. The increase in cost for land for waste excavation is $186,623.

(f) Total Earthwork Cost

The total SFRR earthwork cost, including land for waste excavation, is $1455.5 million. The cost increase associated with total earthwork is $549.6 million.

c. Drainage

i. Lateral Drainage

SECI estimated the linear feet of pipe per route mile for lateral drainage based on the ICC Engineering Reports and applied these amounts to the SFRR's line segments. It developed the cost per linear foot for installed drainage pipe, including backfill and compaction, from the 2009 Means Handbook. CSXT Construction Engineers have reviewed SECI development of SFRR lateral drainage costs and identified a number of errors. SECI does not include any labor, equipment, or cost for excavating the trench for the drainage pipe. CSXT Construction Engineers include these costs, assuming the trench cross section to be 1.33 feet wide by 4 feet

deep. Based on these dimensions, one linear foot of trench, less the volume of the drainage pipe, equals 0.18 CY. CSXT Construction Engineers select the cost of excavation from 1Q09 Means line item 31-23-16.13-0050, Excavate trench, 1' to 4' depth, 3/8 CY excavator. *See* CSXT WP "RS Means Cost Data 2009.pdf"

SECI selects Means line item 31-23-23.16-0050 Fill by Borrow, Crushed stone ¾" to ½" for backfill costs. This assumes a two-mile maximum haul from the material source and that the material is stockpiled less than 200' from the backfill site.[16] CSXT Construction Engineers conclude that it is unreasonable to expect a source of crushed stone to be within two-miles of every lateral drainage site on the SFRR. The Construction Engineers instead assume ten-miles as a conservative estimate of the average haul distance to the crushed stone.[17] Because the trench is backfilled with crushed stone to top of subgrade, the trench excavation spoils are not used as backfill and must be collected and hauled to the waste sites. The SFRR does not include any cost for collecting and hauling trench spoils to the waste site. CSXT Construction Engineers assume that the trench spoils will be collected during the finish grading process and disposed of accordingly. The total increase in lateral drainage cost over SECI's opening is $1.8 million.

ii. Yard Drainage

SECI's engineering experts have included costs for yard drainage with the facilities costs for each of the SFRR's four yards. However, SECI's case-in-chief provides little or no information about how site drainage would be provided for SFRR yards. Accordingly, CSXT's Construction Engineers were required to design a site drainage system, and develop cost estimates for that system. SECI assumes that yard areas are flat and that the yards will be graded

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[16] *See* Means 31-23-23.16-0600 & 0610 and 31-23-16.13-3060 & 3100.

[17] CSX uses Means line item 31-23-23.20-4278 Hauling, 20 CY truck, 20 min. wait/Ld/Uld, 40 MPH ave., cycle 10 miles, to calculate additional hauling costs.

to drain through the yard track ballast sections to a perimeter ditch. While the CSXT Construction Engineers recognize that the gradation of track ballast is designed to allow water to percolate through, the ballast section is designed to provide a base for the track structure that would drain well. It was not designed to be a filter or check dam for surface water runoff. If surface runoff is not drained away from the track structure, the ballast will become fouled or plugged with fines carried by the runoff through the ballast section. When this happens the ballast becomes an effective dam and water is trapped between the yard tracks. This water saturates the subgrade, creating mud which "pumps" under rail traffic and deforms the track structure.

As a leading railroad engineering text explains:

1. Effects of Poor Drainage

   There is scarcely an item of maintenance cost that is not increased by poor drainage. Roadbed stability depends on a well-drained subgrade. Unstable track is reflected in poor surface, line, and gage. With poor drainage, ballast, fouled by dust from abrasion, wind-blown dust from plowed fields or sand dunes, and car dropping, churns and pumps under loose ties and joints. Ties deteriorate more quickly when wet. Pumping joints accelerate rail-end batter and joint-bar and tie wear.

   Flooded and washed-out track often reflects inadequate drainage. In winter insufficient drainage causes ice accumulation, especially in narrow cuts and tunnels, even causing track obstructions. Excess moisture is a direct cause of frost action and heaved track.

2. Types of Drainage

   The purpose of drainage is to keep the roadbed dry by doing the following:
   1. Intercepting and diverting groundwater.
   2. Containing and channeling streams.
   3. Disposing of rainwater and snow runoff.
   4. Tapping and draining water pockets and springs.

5. Intercepting seepage and underground streams.
6. Drying saturated fills.
7. Lowering water tables.
8. Drying the ballast section by draining water from under ties.

WILLIAM W. HAY, RAILROAD ENGINEERING, (2d ed.) 366-67.

Drainage must be effective at two levels – at the surface and at the subsurface. Poor drainage affects the height of the water table and causes subgrade saturation, erosion, and flooding. CSXT Construction Engineers designed a yard drainage system configured with grid of drop-inlets placed between alternating tracks (every other track). The drop inlets would be connected to pipes running under the tracks at 90 degrees to the track direction, spaced at 500 to 1000 foot intervals along the yard, and outlet into a perimeter ditch as stated by the SECI engineer. The design assumes a spacing of 750 feet as the typical drainage grid under all yards. The subgrade of the yard would be shaped to direct water to each of the drop inlets. Standard 18" corrugated metal pipe ("CMP") drop inlets and 18" CMP will be used for the standard drainage system for the typical yard and is not assumed to increase in size as the system crosses the yard and collects additional drainage.[18] The CMP would follow the grade of the yard topography, assumed to be a slope of 0.5% to 2% based on SECI's description. Pipes would be fitted with flared end sections and would daylight into the perimeter ditches, with no headwalls or riprap slope protection. Forty eight (48) inch CMP would be needed to convey water under the ladder tracks, yard lead track, and main line(s) to the main ditch. Ditches would be excavated around the perimeter of the arrival and departure tracks and the classification tracks to divert water away from the yard (ditch work would be considered as part of earthwork quantities and cost). Details of CSXT Construction Engineers' yard drainage calculations are set forth in

[18] Generally, pipe sizes increase in size as the volume of water being collected across the yard increases, i.e. 12" to 18" to 24" to 30", etc.

the work papers and are added into the Buildings and Facilities costs. *See* CSXT WP "Yard Drainage Quantities and Cost.xls". Yard drainage costs add $2.5 million to the total cost of the SFRR.

d. Culverts

SECI developed culvert investment for the SFRR from culvert lists produced by CSXT in discovery. SECI also assumed that any existing CSXT bridge along the SFRR route less than 20 feet in length would be replaced by the SFRR with a culvert. SECI assumed all of the SFRR culverts would be corrugated aluminized metal pipe. Because certain of the CSXT culvert data produced in discovery was incomplete, SECI extrapolated from the information that CSXT produced to fill in the missing CSXT data. CSXT Construction Engineers accept generally the approach used by SECI to estimate culvert construction costs for the SFRR, but identified and corrected errors in SECI's implementation and unit price assumptions

i. Culvert Unit Costs

CSXT Construction Engineers reviewed SECI development of culvert unit costs and determined that SECI's material cost for culvert pipe is backed only by a single document listing "budget" prices for a variety of culvert pipe sizes with no explanation of how the figures were derived or whether culvert materials could actually be purchased for the listed amounts. Similarly, SECI cost for pipe bedding includes only an unsupported material cost per foot for bedding material from the Trestle Hollow Project. CSXT Construction Engineers reject SECI's culvert unit cost as unsupported and in their place develop detailed culvert material and installation cost from Means. CSXT Construction Engineers also made minor refinements to SECI Means-based trenching and backfill costs to more accurately reflect the cost of these activities. Details of CSXT Construction Engineer culvert unit price calculations are set forth in the work papers. *See* CSXT WP "CSX Modified Culvert Costs.xls", tab "Clvrt Unit Cost".

ii. Culvert Installation Plans

CSXT Construction Engineers generally accept SECI's culvert installation plans.

iii. Culvert Quantities

SECI explains that the culvert inventory data produced by CSXT in discovery were incomplete and that SECI calculated the average culvert quantities per mile for those portions of the east and west SFRR segments for which inventory data were produced and applied those quantities to the respective mile for which no inventory data were provided. CSXT Construction Engineers accept SECI's approach, but make corrections to its application. Specifically, SECI states that it received culvert information for 729.21 of the SFRR's route miles. However, its electronic work papers show culvert inventory data for only 548.14 miles. CSXT Construction Engineers audited SECI's work papers and determined that actual culvert information was produced for 606.05 SFRR route miles. Using the correct mileage, CSXT extrapolated the average east and west average culverts per mile, respectively, to the remainder of the SFRR.

In addition, some of CSXT's culvert data did not include culvert length information. For these, SECI estimated total length based on the average SFRR roadbed cut section along with an assumption of 2 feet of cover for each culvert. CSXT Construction Engineers corrected SECI's methodology to use the dimensions of the average roadbed fill section and to assume a cover height consistent with the average height of the roadbed fill section calculated as part of the earthwork quantity formula in the grading work papers.

Finally, SECI assumed that existing bridges less than 20 feet in length, as well as a few other low bridge structures would be replaced with culverts. CSXT Construction Engineers accept this assumption, but correct SECI's count of such structures to include structures inexplicably omitted from SECI culvert counts.

iv. Total Culvert Costs

Total culvert costs are set forth in the following table. CSXT has assessed the cost of culverts as $113.5 million higher than in SECI's Opening.

Table III-F-12
Culvert Costs

	SECI[19]	CSXT[20]	Difference
Total Eastern Segment Culvert Cost	$ 17,538,233	$ 74,868,808	$ 57,330,575
Total Western Segment Culvert Cost	$ 22,584,345	$ 78,750,810	$ 56,166,464
Total Culvert Cost	$ 40,122,578	$ 153,619,617	$ 113,497,039

e. Other

i. Sideslopes

SECI has assumed the SFRR has average side slopes of 1.5:1. CSXT accepts this specification.

ii. Ditches

SECI assumed the SFRR has side ditches in cuts that are two feet wide and two feet deep and that are trapezoidal in section. CSXT accepts this specification.

iii. Retaining Walls

SECI developed retaining wall quantities for the SFRR from the information in the ICC Engineering Reports under the category "Protection of Roadway" included in Account 3, Grading, and assumed that the SFRR would deploy gabions in place of standard timber and masonry retaining walls. CSXT makes two adjustments to SECI's development of the SFRR costs for retaining walls. First, the size of the retaining walls are adjusted to conform with the

[19] *See* CSXT WP "Modified Culvert Costs.xls", tab "Summary"
[20] CSXT total from WPs "CSX Modified SFRR Grading.xls" + ("MGA Grading.xls" x 50%)

wider roadbed assumed for modern day construction standards than the roadbed that was in place at the time the Engineering Reports were completed. Second, CSXT also adjusts SECI's estimate to comply with gabion wall construction standards. CSXT has calculated that the increase in retaining wall costs from SECI's opening is $153.7 million.

iv. Rip Rap

SECI developed rip rap quantities for the protection of the roadway from the ICC Engineering Reports, and applied the unit cost from Means to machine-place the rip rap. SECI included the material portion of the unit cost because the necessary material (rock) is not readily available from the excavated rock that is wasted. CSXT accepts this approach, but adds to the rip rap material cost the cost to transport material longer distances than those assumed by SECI. As SECI explained "The engineers included the material portion of the unit cost because the necessary material (rock) is not readily available from the excavated rock that is wasted." (SECI Open III-F-44). The Means cost it selected, however, assumes that the materials are close by and limits hauling costs to distance of up to two miles. CSXT Construction Engineers determined that the two mile haul is at odds with SECI's premise that suitable rip rap materials are not available locally and extend the assumed length of haulage for the rip rap materials to ten miles. The additional cost over SECI's opening cost for rip rap is $290,641.

v. Relocating and Protecting Utilities

SECI included costs for relocating and protecting utilities for four SFRR branch lines for which it was unable to find ICC Valuation Maps and accompanying ICC Engineering Reports. CSXT accepts this approach.

vi. Seeding/Topsoil Placement

SECI developed embankment protection quantities for all lines other than the recently-constructed branch lines based on the ICC Engineering Reports. For the recently-constructed

branch lines, SECI's engineers estimated the acres per mile for seeding/topsoil placement based on the average acres per mile for the 79-mile Orin Line, constructed by the BNSF Railway in Wyoming during the 1970s. CSXT accepts this approach.

For seeding and topsoil placement costs, SECI relied on the unit cost of $1,600 per acre from the Trestle Hollow Project (indexed to $1,723.73 per acre at January 2009 levels). But the Trestle Hollow work paper referenced by SECI consists of a single summary sheet with one line item indicating a seeding cost of $1,600 per acre for 45 acres. This single line item, lacking any explanation or support, is not sufficiently detailed to determine the applicability of the cost to the entire SFRR. CSXT therefore has rejected this unit cost. Instead CSXT has followed prior Board precedent and developed the cost for seeding from the 2009 R.S. Means Handbook.

vii. Water for Compaction

CSXT Construction Engineers accept SECI's position on water for compaction for the SFRR route, but have included costs for drying wet soil where necessary to obtain proper moisture content.

viii. Surfacing for Detour Roads

SECI did not include costs for any road detours for the SFRR's lines that are covered by ICC Engineering Reports, stating that CSXT did not provide any information in discovery indicating that it incurred such costs. This is consistent with the approach approved by the Board in other SAC cases. *See PSCo/Xcel* at 101; *Duke/NS* at 100; *CP&L* at 86; *Duke/CSXT* at 84; *TMPA* at 707-708; *Wisconsin P&L* at 1024-1025; *FMC* at 802.

For the SFRR's recently-constructed branch lines, SECI included an estimate of $3.2 million for the cost to provide road detours during construction. *See* Exhibit III-F-10 and e-workpaper "SFRR Grading.xls." CSXT accepts this approach.

ix. Construction Site Access Roads

SECI failed to include any costs for construction of site access roads, claiming (1) that most of the SFRR right-of-way is accessible from public roads and highways, thereby permitting construction access without building separate access roads and (2) initial construction activity includes clearing the SFRR right-of-way and creating initial site access with heavy construction equipment. SECI asserts that no additional costs should be incurred for site construction access roads because this is normally not a compensated portion of the grading contractor's requirements, referencing the Trestle Hollow project.

Contrary to SECI's assertion, because of the remote location of many of its segments, the SFRR would require site access roads at numerous locations along its 2,100 mile length. In addition, even in those instances in which a road parallels the right of way, there are often natural or man-made obstacles that prevent direct access from the road to the right of way. Based on a detailed construction schedule, the number of bridge, culvert, tunnel and earthwork construction packages, and the location of the proposed SFRR construction railheads, CSXT's Construction Engineers developed a detailed analysis of the construction site access roads required for the SFRR. Details are set forth in the CSXT Construction Engineer work papers.

x. Environmental Compliance

SECI did not include any costs for environmental compliance for the SFRR lines that are not covered by ICC Engineering Reports. For the SFRR's recently-constructed segments, SECI's engineers included $0.7 million for environmental compliance. CSXT accepts SECI's application of environmental costs to only the new line construction as consistent with prior Board precedent

3. Track Construction

Track construction encompasses the work needed to lay track once the subgrade has been completed, including placing subballast, ballast, ties, rail, and other track components. SECI

estimates track construction for the SFRR at $1950.5 million. Each of the components of track construction costs are discussed below.

Table III-F-13
Track Costs Comparison

		SECI	CSXT	Difference
1.	**Ties**	$213,504,666	$362,857,450	$149,352,785
2.	**Ballast**	$191,499,014	$497,303,969	$305,804,954
3.	**Labor**	$500,756,388	$622,221,165	$121,464,777
4.	**Rail & OTM**	$1,001,342,579	$891,401,376	($109,941,203)

a. Geotextile Fabric

SECI's engineers acknowledged the need for geotextile fabric under turnouts and at-grade crossings, but understated the coverage area under each turnout. SECI did not provide any details of the turnout area requiring geotextile coverage, but the propor computation would include area sufficient to cover the roadbed under the turnout along the mainline length, plus the triangular area for the diverging side of the turnout. CSXT has calculated correctly the area under each turnout and restated geotextile costs for all SFRR turnouts.

b. Ballast

SECI's engineers have used 18" of ballast and subballast, consisting of a 6-inch subballast layer and a 12-inch layer of clean rock ballast for all main tracks. CSXT accepts SECI's ballast and subballast section specifications, but concludes that SECI's engineers did not properly calculate ballast and subballast cross sections and therefore quantities for multiple track segments of the SFRR. SECI also failed to account properly for superelevation required for curved track sections in order to maintain assumed train speeds. Diagrams of the corrected SFRR main track cross sections (single and multiple track) are included in CSXT Reply WP "Ballast Section Computations.xls.

SECI's engineers used 4" "of subballast and 6" of ballast under yard tracks, origin and destination spurs, and helper pocket, set-out tracks and interchange tracks. CSXT accepts these specifications.

SECI assumes that the ballast for the SFRR would be locally obtained limestone or granite, crushed to meet AREMA No. 4 size requirements and meeting Los Angeles and Mill Abrasion requirements and specifies locations from where the ballast required for the SFRR construction would be obtained. CSXT again accepts SECI's ballast standard, but concludes that SECI's seven ballast sources are too limited and are inconsistent with the proposed construction schedule. Specifically, SECI proposes the following quarries and associated costs for the SFRR ballast:

Quarry Location and Supplier	**CSXT Cost**
Verndon, VA, Martin Marietta	{{ }}
Luck, VA, Luck Stone	{{ }}
Skippers, VA, Vulcan Materials	{{ }}
Lemon Springs, NC, Martin Marietta	{{ }}
Junction City, GA, Martin Marietta	{{ }}
Tyrone, GA, Hanson	{{ }}
Whites Creek, TN, (Not on workpapers)	{{ }}
Average Unit Cost	{{ }}

Because of the numerous obstacles to the efficient flow of ballast unit trains between SECI's proposed railheads along the SFRR alignment such as large bridges and tunnels, ballast from the quarries identified by SECI cannot be physically transported along the SFRR right of way in a manner that fits within SECI's proposed construction schedule. For example, the Henderson Bridge would take the longest time to complete. While the grading can be accomplished for the roadbed north of this structure into Indiana and Illinois, the nearest ballast supply is in White's Creek, TN, located south of the Henderson Bridge. Without a supplier that could bring ballast from the north side of the Ohio River, this track construction could not be

completed until after the bridge was completed. This would add considerable time to the project. By adding both a railhead for materials at Evansville, IN and locating adequate ballast supply north of the bridge the construction schedule can be met. CSXT determined that the following additional sources for ballast are required for efficient construction of the SFRR:

Quarry Name and Location	**CSXT Cost**
Mulzer Crushed Stone, Evansville, IN	{{ }}
Conrad Yelvington Dist., Hardeeville, SC	{{ }}
Martin Marietta, Jacksonville, FL	{{ }}
Coolspring Quarry, Inc., Uniontown, PA	{{ }}

Adding these locations changes the average ballast price per ton to $13.31.

In addition to the material price, SECI includes ballast transportation cost from the quarry to construction railhead, but fails to include necessary costs for movement of the ballast from the railheads to placement in the track. While this cost is typically a component of the track installation cost, in this proceeding SECI relies on a quote for track installation from Queen City Railroad Construction that includes only the labor cost to "distribute ballast from hoppers or ballast cars." Because the quote assumes all materials are provided by the owner, it by definition does not include a ballast train cost component to move ballast from the railheads to the track. CSXT added this cost in its reply.

For ballast transportation from the quarry to the railhead, SECI calculated the average transportation distance from the seven ballast sources it selected. CSXT adjusted those distances to include the four additional sources it determined to be required. CSXT's revised ballast cost, including all transportation cost, is {{$ }} per ton.

SECI determines that subballast cost for the SFRR would $13.00 per ton based on unit costs for approximately 17,000 tons of subballast obtained for the Trestle Hollow Project, which it claims includes delivery costs as well as placement of the subballast on the roadbed. As with

the cost for common excavation discussed previously, SECI has not demonstrated that a Trestle Hollow subballast unit cost is representative of the cost the SFRR would incur. CSXT rejects the use of the Trestle Hollow subballast unit cost and have developed subballast costs for the SFRR by locating quarries along the proposed route that are located similar distances (approximately 40 miles) from the proposed route as the three quarries located nearest the Trestle Hollow project and obtaining both pricing and transportation cost information. In the case of the lines below the Fall Line in South Carolina, Georgia, and Florida, CSXT requested relevant information for aggregate suppliers that have distribution yards in those areas since there is no virgin rock available.

Subballast quotes for materials and delivery from various quarries and material distribution yards are as follows:

Location	**Unit Cost $/Ton**	**Transportation $ per ton mile**	**Delivered Cost $/ton at 40 mile radius**
Jacksonville, FL	$21.75	$0.21/ton-mile	$30.15/ton delivered
Savannah, GA	$21.75	$0.25/ton-mile	$31.75/ton delivered
Uniontown, PA	$ 9.00	$0.16/ton-mile	$15.40/ton delivered
Evansville, IN	$ 8.10	$0.19/ton-mile	$15.70/ton delivered
Skippers, VA	$10.45	$0.20/ton-mile	$16.10/ton delivered
Kennesaw, GA	$10.00	$0.22/ton-mile	$18.80/ton delivered
Columbia, TN	$ 6.00	$0.15/ton-mile	$12.00/ton delivered
AVERAGE	$12.43	$0.20 /ton-mile	$20.32/ton delivered

CSXT applied this average cost for subballast in its reply.

c. Ties

SECI's engineers selected wood ties with a tie spacing of 20.5 inches for all main track, passing sidings, and branch lines. CSXT notes that the proposed tie spacing does not meet CSXT's own specification but has accepted the proposed spacing in its reply. SECI's engineers used wood ties with 24" spacing in yards, set-out tracks and interchange tracks which CSXT also accepts.

CSXT accepts SECI's development of unit costs for ties based on CSXT's average wood tie cost as shown in its 2008 R-1, Sch. 721 ($36.03).

d. Track (Rail)

i. Main Line

CSXT accepts SECI's proposed main and branch line rail specifications and unit prices.

ii. Yard and Other Tracks

CSXT accepts SECI's proposed rail specifications and unit prices for yard, interchange, origin and destination spurs, helper pocket tracks, and set-out tracks.

iii. Field Welds

CSXT accepts SECI's proposed field weld specifications and unit prices.

iv. Insulated Joints

Insulated joint requirements are addressed in the signals and communications costs discussed in Part III-F-6 below.

v. Switches (Turnouts)

CSXT accepts SECI's proposed turnout sizes but rejects SECI's turnout unit prices because contrary to SECI's assertion, the turnout prices do not include the cost of switch machines for power turnouts. Costs for switch machines are added under signals and communications below.

vi. Rail Lubrication

CSXT accepts SECI's proposed spacing of lubricators and its unit cost for rail lubricators.

vii. Plates, Spikes and Anchors

CSXT accepts SECI's proposed tie plate, spike and anchoring specifications and unit costs.

viii. Derails and Wheel Stops

CSXT accepts SECI's proposed placement of derails and wheel stops as well as its proposed unit costs.

ix. Materials Transportation

Specific transportation costs associated with a given item are addressed in the relevant portions of this Subpart, or in the applicable e-workpapers. Therefore, no additional transportation costs have been added for those items.

x. Track Labor and Equipment

CSXT accepts SECI's proposed track labor and equipment costs for the activities specifically included in the price quote from Queen City Railroad Construction, which are limited to the following:

- Provide labor to unload and distribute all track material including 136 RE CWR or 115 RE CWR from rail train, timber crossties, tie plates, rail anchors, spikes, and ballast
- Construct track complete using CWR, crossties on 21" centers, box anchoring every other tie, box anchor every tie within 200' of grade crossings
- Distribute ballast from hoppers or ballast cars
- Surface and line track, regulate ballast, 12" of ballast under center of ties

Because the quote request by SECI specified that all materials would be furnished by the owner of the hypothetical track construction project, the Queen City quote understandably covers distribution along the roadbed and installation of materials unloaded from rail and other work trains, but does not include the rail train costs themselves or the transportation of materials from the construction railheads to the placement locations. CSXT has added these costs.

4. Tunnels

SECI developed the SFRR tunnel inventory and tunnel lengths from materials provided by CSXT in discovery, but left out of its SFRR inventory the existing 799 foot tunnel at Point of Rocks, MD and failed to account properly for SFRR double track tunnels. For tunnel costs, SECI engineers utilized the base unit cost of $2,561 per linear foot ("LF") developed in *Coal Trading Corp.* and then indexed this cost from 1980 to 1Q09. The procedure yields a tunnel construction unit cost of $7,431 per LF.

As the Board has recognized, the unit cost for tunnels developed in *Coal Trading Corp.* may have been adequate for the construction of old-fashioned timber lined tunnels (which are no longer commonly built today). *See* STB Docket No. 42088, *Western Fuels Ass'n v. BNSF Ry. Co.*, (served September 10, 2007), slip op. at 75, 107. But in *Western Fuels*, the Board rejected the claim that the *Coal Trading* unit cost would be sufficient to cover the costs of constructing modern tunnels with concrete and steel. *Id.*, slip op. at 107. Because timber lined tunnels require additional maintenance that is not required for tunnels constructed with concrete and steel (*id.*), these tunnels are more costly and less efficient over time.[21] They also increase the risk of tunnel fires which may cause serious traffic delays and require total tunnel reconstruction.[22]

SECI's engineers did not indicate whether they intended to use old-fashioned timber lined tunnels like those at issue in *Western Fuels*, but the *Coal Trading* unit costs they proposed

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[21] Railroad engineers have recognized for more than a century that timber lined tunnels are a "temporary expedient" that are not cost-effective over time. *See* CHARLES PRELINI, TUNNELING: A PRACTICAL TREATISE 68 (1902) ("Timber is seldom employed in lining tunnels except as a temporary expedient, and is replaced by masonry as soon as circumstances will permit").

[22] As stated in the previously-cited treatise, "timber linings possess few advantages. It is only the matter of a few years when the decay of the timber makes it necessary to rebuild them, and there is always the serious danger of fire... causing serious delays in traffic, and necessitating complete reconstruction." *Id.*

are inadequate to construct modern concrete and steel tunnels. In addition, SECI failed to account for the increased maintenance costs associated with timber lined tunnels (as required by Board precedent). *See Western Fuels, supra,* slip op. at 75, 107. Thus, SECI's tunnel costs are incomplete and unreliable.

CSXT Construction Engineers corrected SECI's SFRR tunnel inventory and, rather than rely on an outdated unit cost for timber lined tunnels that is nearly 30 years old, developed detailed tunnel construction costs for the SFRR tunnels.

Specifically, three construction costs were developed: Unlined Single Track Tunnel, Concrete Lined Single track tunnel and Concrete lined double track tunnel. The vast majority of the original CSXT tunnels along the SFRR route were excavated using drill and blast methods. Because of the relatively short length and horse-shoe shape of the tunnels, they would also be excavated today with drill and blast methods. Large and sophisticated rock tunnel boring machines excavate the shape of a circular tunnel and are typically used for much longer tunnels.

Assumptions made for the single track tunnel and double track tunnel dimensions are a horse-shoe shaped tunnel with a finished width of 16 and 32 feet respectively and a height of 19 and 21 feet respectively. Concrete lining thickness for the single track tunnel is assumed at 12 inches of reinforced cast-in-place concrete and for the double track tunnel an 18-inch thick reinforced cast-in-place lining is assumed.

For each cost estimate the tunnel length used was the average of the existing tunnels of each type as shown in Exhibit Table Tunnel Lengths. For the lined tunnels, the average of both concrete and brick tunnels was used.

The tunnels were assumed to be excavated in a non-gassy environment, meaning that methane or other explosive gasses usually found in coal deposits would not be encountered

during construction. Initial support for the tunnel consists of pattern rock bolts and shotcrete. In addition ground conditions are assumed to be stable enough to allow for full face excavation without a partial top heading and bench which would require a slower excavation rate in two steps of advance.

Tunnel excavated rock is stockpiled near the portals and the disposal costs to the final disposal location are not included. Electricity is generated on-site with diesel generators instead of using power grid electricity. Tunnel Cycle Time is the time it takes to drill blast holes, load blast holes with explosives, detonate, excavate the blasted rock and install temporary support. Each cost estimate has a detailed breakdown of the Tunnel Cycle Time based on a drilling speed of 3 feet per minute, a loading time of 3 minutes per hole, and a excavation rate of 20 bank cubic yards per hour for the single track tunnel and 30 bank cubic yards per hour for the double-track tunnel. The difference in excavation rates is based on being able to use a larger loader in the double track tunnel and having more room to load the dump trucks. Temporary tunnel support consisting of steel fiber reinforced shotcrete and rock bolts are installed at a rate of 5 cubic yards of shotcrete per hour and 12 minutes per rock bolt with a boom drill. Tunnel Cycle time for the single track tunnel is 20.27 hours for a 12.5 feet advance per blasting round and for the double track tunnel 21.1 hours for a 12.5 foot advance per blasting round. Advance rates are 59.2 and 57 feet per week for the single track and double track tunnels respectively.

Each direct cost activity is broken down by labor and operated equipment cost and material costs when applicable. Each activity has a quantity of work, production rate and the activity duration. Total costs for each activity is summarized in the Direct Costs Table at the beginning of the cost estimate. Each activity has an Item number for easy cross-reference. Each

cost estimate includes a construction schedule as a bar chart showing the main activities and the sequential duration in weeks.

The cost estimates were applied to the SFRR tunnel inventory by type to arrive at total tunnel costs. CSXT's total cost for the tunnels on the SFRR is $168.0 million higher than it was in SECI's opening.

Table III-F-14
CSXT SFRR Tunnel Lengths and Cost by Type

	Tunnel Type	Total Length (ft)	Cost
1.	Unlined Single Track Tunnel	**6,839**	**$51,176,237**
2.	Concrete Lined Single Track Tunnel	**7,520**	**$78,674,728**
3.	Brick Lined Single Track Tunnel	**3,608**	**$44,187,176**
4.	Concrete Lined Double Track Tunnel	**9,362**	**$118,401,214**
5.	Brick Lined Double Track Tunnel	**10,832**	**$136,992,304**
6.	**Total**	**38,161**	**$429,431,659**
7.	SECI Opening	**35,170**	**$261,348,270**
8.	**Difference**	**2,991**	**$168,083,389**

5. Bridges

SECI's bridge inventory and associated costs were generated by Mr. Harvey Crouch (construction costs) and Mr. Kevin Lindsey (bridge designs and costs). The engineering team for CSXT includes Dan Doty, Bill White and David Magistro (CSXT Bridge Engineers) who, combined, have over 65 years of experience in railroad bridge design.[23] Based on their review of the SECI's SFRR bridge design and cost development work papers, the CSXT Bridge Engineers have determined that while SECI's engineers developed bridge details tailored to the needs of the SFRR, their costing plan is restricted to details taken directly from a number of small projects performed for their own clients. The costs they developed are based on a handful of projects in which SECI's two witnesses have been involved. By focusing on this limited

[23] Details of CSXT Bridge Engineers' experience and qualifications are set forth in Part IV.

experience, resource set, and data, SECI failed to capture properly the costs for those SFRR bridges that fall outside the scope of their sample bridges.

SECI has also taken an unorthodox and simplistic approach by developing bridge investment cost on an *ala carte* bridge assembly notion that identifies standard details for the SFRR's four different bridge types with no underlying engineering design or supporting calculations and then uses a simple formula to mix and match bridge types and components until the total length of each bridge has been covered. Because the design criteria for each of SECI's four bridge types differ, the cobbling together of individual spans results in bridges that are simply unworkable.

While SECI's overall approach is simple, its implementation is riddled with errors and omissions. Some of these errors have significant impact on the estimated bridge costs. For example, SECI's development of SFRR bridge costs includes the following implementation and conceptual errors:

- SECI failed to consider properly the cost of SFRR major bridge structures over navigable waterways.
- SECI's SFRR bridge inventory is missing a total of 133 railroad bridges and 104 overhead bridges.
- The number of bridge piles included by SECI in its bridge costs is lower than the number of piles depicted in SECI's drawings.
- The concrete dimensions in SECI's drawings include more concrete in the piers than included by SECI in its bridge costs.

In addition to these fundamental and conceptual errors, SECI's Bridge Construction Costs spreadsheet formulas contain the following errors:

- SECI developed the cost for Type III (90 ft) spans using 190 feet instead of 90 feet, more than doubling the estimated cost of the Type III spans used. This error increased SECI's calculated SFRR bridge cost by approximately $300 million.

- Complainant neglected to multiply the number of pilings and pile tips at the abutments by 2 (the number of abutments at each bridge), thus estimating only half the cost of these items.

- It omitted the cost of the Elastomeric Pads for the Type I (20 ft to 32 ft) spans (despite having devoted a separate tabbed worksheet to development of cost for this item).

- SECI incorrectly calculate the number of 60' high piers required for certain combinations of bridge span types.

CSXT's engineers have corrected the errors in SECI's development of SFRR bridge costs (including a reduction of SECI's bridge costs by approximately $300 million) and conclude the properly developed SFRR bridge investment is approximately $1.485 Billion as summarized in the following table.

Table III-F-15
Comparison of CSXT's Estimate of Bridge Costs
With SFRR's Estimate of Bridge Costs[24]

Route	SFRR		CSXT			
	Railroad Bridges	Underpass Bridges	Railroad Bridges	Special RR Bridges	Missing RR Bridges	Underpass Bridges
East	$511.9	$12.7	$601.8	$247.0	$25.7	$14.7
West	$286.3	$8.2	$238.5	$276.6	$25.2	$10.9
NS (shared assets)			$17.3	$27.1		$0.6
Subtotals	$798.2	$20.8	$857.5	$550.7	$50.9	$26.2
Totals	$819.1		$1,485.3			

a. Bridge Inventory

CSXT Bridge Engineers reviewed SECI's SFRR bridge inventory and determined that SECI omitted a total of 133 railroad bridges and 104 overhead bridges. CSXT has corrected SECI's SFRR bridge inventory as summarized in the following table.

[24] *See* CSXT WP "Final - REV 01-14-10 - Copy of Bridge Construction Costs.xls"

Table III-F-16
Comparison of CSXT Inventory of Bridges with SFRR Inventory of Bridges

Route	SECI		CSXT[25]		Difference	
	Railroad Bridges	Underpass Bridges	Railroad Bridges	Underpass Bridges	Railroad Bridges	Underpass Bridges
East	456	221	479	269	23	48
West	330	143	363	178	33	35
NS (shared assets)	0	0	77	21	77	21
Totals	**786**	**364**	**919**	**468**	133	104

b. Bridge Design and Cost Overview

ECI's engineers developed several standard bridge types for the SFRR as follows:

- Type I bridges with varying spans of 20 to 32 feet
- Type II bridges with spans of 60 feet
- Type III bridges with spans of 90 feet
- Type IV bridges with spans of 145 feet

CSXT accepts generally SECI proposed categories, but make substantial corrections to inputs and assumptions regarding proper design and construction of each bridge type.

i. Bridge Design

CSXT's Bridge Engineers reject SECI's modular, "snap together building block" approach to SFRR bridge design wherein any span and any substructure unit may be combined with any other standard unit. SECI has provided no documentation or calculations to support any of the details or assumptions of this novel approach, and has made no showing that workable SFRR bridges could be constructed using this approach. Critical details – those that typically drive real world bridge costs – are overlooked in SECI's simplified application. SECI's bridge design suffers from the following basic defects:

[25] *See* CSXT WP "Final - REV 01-14-10 - Copy of Bridge Construction Costs.xls", "Final - Overhead Bridge Construction Costs with Missing Bridges.xls"

- Lack of compliance with standards set forth in the American Railway Engineering and Maintenance-of-Way Association Manual of Recommended Practice (AREMA Manual).

- SECI's standard 145-foot Through Plate Girder (TPG) spans do not satisfy the navigational clearance requirements of the United States Coast Guard (USCG) at all locations.

- SECI's assumption of 30-foot long steel piles in all locations is inadequate.

- SECI's design for 90-foot Prestressed Concrete I-Girder Beams (PCBs) is inadequate for E-80 Live Load.

- SECI's substructure units are inadequate: pier caps are not large enough to accommodate the prescribed superstructure elements and the capacity of the piers and abutments is insufficient to resist design loads defined by AREMA.

Each of these faults is addressed below.

(a) Use of the American Railway Engineering and Maintenance-of-Way Association Manual of Recommended Practice (AREMA Manual).

The AREMA Manual is the cornerstone of railroad engineering, and railroad bridge owners demand that their structures be designed to meet AREMA requirements. SECI's bridge details do not adhere to current AREMA standards. Specifically, SECI's engineers reference "Current AREA specifications, masonry" for the design of the slabs for Type I spans. AREA is the predecessor organization of AREMA, and thus, not current. SECI engineers also reference the 1999 AREMA Manual for Railway Engineering for the design, fabrication and installation of fracture critical members for the Type IV spans, which is a decade older than the current 2009 edition of the AREMA Guidelines. Notwithstanding SECI's lip service to AREMA guidelines, there are numerous occasions where the details offered by SECI very clearly do not meet the requirements of the AREMA Manual. CSXT's engineers checked the SECI's proposed bridge components as depicted on the limited number of sketches provided for compliance with the AREMA Manual.

As just one example, CSXT Bridge Engineers could find no design calculations for any of the substructure units. Instead, by the absence of design calculations, SECI simply asserted the substructure details were adequate without regard to engineering design standards. CSXT's engineers found that the number of piles shown were inadequate to support the AREMA design loads and the loads from SECI's superstructure details. The additional piles also required that the footings be enlarged. Pile spacing needs to meet AREMA guidelines or the piles will not develop full capacity. Additionally, pile spacing needs to be designed to efficiently use the piles to counteract the longitudinal and lateral forces imposed by trains. This process of design could not be found in any of SECI's work papers, but it should be evident and easily found if SECI followed AREMA guidelines for substructure design.

(b) SECI's 145' Through Plate Girder (TPG) spans do not satisfy USCG clearance requirements for navigable waterways in terms of horizontal and vertical clearance at all locations.

The United States Coast Guard ("USCG") has regulatory jurisdiction over all of the nation's navigable waterways. They have imposed clearance requirements that bridge owners must adhere to in order to insure that water traffic may proceed unimpeded past any bridge over a navigable waterway. These navigational clearance requirements have both vertical and horizontal components. SECI's engineers have proposed to cross all navigable waterways using their one-size-fits-all standard 145-foot steel through plate girder supported by a pier that is 60-feet tall. While this standard may satisfy the minimum horizontal clearance requirement for smaller river crossings, it fails to provide adequate clearance at existing movable spans along the SFRR route. This is primarily because a 60-foot tall pier does not provide 60-feet of vertical clearance above the water line. Instead, the pier is founded on the river bed, and most of the pier's height is below water. CSXT Bridge Engineers consulted with the USCG and determined

that the SFRR would be required to construct moveable bridges at eight major river crossings to preserve the existing condition of unimpeded navigation on the waterways provided by existing movable spans. As such, SECI's assumption to build fixed bridges at these locations is untenable. CSXT Bridge Engineers have developed the costs for movable bridge structures at the required locations.

In addition to the moveable spans, CSXT Bridge Engineers' consultation with the USCG revealed that SECI's proposed Type IV 145 foot span does not provide adequate horizontal clearance for the navigation channels of the Ohio River at Henderson, KY, the Monongahela River at Brownsville, PA, the Monongahela River at New Geneva, PA or the Monongahela River at Fairmont, WV. *See* CSXT WP "FW Navigational clearances on the Monongahela River.msg." The existing bridges at these locations utilize long fixed truss spans to permit free passage of waterway traffic below them. Per the 8th USCG District Bridge Administration Office, the existing horizontal and vertical clearances at these major river crossings would have to be preserved. CSXT's engineers have estimated material and construction costs for using long fixed truss spans over the navigational channel of these major river crossings in lieu of SECI's 145' TPG spans. *See* CSXT WP "Final – REV 01-14-10 – Copy of Bridge Construction Costs.xls, tab "Special Bridges."

(c) Use of 30-foot piles in all locations is inadequate.

SECI's engineers assume 30-foot long steel H-piles at all SFRR Bridge locations. This assumption is inadequate for many of the myriad geotechnical conditions that would be encountered along the proposed SFRR route. The use of 30-foot piles is workable in a location such as Tennessee, where SECI's prototypical bridges were constructed and the bedrock layer is relatively close to the ground surface. However, in the eastern coastal areas of Florida, Georgia, South Carolina, North Carolina, Virginia and Maryland, 30-foot piles are too short. CSXT's

geotechnical consultant, Shannon & Wilson, conducted an assessment of historical data on pile lengths along the proposed route. Specifically, Shannon & Wilson divided the SFRR route into different geological provinces and obtained historical data on pile depths within each province. The analysis confirmed that an average pile depth of 30 feet is suitable for the Appalachian Plateaus, the Valley and Ridge, Blue Ridge and Piedmont Provinces. However, for the Coastal Plain and the Interior Low Plateaus, Shannon & Wilson indicates average pile lengths of 75' and 50' respectively, should be used in these Provinces. Shannon & Wilson's analysis in included in CSXT's work papers. *See* CSXT WP "Pile Depths equiv.xls".

The longer pile length requirements in the Coastal Plain and Low Plateaus stem from the need for friction piles instead of end bearing piles. In these provinces, bedrock or other firm bearing strata are generally so far below the ground surface that end bearing piles are not practical. Friction piles, as the name implies, develop their load-carrying capacity from the frictional resistance between the pile and the soil. This frictional resistance is a function of the pile length, because the longer the pile length, the more surface area there is between the pile and the soil to develop frictional resistance. End bearing piles, on the other hand, develop their load-carrying capacity as a column, where the load is applied at the top of the pile, and the bottom of the pile is firmly supported by bedrock or some other firm bearing stratum.

SECI's engineers proposed universal use of high capacity end bearing piles is an obvious effort to limit the number of individual piles, and to keep the sizes of the pile footings as small as possible. This approach is only feasible when there is a bearing stratum relatively close to the ground surface. When the bearing stratum is very deep, longer friction piles must be used along with pile tips to ensure that damage to the pile does not occur as a result of high driving stresses. CSXT Bridge Engineers have added friction piles where required along the SFRR route.

(d) Design for 90-Foot Prestressed Concrete I-Girder Beams (PCBs) is inadequate for E-80 Live Load.

SECI's engineers assume the use of five prestressed concrete bulb tee girders spaced four feet on centers with a 9 inch concrete deck for their standard 90 foot span. No calculations were provided to support the use of this superstructure system and few details were provided on any of the SECI sketches. CSXT Bridge Engineers analyzed these assumed specifications and found them to be insufficient to support the Cooper E-80 live load standard. Specifically, the exterior girders fall outside the AREMA allowable width for lateral distribution of the live load and are therefore ineffective. CSXT Bridge Engineers therefore reject SECI's proposed 90 foot span design as detailed in their work papers.

To remedy the SECI design flaw, CSXT Bridge Engineers reduced the number of bulb tee girders to four and increased the deck thickness to 12 inches to allow for all girders to fall within the allowable width for lateral distribution of the live load. The reinforcing and prestressing steel in the four bulb tee girders was checked for capacity to support the E-80 live load and was determined adequate.

(e) SECI's substructure units are inadequate in various respects.

CSXT Bridge Engineers have identified numerous shortcomings in SECI's substructure design. These include:

1. Pier caps that are too small.
2. Failure to include step caps to accommodate varying superstructure depths.
3. Inadequate bearing pads.
4. Insufficient number of piles.

Each of these is discussed below.

Pier Caps That Are Too Small. The bearing designs included in SECI's cost estimate spreadsheet for the Type II and Type III bridges would not physically fit on the caps as proposed. This is not an issue related to design loads, but rather a matter of geometry. SECI's engineers proposed to fit two 2'-2" x 3'-9" bearing pads, in-line across a 3'-0" wide pier cap. Even if the required 6" edge distance is discounted, these bearings clearly do not fit. CSXT's engineers have redesigned the bearings and corrected the pier cap sizes such that the superstructure elements would actually fit on top of those pier caps. Concrete and reinforcing steel quantities have been updated to include the additional material required for larger caps.

Failure to Include Step Caps to Accommodate Varying Superstructure Depths. For those bridges with multiple spans of varying length, different superstructure depths meet on a common pier cap. However, SECI has failed to provide for a step in the cap that is necessary to keep the rail at the same elevation. CSXT's Bridge Engineers designed the proper stepped cap detail that would be required where there are differing superstructure depths resting on common pier caps. The increased concrete and rebar quantities associated with the use of these stepped caps has been accounted for in CSXT's corrected Bridge Costs.

Inadequate Bearing Pads. SECI's bearings assumptions do not meet AREMA's design requirements. SECI's engineers proposed the use of one inch thick elastomeric bearing pads, with a one inch thick steel sole plate welded to the bottom flange of the Through Plate Girder (TPG) or welded to a steel plate cast into the bottom of the prestressed concrete 72 inch modified bulb tees used on the 60 and 90 foot Type II and Type III spans. However, SECI failed to adjust the thickness of the bearing pad with changes in span length. SECI's bridge design work papers include no calculations, support, or explanation for the universal application of one inch bearing pads. CSXT Bridge Engineers analyzed this pad for rotational capacity per the recommended

practices in AREMA Chapter 15 Part 10 for spans greater than 50 feet. These calculations confirmed that the pads are inadequate to meet the requirements for bearing rotation. As such, CSXT Bridge Engineers reject the use of one inch thick elastomeric bearing pads with sole plates for the Type II, Type III and Type IV bridges as this type of bearing does not meet the requirements stated in the AREMA manual. CSXT's Bridge Engineers designed steel reinforced elastomeric bearing pads for the prestressed bulb-tee girders used in the Type II and Type III bridges. These newly designed bearings have adequate rotational capacity to meet AREMA guidelines.

In addition to a lack of rotation capacity, the one inch thick elastomeric bearing pad does not have sufficient load carrying capacity to support the Type IV Bridge (TPG span). Instead, CSXT's engineers designed steel pedestal hinged bearings to support the fixed end and steel rocker bearings to support the expansion end for this span. These new steel pedestal bearings do meet AREMA's guidelines for bearing capacity and safely transferring load into the pier caps. These bearing calculations are included in the work papers. *See* CSXT WPs "Bearing_Design_60ft – CE.pdf", "Bearing_Design_60ft – STV.pdf", "Bearing_Design_90ft – CE.pdf", "Bearing_Design_90ft – STV.pdf."

Insufficient Number of Piles. In addition to geometry and bearing design errors, CSXT Bridge Engineers found that the piles supporting the substructure units proposed by SECI do not have adequate capacity to resist the loads prescribed by AREMA. Generically, SECI details suggest with no documentation or support that four steel H-piles at each pier and six steel H-piles at each abutment would support any length of span placed on them. To avoid making any assumptions or generalizations, CSXT's Bridge Engineers established a maximum allowable pile load using a maximum stress value commonly accepted in the states traversed by SFRR. Their

subsequent analysis confirmed that SECI's assumed number of piles in the foundation elements supporting structure types II, III, and IV was grossly inadequate when compared to this maximum allowable pile load. To remedy this shortcoming, CSXT Bridge Engineers calculated the loads and forces on the piles for E-80 live load per AREMA guidelines and, as a result of those calculations, increased the number of piles in the foundations such that they can resist the prescribed loads and forces resulting from E-80 live load traffic. Foundation load calculations are included in the CSXT Bridge Engineer's supporting documentation. *See* CSXT WP "Substructure Calc Check.pdf".

Because of the increased numbers of piles required to support the bridge piers, the size of the pier footings must be increased to accommodate the greater number of piles. CSXT's engineers have included the increased number of piles and increased pier footing size in their corrected Bridge Cost evaluation. The calculations documenting these corrections are included in the supporting documentation.

(f) Other Miscellaneous Items

There are a number of other issues that highlight the complexities attributable to designing and building bridges that typically result in an increase in overall construction costs. These include, but are not limited to, design issues associated with curved bridges, skewed bridges, seismic design, exceptionally tall structures and the potential for vessel impact on commercially navigable waterways. Because each of these issues can only be properly quantified on a case-by-case basis, CSXT's Bridge Engineers did not have sufficient time to quantify the additional costs attributable to these items for the SFRR bridges. The inability to develop and include those significant costs in the available time renders CSXT Bridge Engineer's revised bridge investment costs conservative. Details of each of these issues and how

their proper treatment of would increase SFRR bridge costs are summarized in Reply Exhibit III-F-1.

ii. Bridge Costs

This section discusses several specific errors made by SECI in its estimation of Bridge Costs and details the necessary corrections..

(a) Unit Costs

SECI engineers developed bridge costs and unit prices for material from projects they designed, citing the "real world" nature of such costs. In reality, the historical costs relied upon by SECI were based on seven small projects, constituting less than $4.5 million total bid construction costs, six of which are in Middle Tennessee and the other in nearby Huntsville, AL. SECI has not demonstrated that these limited projects are representative of the types of bridge construction that would be encountered along the route of the SFRR. Nor, as discussed previously, could it.

Further, in developing SFRR bridge unit costs, SECI uniformly selected the "low bid" out of the myriad of elements that comprise a contract bid. This selective picking of the lowest line item is different than selecting the lowest contractor bid for an entire project. Singling out individual line items does not provide an accurate or reasonable representation of the cost for that item. Contractors are not bound to bid items at their real cost and very often strategically adjust unit prices for various bid items up and down on their bid sheets to suit their goals for any given bid. The result is that some bid items are proposed below the contractor's real cost while others are bid above the contractor's real cost. To uniformly select the lowest unit price for each bid item from a group of different contract bids does not reflect what a bridge owner could reasonably expect to pay for that bid item as a part of a larger project. SECI's approach guarantees that the sum of its parts does not equal a whole.

CSXT Bridge Engineers reject SECI's selection of the lowest bid price from a small number of localized bridge projects as the basis for SFRR bridge construction costs and instead rely principally on Means – the costing source generally accepted by the Board – as the basis for SFRR bridge costs. For those items for which Means does not publish a cost, CSXT Bridge Engineers consulted a variety of construction cost sources and quotes to assess the validity of the unit costs proposed by SECI's engineers. In those instances in which the construction quotes were materially different from the costs proffered by SECI, CSXT did not reject the SECI costs outright and substitute the more reliable quote data. Instead, CSXT Bridge Engineers conservatively averaged the quotes they obtained with the costs proposed by SECI. CSXT Bridge Engineers believe that this approach offers a fair representation of the low side of the range of likely bridge construction costs that could be achieved throughout the vast SFRR network. All of the unit cost data used by CSXT's Bridge Engineers is included in their supporting workpapers. *See* CSXT WP "Final – REV 01-14-10 – Copy of Bridge Construction Costs.xls".

(b) SECI sampled unit costs from projects that are not representative of the SARR

The projects that SECI's engineers relied on to develop SFRR bridge unit costs do not include any structures over a major waterway. As such, none of the unit costs for the bridges put forth by SECI's engineers account for the added expense of building a structure over water. It costs much more to build a pier in water than on dry land. Larger cranes are required and crane access must be configured closer to the work area because of stability issues and turn-over risk. Equipment movements are constrained by temporary causeways or barges, adding both time and cost to the process. Material staging, likewise, becomes more complex. CSXT's Bridge Engineers consulted with bridge contractors to quantify the costs of bridge construction over

water. Because of the large number of bridges across the SFRR network, each with its own site-specific considerations, CSXT's engineers focused only on the major river crossings, rather than all bridges crossing over water. As such, CSXT Bridge Engineers developed individual construction costs for *twelve* major river crossings the SFRR would be required to make. Details of these calculations are set forth in the CSXT Bridge Engineer work papers.

(c) SECI's 145' Through Plate Girder (TPG) spans do not satisfy USCG clearance requirements for navigable waterways in terms of horizontal and vertical clearance at all locations

SECI's engineers proposed crossing major rivers at four locations using their standard 145-foot through plate girder span on 60-foot tall piers. These are the Ohio River at Henderson, KY, the Monongahela River at Brownsville, PA, the Monongahela River at New Geneva, PA and the Monongahela River at Fairmont, WV. SECI asserts in its narrative that it consulted the United States Coast Guard for determination of navigation requirements. However, the results of any such correspondence did not find their way into SECI's bridge design criteria. CSXT Bridge Engineers also consulted with USCG representatives regarding the navigational requirements at these large bridges and, unlike SECI, have included the details of the correspondence with the USCG in their workpapers and supporting documentation. *See* CSXT WP "FW Navigational clearances on the Monongahela River.msg."

The existing CSXT rail line crosses the navigation channel of each of these rivers on long fixed truss spans. Because the USCG would not permit construction of any new structure where the horizontal and vertical clearances did not at least match what is in place today, CSXT Bridge Engineers designed comparable long fixed truss spans with the required clearance over the navigation channels in those locations. Material quantities were estimated by replicating the general proportions of the long span trusses currently in service in those locations and cross

checked with standard empirical equations. A combination of Means and various contractor quotes was used to estimate the costs associated with constructing each of the truss spans. Details of these calculations are set forth in CSXT Bridge Engineer work papers. *See* CSXT WP "Final – REV 01-14-10 – Copy of Bridge Construction Costs.xls".

(d) Movable Spans Must Be Added To Meet Coast Guard Clearance Requirements For Navigable Waterways

In compliance with USCG regulations for clearance requirements for navigable waterways, CSXT Bridge Engineers included costs for eight movable bridges along the proposed SFRR route. Based on modern standards for the most cost-effective span type for movable bridges, six of the movable bridges would be built as bascule spans and the other two would be vertical lift spans.[26]

In selecting each movable span type, CSXT Bridge Engineers did not simply assume replacement of each existing SFRR movable bridge span in-kind, which would be uneconomical. Specifically, swing span bridges are rarely built today because less than half of the swing span's length is available for horizontal clearance due to the large pivot pier in the middle of the span. CSXT Bridge Engineers would replace the three existing SFRR swing span bridges with more efficient bascule spans. Bascule spans are more and cost effective than swing spans because a much greater proportion of the overall span length is available for horizontal clearance. It would require a 260-foot swing span to achieve the same 100 foot clearance that can be obtained with a 150-foot bascule span.

[26] CSXT WPs "Bridge – B.pdf" and "Bridge – C.pdf" contain documentation of the USCG clearance requirements. CSXT WP "Bridge – D.pdf" shows how the unit costs were calculated with respect to both bascule spans and vertical lift spans.

For the remaining moveable bridges, CSXT Bridge Engineers determined, based on industry practice, that movable span lengths less than 180-feet would be constructed as bascule spans and movable spans over 180-feet would be vertical lift spans.[27] To estimate the costs for these lift spans, CSXT Bridge Engineers consulted data from actual recent movable bridge construction contracts. The construction costs from these contracts were averaged to arrive at a cost per unit of length of movable span. That average cost per foot was applied to the required span length of each SFRR movable bridge.[28]

SECI's engineers failed to include costs for necessary waterproofing of the bridge decks. Deck waterproofing provides two functions: (1) it protects the concrete surfaces from standing water; and (2) it protects both the ballast and the deck surface from damage due to the pressure that occurs when the train loads are transferred from the ballast to the deck. Further, in climates that are susceptible to freezing temperatures, the top surface of concrete decks and spans must be protected to prevent water from entering cracks in the concrete. In freezing temperatures, water in the cracks would freeze, widening and deepening the cracks, increasing the risk of corrosion of the reinforcing steel or prestressing strands in the concrete. Corrosion of the steel in concrete would weaken the load carrying capacity of the structure.

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[27] This conclusion is based on the results of a comprehensive study conducted by Dr. J.A.L. Waddell. Movable bridge experts across the country routinely rely on this research. Dr. Waddell considered the cost of building both types of movable spans from every possible perspective. A copy of his research document is included in the supporting documentation. Reference "Bridge – F" is a snapshot of Dr. Waddell's comparative costs table which shows that the economic cost shifts from favoring the bascule span to favoring the vertical lift span when the span length reaches 182 feet.

[28] Reference "Bridge – E" shows the estimated cost of all of the movable bridges along the SARR.

In determining the waterproofing needs of the SFRR bridges, CSXT Bridge Engineers followed the recommended practices in AREMA Manual Chapter 8, Part 29. Costs for waterproofing have been included in the corrected Bridge Costs.

(e) Bridge Deck Drainage

SECI's engineers assume that bridge deck drainage would be provided by a single one inch diameter PVC deck drain running the entire length of each bridge. This assumption is undocumented and unsupported. There is no detail on the drawings, and no explanation of how this drainage is supposed to work. CSXT Bridge Engineers conclude the unexplained SECI bridge drainage proposal is unworkable.

CSXT Bridge Engineers determined that a minimum drainage system for SFRR bridge decks should provide for six inch diameter perforated PVC, enclosed in a geotextile sleeve. The geotextile sleeve prevents fine particles in the ballast from entering the pipe. Additionally, CSXT Bridge Engineers determined that drainage should be provided along both sides of the deck at the joint between deck and the curb, with the pipes extending 10 feet off the bridge to provide a discharge point away from the abutment. Calculations for deck drainage quantities and the associated costs are included in the supporting documentation, and the cost of deck drainage was added to the corrected Bridge Costs.

(f) Silt fences

SECI failed to provide for silt fences which would be required around the construction areas of bridge abutments to prevent considerable amounts of dirt, silt, and debris from entering the waterway or roadway spanned by the bridge. CSXT Bridge Engineers estimated the required quantity of silt fences and the associated costs. Calculations for silt fence quantities are included in the supporting documentation, and the cost of silt fences was added into the corrected Bridge Costs.

(g) Erosion control

Erosion control measures are required on and around bridge abutment spill slopes after bridges are constructed to preserve the integrity of the embankment. Rip rap is a commonly used erosion control measure because of its cost-effectiveness. SECI's engineers indicated no erosion control or slope protection of any kind on any of the proposed bridges. CSXT Bridge Engineers have estimated the required quantity of erosion control rip rap and the associated costs. These calculations are included in the supporting documentation, and the cost of the rip rap was added into the corrected Bridge Costs.

iii. Cost Development

All of the errors and omissions discussed above regarding the required investment for bridges on the SARR have been corrected by CSXT Bridge Engineers. A summary of the difference in cost calculated by CSXT versus SECI is shown in CSXT WP "Bridge – G.pdf". CSXT's engineers have estimated the total bridge investment to construct the proposed SARR to be approximately $1.485 billion. This cost is $666.2 million higher than the bridge cost in SECI's opening.

6. Signals and Communications

SECI assumes that the signal system for the SFRR will be Centralized Traffic Control ("CTC"). Also included in SECI's signal cost estimate are Failed Equipment Detectors ("FEDs"), Highway-Rail Grade Crossing Warning Systems and Automatic Equipment Identification ("AEI") scanners, plus related equipment. SECI assumes that the communications for the SFRR will be accomplished with a combination of microwave towers and land mobile radio stations.

CSXT's signal and communication expert is John T. Sharkey of Campbell Technology Corporation. Mr. Sharkey accepts SECI's choice of CTC as the SFRR primary signal system

and, although the technology is outdated and no longer used by CSXT, also accepts SECI's proposed deployment of a microwave based communications system, but identifies serious flaws and omissions in SECI's development of both costs. Specifically, based on a detailed review of SECI's design and costing work papers, Mr. Sharkey concludes that SECI has provided little or no explanation or documentation for many of the cost items included in its estimates and has omitted a number of critical components. SECI's work papers also include many unsupported or undocumented assumptions that undermine both the integrity and feasibility of its cost estimates.

SECI develops its signal estimate by drawing quantities from a variation of SECI's Exhibit III-B-3 schematic that purports to show SFRR signal locations into the spreadsheet "SFRR C&S spreadsheet.xls". However, the quantities on the drawings do not match those in the spreadsheet and, because SECI provided no supporting detailed design or schematics there was not enough information provided to verify SECI's signal counts.

Even without the necessary detailed data, CSXT's review revealed a number of omissions and understatements of the quantities and costs required for a complete and functional signal system. To close these gaps and determine the correct component quantities for the SFRR signal system, Mr. Sharkey created an annotated version of the SECI signal schematic and developed a detailed component count, citing specific references to source materials. Details of these revised counts are included in CSXT's electronic work papers.[29]

Based on his restatement of signal and communication component quantities, Mr. Sharkey identified the following issues with SECI's development of SFRR signal costs.

[29] *See* CSXT WPs "Reviewed C-S Straight Line 12-09.pdf" and "STV CTC SFRR C-S spreadsheet rev 2010-01-14.xlsx".

a. Missing Turnouts, Failed Equipment Dectors, and Automatic Equipment Identification Equipment

SECI incorrectly omitted six FEDs and two AEI units from its communications equipment inventories, and therefore omitted the costs for these units. Mr. Sharkey added these missing units in his restatement of SFRR signal costs

b. Omitted Insulated Joints

SECI suggests the use of "intelligent track circuit technology" for automatic signals, a technology it asserts does not require insulated joints. Mr. Sharkey rejects SECI's proposed deployment of a signal system without insulated joints because such a system does not meet accepted industry practice. SECI witness Grappone has been issued U.S. Patent 6,655,639, a copy of which is included in the CSX work papers. *See* CSXT WP "US Patent #6655639.pdf". The invention covered by the patent claims to detect broken rails in sections of track unoccupied by a train. While broken rail detection is a Federal Railroad Administration (FRA) requirement for a track circuit in a signal system (CFR 49 Part 236.51a), broken rail detection is not the only function of the track circuit in the signal system. Specifically, SECI does not explain how train occupancy is detected or how signal aspects (the colors of the signals) are controlled between signal locations absent the use of insulated joints.

In North American signal industry practice, the track circuit provides for train detection that is triggered when the steel wheels of the train create a short circuit between the two steel rails of the track. This causes the normally energized track circuit to de-energize. The signal aspect information is transmitted between signals by energized electrical codes that are present in the normally energized (un-occupied) track circuits. Both of these important functions of a track circuit require the use of insulated joints to isolate each circuit and to ensure that there are no other short circuits across the track. The system proposed by SECI requires the permanent

installation of short circuits across the track in order to function, which renders the design incompatible with the train detection and signal aspect control functions of the signal system. The design proposed by SECI has not been widely accepted or adopted by U.S. railroads because the functionality provided by the insulated joints cannot be replicated. As explained above, insulated joints delineate the wayside train detection circuit. They are also used to isolate highway-rail grade crossing warning systems from interfering with each other. Insulated rail joints also minimize the ground return current from commercial power distribution systems from using the rail as a conductor. This is essential to the safety of employees working on the track and signal system as well as essential to the reliability of the signal system.

Finally, systems using uninsulated joints have not been shown to be compatible with Positive Train Control ("PTC") systems currently considered for deployment as required by Federal law. The Rail Safety Improvement Act of 2008 (Public Law 110-432) mandates the widespread installation of PTC systems by December 2015. *See* CSXT Reply III-C-107 – 110. CSXT has already begun to implement a pilot PTC program using an overlay-type communication-based system that works in conjunction with its currently installed signal systems. SECI has not shown that its proposed "intelligent track circuit technology" would be compatible with the PTC systems required by federal law. In his restatement of SFRR signal investment, Mr. Sharkey includes the cost of insulated joints.

c. Switch Machines

SECI work papers also suggest that the costs for switch machines for the SFRR's power switches are included with the cost of the turnout in the spreadsheet "track construction costs.xls". This assertion is false. A review of "track construction costs.xls" reveals that SECI's turnout costs do not include the cost for switch machines, electric lock mechanisms, or the layout

material necessary to connect the mechanisms to the track structure. Mr. Sharkey has added these components in his restatement of SFRR signal costs.

d. Centralized Traffic Control System

SECI alleges that "each device includes all the materials necessary [for] operation of the signal, including power distribution." Additionally, SECI's power distribution plan assumes that commercial AC power is available at all control points it identifies. It also assumes that solar power is a viable, cost effective alternative for signal and communication facilities other than control points. These assumptions grossly underestimate both the cost and the electrical requirements of the signal systems.

First, commercial electrical power is not available at every control point location along the railroad. To obtain electrical service a railroad frequently must install cable from the control point or other component location to a point along the railroad ROW where electrical service is provided. To remedy this understatement of electrical service costs, Mr. Sharkey assumed an average of 500 feet of electric cable would be required at each control point location to access the nearest location of existing commercial service.

Second, SECI assumes that solar power would be used to provide electricity for highway-rail grade crossings, automatic signals, AEI systems, and failed equipment detectors. However, the costs assumptions used by SECI do not account for variations in electrical current required by each of the individual systems, which is a critical factor in determining the size and cost of the solar power system. SECI's price quotes are for solar systems capable of supplying 2 and 3 amps at 12 volts. SECI uses an unsupported cost of $2,441 each for such systems. However, these systems typically cost $14,000 and $15,000, respectively. Further, due to reliability issues and vandalism vulnerability solar power is not considered a viable alternative for highway-rail grade crossing warning systems if commercial power is available.

Because SECI has understated significantly the cost of solar power systems and because of reliability and vandalism issues that result in premature replacement of these systems, Mr. Sharkey has determined it more efficient for the SFRR to use commercial power as well to power its other signal components.

e. Cost of CTC Office Equipment

SECI based the cost of SFRR's dispatching center on advice from Alstom purporting to indicate that PC-based equipment and software for a typical mainline railroad CTC office runs from $700,000 to $1,000,000. SECI selected the higher end of this range. Mr. Sharkey consulted an actual quote for a CTC system comprising 6 dispatchers and two chief dispatchers for 2,200 miles of CTC. Alstom Transport recently provided an updated quote indicating that a similar CTC office would now cost approximately $2 million, and the additional hardware to support an off-site disaster recovery center would be an additional $500,000.

All Class I railroads have provisions for a disaster recovery dispatcher site in the event that their primary site becomes inoperative due to a natural disaster or other catastrophic event. The disaster recovery site should be far enough from the primary site so that a natural disaster does not affect the secondary site. In the case of the SFRR, Nashville is recommended for the secondary site because it is distant and has building and communication facilities that can economically be used for this purpose. Mr. Sharkey used the updated Alstom quote and included the cost of a disaster recovery center in his restatement of SFRR signal costs.

f. Turnouts to SFRR Customer Locations

SECI failed to provide for turnouts to access the SFRR's customer locations. CSXT Operating Witnesses have determined that the SFRR has a total of 884 customers that it must access. Costs for the required turnouts and track are included in Section III-F-3 above. SECI determined that in CTC territory, all mainline switches require an electric lock. Mr. Sharkey

accepts this assumption and includes the cost for electric locks and all necessary appurtenances in his restatement of SFRR signal costs.

g. PTC Costs

SECI has omitted the mandated cost of PTC for the SFRR on lines meeting the Federal Railroad Administration PTC criteria by 2015. *See* CSXT Reply III-C-107 to 110. As discussed in Section III-C, CSXT developed the cost of PTC for those SFRR lines carrying hazardous materials and assumed PTC implementation in the year 2015. *See id.*

Table III-F-17
Signals and Communications System Costs
($millions)

Item	SECI Cost	CSXT Cost[30]	Difference
CTC, FEDs, Crossing Signals, AEI Scanners, and Related Equipment	$192.0	$329.9	$137.9
Communications	$35.0	$37.6	$2.6
Total	$227.0	$367.5	$140.5

CSXT's total signals and communications cost is $140.5 million higher than SECI's cost. The signal costs are $137.9 million higher and the cost for communications is $2.6 million higher.

7. Buildings and Facilities

SECI assumes the SFRR's major system facilities are located at its Folkston Yard (now to be located at Callahan Yard). These facilities include the SFRR's headquarters building, crew facilities, a locomotive repair shop, a track maintenance base and MOW equipment storage track, 1,000 and 1,500-mile inspection facilities, and car and locomotive storage. SECI also assumes additional, smaller yards are located at Newell, PA, Collier (Petersburg), VA, and Nashville, TN. Overall, SECI computes SFRR investment for these facilities of $32.1 million. CXST's

[30] *See* CSXT WP "STV-CTC SFRR C-S spreadsheet.xls", tab "Components & Tabulation"

Engineering Expert for buildings and facilities is Richard C. Dummar, R.A. of STV/Whitehead. Mr. Dummar reviewed SECI work papers supporting its development of SFRR facilities investment and identified numerous shortcomings in SECI's presentation. In addition, as described in Sections III-B and III-C, SECI has understated the number of SFRR facilities required to handle effectively and efficiently the traffic selected for movement over the network. In this section, Mr. Dummar describes the deficiencies in SECI's development of SFRR facility investment, explains the necessary corrections and applies the corrected cost assumptions to the properly derived SFRR facilities requirements. Table III-F-18 summarizes the SFRR facility requirements.

As discussed in Section III-B, the SFRR, properly configured, will require significantly more facilities than SECI proposes. CSXT's Facilities Matrix shows the required facilities.[31]

Table III-F-18
Buildings and Facilities Count by Type

Building Type	SECI[32]	CSXT[33]	Difference
Headquarters	1	1	0
Fueling Facilities[34]	1	4	3
Intermodal	0	6	6
Transflo	0	11	11
Crew Change[35]	11	19	8
Car/Train Inspector Facilities	4	18	14
Locomotive Repair	4	4	0
MOW	26	35	9

a. Headquarters Building

[31] CSXT WP "Seminole Facilities Matrix.xls"
[32] SECI WP "Facilities Cost.xls"
[33] CSXT WP "SFRR Facilities Matrix - Consolidated 1-6-10 MOW Comments.xls"
[34] Though fueling is performed by trucks, 4 access roads are provided by CSXT
[35] CSXT "Crew Change" number includes Facilities for Yard Crew Change as well

The SFRR headquarters building is located at Folkston Yard and will accommodate its supervisory, general and administrative, clerical and dispatching staffs. CSXT accepts SECI's assumption of a 40,000 square foot headquarters facility.

CSXT also accepts the use of R.S. Means construction cost pricing, removal of engineering and architectural design fees and the use of the .81 location factor. CSXT rejects SECI's use of 20,000 square foot gross floor area size in developing the applicable Means unit costs. Means requires that the total square feet of building floor area must include the total gross area of all floors at grade and above, not including a basement.[36] The correct total gross floor area for the SFRR headquarters building is 40,000 square feet.

In addition to selecting the wrong Means unit costs, SECI omits the costs of window treatments, emergency generator and utility connections from its SFRR headquarters building estimate. CSXT has added these necessary costs as well as costs for a paging system, smoke detectors and a security system. SECI has not explained how the SFRR would get by without these standard components.

CSXT accepts generally SECI's methodology and pricing for site grading, drainage, and parking lots but rejects SECI's costs for outdoor lighting and has added costs for light pole foundations and cross arms (for mounting two lighting fixtures to one pole). CSXT also rejects SECI's choice of mercury vapor light fixtures and the resulting minimal lighting levels as unsafe and has replaced SECI's lighting fixture with a "roadway" type low-pressure sodium fixture designed to adequately illuminate parking areas and roadways.

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[36] Referencing R.S. Means, Square Foot Costs, 2009, Commercial/Industrial/Institutional Section: Square Foot of floor area is the total gross area of all floors at grade and above, excluding a basement. The perimeter in linear feet used for the base cost is for a generally rectangular economical building shape.

b. Fueling Facilities

i. Fueling by Truck

SECI assumes locomotive fueling is performed by trucks (a.k.a., direct-to-locomotive or DTL fueling) at the Nashville, TN, Newell, PA, Callahan, FL and Richmond, VA SFRR Yards, but failed to include the costs for required roads for fuel truck access to each facility and to the tracks where the locomotives would be fueled. CSXT has added these costs.

ii. Lube Oil & Sanding

SECI assumes each yard includes a locomotive servicing facility designed primarily for 92-day inspections. CSXT includes comparable facilities at Nashville, Petersburg and Newell Yards in order to provide these services as required. CSXT accepts SECI's development of costs for these facilities.

c. Locomotive Shop

SECI places the main locomotive repair shop for the SFRR in its Folkston yard. As explained in Section III-C, CSXT has relocated much of the functionality of the Folkston yard – including the major locomotive repair shop – to its SFRR yard at Callahan.

In addition to two tracks for locomotive inspection and servicing, the locomotive repair facility will include three tracks capable of holding up to 10 locomotives. The heavier work track design includes overhead and jib cranes, drop tables and other necessary heavy equipment as required.

CSXT has identified a number of problems with SECI's proposed locomotive shop configuration and design. First, SECI assumes an eave height dimension of 21'-9" for its locomotive shop. *See* CSXT WP "#1332 "FA03-Shop Elevation Folkston (Callahan) Yard Locomotive Building.pdf." This eave height does not provide sufficient clearance to be able to pull power assemblies over the top of the unit hoods with a jib crane or bridge crane. The eave

height should be a minimum of 34'-0" to allow for hook height from top of rail to accomplish this critical locomotive maintenance task as well as power assembly removal and replacement, which is performed indoors to prevent contamination of the interior of the prime mover and for the safety of employees engaged in this maintenance activity.

In its opening evidence, SECI shows a 25-foot distance between service track centers, a distance of 30 feet from the outside service tracks to the building walls, and a 210-foot length and a 200-foot width. The shop will enclose a total maintenance area of 42,000 square feet. *See* SECI WP #1335, "FA06-HQBldg Sketch-Cost.pdf" (NOTE: The workpaper is labeled "HQ Bldg" but the building shown is the locomotive shop. No sketch of the HQ building was included in SECI's workpapers).

Second, SECI's proposed dimensions for its locomotive facility are inadequate. The shop arrangement proposed by SECI must conform to standard design practice as presented in American Railway Engineering and Maintenance-of-Way Association (AREMA) "Design Criteria for Diesel Repair Facilities". In order to comply with standard locomotive maintenance practices and to provide space sufficient to meet the maintenance needs for a fleet size of approximately 225 locomotives, CSXT has reconfigured SECI's proposed shop to include three through tracks for running repairs and periodic inspections and two tracks for heavy repairs. The reconfiguration produces a shop maintenance area of 42,000 square feet, a warehouse of 14,000 square feet, and office area of 12,000 square feet for a total of 68,000 square feet. The maintenance area will be built to "H-2" occupancy standards, the warehouse will be built to "S-2" occupancy standards, and the office built to "B" occupancy standards.[37]

[37] The IBC occupancy classifications are defined as follows:

Third, it is unclear from SECI's opening evidence whether the SFRR locomotive repair facility includes a wash house for cleaning locomotives before they enter the shop for maintenance or inspection. FRA mandated maintenance and inspections are more efficient and effective when locomotives are clean. In addition, a clean working environment promotes efficiency and safety of the maintenance staff. In order to provide a clean and safe working environment for locomotive maintenance personnel, CSXT added an enclosed 6,000 square foot locomotive wash house at the SFRR major locomotive repair facility as well as at the three locomotive inspection and servicing facility locations. The wash house was sized to enclose an area spanning two tracks (60 feet) with each track being 100 feet long.

In addition to the items discussed above, CSXT added the following required items missing from SECI's locomotive shop costs:

- Pump House. This building houses pumps for distribution of locomotive lubricating oil, journal oil, air compressor oil, waste oil, radiator water, soap, and toilet chemicals throughout the shop and wash house.
- Pipe Racks. Support structures for the maintenance fluid distribution system
- Storage Tank Containment Structure. Concrete structure enclosing storage tanks holding locomotive lubricating oil, journal oil, air compressor oil, waste oil, soap, and toilet chemicals.
- Wastewater Pretreatment Building. Holds wastewater pretreatment (Dissolved Air Flotation) apparatus and discharge metering equipment.
- Pressure combined sanitary and industrial wastewater sewer line.

"B" - A building or structure, or a portion thereof, for office, professional or service-type transactions, including the storage of records and accounts; eating and drinking establishments with an occupant load of less than 50.

"H-2" – Buildings and structures which contain materials that pose a deflagration hazard or a hazard from accelerated burning, shall be classified as Group H-2.

"S-2" – Low hazard storage occupancies including buildings or portions of buildings used for storage of non-combustible materials.

CSXT also added costs for tracks outside the shop on which to stage locomotives waiting to enter the shop for maintenance or on which to perform locomotive load tests and concrete walkways so maintenance personnel can access the locomotive.

SECI does not provide detailed descriptions of the arrangement or contents of the locomotive maintenance facility. Details of the equipment included by CSXT for the SFRR locomotive repair shop are included in CSXT's work papers. *See* CSXT WP "Seminole Florida Railroad Building Costs Final.xls".

CSXT accepts SECI's methodology and pricing for calculation of costs of site grading, drainage, and parking lots, but rejects SECI's costs for lighting as inadequate and has added costs for light pole foundation and cross arm (for mounting two lighting fixtures to one pole). CSXT also rejects SECI's choice of mercury vapor light fixtures and the resulting minimal lighting levels as unsafe and has replaced SECI's lighting fixture with a "roadway" type low-pressure sodium fixture designed to adequately illuminate parking areas, roadways and locomotive lead and test tracks.

d. Car Repair Shop

CSXT does not include costs for SFRR freight car repair facilities.

e. Crew Change Facilities and Yard Offices

CSXT rejects the size of the crew change buildings proposed by SECI in its opening evidence. The proposed configuration not provide for important spaces that must be included. The crew change building must add the following spaces to the total square footage:

- Two office spaces
- One unisex shower
- HVAC, mechanical equipment room
- Telecom equipment room.

- The restrooms shown do not comply with ADA, and must be enlarged
- Work area
- Storage room
- Drug test lavatory and toilet (will be used as women's restroom)
- Utility connections (natural gas, water, electricity, sewer)

To accommodate these additional requirements, CSXT expanded the design size of the crew change building an additional 700 square feet to 2,100 square feet. CSXT calculated the cost for crew change and yard office buildings based on standard design that includes insulated metal wall panels and standing seam roof panels, with a steel frame. CSXT also made similar adjustments to SECI's lighting proposals as it did for the headquarters and locomotive facilities.

f. Maintenance of Way Buildings (Roadway Buildings)

SECI's proposed design for the SFRR MOW buildings is similar to that of the crew change facilities, but they are smaller and provide for garaging certain vehicles as necessary and storing certain supplies. SECI's MOW building design has the same flaws articulated above for the SFRR crew change and yard office buildings. CSXT added 734 square feet to the design of each of the SFRR MOW facilities to accommodate missing components, resulting in a total of 1,204 square feet. Although SECI did not provide any details or explanation of the assumptions it used to size the MOW facility garage and storage facilities, CSXT has determined that the proposed size is too small to accommodate the MOW vehicles and materials. CSXT has determined that MOW garages need to be constructed at a size of 30'X45' (1,350 square feet) to allow for vehicles to be driven inside for protection from the weather and vandalism. This size also provides for a modest area in which to store supplies.

In addition to indoor garage and storage space, each MOW facility will require an 8,000 square foot outdoor fenced storage yard for enclosed security. The area will be gravel paved to provide a stable surface for storage of track materials and other storage.

g. Wastewater Treatment

CSXT accepts SECI's assumption that the SFRR building facilities would be served by local sewer connections or similar service, and have included the costs for these connections in its restatement.

h. Yard Air and Yard Lighting

CSXT accepts SECI's assumptions regarding the provision of yard air. As discussed for each of the individual facilities, CSXT rejects SECI's lighting proposal and has added costs for light pole foundations and cross arm (for mounting two lighting fixtures to one pole) as well as replacing SECI's proposed mercury vapor fixture and minimal lighting levels with "roadway" type low-sodium fixtures designed to adequately illuminate parking areas and roadways.

i. Intermodal Terminals

For the SFRR intermodal terminals, CSXT has developed costs for the security fencing, two sliding truck gates, two sliding rail gates, high mast light towers and guard booths using the site plan of 150,000 to 200,000 lifts for the six SFRR intermodal terminals. Standard lighting requirements for an intermodal terminal are to maintain an average of 2 foot candles, based on information from the Illuminating Engineering Society (IES). *See* CSXT WP "Seminole Florida Railroad Site & Facilities Costs.xls", tab "Intermodal Terminals".

j. Transflo Facilities

CSXT has developed costs for the security fencing, sliding gates, high mast light towers, office building and maintenance building for each of the 11 SFRR Transflo facilities. The light

level in a Transflo Facility is to maintain an average of 2 foot candles, based on information from the Illuminating Engineering Society (IES).

Additionally, CSXT has assumed building sizes for the office building at 1,500 SF, maintenance building at 2,400 SF and 6,800 LF of security fencing with 2 sliding truck gates and 2 sliding rail gates for each facility. *See* CSXT WP "Seminole Florida Railroad Site & Facilities Costs.xls", tab "Transflo Facilities".

k. Car/Train Inspector Facilities

CSXT developed costs for 18 Car/Train inspection facilities based on an assumed building size of 24' X 30' (720 square feet). The facilities will be constructed of insulated metal wall panels and metal standing seam roof panels with a steel frame. CSXT WP "Seminole Florida Railroad Site & Facilities Costs.xls", tab "Car/Train Inspector Facilities".

Table III-F-19
Buildings and Facilities
($ millions)

	Facility	SECI Cost 1/	CSXT Cost 2/	Difference
1.	Locomotive Repair Shop 3/	10.4	16.3	5.9
2.	Headquarters Building	3.1	4.9	1.8
3.	Crew, MOW/Roadway Buildings	12.6	18.5	5.9
4.	Total Yard Site Costs (Roads, Lighting, Drainage, etc.)	6.0	91.5	85.5
a.	Callahan Yard (less Locomotive Repair Shop)		6.8	
b.	Nashville Yard		11.3	
c.	Petersburg Yard		10.9	
d.	Newell Yard		11.1	
e.	Intermodal Terminals		26.0	
f.	Transflo Facilities		20.8	
g.	Car/Train Inspector Facilities		2.0	
h.	Yard Drainage		2.5	
5.	Total	32.1	131.2	99.1

1/ These numbers are from SECI's Table III-F-6. The actual SECI total for Buildings & Facilities is listed at $27.1 million
2/ See "Seminole Florida Railroad Building Costs 1.xls"
3/ CSXT Locomotive Repair Shop includes shop equipment costs

The total cost for buildings and facilities is $131.2 million.

8. Public Improvements

While public improvements are discussed in detail below, the costs for such items were included in other investment categories, such as bridges and signals.

a. Fences

CSXT accepts SECI's assumption that fencing is required for SFRR yards. As discussed above under facilities, CSXT also provides fencing where required at each of the SFRR facilities as well as fencing to protect the SFRR's 89 microwave tower locations. Signs and Road Crossing Devices.

b. Signs and Road Crossing Devices

CSXT accepts SECI's assumption of a standard package of railroad signs including mileposts, whistle posts, yard limit and cross-buck signs and posts and the associated costs. CSXT however adds costs for installation of the Emergency Notification Signs that are located at all Class 1 railroad at-grade crossings. Specifically, in 1994, following a demonstrated need for an Emergency Notification System among Class 1 railroads, Congress directed the Secretary of Transportation to pursue a pilot program for a toll-free notification system at all at-grade rail/highway crossings. The National Transportation Safety Board, in conjunction with the FRA, recommended implementation of the ENS system among all Class 1 railroads. A key component of this system is two emergency notification signs at each at-grade rail/highway crossing communicating the following information: "1-800 Telephone Number and Grade Crossing Identifier".

c. Grade-Separated and At-Grade Crossings

SECI assumes a cost of $543.96 per track-foot to construct a typical 28 foot long asphalt-timber at-grade crossing, exclusive of the cost of track materials and construction. CSXT accepts this cost, but adds costs associated with roadway detours and signage required while the roadway is closed for construction of the track and at-grade crossing. These costs include, but are not limited to, identification of the detour route, signs denoting the detour route, barricades at the crossing, and advance notice in local publications of the proposed road closure.

9. Mobilization

SECI has added a 2.7% mobilization factor based on the *Duke/CSXT* decision for all items where mobilization is not already included in the contractor's bid. CSXT rejects the 2.7% factor for mobilization from *Duke/CSXT* because the mobilization factor in that decision was built up based on a detailed analysis of the mobilization costs for each major asset category.

Without a comparable detailed study – which SECI has not undertaken – there is no way to determine if the overall *Duke/CSXT* factor is representative of the mobilization for the SFRR.

In addition, the STB more recently in Ex Parte 646 – *Simplified Standards for Rail Rate Cases* concluded that mobilization costs applicable to roadbed preparation, track, tunnels, bridges and culverts, signals and communications, buildings and facilities and public improvements should be 3.5 percent. CSXT has used the 3.5 percent mobilization factor in its reply.

10. Engineering

SECI's engineers have used a 10 percent additive for engineering. CSXT accepts 10 percent for engineering for the SFRR.

11. Contingencies

SECI used a 10 percent contingency factor applied to the construction subtotal excluding land. CSXT accepts this contingency factor.

12. Other

CSXT accepts SECI's overall construction period.

III. STAND-ALONE COST

G. DISCOUNTED CASH FLOW ANALYSIS

SECI's discounted cash flow (DCF) model strays from the Board's standard DCF application in a number of key respects, the most egregious of which are the truncating of the standard discounting of the interest and depreciation tax benefits after year 10 and the exclusive use of a cost of debt to develop locomotive capital requirements with no corresponding adjustment to the industry cost of capital or capital structure. These and other required corrections to SECI's DCF are discussed in this section.

1. Cost of Capital

In a case such as this with a 3-year construction period, the industry's average costs of debt, common equity and preferred equity, and the capital structure mix are used to determine the cost of capital for the SARR. Since the SFRR began construction in 2006, SECI relied upon the Board's published decisions for the years 2006 and 2007. Because the Board's decision for the 2008 cost of capital was not yet available, SECI used the proposed costs presented by the AAR for that year. Since the time that SECI filed its Opening evidence in late August, the STB released its Decision on the 2008 Cost of Capital.[1] CSXT substituted the Board's actual 2008 industry cost of capital determination for the preliminary AAR figure used by SECI.[2]

For calculating SFRR locomotive capital costs, SECI ignores established Board precedent of determining SARR capital requirements based on the railroad industry cost of capital and uses instead a debt rate derived from CSXT 2007 Secured Equipment Notes that

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[1] STB Ex Parte No. 558 (Sub-No. 12), September 24, 2009

[2] The STB's cost of equity for 2008 is 13.17% compared to 13.35 used by SECI. The debt to equity ratio is 21.5%/78.5% compared to SECI's 21.3%/78.7.

SECI asserts were used by CSXT to purchase locomotives.[3] SECI makes this assertion despite the fact that the Prospectus to which it refers clearly states in the Use of Proceeds section that:

> The net proceeds from the sale of the Notes will be used for general corporate purposes, which may include repurchases of CSX Corporation's common stock, capital expenditures, working capital requirements, improvements in productivity and other cost reductions at CSX's major transportation units. (See CSX 2007 Prospectus on CSX 6.25% Secured Equipment Notes Due 2023 at S-5)

SECI's effective debt rate applied to SFRR locomotives is 8.09 percent. SECI also assumed SFRR locomotives would be acquired 100 percent with debt. By substituting a lower debt rate and assuming 100 percent debt financing for locomotives without any corresponding adjustments to the capital structure or cost of capital for the remaining SFRR assets, SECI artificially lowers the SFRR's cost of capital.

SECI cites the Board's decision in *PSCo/Xcel* as support for its position, characterizing the Board's position as follows:

> In *PSCo/Xcel*, the Board indicated that in the absence of a specific connection between the assets being purchased and the cost of financing, a default to the assumption that the assets would be purchased through the use of general funds raised at a cost equal to the railroad industry cost of debt and equity would be appropriate. *PSCo/Xcel* at 72-73. SECI Opening III-G-6.

However, rather than supporting SECI's proposed treatment, the Board in *PSCo/Xcel* correctly *rejected* Xcel's attempt to assume alternative financing for motor vehicles, admonishing that such treatment would require a similar examination of all investments.

> Xcel has provided no rationale for departing from the Board's assumption that a SARR would purchase its assets using the general funds that it would raise through the issuance

[3] Even though the SFRR locomotives are purchased in 2008 and SECI identifies a CSX 2008 $351 million debt offering that it claims also was used to purchase locomotives, SECI uses the effective rate of the 2007 debt offering for the SFRR locomotives. The 2007 notes carry a 6.25% interest rate compared to a 8.375% rate for the 2008 notes.

> of debt and equity. To assume that vehicles could be financed at a rate below the aggregate cost of capital would necessitate an examination of the costs of raising capital for each individual investment that the WCC would make. Such an examination would significantly complicate these cases but in the end would have no perceptible effect on the overall costs that the WCC would incur, as some investments would have financing costs above the aggregate cost of capital while other would have lower rates. (*PSCo/Xcel* at 72-73)

Because it assumes alternative financing for a single SFRR asset category without undertaking comparable examinations of the costs of raising capital for each of the remaining individual investments the SFRR would incur, SECI's proposal here is no different than that rejected by the Board in *PSCo/Xcel* and, as such should be rejected again.

Further confirmation that SECI's approach understates the SFRR's overall cost of capital lies in the Board's own industry cost of capital determination. Specifically, the 2007 Secured Equipment Notes used by SECI to develop an effective debt rate are used by the Board in its 2007 industry cost of capital determinations. *See* 2007 Railroad Cost of Capital – Workpapers of the Association of American Railroads (May 22, 2008) Exhibit 2. As such, there is no need to isolate treatment of specific assets – they are already included in the composite.

Finally, SECI has not demonstrated that the proceeds from the Secured Equipment Notes were used exclusively by CSXT for the acquisition of locomotives. SECI's opening evidence speculates that this is the case by citing CSXT's acquisition of $340 and $351 million in locomotives in 2007 and 2008, respectively. However, as reported in its R-1, CSXT also purchased $425 million in freight cars and $79 million in other equipment in 2007 and 2008, confirming that SECI's assertion is only speculation.

For the foregoing reasons, CSXT rejects SECI's substitution of debt only financing for the SFRR locomotives and treats locomotives similarly to all other SFRR acquired assets in the DCF.

SECI also inexplicably omitted from its cost of capital calculations equity flotation costs. The Board upheld the inclusion of these costs in *AEP Texas*. *See AEP Texas* at 108. CSXT followed the approach the Board supported in *AEP Texas* to add equity flotation costs of 3.87%, which are allocated to the four largest railroads and the SFRR based on market value. *See* CSXT Reply WP "Equity Flotation.xlsx." This allocation results in CSXT adding 0.04%, 0.10% and 0.15%, respectively, for 2006, 2007 and 2008 to the Board's published cost of equity figures to determine the cost of equity for the SFRR as demonstrated in Table III-G-1.

Table III-G-1

Year	Industry Cost of Equity	SFRR Equity Flotation Costs	**SFRR Cost of Equity**
2006	11.13%	0.04%	**11.17%**
2007	12.68%	0.10%	**12.78%**
2008	13.17%	0.15%	**13.32%**

2. Inflation Indices

SECI used the actual AAR cost indices and Global Insight's June 2009 forecasts to calculate annual inflation forecasts. CSXT does not dispute SECI's road property asset and operating expense DCF inflation indexes except for the index used by SECI for land and, consistent with prior Board precedent, updates those indices in circumstances where new actual index values have become available. As discussed in more detail below, CSXT also extended the forecast period for the road and equipment asset indices to 20 years.

SECI develops an inflation index for land assets based on a weighted combination of indices that it asserts reflect rural and urban land prices in proportion to the mix of these types on the SFRR system routes. It develops rural land indexes from rural land values reported by the U.S. Department of Agriculture. For urban land values, SECI says it relies on a commercial land index prepared by the Massachusetts Institute of Technology Center for Real Estate, and a

residential land index prepared jointly by the Lincoln Institute of Land Policy and the James A. Graaskamp Center for Real Estate at the Wisconsin School of Business, but did not include either of those sources in its work papers. As such, SECI's index for urban land values is unsupported.

What SECI fails to explain in its narrative is that its calculations of a land inflation index for the SFRR result in an astonishing *annual* land appreciation rate from 2009 to 2018 of 8.44 percent. Put another way, SECI assumes the SFRR land values will increase 170 percent over the 10 year DCF period. This assumption strains credulity, to say the least.

It is important to note that while the inflation assumptions attributable to land have not been a major issue in prior Board cases, that is because the SARRs in those proceedings did not traverse the major metropolitan areas in which the lines and facilities of the SFRR are located. As a result, overall SARR real estate values represented only a percentage or two of overall SARR investment. For the SFRR, on the other hand, real estate is the single most expensive asset that the SFRR will acquire, so a misguided inflation index will have a dramatic impact on the SFRR annual capital carry charge in the DCF. This is a critical point: As the Board is well aware, under the real annuity construct of the DCF, the higher the assumed inflation rate, the more of the capital recovery that is pushed back to the later years of the DCF period and on into perpetuity, suppressing artificially the starting SAC capital revenue requirement.

There are a number of critical flaws in SECI's development of a land inflation index that produce this absurdly high growth rate.

- The time frame relied upon by SECI to develop its index is 2000 to 2008, a period which saw an almost unprecedented increase in real estate prices.
- SECI used the 2009 edition of USDA Land Values and Cash Rents Summary as the source for 2008 agricultural land value index. That edition also included values for 2009 which USDA shows declined on average 3.2 percent from 2008

levels. Even with evidence of such a decline in real estate values in its hand, SECI nonetheless projected land inflation for 2008 to 2009 of 8.44 percent.

- SECI calculated a weighted land value index based on the relative acres of SFRR agricultural to urban land, thereby attributing a higher weighting to the higher 9.2 percent 2000 to 2008 calculated agricultural land inflation than if the indexes were instead weighted by relative value of land.

Because of these critical flaws and the outrageous result, CSXT rejects SECI's proposed land inflation index. CSXT's real estate expert Mr. Tesh developed an inflation forecast for land values considering the following elements:

- The subject real estate is land only. Land is the residual asset in real estate. It is needed for all development, but its value is dependent on whatever is left over after all other expenses are paid. In the current housing market, although there is a recession, material and labor costs continue to climb. As such, unless rising prices offset the increased costs of construction, land will not enjoy much, if any, appreciation.

- Over 90% of the SFRR's land value is in urban areas. The way to measure the projected price growth for the subject lands is not to weight it by urban or rural acres, but rather by value impact. As such the uses that are urban, including projections of retail, office, and residential growth are the important ones for considering portfolio growth. Retail and office uses are currently feeling the strain of vacancies. The second largest developer and manager of regional retail is in bankruptcy and interest rates are climbing. This is foreshadowing significant value drops for the sector, at least in the short term. Retail and particularly regional malls experienced significant value increases between 2000 and 2007. Since 2007, malls which are primarily owned by REITs have dropped only 9.5% to date. The increase in values for the first seven years of the century was about 40% (the time frame used by SECI to develop its forecast). Experts believe that there is still a long way to go before the excesses of that impressive 5.7% average annual growth are corrected.

- 2009 is a recessionary year, but demands for return on debt and equity are rising. According to most in real estate, the recession continues into 2010 and perhaps 2011. It can be classified as severe. The problem is that coexistent with falling profits, an almost moribund housing market, and high central business district vacancies are rising debt and equity demands. In early 2000 the prevailing capitalization rate for downtown or inner-suburban office space was between 5% and 6%. As of the fourth quarter of 2009 it was about 7% and is now moving towards 8% in primary markets.

- The GDP is expected to grow. Although the relationship between real estate and the GDP is not inextricably intertwined, there is a direct correlation since

investors look to GDP projections as indicators of employment and demand for their products. The President's Council of Economic Advisors projects growth in the GDP between 2010 to 2020 to be about 2%. Complementing the Council's projection is the Federal Reserve which is planning its policies on GDP growth for that period of 2.5% to 2.7%. Macroeconomic Advisors is projecting 2.5%. The Congressional Budget Office projects 2.2% between 2009 and 2019.

- The spread between treasuries and interest rates is widening. This spread is an indication of risk perception. Of course rising risk and interest rates have a depressive effect on prices, and this is likely to prevent the replay of the first few high growth years of this century.

Taking all of the above into consideration, a case could be made that in view of our unprecedented national debt, high rates of insolvency, and high unemployment it is unlikely that any growth, let alone moderate to high growth, in real estate prices will occur over the next decade. It is projected that continuing price declines will exist for a year or two and that land will stabilize thereafter with perhaps modest growth to exceed inflation in the last 4 to 5 years of the projection periods. Overall, prudent investment would not anticipate more than an overall 2% to 3% growth rate. As such, a 2.5% average growth over ten years is a reasonable conclusion, and the one adopted by CSXT.

3. Tax Liability

SECI's DCF incorporates three errors related to the calculation of SFRR income tax liability related to SECI calculations of the income tax adjustments attributable to accelerated depreciation and, in one instance, tax deductible interest.[4] First, as discussed in Section III-H-f, SECI misapplied the guidelines relative to bonus depreciation and overstated the tax credit associated with that benefit. Second, SECI used the wrong tax life for certain of the SFRR road property assets. Third, as discussed in Section III-G-4, SECI improperly truncated the

[4] SECI's proposed improper treatment of locomotives also affects somewhat the SFRR calculated income tax liability. These are corrected by CSXT's proper treatment of capital charges related to locomotive acquisition in the DCF.

calculation of the present value of remaining interest and accelerated depreciation tax benefits beyond year 10 of the DCF. CSXT corrected these shortcomings as explained in the referenced Sections.

4. Capital Cost Recovery

SECI explains that it shifted to a 10-year analysis period in accordance with *Major Issues*. To do so, however SECI truncated the DCF analysis at 10 years and computed the terminal value as of year 10, instead of year 20 as the Board concluded proper in *Major Issues*. Specifically, in *Major Issues* the Board limited the modifications to be made to the DCF in the shift to a 10-year recovery period as follows:

> (A) shorter DCF period does not necessitate the adjustment in how debt is treated, i.e., amortization over the life of the asset versus amortization over the DCF period. The only changes to Table E necessary to accommodate a shorter 10-year analysis period are: (1) the elimination of forecasts for operating expenses in years 11 through 20 and (2) changing the netting calculations to compute the cumulative underage or overage at the end of year 10, instead of year 20. (*Major Issues* at 65)

In doing so, the Board recognized that certain of the assumptions within the DCF model, such as the amortization of the debt component of the cost of capital and the stream of tax deductions generated by accelerated depreciation, would be inadvertently and improperly influenced by a simple truncation of the complex DCF model. SECI ignored this guidance and, not surprisingly, changed the amount of the interest amortization and accelerated depreciation tax benefits implicit in the 20 year DCF.

The terminal value calculation within the Board's DCF model capitalizes the DCF quarter 80 pre-tax calculated revenue requirement by dividing by the real cost of capital. From the capitalized revenue stream it subtracts the unconsumed tax benefits from accelerated

depreciation for those assets with lives in excess of 20 years[5] before calculating Federal and state tax liability. In truncating the DCF after year 10, SECI capitalizes the quarter 40 pre-tax revenue requirement by dividing by the real cost of capital, and deducts the sum of the remaining years 11 through 20 debt amortization and the sum of the remaining years 11 through 50 accelerated depreciation. In deducting the sum of those remaining tax benefits, SECI assumes explicitly that all of those benefits will be realized immediately after year 10, when in fact they will be spread over many years. Table III-G-2 below compares the amount of the remaining tax benefits assumed by SECI in its truncated DCF versus the amount implicit in the Board's 20 year DCF model.[6]

[5] The Board's DCF model contains a conceptual error in that it simply sums the amount of unused depreciation beyond year 20 and assumes explicitly that all of the remaining benefit will be realized immediately. If fact, the remaining depreciation benefits will be spread over the next 30 years, so the correct calculation would be to compute the present value of the remaining depreciation benefit as of year 20 and deduct that amount from the capitalized revenue stream.

[6] For purposes of these calculations, the conceptual error explained in footnote 4 regarding available tax benefits for accelerated depreciation beyond year 20 has not been corrected.

Table III-G-2
Comparison of Remaining Tax Benefits Under
SECI DCF Truncation Versus Board Standard DCF
($ millions)

Year (1)	Annual Stand-Alone Requirement (2)	Stand-Alone Revenues (3)	Over-payments or Shortfalls (4)	PV Difference (5)	Cumulative PV Difference (6)
2009	$1,821.2	$942.0	-$879.1	-$834.1	-$834.1
2010	1,835.3	1,035.4	-799.9	-683.2	-1,517.3
2011	1,908.8	1,058.5	-850.3	-653.8	-2,171.1
2012	1,988.2	1,153.4	-834.8	-577.8	-2,748.9
2013	2,061.4	1,274.1	-787.3	-490.6	-3,239.5
2014	2,144.3	1,361.6	-782.7	-439.0	-3,678.5
2015	2,218.2	1,434.5	-783.7	-395.7	-4,074.2
2016	2,289.1	1,508.5	-780.6	-354.8	-4,429.0
2017	2,357.7	1,592.5	-765.2	-313.1	-4,742.1
2018	2,426.7	1,680.7	-746.0	-274.8	-5,016.9

As shown in Table III-G-2, by truncating the DCF model after year 10, SECI overstates the amount of the implicit interest and depreciation tax deductions by over three-quarters of a billion dollars. CSXT restates the SFRR DCF to comply with the Board's *Major Issues* guidance.

As discussed in III-C, SECI's Opening Evidence excluded any costs associated with federally-mandated positive train control (PTC) systems. CSXT has added those costs that the SFRR will incur to its Reply DCF and assumed that those expenditures will be made in the year 2014. Because those investments will be made after the SFRR begins operations, CSXT expanded the SFRR DCF model to accommodate a separate capital recovery stream for PTC investment assuming expenditures are made in 2014 and the PTC investment is placed into service January 1, 2015.

III. STAND-ALONE COST

H. Results of SAC DCF Analysis

1. Results of SAC DCF Analysis

SECI deployed a variation of the Board's DCF model to develop SFRR capital recovery and operating expense related revenue requirements. Certain of the problems with SECI's model were discussed in Section III-G. There are other problems with SECI's DCF inputs and assumptions that could also fall under the Section III-G Discounted Cash Flow Analysis purview. However, because SECI's Opening discusses these other issues under Section III-H Stand Alone Cost, CSXT includes its Reply to those issues in III-H as well. The DCF implementation problems discussed under Section III-H include SECI's misapplication of bonus depreciation to the SFRR assets and its use of the wrong tax depreciation lives for certain of the SFRR road property assets.

a. Cost of Capital

As discussed above in III-G-1, the most significant cost of capital adjustment CSXT made to SECI's figures was to eliminate SECI's use of a separate debt rate for locomotives. CSXT also made two minor adjustments -- updating the 2008 figures with those in the Board's September 2008 Decision and adding equity flotation costs. The cost of capital figures used by CSXT in its Reply are set forth in Table A of CSXT's Reply DCF.

b. Road Property Investment Values

The calculations for road property investment values are detailed in Table C and summarized below. CSXT replaced SECI's the road property investments with those specified in Section III-F. CSXT accepts SECI's SFRR proposed construction schedule.

Table III-H-1

Road Property Investment Values

	2006	2007	2008 1/	Total
SECI	$1,073,841,123	$2,229,293,008	$2,734,038,786	$6,037,172,916
CSXT	$2,909,438,205	$3,757,445,287	$3,901,688,056	$10,568,571,547
Difference	$1,835,597,082	$1,528,152,280	$1,167,649,270	$4,531,398,631

1/ Includes locomotives

For Land investments, SECI's land valuation witness estimated 2009 land values and discounted those values back to 2006 using a contrived quarterly index factor derived from estimates of price changes for agricultural properties between the years 2000 and 2008. In its Reply, CSXT land valuation expert Tesh develops SFRR real estate values as of 2006 – the year in which the SFRR would actually acquire the land – thereby eliminating any purported need in the DCF to index land values. The road property values exclude PTC investments because they are incurred several years after the SFRR begins operations.

c. Interest During Construction

The interest during construction (IDC) was calculated on construction funds outstanding during 2006, 2007 and 2008 using the same methodology as that employed by SECI. Interest during construction for PTC investment is calculated assuming investment occurs in equal increments throughout 2014.

d. Amortization Schedule of Assets Purchased with Debt Capital

The primary difference between SECI's and CSXT's amortization schedules is SECI's treatment of locomotives. SECI amortized locomotives separately, using a 15 year amortization period rather than 20 years, 100% debt ratio instead of 21.5%, and a debt rate of 8.09%. CSXT

includes the locomotive investment with the other road property investment for 2008 and amortizes it over 20 years.

Because PTC investments are expected to be made in 2014, CSXT created a separate debt amortization table for the debt portion of that investment, using a 20 year term and the SFRR's cost of debt for 2014, which is 6.29%.

e. Present Value of Replacement Cost

SECI also includes a separate schedule to compute locomotive replacement costs. CSXT included the calculation of locomotive replacement costs in the standard DCF replacement cost tab.

CSXT created a separate replacement cost worksheet for PTC that uses the composite cost of capital. The initial investments are in 2014 dollars so that the replacement cost calculations reflect the later implementation date for the investment.

f. Tax Depreciation Schedules

SECI's tax depreciation schedules contain two errors. The more significant of the two relates to SECI's assumptions regarding the applicability of bonus depreciation to the SFRR investment assets. In its Opening, SECI assumes that the SFRR will take advantage of additional or "bonus" depreciation provisions enacted in 2008 and 2009 as part of federal economic stimulus legislation. The Economic Stimulus Act of 2008 ("Stimulus Act") provided bonus depreciation on capital investments with Modified Accelerated Cost Recovery System ("MACRS") recovery periods of 20 years or less. The American Reinvestment and Recovery Act ("ARRA") extended this bonus depreciation into 2009. Under both the Stimulus Act and the ARRA, qualifying investments are allowed a 50 percent depreciation bonus in the year that they are placed into service. Tax depreciation for the remaining 50 percent of the cost, or the remaining cost basis, is calculated using the standard MACRS schedules. In applying the bonus

depreciation to the SFRR assets, SECI assumes that because the DCF model is predicated upon all assets being placed into service in the first year of the 10-year DCF period, that the majority of the SFRR's investment qualifies for the bonus depreciation. This assumption is, however, incorrect.

The standard for qualifying for bonus depreciation is not (as SECI asserts) when an asset is placed in service, but rather when the asset is acquired. IRS rules clearly specify that assets acquired in 2006 and 2007 do not qualify:

> Certain qualified property (defined below) acquired after December 31, 2007 is eligible for a 50% special depreciation allowance. If a binding contract to acquire the property existed before January 1, 2008, the property does not qualify. (2009 IRS Form 4562, page 4).[1]

Because the SFRR is assumed to be built over three years, many of the assets are assumed within the DCF to be acquired prior to the January 1, 2008 qualification date. SECI ignored this restriction on prior year purchases and included over $1.3 billion in investments from 2006 and 2007, which overstates the year one 2009 bonus depreciation by $662 million. This overstated depreciation contributes to an enormous tax carry forward in the first several years of SECI's SFRR. CSXT corrected this error and only recognized 2008 investments purchased on or after January 1, 2008 as being eligible for the bonus depreciation.

The other problem relates to the tax depreciation schedules for certain accounts assumed by SECI to qualify for 15 year lives when, under IRS rules, they actually qualify as 20 year properties. Internal Revenue Code § 168(e) specifies to rules for the classification of property for purposes of computing the cost recovery allowance provided by MACRS. Property is classified according to class life as determined in Revenue Procedure 87-56 unless statutorily classified otherwise in § 168. *See* CSXT WP "IRC 168.pdf" There are no exceptions to this

[1] *See* CSXT WP "IRS Form 4562.pdf"

rule. The following assets are specifically listed under asset class 40.2, each carrying a 20-year tax life.

- Account 6 - Bridge & Trestles
- Account 13 - Fences & Roadway Signs
- Account 17 - Roadway Buildings
- Account 19 - Fuel Stations
- Account 20 - Shops & Enginehouses
- Account 39 - Public Improvements

For each of these CSXT changed the depreciation period from 15 years to 20 years and updated the depreciation percentages to comply with the proper 20-year MACRS table.

g. Average Annual Inflation in Asset Prices

Because the discounted cast flow calculations require inflation rates for each year, CSXT expanded SECI's inflation spreadsheet to cover 20 years rather than just 10 years.

h. Discounted Cash Flow

As explained in detail above in Section III-G-4, CSXT expanded SECI's discounted cash flow calculations to the Board's original 20 year timeframe. If for some reason the Board were to reject the use of a 20 year DCF, it is critical that the future tax depreciation and interest payments are discounted to the last year of the DCF. Otherwise these tax deductions will be significantly overstated.

CSXT included a separate discounted cash flow for PTC investments. These levelized capital carrying charge requirements are added to the SFRR's SAC requirements in years 2015-2018 in the Netting tab.

i. Computation of Tax Liability – Taxable Income

CSXT accepts SECI's assumed federal tax rate of 35%. For state taxes, SECI calculated a composite rate based on the number of miles of track in each state. CSXT accepts SECI's calculation of the composite state tax rate.

As elsewhere, CSXT expanded SECI's federal and state tax tables to 20 years and included a separate table for PTC.

j. Operating Expenses

CSXT updated the base year operating expenses as detailed in Section III-D. For the annual adjustment of operating expenses, SECI used ton miles instead of the Board's standard use of tons to more accurately account for the mix of traffic on the SFRR. CSXT accepts SECI's use of ton miles and updates the calculations in the DCF using the updated and corrected ton miles from Section III-A-2.

k. Summary of SAC

CSXT's stand-alone costs are presented in Table L of Exhibit III-H-1 on a quarterly and annual basis. Capital investments for road property and PTC are from Table I and annual operating expenses are from Table L.

2. Maximum Rate Calculations

Table III-H-2 shows the results of the DCF analysis. In each year in which the SFRR operates during the 10-year analysis period, SFRR SAC exceed SFRR revenues. The detailed calculations underlying this Table are found in Exhibit III-H-1.

Table III-H-2

Year (1)	Annual Stand-Alone Requirement (2)	Stand-Alone Revenues (3)	Over-payments or Shortfalls (4)	PV Difference (5)	Cumulative PV Difference (6)
2009	$1,821.3	$942.0	-$879.2	-$834.2	-$834.2
2010	1,835.4	1,035.4	-800.0	-683.3	-1,517.5
2011	1,908.9	1,058.5	-850.5	-653.9	-2,171.4
2012	1,988.3	1,153.4	-835.0	-577.9	-2,749.3
2013	2,061.5	1,274.1	-787.5	-490.7	-3,240.0
2014	2,144.5	1,361.6	-782.9	-439.1	-3,679.1
2015	2,218.3	1,434.5	-783.9	-395.8	-4,074.9
2016	2,289.2	1,508.5	-780.8	-354.9	-4,429.8
2017	2,357.9	1,592.5	-765.3	-313.2	-4,742.9
2018	2,426.9	1,680.7	-746.2	-274.9	-5,017.8

Because stand-alone costs exceed revenues, there is no rate prescription and no need to run the MMM model. However there are several modifications that need to be made to the MMM model that SECI submitted in its Opening evidence. While not necessary to determine the outcome of this case, CSXT submits a corrected MMM workpaper with the following changes made.

First, SECI improperly used the STB's URCS index instead of the RCAF-A as instructed by the Board in its May 15, 2009 *AEP Texas* Decision. *See AEP Texas* at 14. In that Decision the Board determined that RCAF-A is the proper index to forecast the defendant railroad's variable costs in order "to correctly calculate the degree of differential pricing needed by the defendant railroad to recover the total SAC costs over the DCF analysis period." *Id.* at 14. CSXT corrected this index for variable costs in the MMM model using the Board's December 16, 2009 RCAF Decision.

Second, CSXT updated the revenues and variable costs for each move in the MMM model based on the adjustments made in III-A-2 and III-A-3. These adjustments include those made to account for re-routed traffic, which impacted the SFRR and residual mileages. For re-routed traffic that is split over multiple routes, additional moves were added to the MMM spreadsheet as they were for the URCS input files. For revenues to match the records used in the MMM model, CSXT allocated the SFRR revenues for each O-D Pair in III-A-3 to the moves in the MMM based on the 2008 tons.

Finally, the variable costs for each move were updated using the 2008 URCS.

JAMES D. BAGLEY

Mr. Bagley is an independent consultant with over thirty-five years of experience in the railroad industry, working for Norfolk Southern Railway Company ("NS") (and its predecessor Southern Railway Company) and for CSXT. Between June 2004 and February 2008, Mr. Bagley served as Vice President Engineering and Chief Engineering Officer for CSXT. Mr. Bagley is sponsoring the portions of Section III-D of CSXT's Reply Evidence that relate to Maintenance of Way costs for the SFRR. Mr. Bagley has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

As CSXT's Vice President Engineering and Chief Engineering Officer, Mr. Bagley was responsible for all engineering functions within the CSXT system – track, roadway, bridges and structures, buildings, facilities, and communications and signals. He supervised and managed a workforce of approximately 6500 employees over 22 States and two Canadian Provinces covering over 21,000 miles of main track and 9,000 miles of yard and siding tracks.

Before his tenure as CSXT's Chief Engineering Officer, Mr. Bagley had over thirty years experience working for NS and its predecessor railroads. A sampling of the positions he held over the course of his career include Track Supervisor; Assistant Division Engineer – Piedmont Division; Division Engineer – Asheville Division; Division Engineer – Kentucky Division; Engineer Maintenance of Way – Southwest Region; Engineer Maintenance of Way – Eastern Region; Division Engineer – Virginia Division (following a departmental reorganization); Chief Engineer Line Maintenance – Western Region; Chief Engineer Line Maintenance – Eastern Region; Chief Engineer Line Maintenance – Staff; Chief Engineer Line Maintenance – Northern Region. In these positions Mr. Bagley had increasing responsibility for the maintenance of and daily operations on track and bridges. He represented the Maintenance

of Way and Structures Department on the transition team working on the integration of the Conrail territory. In his final position with NS, Mr. Bagley directed over 2000 employees and had responsibility for over 7000 miles of main track and 2000 miles of yard and siding track.

Mr. Bagley has also worked as a consultant on a number of projects concerning safety assessment and inspection of track infrastructures. These projects are described in greater detail in his curriculum vitae, which is attached.

Mr. Bagley received a Bachelor of Science degree in civil engineering from Southern Polytechnic State University. He is a member of the American Railway Engineering and Maintenance-of-Way Association ("AREMA"), and was a member of its predecessor organizations. Since 2007 he has been a member of AREMA's Board of Governors.

VERIFICATION

I, James D. Bagley, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

James D. Bagley

Executed on January 11, 2010.

JAMES D. BAGLEY

♦♦♦

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SUMMARY

35+ years experience with Norfolk Southern Railway Company (and predecessor company, Southern Railway Company), and CSX Transportation, in the Maintenance of Way & Structures and Engineering Departments. Began my career with Southern Railway in November 1968 as a Management Trainee progressing steadily through positions of increasing responsibility from Track Supervisor to Chief Engineer with Norfolk Southern, and then to Vice President and Chief Engineering Officer for CSX Transportation.

WORK HISTORY

INDEPENDENT CONSULTANT - March 1, 2008 to Present

December 2008 and January 2009

Special Consultant for Niemeyer & Associates, PC and Teledyne Brown Engineering, Inc. on track and bridge upgrade work on Russian Railways project near Bolshoi Kamen, Russia.

CSX TRANSPORTATION COMPANY

June 1, 2004 to February 29, 2008
Vice President Engineering and Chief Engineering Officer

Responsible for all engineering functions within the CSX system (track, roadway, bridges & structures, buildings, facilities, communications and signals, design, construction & capacity). Overall responsibility for supervising and managing a workforce of approximately 6500 employees over 22 States and two Canadian Provinces covering 21,000 + miles of main track, 9000+ miles of yard and siding tracks, with an annual expense and capital budget in excess of $1.4B.

2000-2004 **INDEPENDENT CONSULTANT**

August 28-September 1, 2000
September 18-23, 2000

Safety assessment and inspection of track infrastructure on the Alaska Railroad from Anchorage to Fairbanks, Alaska.

November 19-20, 2000

Safety assessment/track inspection of Canadian National Railway's Kitimat Subdivision to assess the feasibility of operating longer/heavier trains between Kitimat and Terrace, B.C., Canada.
January 11-17, 2001

Safety assessment and inspection of track infrastructure of Ferrominera Orinoco Railroad between Porte Ordaz and San Isidro ore mine (146km) in Venezuela, South America.

February 12-16, 2001

Member of a Value Engineering team reviewing Phase I of Metra's rail expansion project on Metra's West Line and Wisconsin Central's North Central Line in the Chicago, IL. area.

April 23-27, 2001

Conducted track maintenance/track inspection training class at Coronach, SK., Canada for Luscar, Ltd.'s track maintenance employees.

May 21-25, 2001

Member of a Value Engineering team reviewing proposed rail expansion project for Metra between Geneva and Elburn,IL.

June 4-8, 2001

Member of Value Engineering team reviewing phase II of proposed rail expansion project for Metra in the Chicago, IL. area on Metra's West Line and Wisconsin Central's North Central Line.

June 11-15, 2001

Member of a Value Engineering team reviewing rail expansion project on the Greenbush Line for the MBTA in Boston, MA.

August 1-3, 2001

Safety assessment and inspection of track infrastructure of the Indiana Railroad between Newton, IL. and Indianapolis, IN.

October 8-12, 2001

Conducted track maintenance/track inspection training classes for INTERCOR track maintenance employees in Columbia, South America.

January 7-10, 2002

Safety assessment and inspection of track infrastructure for Westinghouse Corp. at the Savannah River Nuclear Plant near Aiken, SC.

March 4 – September 30, 2002

Consultant for Norfolk Southern Railway in two coal rate cases before the Surface Transportation Board.

May 20-22, 2002 and July 28 –30, 2003

Safety assessment and inspection of track infrastructure of the Georgia Ports Authority tracks in the Savannah and Brunswick, Georgia areas.

November 18-21, 2002

Conducted training class covering FRA Track Safety Standards, Track Inspection, and Track Maintenance for employees of Westinghouse Corp. at the Savannah River Nuclear Plant near Aiken, SC.

September 9-12, 2003

Performed Inspection, evaluation and risk assessment of Luscar, Ltd.'s Poplar River Mine Rail Line near Coronach, SK., Canada including preparation of a written report.

September 22-25, 2003

Conducted training class covering FRA Track Safety Standards and Track Inspection for employees of Bechtel BWXT Idaho, LLC (BBWI) at the Idaho National Engineering & Environmental laboratory near Idaho Falls, Idaho.

1968-2000 NORFOLK SOUTHERN RAILWAY / SOUTHERN RAILWAY COMPANY

June 1, 1999- February 28, 2000
Chief Engineer Line Maintenance Northern Region (Conrail acquired territories)
Atlanta, Georgia

Overall responsibility for daily track and bridge operations on 7000+ miles of main track and approximately 2000+ miles of yard and siding track. Overall responsibility for directing a maintenance force of approximately 2000 employees with an annual expense and capital budget of approximately $200 million.

May 16, 1997-May 31, 1999
Chief Engineer Line Maintenance-Staff
Atlanta, Georgia

In this position I was the Maintenance of Way & Structures Department representative on a Transition Team involved in Norfolk Southern's acquisition of a very sizable portion of Consolidated Rail Corporation (Conrail). Responsibilities included familiarization of the Conrail territory to be acquired, interviewing Conrail supervisors and maintenance of way employees and extending job offers to existing Conrail employees for non-agreement Maintenance of Way & Structures supervisory positions with Norfolk Southern. Responsibilities also included determining division boundaries for the territories being acquired as well as staffing and manpower requirements for these territories. It was also my responsibility to develop five-year maintenance and capital programs for the physical plant being acquired.

July 1, 1995- May 15, 1997
Chief Engineer Line Maintenance-Eastern Region

Atlanta, Georgia

Overall responsibility for daily track and bridge operations on approximately 7000 miles of main track and 1700 miles of yard and siding track. Overall responsibility for directing a maintenance force of approximately 1700 employees with annual expense and capital budgets of approximately $200 million.

October 1, 1993- June 30, 1995
Chief Engineer Line Maintenance-Western Region
Atlanta, Georgia

Overall responsibility for daily track and bridge operations on approximately 7000 miles of main track and 1800 miles of yard and siding track. Overall responsibility for directing a maintenance force of approximately 1900 employees with annual expense and capital budgets of approximately $200 million.

February 1, 1989- September 30, 1993
Division Engineer- Virginia Division (Departmental Reorganization)
Roanoke, Virginia

Overall responsibility for daily track and bridge operations on heavy tonnage division (110 million gross tons annually on approximately one-third of division) consisting of approximately 1900 miles of main track and 800 miles of yard and siding track. Responsible for directing a maintenance track and bridge force of approximately 450 employees. Responsibilities included preparing annual maintenance and capital programs for both track and bridge projects with an annual budget of approximately $50-60 million.

August 16, 1986- January 31, 1989
Engineer Maintenance of Way- Eastern Region
Roanoke, Virginia

Overall responsibility for daily track operations and maintenance on the Eastern Region of the Norfolk and Western Railway Company (subsidiary of Norfolk Southern Railway Company). The Eastern Region was comprised of approximately 2000 miles of main track and 1000+ miles of yard and siding track. The vast majority of this region was mountainous terrain territory with heavy coal tonnage being the predominate commodity being transported. Directed a work force of approximately 750 employees responsible for the maintenance and safety of the track structure on this region. Responsibilities included preparing annual maintenance and capital

programs for track projects with an annual budget of approximately $100 million.

February 1, 1983- August 15, 1986
Engineer Maintenance of Way- Southwest Region
Atlanta, Georgia

Overall responsibility for daily track operations and maintenance on the Southwest Region of the Southern Railway System (subsidiary of Norfolk Southern Railway Company). The Southwest region was comprised of approximately 2500 miles of main track and 1000+ miles of yard and siding track. Approximately 50% of the main track was mountainous terrain with heavy coal tonnage. Directed a work force of approximately 500 employees responsible for the maintenance and safety of the track structure on this region. Responsibilities included preparing annual maintenance and capital programs for track projects with an annual budget of approximately $80-90 million.

July 1, 1976- January 31, 1983
Division Engineer- Kentucky Division
Somerset, Kentucky

Responsible for daily track operations and maintenance on heavy tonnage division between Cincinnati, Ohio and Chattanooga, Tennessee on the Southern Railway System. This division was comprised of 500 miles of heavy tonnage CTC main track (35MGT- 72MGT), 100 miles of secondary main track and approximately 200 miles of yard and siding track. Directed a work force of 130 employees responsible for maintenance and safety of the track structure. Responsible for preparing annual maintenance and capital programs for track projects with an annual budget of approximately $25 million.

March 16, 1974- June 30, 1976
Division Engineer- Asheville Division
Asheville, North Carolina

Responsible for daily track operations and maintenance on mountainous division consisting of approximately 200 miles of heavy tonnage main track,

200 miles of secondary main track, and 100 miles of yard and siding track. Directed a work force of approximately 65 employees responsible for maintenance and safety of the track structure on this division. Responsibilities included preparing annual maintenance and capital programs for track projects with an annual budget of approximately $10 million.

January 16, 1973- March 15, 1974
Assistant Division Engineer- Piedmont Division
Greenville, South Carolina

Assisted the Division Engineer on the Piedmont Division in managing daily track operations and maintenance on approximately 500 miles of CTC main track, 150 miles of secondary main track, and 200 miles of yard and siding track. Assisted the Division Engineer in planning future maintenance and capital programs for the division.

January 1, 1972- January 15, 1973
Track Supervisor-Piedmont Division
Greenville, South Carolina

Responsible for daily track maintenance on 100 miles of Centralized Traffic Control main track, 45 miles of secondary main track, and 15 miles of yard and siding track. Directed a daily work force of approximately 20 employees.

August 12, 1969-December 31, 1971
Track Supervisor- Piedmont Division
Union, South Carolina

Responsible for daily track maintenance on 100 miles of main track, 25 miles of secondary main track, and 5 miles of yard and siding track. Directed a work force of six employees.

November 18, 1968- August 11, 1969
Management Trainee
Columbus, Georgia

Participant in a structured Management Training program under the direction of the Division Engineer at Columbus, Georgia.

1964-1968 **DANIEL CONSTRUCTION COMPANY**
Florida Division
Jacksonville, Florida

Field Construction Engineer and Assistant Construction Superintendent on several heavy building construction projects in Jacksonville and Windermere, Florida and St. Mary's Georgia.

EDUCATION

1964 Graduated Southern Technical Institute (Southern Polytechnic State University) – Civil Engineering Degree

1995 Management Development Certificate from Duke University - The Fuqua School of Business

SAFETY TRAINING

1989 Completed the DuPont Safety Training Course developed for Norfolk Southern Railway. Conducted Safety Training/Safety Audit training classes for all M/W personnel on Norfolk Southern's Virginia Division.

PROFESSIONAL ORGANIZATIONS

1973 to Present Member of American Railway Engineering and Maintenance-Of-Way Association and predecessor organizations American Railway Engineering Association and Roadmasters and Maintenance-Of-Way Association.

2007 to Present Member of the Board of Governors of American Railway Engineering and Maintenance of Way Association (AREMA).

MICHAEL R. BARANOWSKI

Mr. Baranowski is a Senior Managing Director at FTI Consulting, Inc., an economic and consulting firm with offices located at 1101 K Street, NW, Washington, DC 20005. Since 1980, Mr. Baranowski has been involved in various aspects of transportation analysis including operations, engineering, facility requirements, valuations and costing. Mr. Baranowski is sponsoring portions of Sections III.D.4, III.E., III.F, III.G and III.H of CSXT's Reply Evidence. Mr. Baranowski has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Baranowski holds a Bachelor of Science degree in accounting from Fairfield University in Fairfield, Connecticut. In 1980, he joined the consulting firm of Wyer, Dick and Company in Livingston, New Jersey as a consultant. He participated in a variety of studies for railroad, shipper and other clients including line abandonments, operations analysis, terminal switching studies, labor protection and rail facility and equipment valuation.

In late 1981, Mr. Baranowski became a consultant with Snavely, King and Associates with offices in Morristown, New Jersey and Washington, D.C. While at Snavely, King, he was involved in rail merger, traffic, switching, liquidation and valuation studies for a variety of rail and rail related clients. He was also responsible for engineering, operating and costing components in a number of Section 229 proceedings.

Mr. Baranowski joined Klick, Kent & Allen ("KK&A") in 1988 as a Senior Consultant. He became a principal of KK&A in 1989 and remained in that position until its acquisition by FTI in 1998.

Mr. Baranowski has presented testimony before the Interstate Commerce Commission, Surface Transportation Board, Federal Communications Commission, Federal Regulatory

Commission and a variety of state regulatory agencies. Mr. Baranowski's curriculum vitae, which identifies representative engagements and cases in which he has sponsored expert testimony, is attached hereto.

VERIFICATION

I, Michael R. Baranowski, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Michael R. Baranowski

Executed on January___, 2010.

Michael R. Baranowski

Senior Managing Director - Economic Consulting

mike.baranowski@fticonsulting.com

1101 K Street, NW
Suite B100
Washington, DC 20005
Tel: (202) 312-9100
Fax: (202) 312-9101

Education
B.S. in Accounting, Fairfield University

Supplemental Finance Studies, Kean College

Mike Baranowski provides financial and economic consulting services to the telecommunications and transportation industries. He has special expertise in analyzing and developing complex computer costing models, operations analysis, and transportation engineering. Much of his work involves providing oral and written expert testimony before courts and regulatory bodies.

Some of Mr. Baranowski's representative accomplishments include:

- Overseeing the development of computer cost modeling tools designed to simulate the cost of competive entry into local telecommunications markets and directing the efforts of a nationwide team of testifying experts presenting the cost model results in multiple proceedings across the country.
- Directing the analysis, critique and restatement of a variety of complex cost models developed by major telecommunications companies designed to simulate the forward-looking cost of competitive entry into local telecommunications markets.
- Designing multiple PC-based spreadsheet models for use in calculating the stand-alone cost of competitive entry into the railroad and pipeline markets. These models have been used to assist clients in all three network industries in making internal pricing decisions that are in compliance with governing regulatory standards.
- Conducting detailed analyses of railroad operations and developing the associated capital requirements and operating expenses attributable to specific movements and the incremental capital and operating expense requirements attributable to major changes in anticipated traffic levels.
- Calculating marginal and incremental costs for a major petroleum products pipeline company, an approach that is now used regularly by the company in making internal day-to-day pricing decisions.

Mr. Baranowski holds a B.S. in Accounting from Fairfield University in Fairfield, Connecticut and has pursued supplemental finance studies at Kean College in Union, New Jersey.

TELECOMMUNICATIONS TESTIMONY

Federal Communications Commission

February 1998	File No. E-98-05. AT&T Corp. v. Bell Atlantic Corp. Affidavit of Michael R. Baranowski.
March 13, 1998	File No. E-98-05. AT&T Corp. v. Bell Atlantic Corp. Supplemental Affidavit of Michael R. Baranowski.
June 10, 1999	CC Docket No. 96-98. Implementation of the Local Competition Provisions of the Telecommunications Act of 1996. Reply Affidavit of Michael R. Baranowski, John C. Klick and Brian F. Pitkin.

July 25, 2001	CC Docket No. 00-251, 00-218. In the Matter of Petition of AT&T Communications of Virginia, Inc. and WorldCom, Inc., Pursuant to Section 252(e)(5) of the Communications Act, for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon-Virginia, Inc. Panel
June 13, 2005	WC Docket No. 05-25;RM-10593. In the Matter of Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services, Joint Declaration on Behalf of SBC Communications, Inc.
July 29, 2005	WC Docket No. 05-25;RM-10593. In the Matter of Special Access Rates for Price Cap Local Exchange Carriers; AT&T Corp. Petition for Rulemaking to Reform Regulation of Incumbent Local Exchange Carrier Rates for Interstate Special Access Services, Joint Reply Declaration on Behalf of SBC Communications, Inc.
Public Service Commission of Delaware	
February 4, 1997	PSC Docket No. 96-324. In the Matter of Bell Atlantic - Delaware Statement of Terms and Conditions Under Section 252(F) of the Telecommunications Act of 1996. Testimony of Michael R. Baranowski.
Public Service Commission of the District of Columbia	
March 24, 1997	Formal Case No. 962. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996. Testimony of Michael R. Baranowski.
May 2, 1997	Formal Case No. 962. In the Matter of the Implementation of the District of Columbia Telecommunications Competition Act of 1996. Rebuttal Testimony of Michael R. Baranowski.
Public Service Commission of the State of Maryland	
March 7, 1997	Docket No. 8731, Phase II. In the Matter of the Petitions for Approval of Agreements and Arbitration of Unresolved Issues Arising Under Section 252 of the Telecommunications Act of 1996. Direct Testimony of Michael R. Baranowski.
April 4, 1997	Docket No. 8731, Phase II. In the Matter of the Petitions for Approval of Agreements and Arbitration of Unresolved Issues Arising Under Section 252 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.
May 25, 2001	Case No. 8879. In the Matter of the Investigation into Rates for Unbundled Network Elements Pursuant to the Telecommunications Act of 1996. Panel Testimony on Recurring Cost Issues

Public Service Commission of the State of Michigan

January 20, 2004	Case No. U-13531. In the Matter, on the Commission's Own Motion to Review the Costs of Telecommunication Service Provided By SBC Michigan. Initial Testimony of Michael R. Baranowski and Julie A. Murphy.
May 10, 2004	Case No. U-13531. In the Matter, on the Commission's Own Motion to Review the Costs of Telecommunication Service Provided By SBC Michigan. Final Reply Testimony of Michael R. Baranowski and Julie A. Murphy.

New Jersey Board of Public Utilities

December 20, 1996	Docket No. TX 95120631. Notice of Investigation Local Exchange Competition for Telecommunications Services. Rebuttal Testimony of John C. Klick and Michael R. Baranowski.

North Carolina Utilities Commission

March 9, 1998	Docket No. P-100, Sub 133d. In the Matter of Establishment of Universal Support Mechanisms Pursuant to Section 254 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.

Pennsylvania Public Utility Commission

January 13, 1997	Docket Nos. A-310203F0002 et al. MFS-III. Application of MFS Intelenet of Pennsylvania, Inc. et. Al. (Phase III). Rebuttal Testimony of Michael R. Baranowski.
February 21, 1997	Docket Nos. A-310203F0002 et al. MFS-III. Application of MFS Intelenet of Pennsylvania, Inc. et. Al. (Phase III). Surrebuttal Testimony of Michael R. Baranowski.
April 22, 1999	Docket Nos. P-00991648, P-00991649. Petition of Senators and CLECs for Adoption of Partial Settlement and Joint Petition for Global Resolution of Telecommunications Proceedings. Direct Testimony of Michael R. Baranowski.
January 11, 2002	Docket No. R-00016683. Generic Investigation of Verizon Pennsylvania, Inc.'s Unbundled Network Element Rates. Panel Testimony on Recurring Cost Issues

State Corporation Commission Commonwealth of Virginia

April 7, 1997	Case No. PUC970005. Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Affidavit of Michael R. Baranowski.
April 23, 1997	Case No. PUC970005. Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Direct Testimony of Michael R. Baranowski.

June 10, 1997 — Case No. PUC970005. Ex Parte to Determine Prices Bell Atlantic - Virginia, Inc. Is Authorized To Charge Competing Local Exchange Carriers In Accordance With The Telecommunications Act of 1996 And Applicable State Law. Rebuttal Testimony of Michael R. Baranowski.

Washington State Utilities and Transportation Commission

December 22, 2003 — Docket No. UT-033044. In the Matter of the Petition of Qwest Corporation To Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order. Direct Testimony of Michael R. Baranowski.

February 2, 2004 — Docket No. UT-033044. In the Matter of the Petition of Qwest Corporation To Initiate a Mass-Market Switching and Dedicated Transport Case Pursuant to the Triennial Review Order. Response Testimony of Michael R. Baranowski.

Public Service Commission of West Virginia

February 13, 1997 — Case Nos. 96-1516-T-PC, 96-1561-T-PC, 96-1009-T-PC, 96-1533-T-T. Petition to establish a proceeding to review the Statement of Generally Available Terms and Conditions offered by Bell Atlantic in accordance with Sections 251, 252, and 271 of the Telecommunications Act of 1996. Testimony of Michael R. Baranowski.

February 27, 1997 — Case Nos. 96-1516-T-PC, 96-1561-T-PC, 96-1009-T-PC, 96-1533-T-T. Petition to establish a proceeding to review the Statement of Generally Available Terms and Conditions offered by Bell Atlantic in accordance with Sections 251, 252, and 271 of the Telecommunications Act of 1996. Rebuttal Testimony of Michael R. Baranowski.

June 3, 2002 — Case No. 01-1696-T-PC, Verizon West Virginia, Inc. Petition For Declaratory Ruling That Pricing of Certain Additional Unbundled Network Elements (UNEs) Complies With Total Element Long-Run Incremental Cost (TELRIC) Principles. Direct Testimony of Michael R. Baranowski

July 1, 2002 — Case No. 01-1696-T-PC, Verizon West Virginia, Inc. Petition For Declaratory Ruling That Pricing of Certain Additional Unbundled Network Elements (UNEs) Complies With Total Element Long-Run Incremental Cost (TELRIC) Principles. Supplemental Direct Testimony of Michael R. Baranowski

RAILROAD TESTIMONY

Interstate Commerce Commission

March 9, 1995 — Finance Docket No. 32467. National Railroad Passenger Corporation and Consolidated Rail Corporation – Application Under Section 402(a) of the Rail Passenger Service Act for an Order Fixing Just Compensation.

October 30, 1995 — Docket No. 41185. Arizona Public Service Company and Pacificorp v. The Atchison, Topeka and Santa Fe Railway Company.

Surface Transportation Board

July 11, 1997	Docket No. 41989. Potomac Electric Power Company v. CSX Transportation, Inc. Reply Statement and Evidence of Defendant CSX Transportation, Inc.
August 14, 2000	Docket No. 42051. Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Michael R. Baranowski.
September 20, 2002	STB Docket No. 42070. Duke Energy Corporation v. CSX Transportation, Inc., Reply Evidence and Argument of CSX Transportation, Inc.
September 30, 2002	STB Docket No. 42069. Duke Energy Corporation v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company.
October 11, 2002	STB Docket No. 42072. Carolina Power & Light v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company.
November 12, 2002	Docket No. 42070 Duke Energy Corporation v. CSX Transportation, Rebuttal Evidence and Argument of CSX Transportation
November 19, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
November 27, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
January 10, 2003	STB Docket No. 41185. Arizona Public Service Co. And Pacificorp v. The Atchison, Topeka and Santa Fe Railway Company, Petition of the Burlington Northern and Santa Fe Railway Company to Reopen and Vacate Rate Prescription.
February 19, 2003	STB Docket No. 42077, Arizona Public Service Co. And Pacificorp v. The Burlington Northern and Santa Fe Railway Company, and STB Docket No. 41185, Arizona Public Service Co. And Pacificorp v. The Burlington Northern and Santa Fe Railway Company, Reply of the Burlington Northern Santa Fe Railway Company in Opposition to Petition for Consolidation.
April 4, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
October 8, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
October 24, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Supplemental Evidence of Norfolk Southern Railway Company

October 31, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Duke Energy Company's Supplemental Evidence
November 24, 2003	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Supplemental Evidence of Norfolk Southern Railway Company
December 2, 2003	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Carolina Power & Light Company's Supplemental Evidence
December 12, 2003	Docket No. 42069 Reply of Norfolk Southern Railway Company to Duke Energy Corporation's Petition to Correct Technical Error and Affidavit of Michael R. Baranowski
January 5, 2004	Docket No. 42070 Duke Energy Corporation v. CSX Transportation, Inc., Supplemental Evidence of CSX Transportation, Inc.
January 26, 2004	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Joint Supplemental Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company
March 22, 2004	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Supplemental Reply Evidence of The Burlington Northern and Santa Fe Railway Company
April 9, 2004	Docket No. 41185 Arizona Public Service Company and Pacificorp v. The Burlington Northern and Santa Fe Railway Company, The Burlington Northern and Santa Fe Railway Company's Reply Evidence on Reopening
May 24, 2004	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
June 23, 2004	Docket No. 42057 Public Service Company of Colorado d/b/a Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Petition to Correct Technical and Computational Errors
March 1, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Supplemental Evidence of BNSF Railway Company
April 4, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Reply of BNSF Railway Company to Supplemental Evidence
July 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Evidence of BNSF Railway Company

May 1, 2006	Docket No. Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases, Verified Statement Supporting Comments of BNSF Railway Company
May 31, 2006	Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases; Verified Statement Supporting Reply Comments of BNSF Railway Company
June 15, 2006	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 15, 2006	Docket No. 41191 (Sub 1) AEP Texas North Company v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 30, 2006	Docket No. Ex Parte 657 (Sub-No. 1) Major Issues in Rail Rate Cases; Verified Statement Supporting Rebuttal Comments of BNSF Railway Company
February 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
February 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
February 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSX Transportation, Inc.
May 1, 2008	Docket No. Ex Parte 679 Petition of the AAR to Institute a Rulemaking Proceeding to Adopt a Replacement Cost Methodology to Determine Railroad Revenue Adequacy, Verified Statement of Michael R. Baranowski
July 14, 2008	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Third Supplemental Reply Evidence of BNSF Railway Company
July 14, 2008	Docket No. AB-515 (Sub-No. 2) Central Oregon & Pacific Railroad, Inc. -- Abandonment and Discontinuance of Service -- in Coos, Douglas, and Lane Counties, Oregon (Coos Bay Rail Line)
August 8, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Evidence of BNSF Railway Company
August 11, 2008	Docket No. 42014 Entergy Arkansas, Inc. and Entergy Services, Inc. v Union Pacific Railroad Company and Missouri & Northern Arkansas Railroad Company, Inc.; Finance Docket No. 32187 Missouri & Northern Arkansas Railroad Company, Inc. -- Lease, Acquisition and Operations Exemption -- Missouri Pacific Railroad Company and Burlington Northern Railroad Company, Reply Evidence and Argument of Union Pacific
September 5, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Reply Evidence of BNSF Railway Company
September 12, 2008	Docket No. AB-515 (Sub-No. 2) Central Oregon & Pacific Railroad, Inc. -- Abandonment and Discontinuance of Service -- in Coos, Douglas, and Lane Counties, Oregon (Coos Bay Rail Line); Rebuttal to Protests
August 24, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Opening Evidence of Union Pacific Railroad Company

US District Court for Northern District of Oklahoma

January 2, 2007	Case No. 06-CV-33 TCK-SAJ, Grand River Dam Authority v. BNSF Railway Company; Report of Michael R. Baranowski
February 2, 2007	Case No. 06-CV-33 TCK-SAJ, Grand River Dam Authority v. BNSF Railway Company; Reply Report of Michael R. Baranowski

Circuit Court of Pulaski County, Arkansas

August 17, 2007	Case No. CV 2006-2711, Union Pacific Railroad v. Entergy Arkansas, Inc. and Entergy Services, Inc., Expert Witness Report of Michael R. Baranowski
December 14, 2007	Case No. CV 2006-2711, Union Pacific Railroad v. Entergy Arkansas, Inc. and Entergy Services, Inc., Reply Expert Witness Report of Michael R. Baranowski

U.S. District Court for the Eastern District of Wisconsin

February 15, 2008	Case No. 06-C-0515, Wisconsin Electric Power Company v. Union Pacific Railroad Company, Expert Reply Report of Michael R. Baranowski

Arbitrations and Mediations

March 7, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Expert Report on behalf of BNSF Railway Company
March 28, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Rebuttal Expert Report on behalf of BNSF Railway Company
April 12, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Supplemental Expert Report on behalf of BNSF Railway Company
April 19, 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Supplemental Rebuttal Expert Report on behalf of BNSF Railway Company
April/May 2005	Arbitration Case #181 Y 00490 04 BNSF Railway Company and J.B. Hunt Transport, Inc., Hearings before Arbitration Panel
February 20, 2007	In the Matter of the Arbitration between the Detroit Edison Company, et al, and BNSF Railway Company, Expert Report of Michael R. Baranowski
March 19, 2007	In the Matter of the Arbitration between the Detroit Edison Company, et al, and BNSF Railway Company, Supplemental Expert Report of Michael R. Baranowski
February 12, 2009	In the Matter of the Arbitration between Wisconsin Public Service Corporation and Union Pacific Railroad Company, Rebuttal Expert Report of Michael R. Baranowski

RICHARD BROWN

Mr. Brown is a Director at FTI Consulting, Inc., an economic and consulting firm with offices located at 1101 K Street, NW, Washington, DC 20005. With 28 years of experience in the railroad industry, Mr. Brown specializes in providing financial, economic and analytical consulting services to North America's largest railroads. Mr. Brown is sponsoring portions of Sections III.D of CSXT's Reply Evidence. Mr. Brown has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Brown received a BA in Economics from Syracuse University in 1963, and a MBA from Northwestern University in 1971. Prior to joining FTI, Mr. Brown spent 28 years with The Burlington Northern & Santa Fe Railway (BNSF), and its predecessor The Atchison, Topeka and Santa Fe Railway (ATSF). While at BNSF, Mr. Brown focused on strategic issues including the negotiation and implementation of the agreements between UP and BNSF that were effected to facilitate the UP-SP merger. Additionally, he took a lead role in the analysis of the potential impact of regulatory changes on railroad marketing strategy.

Mr. Brown held numerous positions in Strategic Planning and Marketing at ATSF. He was involved in merger analysis and planning and played a key role in the attempted merger between ATSF and Southern Pacific. Mr. Brown headed ATSF's Bulk Commodity Marketing which included Chemicals and Coal. In this role, he re-engineered a field sales organization with regional directors responsible for coaching and mentoring account managers. He also led ATSF's rail-truck retail efforts and negotiated several joint venture and business partnerships. While in this capacity, he developed a program for using rail truck transfer to increase car utilization. He implemented a joint venture with a major bulk truck line to bring intermodal rail service to dry bulk shippers.

Mr. Brown has provided expert testimony in merger proceedings before the Interstate Commerce Commission and The Surface Transportation Board.

VERIFICATION

I, Richard W. Brown, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Richard W. Brown

Executed on January 11, 2010.

DANIEL A. DOTY, P.E.

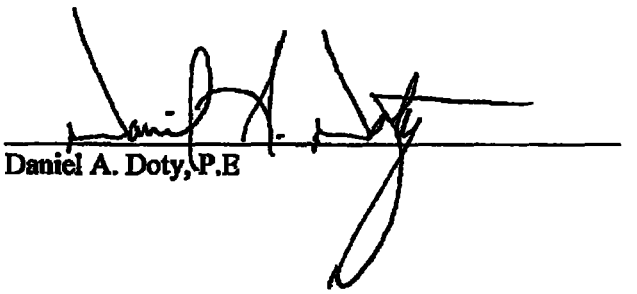
Mr. Doty is a project manager/senior engineer with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Doty has more than 22 years of experience in bridge analysis, design, inspection, rating, and rehabilitation. Mr. Doty is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to bridges. Mr. Doty has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Doty has designed major new bridge structures, including truss structures as well as major bridge repairs and replacement structures. Mr. Doty has conducted railroad bridge forensic analysis/studies, strength and fatigue analyses, and bridge ratings. He is experienced and has been involved in numerous emergency repairs and replacements to major bridges, such as his involvement with CSX's six major bridges in the Gulf Coast that were damaged or destroyed in 2005 by Hurricane Katrina. Mr. Doty co-authored and co-instructed the American Railway Engineering and Maintenance-of-Way Association (AREMA) Railroad Bridge Load Rating Manual and Seminar, and was responsible for writing and teaching Section 5 (Structural Analysis) and Section 6 (Steel Structure Rating) and the review of Section 3 (Rating Inspection) and Section 4 (Rating Loads). He has presented and continues to present annually "Highway Bridges & Railroad Bridges – Differences and Similarities" to Purdue University School of Engineering Bridge Design Class. Mr. Doty holds a Bachelor of Science, Civil Engineering from Valparaiso University and a Master of Science, Engineering from Tulane University.

Mr. Doty's resume with additional project experience is attached hereto.

VERIFICATION

I, Daniel A. Doty, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Daniel A. Doty, P.E

Daniel A. Doty, P.E.

Project Manager/Senior Engineer

Mr. Doty is a project manager/senior engineer with more than 22 years of experience in bridge analysis, design, inspection, rating, and rehabilitation. He has designed major new bridge structures, including truss structures as well as major bridge repairs and replacement structures. Mr. Doty has conducted railroad bridge forensic analysis/studies, strength and fatigue analyses, and bridge ratings. He is experienced and has been involved in numerous emergency repairs and replacements to major bridges, such as his involvement with CSX's six major bridges in the Gulf Coast that were damaged or destroyed in 2005 by Hurricane Katrina. Mr. Doty co-authored and co-instructed the American Railway Engineering and Maintenance-of-Way Association (AREMA) Railroad Bridge Load Rating Manual and Seminar, and was responsible for writing and teaching Section 5 (Structural Analysis) and Section 6 (Steel Structure Rating) and the review of Section 3 (Rating Inspection) and Section 4 (Rating Loads). He has presented and continues to present annually "Highway Bridges & Railroad Bridges – Differences and Similarities" to Purdue University School of Engineering Bridge Design Class.

Project Experience

CSX Systemwide Bridge Replacements - Project Manager/Lead Engineer
Responsible for managing any necessary fieldwork, permitting, analysis, design, preparation of plans and specifications, reports, etc. for the replacement of existing or the development of new CSX bridges or the repairs and rehabilitation of existing CSX bridges throughout their system. (2001 - Present)

Florida East Coast Railway L.L.C. System-Wide Bridge Replacements - Project Manager/Senior Engineer
Responsible for managing any necessary fieldwork, permitting, analysis, design, preparation of plans and specifications, reports, etc. for the replacement of existing or development of new FEC bridges or the repairs and rehabilitation of existing FEC bridges throughout their system (2001 - Present)

Norfolk Southern Bridge Inspections - Project Manager/Lead Engineer
Managing in-depth inspections and preparation of inspection reports for Bridges 32, 33, 34A, 34B, 35, and 36 near the Holston Army Ammunition Plant in Kingsport, TN. Mr. Doty is acting as liaison to Norfolk Southern. (1997 - Present)

CSX Bridge BAK56.90 over the Susquehanna River - Project Manager/Senior Engineer

Employee No.
91506

Department No.
53

Office Location
Jacksonville, FL

Date joined firm
4/9/01

Years with other firms
16

Education
Master of Science, Engineering; Tulane University (1999)

Bachelor of Science, Civil Engineering; Valparaiso University (1985)

Professional Registration
Professional Engineer: Florida (2000/#55710/exp. 2/28/11), Indiana (2006/#10607208/exp. 7/31/10), Louisiana (#0024943/exp. 3/31/11), and Nebraska (1997/#E-8979/exp. 12/31/09)

Training
STV Project Management Training Course (6/07 - 7/07)

Memberships
Member, American Railway Engineering and Maintenance-of-Way Association (AREMA)

Member, AREMA Committee 15 (Ad hoc committee for the development of the AREMA Bridge Rating Seminar)

American Institute of Steel Construction

STV

Responsible for managing the structural inspection and the preparation of repair plans for the 6,020-foot bridge consisting of through trusses, deck trusses , and deck plate girder spans averaging 90 feet in length near Aikin, MD. (2007 - 2008)

Awards
PCI Design Award 2006: Best Non-Highway Bridge for CSX Bridge No. 23 over St. Louis Bay in St. Louis, MS

CSX Bridge PLE25.31 over the Ohio River - Project Manager/Senior Engineer
Responsible for managing the structural inspection and the preparation of floor system repair plans in the 1,409-foot cantilever truss and 370-foot through truss double-track bridge near Monaca, PA. (2007 - 2008)

CSX Bridge 000663.2 over Chickasawbogue Creek - Project Manager/Senior Engineer
Responsible for managing the preparation of emergency repair plans for the partial removal and replacement of a truss diagonal and vertical post in the 375-foot swing span through truss near Mobile, AL. The temporary truss diagonal bypass system incorporated four $1^{3}/_{4}$" diameter, 150 ksi rods and steel anchor blocks capable of handling rail traffic during construction. (8/07)

Indiana Rail Road Company Bridge 177.35 over Industry Tracks - Project Manager/Senior Engineer
Performed a structural strength rating to determine the feasibility to allow heavy axle loads (HAL) to traverse the structure. The rating was performed in accordance with the AREMA Manual for Railway Engineering and incorporated Cooper E80, 286,000-lb, and 315,000-lb gross weight unit coal trains, including two EMD SD70-2 6-axle locomotives. Mr. Doty was responsible for the development and submission of the written report deliverable to inform the railroad of the strength rating results, which included the capability of the existing bridge to handle the unit coal trains and recommendations for strengthening the bridge to carry the trains. (4/07 - 5/07)

Indiana Rail Road Company Tulip Bridge over Richland Creek Inspection - Project Manager/Senior Engineer
Lead inspector in the visual inspection of accessible structural steel components, connections, and bearings making up the deck plate girder spans and the tower bearings of the 2,307-foot Tulip Bridge in Tulip, IN. The bridge includes eighteen 40-foot spans, two 50-foot spans, two 60-foot spans, seventeen 75-foot spans, and a 90-foot continuous 2-span system. A rail-mounted snooper was used to perform the inspection of the steel deck plate girder spans. The inspection also included concrete pedestals supporting the bridge towers, as well as the concrete abutments at each end of the bridge. Mr. Doty was responsible for the development and submission of the written report deliverable, which included an overall condition evaluation of the bridge, a summary of inspection findings, and photographs of general and significant findings. (3/07 - 5/07)

Indiana Rail Road Company Bridge 221.79 Inspection - Project Manager/Senior Engineer

Performed a visual inspection of the truss pins, floor system members, and associated connections on Bridge 221.79 over the West Fork of the White River in Elnora, IN. The 1899 vintage truss spans consist of three 150-foot open-deck, simple-span, pinned connected through Pratt trusses with counters. Mr. Doty reviewed the Bridge 221.79 Latta Subdivision Summary Report and strength rating of the thru-truss spans provided by the Canadian Pacific Railroad. He prepared and submitted a letter report, which included a summary of inspection findings, photographs of general and specific findings, and recommendations on the truss spans' ability to support trains with 286,000-lb loads. (8/06 - 9/06)

CSX Hurricane Katrina Bridge Repairs/Replacements - Project Manager
Responsible for bridge design and repair plans as well as the construction inspection regarding bridge repairs or replacements of CSX's six major bridges, which were either damaged or destroyed by Hurricane Katrina. Bridges included Bridge 709.5 over Singing River near Gautier, MS; Bridge 723.6 over Biloxi Bay in Biloxi, MS; Bridge 752.5 over St. Louis Bay in Bay St. Louis, MS; Bridge 769 over Pearl River near Rigolets, LA; Bridge 775.4 over Rigolets near Rigolets, LA; and Bridge 776.8 over Blind Rigolets. (8/05 - 5/06)

Florida East Coast Railway L.L.C. System-Wide Steel Structure Strength Rating Program - Project Manager/Lead Engineer
Responsible for the bridge strength ratings, the development and submission of the written rating report deliverable for all major steel bridges and concrete structures on the FEC system. The project consisted of rating 13 bridges with 32 different spans for fatigue and strength. (2005)

Indiana Rail Road Company Wabash River Bridge - Project Manager/Lead Engineer
Performed the structural strength rating for the 167-foot Pratt Truss with counters spans and the 61-foot through plate girder span and developed the strength rating report for the 810-foot single-track, open-deck bridge over the Wabash River near Riverton, IN. (2004)

Florida East Coast Railway L.L.C. Bridge Nos. LR7.35 and LR7.40 - Project Manager/Lead Engineer
Acted as lead designer for FEC Bridge No. LR7.35 over Okeechobee Road, a 129-foot double-track structure incorporating three steel box beams, and FEC Bridge No. LR7.40 a 171-foot bridge, comprising twin 4-span structures which incorporate prestressed concrete slabs, rolled beam spans with composite concrete decks, and 66-foot thru-plate girder spans with composite decks. (2004)

Florida East Coast Railway L.L.C. Bridge LR7.58Y over FEC Canal - Project Manager/Lead Engineer
Provided design and construction of the 7-span, 10-degree curve, 232-foot bridge over the FEC Canal near Hialeah, FL. The bridge consists of 14

prestressed concrete double-celled box girders bearing on cast-in-place concrete caps and three 30-inch-diameter reinforced concrete-filled steel pipe piles. (2004)

Georgia Port Authority/Rail Link Golden Isles Terminal Emergency Repair - Project Manager/Lead Engineer
Provided emergency repair plans for 700 feet of the 1,735-foot, severely fire-damaged timber trestle over Fancy Bluff Creek near Brunswick, GA. The repair consisted of incorporating HP14x73 steel piling for both the superstructure, substructure, and L6 x 6 x ½" bracing. The new bridge design, contract drawings, and material quantities were completed in 19 hours and the 700 feet of the replacement bridge was constructed in 13 days. (6/03)

Florida East Coast Railway L.L.C. System-Wide Trestle Fatigue Study - Project Manager/Lead Engineer
Acted as lead engineer for the system-wide strength and fatigue analyses of the Florida East Coast L.L.C. Railway's steel beam trestles incorporating 150 series, 160 series, and TPIX rail cars. (2002)

Florida East Coast Railway L.L.C. Bridge 311.45 over Boynton Canal Emergency Repair - Project Manager/Lead Engineer
Responsible for developing and implementing an emergency repair scheme and the fabrication of repair steel for emergency repairs on FEC Bridge 311.45.. The repairs consisted of removing the dead and live loads from damaged Bent 11 and transferring the load via a cradle beam and transfer beam to the adjacent bents. (2001)

Florida East Coast Railway L.L.C. Bridge 282.58 over Jupiter River Inspection/Repairs - Project Manager/Lead Engineer
Responsible for the in-depth inspection and preparation of repair plans and specifications for the 54-foot simple trunnion bascule span bridge over Jupiter River in Jupiter, FL. (2001)

CSX Bridge No. 66-C Repairs - Project Manager/Lead Engineer
Oversaw repairs to Bridge No. 66-C, a 1910 vintage, 764-foot stone masonry arch structure crossing Brandywine Creek near Wilmington, DE. The project consisted of developing plans to repair cracks in Arch No. 4 and Arch No. 5 incorporating 150 ksi high strength rods, grout, and epoxy injection. (5/01 - 8/01)

[Individual Experience]
CSXT Bridge No. MP DM 173.84 Repairs - Project Manager/Lead Engineer
Developed repair plans and oversaw repairs to Bridge No. MP DM 173.84 in Prattville, AL. The repairs included heat straightening and strengthening of lift span tower columns and the replacement of screw jack bearing beams and bearing beam brackets. (5/00)

[Individual Experience]
City of Pittsburgh I-279 Service Road Bridge Inspection - Project Engineer/Inspector
Responsible for the in-depth inspection of the 445-foot slant leg frame Service Road Bridge over I-279 near Pittsburgh, PA. The bridge was constructed in 1986 and consists of four steel slant leg frames incorporating a 9-inch concrete deck slab with standard concrete parapets and a 6-foot sidewalk along the left side of the structure. (5/99)

[Individual Experience]
City of Pittsburgh Schenley Drive Bridge Inspection - Project Engineer/Inspector
Responsible for the in-depth inspection of the Schenley Drive Bridge, a 3-hindged deck truss arch and two stone masonry arches that span over Boundary Street and CSXT near Pittsburgh, PA.(5/99)

[Individual Experience]
Norfolk Southern Bridge Replacements - Technical Project Manager/Lead Engineer
Responsible for the design and shop drawing review for three 150-foot Warren through trusses and one 200-foot Warren through truss; replacing the existing Pratt trusses crossing the Coosa River near Childersburg, AL. (1999)

[Individual Experience]
Norfolk Southern Bridge No. 33 and Bridge No. 35 Analyses - Project Manager
Acted as a liaison for Norfolk Southern and was responsible for the in-depth analysis of Bridges No. 33 and No. 35 near the Holston Army Ammunition Plant near Kingsport, TN. The project included fatigue and strength analysis and a formal report for the feasibility of 286,000-lb gross weight cars traversing Bridges No. 33 and No. 35. (1998)

[Individual Experience]
Union Pacific Railroad Shoal Creek Bridge Repairs - Project Manager
Oversaw the design and development of floor beam strengthening plans and miscellaneous repair plans for Bridge No. 451.30 over Shoal Creek in the Trenton Subdivision near Polo, MO. (1998)

[Individual Experience]
Union Pacific Railroad Grand River Bridge Rehabilitation - Project Manager
Responsible for the fatigue analysis, design, and development of bridge rehabilitation plans for Bridge No. 399.40 over the Grand River in the Trenton Subdivision near Mill Grove, MO. (1998)

[Individual Experience]
Port of New Orleans Bridge Inspection - Project Engineer/Inspector

Responsible for the structural inspections and inspection reports for the four Strauss Heel Trunnion Bascule Bridges spanning the Inner Harbor-Navigation Canal near New Orleans, LA. (1991 - 1997)

[Individual Experience]
LADOTD Crescent City Connection Division Bridge Inspections - Project Engineer/Inspector
Participated in the in-depth inspection of the US 90 (business) bridges; two cantilever thru-truss structures over the Mississippi River at New Orleans, LA. (1991 - 1997)

[Individual Experience]
Union Pacific Railroad White River Bridge Replacement - Project Engineer
Responsible for the analysis, design, and preparation of rehabilitation plans for the replacement of the truss hangers in Bridge No. 298.3 over the White River near New Augusta, AK. The project included a temporary construction scheme to accommodate live load for the replacement of the swing-span truss hangers. (1996)

[Individual Experience]
Canadian National Railway St. Lawrence River Bridge Inspection - Project Engineer/Inspector
Participated in the in-depth structural steel inspection of the Quebec Bridge over the St. Lawrence River in Quebec, Canada. (1996)

[Individual Experience]
Public Belt Railroad Huey P. Long Bridge Repairs - Project Engineer/Inspector
Supervised repairs to the US 90 (Huey P. Long) Bridge over the Mississippi River near New Orleans, LA. The repairs included jacking, cleaning, and installation of shims for the anchor arm bearings in the 1,850-foot cantilever truss. (1995)

[Individual Experience]
Kansas City Southern Railway Bridge Ratings - Project Engineer
Performed the structural analysis and rating of Bridge No. 729.2 over the Atchafalaya River near Simmesport, LA; Bridge No. C-766 over the Neches River near Beaumont, TX; and Bridge No. 165 over the Ouachita River near Monroe, LA. (1995)

[Individual Experience]
Arkansas and Missouri Railroad Company Harahan Bridge Inspection - Project Engineer
Participated in the in-depth inspection of the Harahan Bridge over the Mississippi River near Memphis, TN. (1995)

[Individual Experience]

Terminal Railroad Association Bridge Analysis/Repairs - Project Engineer
Conducted an analysis for the proposed lower chord strengthening on the TRRA Merchants Bridge over the Mississippi River at St. Louis, MO. The project included the analysis of three Petit thru-trusses as well as the analysis, design, and plan preparation for the floorbeam strengthening in the three trusses. (11/93 - 1/94)

[Individual Experience]
Burlington Northern Railroad Bridge No. 783.7 Repairs - Project Engineer
Supervised steel fabrication for the emergency repairs to this 292-foot swing span bridge over the Alabama River near Yellow Bluff, AL. (1993)

[Individual Experience]
Florida East Coast Railway, L.L.C. St. John's Bridge Repairs - Project Engineer
Responsible for shop drawings preparation and review, the steel fabrication, and emergency repairs to the 216-foot-long bascule span in Bridge No. 0.00 over the St. John's River at Jacksonville, FL. The repair consisted of the removal/replacement of a lower chord member in the bascule span. (12/92 - 1/93)

[Individual Experience]
Southern Pacific Transportation Company Bridge 321.98 over the Trinity River Bridge Repair - Project Engineer
Responsible for the design and preparation of plans for spidering plates used to bypass the work pin connection at Joint L4 in the 225-foot-long Pratt thru-truss. (1992)

[Individual Experience]
NYCDOT Manhattan Bridge Inspection - Project Engineer/Inspector
Participated in the inspection and aided in the development of the inspection report for the subway floor system located on the Manhattan Bridge over the East River in New York City. (1990)

[Individual Experience]
KYDOT Bridge Inspections - Project Engineer/Inspector
Participated in the in-depth bridge inspections and aided in the development of inspection reports for various bridges throughout the State of Kentucky for the Kentucky Department of Transportation (KYDOT). Bridges included the twin US 41 Bridges, cantilever thru-trusses, over the Ohio River near Henderson, KY; the US 231 Bridge, cantilever thru-truss, over the Ohio River near Owensboro, KY; the twin I-471 Bridges, steel tied-arch, over the Ohio River at Cincinnati, OH; and the US 31E, cantilever thru-truss, over the Ohio River at Louisville, KY. (1988 - 1990)

[Individual Experience]

City of Chicago Michigan Avenue Bridge Inspections - Project Engineer/Inspector
Participated in the in-depth inspection of the Michigan Avenue Bascule Bridge over the Chicago River and the Michigan Avenue viaduct located in Chicago, IL. (1988)

[Individual Experience]
Burlington Northern Railroad Bridge Inspections - Project Engineer/Inspector
Participated in the structural steel inspection of a simple-span thru-truss and deck truss traversing the Columbia River near Wenatchee, WA. (1987)

[Individual Experience]
WisDOT 8th Street Bridge Inspection - Project Engineer/Inspector
Participated in the in-depth inspection of the 8th Street Bascule Bridge in Manitowoc, WI. (1987)

[Individual Experience]
Port of Los Angeles Badger Avenue Bridge Inspection - Project Engineer/Inspector
Participated in the in-depth inspection of this double-leaf Strauss heel trunnion bascule bridge near Long Beach, CA. (1987)

Publications

Doty, Daniel A. 2001. "American Railway Engineering and Maintenance-of-Way Association Railroad Bridge Load Rating Manual;" Section 5 - Structural Analysis, Section 6 - Steel Structure Rating and review of Section 3 - Rating Inspection and Section 4 - Rating Loads.

Teaching Experience

Guest Lecturer, Purdue University College of Civil Engineering: Class in Bridge Design; Lecture on Highway Bridges and Railroad Bridges - Differences and Similarities. (1/07), AREMA Railroad Bridge Load Rating Seminar (9/03)

Specialized Training

AREMA Railway Structures Loading Seminar; AREMA Railway Structures Repair Seminar; AREMA Structures Inspection Seminar; University of Kansas - Fracture and Fatigue Control in Structures (Applications of Fracture Mechanics);

RICHARD C. DUMMAR, R.A.

Mr. Dummar is a project architect with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Dummar, NCARB-certified, is a registered architect in three states with more than 35 years of experience managing and designing railroad facilities across the country. Mr. Dummar is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to facilities. Mr. Dummar has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Dummar oversees teams of architects, as well as subconsultants and contractors, while managing projects from concept to completion. Mr. Dummar has experience with the design of new and renovated rail facilities, including offices, maintenance, roundhouse, and unloading facilities. He is also skilled at performing administrative tasks, such as cost estimating, schedule and budget management, and acting as liaison with clients. Mr. Dummar holds a Bachelor of Architecture from University of Nebraska-Lincoln.

Mr. Dummar's resume with additional project experience is attached hereto.

VERIFICATION

I, Richard C. Dummar, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Richard C. Dummar

Richard C. Dummar, R.A.

Richard C. Dummar, R.A.

Project Architect

Mr. Dummar, NCARB-certified, is a registered architect in three states with more than 35 years of experience managing and designing railroad facilities across the country. He oversees teams of architects, as well as subconsultants and contractors, while managing projects from concept to completion. Mr. Dummar has experience with the design of new and renovated rail facilities, including offices, maintenance, roundhouse, and unloading facilities. He is also skilled at performing administrative tasks, such as cost estimating, schedule and budget management, and acting as liaison with clients.

Employee No.
05079

Department No.
53

Office Location
Charlotte, NC

Date joined firm
7/20/09

Years with other firms
35

Education
Bachelor of Architecture; University of Nebraska-Lincoln (1974)

Professional Registrations
Registered Architect: Nebraska (2005/#A3518/exp. 12/31/11), Colorado (1994/#B-3122/exp. 7/31/11), Minnesota (2005/#44068/exp. 8/30/10)

Training/Certifications
National Council of Architectural Registration Boards (NCARB) (2005/#59363/)

Memberships
Member of Committee 6 - Building and Support Facilities, American Railway Engineering and Maintenance-of-Way Association (AREMA)

Computer Skills
MS Word, MS Excel, MS PowerPoint

Project Experience

BNSF Railway Wyo-Ben Building Interior Renovation - Architect Project Manager
Project Scope: To renovate a 12,000 square foot uninsulated pre-engineered metal warehouse building into finished office space.
Project Location: BNSF Yard, Gillette, Wyoming.
Scope of Work Included: Construction of new interior partitions, insulation of all perimeter walls, install new flooring, wall finishes, ceilings, light fixtures, doors and cabinets; installation of plumbing for new men and women restrooms; installation of new HVAC equipment.
My Role/Responsibilities: Worked with local BNSF management to put together a building program of space requirements for the renovation, designed preliminary plans and specifications, developed a project cost estimate and project schedule, hired and managed a design consultant to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 1-08 thru 10-08
Total Project Cost: $720,000

BNSF Railway New Maintenance of Way (MOW) Facility - Architect Project Manager
Project Scope: To construct a new 4,000 square foot Maintenance of Way Facility to move personnel from existing leased office building.
Project Location: BNSF Yard, Grants, New Mexico.
Scope of Work Included: Complete construction of new Maintenance of Way (MOW) Facility using wood stud framing on the perimeter walls and steel studs for interior partitions. Insulation of all perimeter walls, install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation of plumbing for new men and women restrooms, unisex shower; installation of new HVAC equipment; site grading, parking lot and construction of outdoor fenced storage area.

My Role/Responsibilities: Worked with local BNSF management to put together a building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, hired and managed a design consultant to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 10-07 thru 7-08
Total Project Cost: $780,000

BSNF Railway Cicero Yard Locker Room Expansion - Architect Project Manager
Project Scope: To renovate a 4,200 square foot masonry office building into a new locker room with break room, showers and men & women restrooms.
Project Location: BNSF Yard, Cicero, Illinois.
Scope of Work Included: Demolition of existing interior area as required, construction of new interior partitions, insulation of all perimeter walls, install new lockers, flooring, wall finishes, ceilings, light fixtures, doors and cabinets; installation of plumbing for new men and women restrooms; installation of new HVAC equipment; installation of new roof.
My Role/Responsibilities: Worked with local BNSF management to put together a building program of space requirements for the renovation, designed preliminary plans and specifications, developed a project cost estimate and project schedule, hired and managed a design consultant to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 3-06 thru 11-06
Total Project Cost: $525,000

BSNF Railway New Yard Office Facility - Architect Project Manager
Project Scope: To construct a new 4,500 square foot Yard Office Facility.
Project Location: BNSF Yard, Savanna, Illinois.
Scope of Work Included: Complete construction of new Maintenance of Way (MOW) Facility using wood stud framing on the perimeter walls and steel studs for interior partitions. Insulation of all perimeter walls, install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation of plumbing for new men and women restrooms, unisex shower; installation of new HVAC equipment; site grading, parking lot and construction of outdoor fenced storage area. Demolition of existing yard office after moving personnel into the new facility.
My Role/Responsibilities: Worked with local BNSF management to put together a building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, hired and managed a design consultant to finalize plans and specifications for bidding the project. Conducted pre-bid

and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 10-07 thru 7-08
Total Project Cost: $830,000

UPRR Severe Weather Survivability Study - Project Design Manager
Project Scope: Feasibility study to show construction options and costs to prevent building damage, to the UPRR Spring Regional Office Facility, from a severe weather occurrence.
Project Location: UPRR Spring Regional Office Facility, Spring, Texas.
Scope of Work Included: Listing the building options with the most economical solution first to the most expensive solution, what the percentage of survivability the building would be able to attain with each option, what the total cost of construction would be to accomplish that percentage and the time for construction of each option. After all construction options and costs were completed, a spreadsheet was developed to show the feasibility of each option comparing construction time, costs and survivability percentages.
My Role/Responsibilities: Discussed construction options with Facilities Design Group at UPRR Headquarters in Omaha, NE. to begin the project. I put together a program of requirements for the feasibility study that would determine the type of severe weather storm damage would be prevented from each construction solution. Managed the development of all construction solutions and costs. Items to be prevented included: Projectiles coming thru windows, walls and roof; power outages; dispatching center not functioning.
Project Duration: 8-04 thru 3-05
Total Project Cost: $140,000 (Costs for Study – No construction was done)

UPRR New Maintenance of Way (MOW) Facility - Design Manger
Project Scope: To construct a new 4,200 square foot Maintenance of Way (MOW) Facility to move personnel from existing office building.
Project Location: UPRR Yard, Albany, Oregon.
Scope of Work Included: Complete construction of new Maintenance of Way (MOW) Facility using pre-engineered metal building with steel studs for interior partitions. Insulation of all perimeter walls, install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation of plumbing for new men and women restrooms, unisex shower; installation of new HVAC equipment; site grading, parking lot and construction of outdoor fenced storage area.
My Role/Responsibilities: Worked with local UPRR management to put together a building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the design consultant team, at Utility Engineering, to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 1-03 thru 11-03 . . .

Total Project Cost: $750,000

BNSF Railway Auto Facility Office Remodeling - Design Manager
Project Scope: To renovate and remodel an existing 6,000 square foot office building into new office space, locker rooms, breakroom, restrooms and conference room.
Project Location: BNSF Auto Facility, Renton, Washington.
Scope of Work Included: Construction of new interior partitions, install new flooring, wall finishes, ceilings, light fixtures, doors and cabinets; installation of plumbing for new men and women restrooms; new lockers; installation of new HVAC equipment and electrical components.
My Role/Responsibilities: Worked with local BNSF management to put together a building program of space requirements for the renovation, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the design consultant team, at Utility Engineering, to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 2-02 thru 8-02
Total Project Cost: $460,000

BNSF Railway Yard Office Facility Study - Design Manager
Project Scope: Building design study to show floor plan layout, site grading work required and parking lot size to accommodate all personnel that will be using the new facility.
Project Location: BNSF Yard, Whitefish, Montana.
Scope of Work Included: Building code investigation. Design of conceptual building floor plans; site, grading and parking lot layout. Preliminary budgetary design and building construction costs. Provided preliminary design and building construction schedules.
My Role/Responsibilities: Attended pre-design meeting in Whitefish, MT. with BNSF design team and local management to discuss space requirements for the new Yard Office. To direct the design team in the development of all portions of this building design study.
Project Duration: 7-01 thru 10-01
Total Project Cost: $95,000 (Costs for Study – No construction was done)

UPRR Auto Unloading Facility New Office Building - Lead Architect
Project Scope: To construct a new 3,800 square foot office building for Auto Unloading Facility.
Project Location: UPRR Yard, West Memphis, Arkansas.
Scope of Work Included: Complete construction of new office building for Auto Unloading Facility using pre-engineered metal building with steel studs for interior partitions. Insulation of all perimeter walls, install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation

of plumbing for new men and women restrooms, unisex shower; installation of new HVAC and electrical equipment; site grading.
My Role/Responsibilities: Developed building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the UPRR design team. Managed design consultant firm to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 2-97 thru 10-97
Total Project Cost: $580,000

UPRR New Yard Office Facility - Lead Architect
Project Scope: To construct a new 5,000 square foot Yard Office Facility.
Project Location: UPRR Yard, Livonia, Louisiana.
Scope of Work Included: Complete construction of new masonry Yard Office Facility for the Livonia Yard with steel studs for interior drywall partitions. Concrete footings and foundations and insulation of all perimeter walls. Install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation of plumbing for new men and women restrooms, showers and drying area; installation of new HVAC and electrical equipment; site grading; parking lot.
My Role/Responsibilities: Developed building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the UPRR design team. Managed design consultant firm to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 5-95 thru 3-96
Total Project Cost: $820,000

UPRR Western Regional Office Building Renovations - Lead Architect
Project Scope: To renovate and remodel the existing 11,000 square foot Southern Pacific Railroad office building into new office space, locker rooms, breakroom, IT equipment room, storage areas, mailroom, restrooms and conference rooms, for the UPRR merger.
Project Location: UPRR Western Regional Office Building, Roseville, California.
Scope of Work Included: Demolition of interior partitions, flooring, ceilings, electrical and plumbing as required. Construction of new interior drywall partitions over steel studs, install new flooring, wall finishes, ceilings, light fixtures, doors w/glass sidelights, floor and wall cabinets; installation of plumbing for new men and women restrooms; installation of new HVAC and electrical equipment; site grading as required; modifications to existing parking lot.

My Role/Responsibilities: Developed building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the UPRR design team. Managed design consultant firm to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Worked with furniture contractor to develop needs and requirements for purchasing of all new furniture. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 5-94 thru 2-95
Total Project Cost: $985,000

UPRR Roseville Yard Site Development and Office Building - Lead Architect
Project Scope: To develop all building site work for the new Yard Office Building. To construct a new 6,800 square foot Yard Office Building for the new Roseville Yard.
Project Location: Roseville Yard, Roseville, California.
Scope of Work Included: Complete site development of the new office building area that included: site grading and drainage, new parking lot, site lighting and landscaping. Construction of new masonry Yard Office Building with concrete footings and foundation. Building construction included: interior drywall partitions over steel studs, installation of new flooring, wall finishes, ceilings, light fixtures, doors w/glass sidelights, floor and wall cabinets; installation of plumbing for new men and women restrooms; wiring; installation of new HVAC and electrical equipment;
My Role/Responsibilities: Prepared preliminary site plans for the new Yard Office Building area. Developed building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule for the site development and new building, was manager of the UPRR design team. Managed design consultant firm to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Worked with furniture contractor to develop needs and requirements for purchasing of all new furniture. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 4-93 thru 5-94
Total Project Cost: $1,200,000

UPRR Steam Locomotive and Roundhouse Renovations - Lead Architect
Project Scope: To renovate, remodel, reroof and repair the existing 12,000 square foot Steam Locomotive Shop. To renovate, repair and reroof the 10,500 square foot, 7 bay, Roundhouse Building. Renovation of the Roundhouse Building earned the UPRR tax credits and a place on the National Register of Historical Landmarks.
Project Location: Cheyenne Yard, Cheyenne, Wyoming.

Scope of Work Included: Steam Locomotive Shop: Demolition of interior space as required. Install new acoustical tile ceiling, new light fixtures, flooring, wall finishes, new HVAC and electrical equipment. Remove existing clerestory windows and replace with opaque panels; construct new men and women restrooms, unisex shower; construct new offices, breakroom, storage room and conference room; remove existing roof and replace with new EPDM roof. Roundhouse Building: All construction work had to follow requirements of the National Register of Historical Landmarks to keep the character of the original building. Remove the existing windows and install custom designed Marvin metal windows. Wash the exterior face brick and wash down the interior walls. Remove the existing 7 large pairs of locomotive doors at each entrance into the building with new custom doors. Remove the existing roof with new roof to match what was removed. Remove all existing metal trim, gutters and downspouts with new metal to match existing. Installation of new heating and electrical equipment.
My Role/Responsibilities: Worked with UPRR Steam Locomotive Shop manager to discuss the building requirements for the renovation work that was to be done. Met with the State of Wyoming, Department of the Interior, to secure the direction the Roundhouse Building renovation and repairs would be accomplished. Developed building program of space requirements for the new building, designed preliminary plans, details and specifications, developed a project cost estimate and project schedule for the work, was manager of the UPRR design team. Managed and coordinated the UPRR design team to finalize plans and specifications for bidding the renovation project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 4-88 thru 3-89
Total Project Cost: $1,320,000

UPRR New Intermodal Office Building - Lead Architect
Project Scope: To construct a new 3,400 square foot Intermodal Office Building.
Project Location: Commerce Intermodal Yard, Commerce, California.
Scope of Work Included: Complete construction of new pre-engineered metal Intermodal Office Building for the Commerce Intermodal Yard using steel stud framing on the insulated perimeter walls and interior partitions. Install new flooring, wall finishes, ceilings, light fixtures, lockers, doors and cabinets; installation of plumbing for new men and women restrooms, unisex shower; installation of new HVAC and electrical equipment; site grading; parking lot.
My Role/Responsibilities: Developed building program of space requirements for the new building, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the UPRR design team. Managed and coordinated UPRR design team to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor

throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 1-86 thru 10-86
Total Project Cost: $480,000

UPRR Superintendent Facility Renovation - Lead Architect
Project Scope: To renovate and remodel an existing 7,500 square foot office building into new office space, locker rooms, breakrooms, restrooms, conference rooms, storage rooms, IT equipment room and mechanical space.
Project Location: Little Rock Yard, Little Rock, Arkansas.
Scope of Work Included: Selected demolition of interior partitions, ceilings, flooring, electrical and mechanical modifications; construction of new interior partitions, install new flooring, wall finishes, ceilings, light fixtures, doors and cabinets; modification of existing plumbing for remodeling men and women restrooms; new lockers; installation of new HVAC equipment and electrical components.
My Role/Responsibilities: Meeting with local UPRR management to put together a building program of space requirements for the renovation, designed preliminary plans and specifications, developed a project cost estimate and project schedule, was manager of the UPRR design team. Managed and coordinated UPRR design team to finalize plans and specifications for bidding the project. Conducted pre-bid and pre-construction meetings. Directed building contractor throughout construction phase of the project, reviewed shop drawing submittals. Final building walkthrough at completion of project construction.
Project Duration: 3-85 thru 11-85
Total Project Cost: $810,000

BENTON V. FISHER

Mr. Fisher is a Senior Managing Director at FTI Consulting, Inc., an economic and consulting firm with offices located at 1101 K Street, NW, Washington, DC 20005. Since 1991, Mr. Fisher has been involved in various aspects of transportation consulting including economic studies involving costs and revenues, traffic and operating analyses, and work with performance measurement and financial reporting systems. Mr. Fisher is sponsoring portions of Sections II.A and III.A of CSXT's Reply Evidence that relate to the calculation of variable costs for issue traffic movements and volumes and revenues for the SFRR traffic group, respectively. Mr. Fisher has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Fisher holds a Bachelor of Science degree in Engineering and Management Systems from Princeton University. In 1990, he served as the Deputy Controller for the Bill Bradley for U.S. Senate Campaign. In 1991, he joined Klick, Kent & Allen, Inc., which was acquired by FTI Consulting, Inc. in 1998. While with the firm Mr. Fisher has performed numerous analyses for and assisted in the preparation of expert testimony related to merger applications, rate reasonableness proceedings, contract disputes, and other regulatory costing issues before the Interstate Commerce Commission, Surface Transportation Board, Federal Energy Regulatory Commission, Postal Rate Commission, Federal Courts, and State Utility Commissions. He has previously sponsored evidence in numerous railroad rate reasonableness proceedings, including evidence regarding the topics identified above.

Mr. Fisher's curriculum vitae, which identifies representative engagements and cases in which he has sponsored expert testimony, is attached hereto.

VERIFICATION

I, Benton V. Fisher, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Benton V. Fisher

Executed on January 14, 2010.

Benton V. Fisher

Senior Managing Director - Economic Consulting

benton.fisher@fticonsulting.com

1101 K Street, NW
Suite B100
Washington, DC 20005
Tel: (202) 312-9100
Fax: (202) 312-9101

Education
B.S. in Engineering and Management Systems, Princeton University

Benton V. Fisher is a Senior Managing Director of FTI's Economic Consulting group, located in Washington, D.C. Mr. Fisher has more than 15 years of experience in providing financial, economic and analytical consulting services to corporate clients dealing with transportation, telecommunications, and postal subjects.

Mr. Fisher has sponsored expert testimony in rate reasonableness proceedings before the Surface Transportation Board.

Mr. Fisher graduated from Princeton University with a Bachelor of Science degree in Engineering and Management Systems.

TESTIMONY

Surface Transportation Board

January 15, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
March 31, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
April 30, 1999	Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
July 15, 1999	Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
August 30, 1999	Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
September 28, 1999	Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
June 15, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
August 14, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher

September 28, 2000	Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
December 14, 2000	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher
March 13, 2001	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
May 7, 2001	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher
October 15, 2001	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Opening Verified Statement of Benton V. Fisher
January 15, 2002	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Benton V. Fisher
February 25, 2002	Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Rebuttal Verified Statement of Benton V. Fisher
May 24, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Opening Evidence and Argument of Norfolk Southern Railway Company
June 10, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Opening Evidence and Argument of Norfolk Southern Railway Company
July 19, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Opening Evidence
September 30, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
October 4, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Reply Evidence
October 11, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
November 1, 2002	Northern States Power Company Minnesota v. Union Pacific Railroad Company, Union Pacific's Rebuttal Evidence

November 19, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
November 27, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Rebuttal Evidence and Argument of Norfolk Southern Railway Company
January 10, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Opening Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
February 7, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Opening Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad
April 4, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
May 19, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
May 27, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Joint Variable Cost Reply Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad
May 27, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
June 13, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Opening Evidence of The Burlington Northern and Santa Fe Railway Company
July 3, 2003	Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad, Joint Variable Cost Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad
October 8, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
October 24, 2003	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company Supplemental Evidence of Norfolk Southern Railway Company

October 31, 2003	STB Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Duke Energy Company's Supplemental Evidence
November 24, 2003	STB Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Supplemental Evidence of Norfolk Southern Railway Company
December 2, 2003	STB Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply of Norfolk Southern Railway Company to Carolina Power & Light Company's Supplemental Evidence
January 26, 2004	STB Docket No. 42058 Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company, Joint Supplemental Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company
March 1, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Opening Evidence and Argument of The Burlington Northern and Santa Fe Railway Company
March 22, 2004	STB Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Supplemental Reply Evidence of The Burlington Northern and Santa Fe Railway Company
April 29, 2004	STB Docket No. 42071 Otter Tail Power Company v The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company
May 24, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
March 1, 2005	Docket No. 42071 Otter Tail Power Company v. BNSF Railway Company, Supplemental Evidence of BNSF Railway Company
April 4, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Reply of BNSF Railway Company to Supplemental Evidence
April 19, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Opening Evidence of BNSF Railway Company
July 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Evidence of BNSF Railway Company
July 27, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Rebuttal Evidence of The Burlington Northern and Santa Fe Railway Company

September 30, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Rebuttal Evidence of BNSF Railway Company
October 20, 2005	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Surrebuttal Evidence of BNSF Railway Company
June 15, 2006	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
June 15, 2006	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Reply Supplemental Evidence of BNSF Railway Company
March 19, 2007	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Reply Third Supplemental Evidence of BNSF Railway Company
March 26, 2007	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Reply Second Supplemental Evidence of BNSF Railway Company
July 30, 2007	Docket No. 42095 Kansas City Power & Light v. Union Pacific Railroad Company, Union Pacific's Opening Evidence
August 20, 2007	Docket No. 42095 Kansas City Power & Light v. Union Pacific Railroad Company, Union Pacific's Reply Evidence
February 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSXT
February 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSXT
February 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Opening Evidence of CSXT
March 5, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
March 5, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
March 5, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Reply Evidence of CSXT
April 4, 2008	Docket No. 42099 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT
April 4, 2008	Docket No. 42100 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT
April 4, 2008	Docket No. 42101 E.I. DuPont De Nemours and Company v. CSX Transportation, Inc., Rebuttal Evidence of CSXT

July 14, 2008	Docket No. 42088 Western Fuels Association, Inc. and Basin Electric Power Cooperative, Inc. v. BNSF Railway Company, Third Supplemental Reply Evidence of BNSF Railway Company
August 8, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Evidence of BNSF Railway Company
September 5, 2008	Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. BNSF Railway Company, Fourth Supplemental Reply Evidence of BNSF Railway Company
October 17, 2008	Docket No. 42110 Seminole Electric Cooperative, Inc. v. CSX Transportation, Inc., CSX Transportation, Inc.'s Reply to Petition for Injunctive Relief, Verified Statement of Benton V. Fisher
August 24, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Opening Evidence of Union Pacific Railroad Company
September 22, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Reply Evidence of Union Pacific Railroad Company
October 22, 2009	Docket No. 42114 US Magnesium, L.L.C. v. Union Pacific Railroad Company, Rebuttal Evidence of Union Pacific Railroad Company

U.S. District Court for the Eastern District of North Carolina

March 17, 2006	Civil Action No. 4:05-CV-55-D, PCS Phosphate Company v. Norfolk Southern Corporation and Norfolk Southern Railway Company, Report by Benton V. Fisher

Arbitrations and Mediations

July 10, 2009	JAMS Ref. # 1220039135; In the Matter of the Arbitration Between Pacer International, Inc., d/b/a/ Pacer Stacktrain (f/k/a/ APL Land Transport Services, Inc.), American President Lines, Ltd. And APL Co. Pte. Ltd. And Union Pacific Railroad Company; Rebuttal Expert Report of Benton V. Fisher

RANDALL G. FREDERICK

Mr. Frederick is a Project Manager/Senior Engineer/Associate with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Frederick, has more than 30 years of experience as a project manager and senior engineer managing underground wireline and pipeline utility installations and construction engineering and inspection (CE&I) services for highway and railway bridges and tunnels. Mr. Frederick is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to earthwork. Mr. Frederick has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

As a former CSX Principal Engineer, Mr. Frederick functioned as the primary representative in the mediation of legal proceedings, public safety issues, and other politically-sensitive railroad-related matters. He managed the system and network of the company's Computer Aided Dispatching System (CADS), Rail-Highway Grade Crossing Warning Systems, and Incremental Train Control Signaling (ITCS). Mr. Frederick holds a Bachelor of Arts, Business Administration from Cedarville University.

Mr. Frederick's resume with additional project experience is attached hereto.

VERIFICATION

I, Randall G. Frederick, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Randall G. Frederick

Randall G. Frederick

Project Manager/Senior Engineer
Associate

Mr. Frederick has more than 30 years of experience as a project manager and senior engineer managing underground wireline and pipeline utility installations and construction engineering and inspection (CE&I) services for highway and railway bridges and tunnels. As a former CSX Principal Engineer, Mr. Frederick functioned as the primary representative in the mediation of legal proceedings, public safety issues, and other politically-sensitive railroad-related matters. He managed the system and network of the company's Computer Aided Dispatching System (CADS), Rail-Highway Grade Crossing Warning Systems, and Incremental Train Control Signaling (ITCS).

Employee No.
91665

Department No.
53

Office Location
Jacksonville, FL

Date joined firm
9/12/05

Years with other firms
30

Education
Bachelor of Arts, Business Administration; Cedarville University (1987)

Training/Certifications
FRA Roadway Worker

Environmental and Industrial Safety Course

AREMA Highway Crossing Interconnection

Memberships
NCUTCD Railroad & Light Rail Transit Highway Grade Crossings Technical Committee

Computer Skills
MS PowerPoint, Project, Access

Project Experience

CSX Siding Capacity Project - Project Manager/Senior Engineer
Managing the design and construction of a 7,200-foot passing siding in Goldsboro, NC. Mr. Frederick is responsible for site survey, environmental permitting, development of design documents, and the supervision of construction. (2007 - Present)

CSX Montgomery Sanitary Sewer Installation - Project Manager
Managing CE&I services for the micro-tunneling and installation of a 96-foot sanitary sewer beneath the CSX main line tracks in Montgomery, AL. Mr. Frederick is preparing estimates, coordinating with CSX personnel, and managing the budget. (2007 - Present)

CSX Railroad Bridge over Asbury Road Rehabilitation - Project Manager
Managing preliminary engineering reviews and development of railroad force account estimates and contract management for the rehabilitation of a single-span railroad bridge over Asbury Road at Erie International Airport in Erie, PA. Mr. Frederick is coordinating with CSX personnel and managing the budget. (2006 - Present)

CSX I-370 Bridge Widenings - Construction Manager
Managing CE&I services for the widening of dual highway bridges on I-370 over the CSX right-of-way in Derwood, MD. Mr. Frederick is preparing estimates, coordinating with CSX personnel, and managing the budget. (2006 - Present)

CSX Wireline and Pipeline Installations - Construction Manager
Managing more than 35 underground wireline and pipeline utility installations across CSX property in 23 states, some of which go under and

others parallel to the CSX right-of-way. Mr. Frederick is preparing estimates, coordinating with CSX personnel, and managing the budget. (2005 - Present)

Republic of China Ministry of Rail ITCS Signal System - Designer
Served as a member of the design management team for a state-of-the-art, GPS-based, Incremental Train Control Signaling (ITCS) system on 1,400 km of rail line between Beijing and Tibet for the Republic of China's Ministry of Rail. Mr. Frederick led a team of engineers and CAD operators in the application engineering department of GE Transportation Systems in Jacksonville, FL, to ensure on-time project completion within pre-established budgetary constraints. (2004 - 2005)

GE Transportation Systems - Former Signal Engineer
Responsible for oversight and management of the grade crossing warning system and as-in-service train control projects. This position required solid knowledge and experience in railroad signal design, inspection and installation, FRA, FHWA, and MUTCD standards, as well as a thorough understanding of the federal (ISTEA/TEA-21/SAFETEA-LU) funding programs. (2000 - 2005)

CSX Public Projects - Former Principal Engineer, Public Projects
Responsible for project management and administration of publicly funded projects, within a 11-state area including Ohio, Michigan, Indiana, Illinois, Pennsylvania, Kentucky, Tennessee, West Virginia, Virginia, Maryland, Washington, D.C., and Ontario, Canada. The position entailed monitoring, scheduling, and coordination of key project milestones necessary for successful implementation. Responsibilities necessitated close interaction, communication, and negotiation with state and local government authorities for review and execution of contractual agreements. The position required detailed knowledge and application of state and federal laws and regulations, as they relate to railroad operations, permitting, and associated issues. The job periodically required appearances as the railroad's expert witness for grade crossing accident and Public Utility Commission hearings and litigation. Mr. Frederick also functioned as the railroad's primary representative in the mediation of legal proceedings, public safety issues, and other politically-sensitive railroad-related matters. (1994 - 2000)

CSX Technology - Former Software Engineer
Managed the system and network of the company's Computer Aided Dispatching System (CADS) in Jacksonville, FL. Duties included system monitoring, performance tuning, supervision, implementation and management of software/hardware upgrades, and disaster recovery planning within a high-volume, mission-critical operation. (1992 - 1994)

CSX Technology - Former Electronic Signal Technician
Responsible for coordination and implementation of new software installations necessary to update the Computer Aided Dispatching System (CADS) in Jacksonville, FL. Duties included managing and directing field

personnel in the identification, analysis, and resolution of signal code system problems. (1988 - 1992)

CSX Technology - Former Division Signal Maintainer
Performed signal design, installation, maintenance, and electronic trouble shooting of automatic signal and grade crossing warning systems in Newark, OH. (1974 - 1988)

JOHN M. GIBSON, JR.

John M. Gibson, Jr. is a principal of PC&N Consulting, with offices at 4431 Harbour Island Dr., Jacksonville, Florida 32225. Mr. Gibson is a former CSXT Vice President of Operations Research & Planning and directed the development of CSXT's operating plan for the SFRR and is sponsoring CSXT's evidence with respect to that operating plan, and the SFRR system configuration as set out in Sections III-B and III-C of CSXT's Reply Narrative.

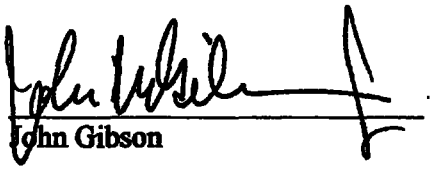
Mr. Gibson is intimately familiar with CSXT's train operations. During a distinguished 31-year career with CSXT and the Federal Railroad Administration, Mr. Gibson held a series of positions of increasing responsibility, including AVP-Operations Planning, Vice President-Operations Planning and Passenger Services, and Vice President-Operations Planning and Research. In those positions, Mr. Gibson had direct responsibility for analyzing CSXT's train services and infrastructure needs (including literally hundreds of projects in which the RTC Model was utilized). Witness Gibson has also served as Director-Business Development of CSXT and President of Three Rivers Railroad, positions in which he acquired substantial experience with the operations of short-line and regional carriers comparable to the proposed SFRR.

Drawing on that extensive experience, his personal observation of CSXT's current operations in the SFRR's service territory, input from CSXT operating personnel and the results of CSXT witness David Wheeler's RTC Model simulation, witness Gibson crafted an operating plan for the SFRR.

Greater detail about Mr. Gibson's relevant experience and expertise can be found in his resume, which is attached.

VERIFICATION

I, John Gibson, verify under penalty of perjury that I have read the sections of the foregoing Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the sections of the Reply Evidence I have sponsored are true and correct. Further, I certify that I am qualified and authorized to file this statement.



John Gibson

Executed on January 13, 2010.

John M. Gibson, Jr.
Principal
PC&N Consulting
4431 Harbour Island Dr.
Jacksonville, Fl. 32225
Cell 904-607-2785
pcnconsulting@comcast.net

Summary:

- Rail management veteran with 31 years of progressive achievement
- Skilled negotiator with more than $2 billion in successful transactions
- Experienced speaker in all venues including: senior management, press interviews, litigation, Surface Transportation Board proceedings and Congressional hearings
- Managed CSX Transportation's (CSX) Operations Research, Operations Planning, Passenger Operations, Passenger and Joint Facility Agreements, and Office Car Departments
- Oversaw CSX's passenger operations, strategic planning and contract negotiations

Employment History:

Principal – PC&N Consulting

- Full range of duties for this small consulting firm which provides advice for rail management, passenger startups, capacity simulation modeling, business practice reviews and strategic planning

CSX Vice President Operations Research & Planning (2004 – 2009)

- Full control of 45 person department with an operating budget exceeding $5 million per year. Direct reports included:
    - Operations Research – performed traditional operating research functions including optimization modeling, new tool

development, regulation analysis and implementation, and measurement of network efficiency. Led industry efforts to insure compliance with new Toxic Inhalation Hazard regulations.

- Operations Planning – developed annual capacity capital plan totaling up to $150 million per year, created capacity investment strategies to improve network fluidity and created network and corridor models to evaluate the effectiveness of proposed capacity investments.
- Passenger and Joint Facilities Agreements – oversaw the negotiation and implementation of more than 1,500 joint facility agreements and all passenger agreements including Amtrak, MBTA, Metro North, SEPTA, MARC, VRE and TriRail.
- Amtrak and Commuter Operations – oversaw 24/7 operations desk, provided tactical guidance to recover from service delays, lead strategic efforts to improve on time performance and to improve processes for creating passenger operating schedules.
- Office Car Operations – managed operation of CSX's historic office car fleet. Managed Office Car use for transportation, political, customer and charity events. Acquired, rehabilitated and retired equipments as appropriate. Operated 11 years injury free.

Assistant Vice President Operations Planning (1996 – 2004

- Responsible for CSX's capacity capital budget, simulation modeling efforts and proposals to increase or introduce passenger service on CSX territory.

Director Business Development (1994 – 1995)

- Directed strategic acquisitions including investments in the Paducah & Louisville, Pittsburgh & Ohio Valley and the Indiana Railroads.

President Three Rivers Railroad (1993 – 1994)

- Full range operating control of CSX Subsidiary after acquisition of assets from the Pittsburgh & Lake Erie Railroad. Employees included Sales and

Marketing, Accounting, Transportation and Engineering supervision and 50 contract employees.

Manager/Director Shortline Sales (1983 – 1992)

- Negotiated and closed more than 100 transactions.

Financial Analyst/Manager/Director (1978 – 1983)

- Represented the Federal Railroad Administration in negotiations for preference share and loan purchases to U.S. railroads.

Education:

- BA University of Maryland with 2 majors: Economics and Public administration-1983
- MBA American University specializing in Finance-1986

Affiliations:

- 1999 – 2009 Habitat for Humanity of Jacksonville, FL. Board of Directors, former Chairman, Vice Chairman, various committee chairs
- 2005 – 2009 United Way of Northeast Florida. Campaign Board, CSX Campaign Co-Chair.

ROBERT GUARDIA, P.E.

Mr. Guardia is a Vice President with Shannon & Wilson, Inc., a consulting firm dedicated to providing a full range of geotechnical and environmental engineering services.. Mr. Guardia is a geotechnical engineer with 25 years of experience including the last 18 years in tunneling, microtunneling and horizontal directional drilling projects. Mr. Guardia is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to tunnels. Mr. Guardia has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Guardia has been involved in the construction and rehabilitation of over 150 tunnels in the US and overseas. Other areas of expertise include tunnel support, grouting, and shotcrete. He has been Resident Engineer for the enlargement of approximately 25 railroad tunnels. Mr. Guardia has served as Project Manager for the design and plans and specifications for construction, enlargement and rehabilitation of railroad, highway and conveyance tunnels. Mr. Guardia has a BS, Civil Engineering and a MS, (Geotechnical) Civil Engineering from University of Illinois.

Mr. Guardia's resume with additional project experience is attached hereto.

Roberto J. Guardia, PE | Vice President

GEOTECHNICAL ENGINEER

EDUCATION

MS, (Geotechnical) Civil Engineering, University of Illinois, 1978
BS, Civil Engineering, University of Illinois, 1976

REGISTRATION

Professional Engineer, Washington, 26086, 1989
Professional Engineer, Oregon, 66833PE, 2001
Professional Engineer, California, C63333, 2002
Professional Engineer, Florida, 63761, 2006
Professional Engineer, Georgia, PE032289, 2007
Professional Engineer, Alabama, 30515
Professional Engineer, South Carolina, 27552
Professional Engineer, Panama, 81-006-053, 1981
Approved Examiner and Trainer for American Concrete Institute Shotcrete Nozzlemen Certification

ADDITIONAL TRAINING

Health and Safety Training for Hazardous Waste Operations (40-Hour 29 CFR, 1910.120)
Short Course - Applied Rock Mechanics, ASCE, 1998
Short Course – Deep Foundations, Deep Foundation Institute, 1993
Short Course – Mechanical Excavation and Ground Support, Colorado School of Mines, 1994
Short Course- Project Delivery System, Transpeed, 2001
Various Short Courses organized by the Seattle Section of ASCE

Roberto Guardia is a geotechnical engineer with 25 years of experience including the last 18 years in tunneling, microtunneling and horizontal directional drilling projects. Roberto has been involved in the construction and rehabilitation of over 150 tunnels in the US and overseas. Other areas of expertise include tunnel support, grouting, and shotcrete. He has been Resident Engineer for the enlargement of approximately 25 railroad tunnels. Mr. Guardia has served as Project Manager for the design and plans and specifications for construction, enlargement and rehabilitation of railroad, highway and conveyance tunnels.

Microtunneling

1 ***Health Ministry/ Nippon Koei, Panama, Sewer Collection Tunnel, Panama City, Panama.*** As Project Geotechnical Manager, Roberto provided Geotechnical services for the 8-kilometer 3.0-meter diameter sewer collector tunnel. The first phase of exploration included 22 deep borings up to 40 meters deep in soil and rock and a preliminary engineering report of conditions encountered and recommendations for design and tunneling machine selection. The rock samples were characterized by performing unconfined compressive strength tests, tri-axial tests, point load tests and slake durability tests. In-place permeability tests were performed at the bottom of the boreholes utilizing packer tests. The second phase included 42 deep borings to further explore

difficult areas and included the preparation of tunneling specifications and a Geotechnical Baseline Report for the Design-Build project. Tunneling machine is an earth pressure balance tunneling machine and support provided with a segmental concrete lining.

2 ***King County, Henderson Combined Sewer Overflow (CSO), Seattle, Washington.*** A 1,000-foot segment of the project consisted of a 72-inch-diameter concrete pipe that was installed by microtunneling under an eight-lane section of Interstate-5 and the BNSF and Union Pacific Railroad corridor into Seattle. Three-dimensional tomography methods were utilized to identify potential obstructions. Horizontal directional drilling was used to install three 4 ½-inch high-density polyethylene (HDPE) pipes around the future tunnel to run the tomography probes. Roberto managed the exploration program, prepared a geotechnical baseline report, and plans and specifications related to the 72-inch crossing. Obstructions found during tunneling confirmed the anticipated obstructions identified by the three-dimensional tomography.

3 ***King County, Henderson Combined Sewer Overflow (CSO), Seattle, Washington.*** Roberto was Project Manager assisting Construction Management Team in reviewing geotechnical related submittals, weekly progress meetings, assessing construction methods, special inspections for shotcrete supported circular shafts and monitoring and analyzing ground behavior while tunneling under two important water mains. The 3,500-foot-long, 15-foot diameter storage tunnel was excavated with an earth pressure balance machine and supported with gasketed segmental liner. Compaction grouting was utilized for an area of excessive ground settlement and as a precautionary measure under the main waterlines. Five microtunnels ranging from 48- to 78-inch-diameter and up to 750 feet long were part of the project connecting between shafts.

4 ***Bonneville Power Administration, Pipe Jacking, Vancouver, Washington.*** As Project Engineer, Roberto provided design and plans and specifications for the construction of a 48-inch pipe jack to replace an existing distressed concrete pipe at the Cold Creek diversion pipeline of the Bonneville Power Administration in Vancouver. The design-construct contract was structured to allow concrete, fiberglass, and steel pipe as alternates. A Data Report and a Baseline Report were provided as part of the project documents. Lateral loads were provided for the design of three shafts up to 80 feet deep connecting the three segments of the 2,250 feet long pipeline. Provided Engineer's cost estimate, submittal review, and overseeing construction activities with participation in progress meetings as required. A slurry excavation microtunneling machine and a closed shield machine were used simultaneously in different segments.

5 ***Burns & McDonnell, Lake Ft. Smith Water Supply Intake Works, Fort Smith, Arkansas.*** The water supply intake structures consisted of an intake tower built in a shaft on the shore of Lake Ft. Smith, a 1,300 feet long multi-use tunnel and outlet portal structure. The shaft and tunnel were excavated by drill and blast methods and supported by steel fiber reinforced shotcrete and rock dowels. The tunnel was lined with cast-in-place concrete and will be used for flood control discharge. There are two water supply pipes below the invert of the tunnel. Two lake taps of 72-inch-diameter and 300 feet aggregate length were excavated from the intake shaft below lake level utilizing microtunneling methods. Roberto served as Project Manager/Designer for this project preparing plans and specifications.

6 ***Cascade Water Alliance, Waterline Central Segment, Seattle, Washington*** The Cascade Water Alliance, composed by several utilities and cities of eastern Seattle are building a new 42-inch diameter waterline to meet the needs of the growing east side communities. The 10-mile long Central segment has four undercrossings that will be excavated by microtunneling methods installing 48 to 56-inch diameter casings. Obstacles include a BNSF railroad line/ Jenkins Creek,

four-lane with median SR-18, Little Soos Creek and a major avenue Kent-Kangley Road. Roberto was Project Manager for the exploration consisting of eight borings and Geotechnical recommendations for the new crossings with lengths between 135 to 355 feet utilizing microtunneling methods. Slug tests in cased boreholes were conducted to estimate the groundwater inflow during dewatering of the alluvial deposits at Jenkins Creek. Both slurry pressure balanced and auger microtunneling methods were recommended. Recommendations were provided for shafts, thrust blocks and construction dewatering.

7 ***City of Seattle Duwamish River Crossing, Seattle, Washington.*** As Project Engineer, Roberto provided submittal reviews for two 80-foot-deep frozen ground shafts and 10-foot-diameter concrete pipes installed by pipe-jacking with a slurry-circulation microtunneling machine. The 540-foot-long crossing traversed saturated silts and fine sands. Participated in construction monitoring during the difficult shaft construction due to freeze-pipe complications and evaluated instrumentation including inclinometer/magnetic switch extensometers, piezometers, and thermistor strings.

8 ***City of Everett, I-5 Crossing, Everett, Washington.*** Roberto was Project Engineer for a 60-inch steel pipe jacked under I-5 near Everett. Provided construction monitoring during chemical grouting of the heading material consisting of soft organic soils and hydraulically placed fill. Performed cube compression test on grouted sand samples. The pipe was jacked with an open face shield and spoils removed with an auger.

9 ***City of Kennewick, Kennewick Treatment Plant, Kennewick, Washington.*** Roberto was Project Engineer for the design, plans, and specifications for 10-foot-diameter jacked steel pipe crossing a BNSF mainline embankment. Also provided the engineer's cost estimate and lateral pressures for the design of the reaction shoring. The 160 feet long pipe jack will be used to convey a 2-foot-diameter treated sewer line and pedestrian traffic.

10 ***BNSF, Pipe Jacking, Tacoma, Washington.*** As Project Engineer, Roberto reviewed submittals and provided partial construction monitoring for a 540-foot-long, 68-inch-diameter steel pipe jacked under a BNSF railyard in Tacoma. The tunnel was driven with a slurry microtunneling machine excavating through consolidated silts, sands, and clays with the ground water located 3 feet below the ground surface. Logs were encountered in the course of the excavation, which were crushed by the slurry machine. The project was completed without significantly disturbing the railyard tracks as verified by survey settlement points.

Tunnels

11 ***Oregon Department of Transportation, In-Depth Tunnel Inspections, Oregon.*** As Project Manager, Roberto performed in-depth tunnel inspections of nine highway tunnels in Oregon and provided tunnel inspection training to their engineering and maintenance personnel. The inspection reports had detailed information regarding tunnel design and detailed tunnel maps. Tunnel portals, adjacent slopes, and tunnel drainage systems were also evaluated during the tunnel inspections. Recommendations were provided for immediate, short-term and long-term maintenance and the scope and budget of the anticipated repairs. A tunnel inspection training manual was prepared with basic tunnel design concepts, descriptions of tunnel liners, and specific tunnel inspection procedures adapted to each kind of tunnel liner. One-day and half-day long training seminars were developed for engineering and maintenance personnel respectively. The seminars included examples of liner distress for various kinds of liners, as identified during the

tunnel inspections, and discussion of tunnel maintenance and rehabilitation recommendations for each tunnel.

12 ***Washington State Department of Transportation, Interstate 90 Tunnel Feasibility, Hyak, Washington.*** Roberto was Project Manager for the feasibility study and preliminary cost estimate for the 3,000-feet long, 36-foot wide roadway twin tunnels through volcanic and sedimentary rocks. Geologic reconnaissance of the portals and terrain over the tunnel alignment provided basic geologic information that was used in the preliminary rock support design. The preliminary design of the 190 foot high west portal rock cut was developed based on existing topography and existing highway constraints. An engineer's cost estimate was developed for construction of the tunnel and portals based on unit costs and estimated quantities. A geotechnical exploration program for final design including core drilling along the alignment and portals and the use of the boring optical televiewer and a pilot bore along the tunnel alignment was developed.

13 ***Oregon Department of Transportation, Cape Creek Tunnel Rehabilitation, Florence, Oregon.*** Roberto was Project Manager for the geotechnical investigation, testing, design, plans, specifications, and construction observation for Cape Creek Tunnel Rehabilitation. The 714-foot-long tunnel built in 1933 has approximately 450 feet of timber lining that was later covered with a reinforced concrete lining. The rest of the tunnel was left unlined. Geotechnical investigations included drill probes through the concrete lining and six coreholes drilled through the arch form within the tunnel to a depth of 25 feet. The concrete linings were also tested with ground penetration radar and sonic testing to determine the strength and thickness of the lining, and to get an indication of loose rock and voids above the lining. The investigation found that a segment of the concrete lining had areas of thinner concrete and signs of distress and corrosion with high rock loading. The lining near the south portal was designed for replacement with lattice girders and shotcrete and cement grouting in the tunnel arch. The rest of the concrete linings will be backfilled with lightweight grout to fill the existing voids. The unlined areas will be supported with rock bolts and shotcrete.

14 ***Union Pacific, Clearance Improvements for Double-Stack Cars of Coos Bay Tunnels, Oregon.*** Roberto is Project Manager for the ongoing evaluation of 9 tunnels in the Coos Bay area to determine preliminary feasibility and construction costs for providing double-stack container car clearance. The condition of the tunnels was assessed and surveyed cross-sections were evaluated to determine the depth of tunnel clearance required by location. Concrete notching, complete timber set removal with new tunnel support and track lowering are under consideration to obtain the clearance improvements.

15 ***RailAmerica, Tunnel 13, Siskiyou, Oregon.*** Tunnel 13 had extensive damage due to a fire and after rehabilitation there were two segments of the tunnel that did not meet State requirements for vertical and side clearance. Roberto was Project Manager for determining the impediments by laser survey and developing the design and specifications for the tunnel clearance improvements. Existing steel sets had to be removed and replaced with new steel sets located in a new centerline. The work involved the use of steel fiber reinforced shotcrete, steel dowels and new steel sets. We also participated during construction with submittal review and construction observation on a full-time basis.

16 ***Union Pacific Railroad, Tunnel No. 2, Keddie, California.*** Roberto served as resident engineer for the mining of a collapsed tunnel in foliated schist providing additional support with spilling, grouting and shotcrete as required for the Union Pacific Railroad. A top heading excavation

method was utilized in a portion of the tunnel that collapsed up to the ground surface. Liner consisted of steel sets and channel lagging backfilled with concrete.

17 ***Union Pacific Tunnel Clearance Improvements, Feather River and Fremont, California.*** Roberto served as resident engineer for notching railroad tunnels to improve clearance. Notching was performed with a roadheader mounted on a rail car. Resin encapsulated rock bolts were installed through the existing concrete liners to provide additional liner support or to replace existing rock bolts located in the notched area. Responsible for measuring air flows and toxic gases during the operation. Notching was performed in 10 tunnels located in the Feather River Canyon and one tunnel in Fremont.

18 ***Southern Pacific, Tehachapi Tunnel Clearance Improvement Project, Caliente and Tehachapi, California.*** Roberto served as resident engineer for this project. Twelve tunnels between Caliente and Tehachapi were enlarged to accommodate double-stack container trains. The work consisted of installing crown rock bolts and sidewall tiebacks, pumping cement grout behind the concrete liner to fill voids, and notching with a roadheader.

19 ***Conrail, Tunnel Enlargement, Gallitzin, Pennsylvania.*** The brick liner of the 3,600-foot-long tunnel was removed and the tunnel enlarged from a single-track to a double-track configuration. Coal mines were present over the tunnel and caused several collapses. Support consisted of rock dowels and pre-stressed rock bolts with steel-fiber-reinforced wet mix shotcrete. Provided construction management services and supervised six engineers and technicians on three shifts per day. Roberto served as Resident Engineer.

20 ***ICF-Kaiser, Berry Street Tunnel Rehabilitation and Enlargement Project, Pittsburgh, Pennsylvania.*** The project involved enlargement of a 100-year-old brick railroad tunnel and conversion to a bus tunnel, excavation of shale and sandstone, lattice girder, shotcrete and rock dowel support, and new drainage systems. Roberto collaborated in the design approach, plans and specifications, engineer's cost estimate, and Geotechnical Design Summary Report. He also reviewed contractor's value engineering proposal.

21 ***La Nacional, Loma Larga Tunnels, Monterrey, Mexico.*** Project Manager for alternate design and blasting recommendations for the construction of the tunnels. The 2,350 feet long twin highway tunnels have a semi-circular shape with a horizontal diameter of 58 feet making it a large underground cavern. Reviewed available borings and site geology and provided design for various support categories based on the RMR and Q methods. Proposed liner was of fiber-reinforced shotcrete and rock bolts in lieu of the original design of wire mesh and plain shotcrete. Further analysis of the benefits of utilizing rock bolt was conducted by numerical methods (FLAC). Provided tunnel blasting recommendations for optimizing drillhole diameter, spacing and blast sequence of the benched heading. The perimeter of the tunnel was blasted by innovative smooth blasting methods.

22 ***Wheeling & Lake Erie, Robertsville Tunnel Rehabilitation, Robertsville, Ohio.*** The 550-foot-long railroad tunnel supported by timber sets has erodible shales, which weaken the sidewalls and requires continuous ditch maintenance. Roberto served as Project Manager and provided field investigation and alternative recommendations with cost estimates followed by plans and specifications for shotcreting the sidewalls and providing shotcrete and rock bolt support to one portal and a new portal excavation.

23 ***Oregon Department of Transportation (DOT), Elk Creek Highway Tunnel, Elkton, Oregon.*** Roberto was Project Manager for the rehabilitation of the 1,150 feet long Elk Creek highway tunnel. Performed tunnel exploration by probes through wood liner and ground penetration radar methods. Accomplished geological mapping and rock mass classification of the tunnel including Schmidt rebound hammer and point load testing of the rock. Developed design of tunnel ground support for the new clearance envelope, consisting of fiber-reinforced shotcrete, rock bolts, lattice girders, and steel sets. Prepared plans and specifications for Oregon DOT for the ground support and portal structures. Included engineer's cost estimate, which was within 10 percent of successful bidder's proposal.

24 ***BNSF, Tunnel Enlargement, Martinez, California.*** As Project Manager, Roberto provided preliminary design and cost estimate for the enlargement of three tunnels in Martinez. The concrete-lined tunnels were enlarged in 1989 for double stack clearance by performing notches that exceeded 2 feet and undercutting. The proposed notching is to achieve Chrysler car clearance. The work will involve notching with a road header and installing new resin-grouted rock bolts above and below the new notch.

25 ***Union Pacific, Clearance Improvement Program of the Donner Pass Tunnels, Sacramento, California to Reno, Nevada.*** As Project Manager, Roberto prepared plans and specifications for enlarging 25 tunnels for double stack and Chrysler car clearance. Several of the tunnels will require remining or undercutting. Prior to notching with a road header the tunnels will be grouted and reinforced with rock bolts. Construction costs were estimated in the order of $12 million.

26 ***BNSF, Ostrander Tunnel Rehabilitation, Kelso, Washington.*** The timber set and lagging supported tunnel was burned to ashes after a forest fire. The 430-foot-long tunnel built in vesicular basalt was literally cooked by the fire and had to be scaled by mechanical methods. Final support was achieved with the installation of resin-grouted rock bolts and steel fiber-reinforced shotcrete. Bidding documents were prepared in an accelerated schedule and the work was completed in 28 working days. Roberto was Project Manager.

27 ***Puget Sound Energy, Lower Baker Tunnel In-Depth Inspection, Concrete, Washington.*** The Lower Baker Tunnel has had a long history of water flows on the downstream abutment partially originating from the concrete lined tunnel. When the 22-foot-diameter tunnel is dewatered inflows are in the order of 800 gallons per minute originating in cracks and previously installed grout pipes. The tunnel was mapped indicating existing cracks, construction joints, and areas of seepage and leaks. Nondestructive testing consisting of ground penetration radar and sonic/ultrasonic methods were utilized to determine the extent of poor concrete and the location of voids in the concrete and between the concrete and rock. Probe holes drilled through the concrete liner verified and calibrated the ground penetration radar and sonic measurements. Roberto served as Project Manager for this project.

28 ***Puget Sound Energy, Lower Baker Tunnel Rehabilitation, Concrete, Washington.*** Roberto served as Project Manager for this project. Based on the results of the Lower Baker Tunnel In-Depth Inspection, a rehabilitation program was implemented consisting of cement and chemical grouting of voids behind the concrete liner and within the concrete liner. A valve attached to a steel plate anchored to the concrete was used to seal one grout pipe that was leaking approximately 300 gallons per minute. Once the flow was stopped, polyurethane grout was injected into the grout pipe successfully stopping the flow. Significant cracks were grouted through holes drilled into the liner. Other work consisted of surface repairs of cavitation areas and sealing cracks on the surface.

PUBLICATIONS

Lake Ft. Smith Microtunneling Lake Tap, Guardia, R., Winkler, K., Rasmussen, P., and Lewtas, T. Proceedings Rapid Excavation and Tunneling Conference, Seattle, June 2005.

Rehabilitation of the Cape Creek Highway Tunnel Under Traffic, Robinson, R. A., Shell, T., Guardia, R., Rodolf, S., Proceedings Rapid Excavation and Tunneling Conference, Seattle, June 2005.

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"Conceptual Design for a Deep Underground Science and Engineering Laboratory," by H.C. Haxton, J.F. Wilkerson, R. Robinson, and R. J. Guardia, Proceedings of the Rapid Excavation and Tunneling Conference, June 2005.

Godlewski, P.M., and Guardia, R.J., 2003, Transportation Tunnel Rehabilitation *in* Rapid Excavation and Tunneling Conference, New Orleans, La., June 2003, Proceedings, New Orleans, La..

Neil, D.M., and Guardia, R.J., 2002, Tomographic Ground Imaging for the Henderson CSO Treated Tunnel Alignment, King County, Washington, Proceedings North American Tunneling, Seattle, May.

Guardia, R.J., Robinson, R.A., Godlewski, P.M., and Hultman, W.A., 2002, Reconditioning of Transportation Tunnels in the Pacific Northwest, Proceedings North American Tunneling, Seattle, May.

Parker, H.W., Godlewski, P.M., and Guardia, R.J., 2002, The Art of Tunnel Rehabilitation with Shotcrete, Shotcrete Magazine, American Shotcrete Association, Fall.

Fisk, P.S., Guardia, R.J., and Porter, W.D., 2002, Lower Baker Tunnel Investigation and Repairs, Proceedings North American Tunneling, Seattle, May.

Robertson, C.A., Guardia, R.J., Robinson, R.A., and Rustvold, J.W., 2001, Bonneville Power Administration Cold Creek Pipeline Replacement, Proceedings Rapid Excavation and Tunneling Conference, San Diego, June.

Parker, H.W., Robinson, R.A., Godlewski, P.M., Hultman, W.A., and Guardia, R.J., 2001, Tunnel Rehabilitation in North America, Proceedings International Tunneling Association World Tunnel Congress, Milan, June.

Guardia, R.J., Robertson, R.A., and Laird, J.R., 2000, Tunnel Inspection Manual, prepared for Oregon Department of Transportation, June, 96 p.

PROFESSIONAL ASSOCIATIONS

American Society of Civil Engineers
American Shotcrete Association; Individual Member
American Railway Engineering and Maintenance of Way Association; Associate Member

VERIFICATION

I, Roberto J. Guardia, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Roberto J. Guardia

CHRISTOPHER D. KENT

Mr. Kent is a Senior Managing Director at FTI Consulting, Inc., an economic and consulting firm with offices located at 1101 K Street, NW, Washington, DC 20005. Since 1977, he has been involved in various aspects of transportation including traffic analyses, economic studies including costs and revenue analyses, railroad valuations, and the development of railroad operating plans, railroad facility plans and rolling stock requirements. Mr. Kent is sponsoring evidence presented in Section III.D of CSXT's Reply Evidence and CSXT's Reply Ex. I-2. Mr. Kent has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Kent holds a Bachelor of Arts degree from the University of Virginia. In 1970 he joined Western Electric, Inc. In 1977, Mr. Kent joined Conrail as Project Manager and worked primarily in assisting the Operating Department in optimizing fleet availability. In 1978, he was employed by the United States Railway Association as the Manager of Equipment and Facilities. He was subsequently appointed Chief, Equipment and Facilities, Rail Asset Valuation, in the Office of General Counsel. In this capacity, he supervised a staff of in-house professionals and outside consultants in developing the equipment, maintenance of way and operating evidence submitted by the U.S. Government in the valuation proceedings before the Special Court created under Section 303(c) and 306 of the Regional Rail Reorganization Act.

In 1980, Mr. Kent formed Kent Associates, a consulting firm dealing with operating, transportation and marketing issues for various clients. Kent Associates was affiliated with the Washington Management Group and Mr. Kent served as Vice President of that firm.

In 1984, he joined the economic consulting firm of Snavely, King & Associates, Inc. as a Senior Consultant. While with that firm he participated in numerous studies related to Section 229 proceedings and anti-trust litigation.

In 1987, Mr. Kent founded Klick, Kent & Allen, Inc., an economic and financial consulting firm. He was a Principal of KK&A until its acquisition by FTI Consulting, Inc. in June 1998.

Mr. Kent has presented testimony in the valuation proceedings before the Special Court, the House of Courts of Justice Committee of the Virginia General Assembly, various state courts and federal courts and the Interstate Commerce Commission and Surface Transportation Board.

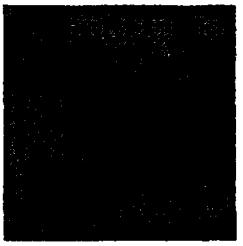
Mr. Kent's curriculum vitae, which identifies specific transportation-related testimony he has filed, is attached hereto.

VERIFICATION

I, Christopher Kent, verify under penalty of perjury that I have read the sections of the foregoing Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the sections of the Reply Evidence I have sponsored are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Christopher D. Kent

Executed on January 14, 2010.



Christopher D. Kent

Senior Managing Director – Economic Consulting

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B.A. in Political Science and English, University of Virginia

Christopher Kent is a senior managing director of the FTI Network Industries Strategies group of the Economic Consulting practice. Mr. Kent is based in Washington, DC. Since 1970, he has conducted financial and economic studies for companies in a variety of network industries and provided testimony in administrative and judicial proceedings, and arbitrations. Mr. Kent has special expertise in railroad and telecommunications industries.

Mr. Kent's studies have included detailed cost and rate studies, market assessments, and re-engineering of operations analyses. He has also developed strategic plans and tactical implementation models for his clients. Mr. Kent's studies often employ complex computer-driven models that incorporate detailed engineering input data and utilize state-of-the-art financial analyses.

Major project engagements that Mr. Kent has directed during the past several years include:

- Directing, designing and implementing multiple network models simulating major traffic flows throughout North America, including the design of operating parameters for these flows, and presenting expert testimony on the results.
- Leading the analyses and authoring the final report, which is the basis for the legislative terms of reference, on the creation of a fully integrated, public-private national transportation system in Venezuela.
- Designing the methodologies and supervising efforts to quantify benefits in mergers of four major transportation firms. These benefits formed the basis for the public filings of the merging entities.
- Creating the methodology and authoring a concept paper, on behalf of the United States Postal Service, on utilizing profitability as its primary financial measure.
- Serving as lead outside negotiator for an international telecommunications company on prices for unbundled network elements to gain entry into the local service market.

Mr. Kent holds a B.A. in Political Science and English from the University of Virginia.

TESTIMONY

January, 1980	In the Matter of the Valuation Proceedings Under Sections 303(c) and 306 of the Regional Rail Reorganization Act. Special Court Misc. No. 76-1
October, 1981	In the Matter of the Valuation Proceedings Under Sections 303(c)and 306 of the Regional Rail Reorganization Act. Special Court Misc. No. 76-1
January, 1986	Oral testimony before the House of Delegates, Commonwealth of Virginia, Courts of Justice Committee
May 15, 1987	I.C.C. Docket No. 38301S - Coal Trading Corporation et al. v. The Baltimore and Ohio Railroad Company et al.
December, 1987	I.C.C. Docket No. 38301S (Sub-No. 1) - Westmoreland Coal Sales Company v. The Denver & Rio Grande Western Railroad Company, et al.
December, 1987	I.C.C. Docket No. 37038 Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada and consolidated proceedings
January 14, 1988	I.C.C. Docket No. 38301S - Coal Trading Corporation et al. v. The Baltimore and Ohio Railroad Company et al.
June 20, 1988	I.C.C. Docket No. 37038 Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada and consolidated proceedings
July, 1989	Oral testimony before the Superior Court of Rhode Island in the matter: National Railroad Passenger Corporation v. DOT, Providence & Worcester Railroad Co. v. RI
July 30, 1990	I.C.C. Docket No. 37038 Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada and consolidated proceedings
October 10, 1990	I.C.C. Docket No. 37063, 38025S - The Dayton Power and Light Company v. Louisville and Nashville Railroad Company
December 14, 1990	I.C.C. Docket No. 37063, 38025S - The Dayton Power and Light Company v. Louisville and Nashville Railroad Company
January 25, 1991	I.C.C. Docket No. 37063, 38025S - The Dayton Power and Light Company v. Louisville and Nashville Railroad Company
July 15, 1991	I.C.C. Docket No. 37038 Bituminous Coal -- Hiawatha, Utah to Moapa, Nevada and consolidated proceedings
April 24, 1992	I.C.C. Finance Docket No. 31951 Southern California Regional Rail Authority For an Order Requiring Joint Use of Terminal Facilities of The Atchison, Topeka and Santa Fe Railway Company
May 7, 1993	I.C.C. Finance Docket No. 21215 (Sub-No. 5) Seaboard Air Line Railroad Company -- Merger -- Atlantic Coast Line Railroad Company -- Petition to Remove Traffic Protective Conditions

June 10, 1994	I.C.C. Finance Docket No. 21215 (Sub-No. 5) Seaboard Air Line Railroad Company – Merger – Atlantic Coast Line Railroad Company – Petition to Remove Traffic Protective Conditions
October 11, 1994	I.C.C. Finance Docket No. 32549 Burlington Northern, Inc. And Burlington Northern Railroad Company – Control and Merger – Santa Fe Pacific Corporation and the Atchison, Topeka and Santa Fe Railway Company
March 29, 1995	I.C.C. Docket No. 37809, 37809 (Sub-No. 1) McCarty Farms, Inc., et al., and consolidated proceedings
May 30, 1995	I.C.C. Docket No. 41191 West Texas Utilities Company v. Burlington Northern Railroad Company
October 30, 1995	I.C.C. Docket No. 41185 Arizona Public Service Company and Pacificorp v. The Atchison, Topeka and Santa Fe Railway Company
April 29, 1996	Finance Docket No. 32760. Union Pacific Corporation, Union Pacific Railroad Company and Missouri Pacific Railroad Company – Control and Merger – Southern Pacific Rail Corporation, Southern Pacific Transportation Company, St. Louis Southwestern Railway Company, SPCSL Corp., and The Denver & Rio Grande Western Railroad Company.
May 23, 1996	S.T.B. Docket No. 41191. West Texas Utilities Company v. Burlington Northern Railroad Company – Petition of Burlington Northern Railroad Company to Reopen Proceeding.
October 15, 1996	S.T.B. Docket No. 41242 Central Power & Light Company v. Southern Pacific Transportation Company; Docket No. 41295 Pennsylvania Power & Light Company v. Consolidated Rail Corporation; Docket No. 41626 MidAmerican Energy Company v. Union Pacific Railroad Company and Chicago & North Western Railway Company.
October 25, 1996	S.T.B. Docket No. 41242 Central Power & Light Company v. Southern Pacific Transportation Company; Docket No. 41295 Pennsylvania Power & Light Company v. Consolidated Rail Corporation; Docket No. 41626 MidAmerican Energy Company v. Union Pacific Railroad Company and Chicago & North Western Railway Company.
July 11, 1997	S.T.B. Docket No. 41989 Potomac Electric Power Company v. CSX Transportation, Inc. Reply Statement and Evidence of Defendant CSX Transportation, Inc.
May 26, 1998	S.T.B. Docket No. 42012 Sierra Pacific Power Company and Idaho Power Company v. Union Pacific Railroad Company, Opening Verified Statement.
July 1998	S.T.B. Finance Docket No. 33556. Canadian National Railway Company, Grand Trunk Corporation, and Grand Trunk Western Railroad Incorporated – Control – Illinois Central Corporation, Illinois Central Railroad Company, and Cedar River Railroad Company.

September 28, 1998	S.T.B. Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Verified Statement Supporting UP's Opposition to FMC's Petition for Partial Revocation of Exemption for Coke.
December 1998	S.T.B. Finance Docket No. 33556. Canadian National Railway Company, Grand Trunk Corporation, and Grand Trunk Western Railroad Incorporated -- Control -- Illinois Central Corporation, Illinois Central Railroad Company, and Cedar River Railroad Company.
January 15, 1999	S.T.B. Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher.
March 31, 1999	S.T.B. Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher.
April 30, 1999	S.T.B. Docket No. 42022 FMC Corporation and FMC Wyoming Corporation v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher.
July 15, 1999	S.T.B. Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher.
August 30, 1999	S.T.B. Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher.
September 28, 1999	S.T.B. Docket No. 42038 Minnesota Power, Inc. v. Duluth, Missabe and Iron Range Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher.
April 4, 2000	Expert Report of Christopher D. Kent, In the Matter of IFL Group, Inc. v. Birmingham Express.
June 15, 2000	S.T.B. Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher.
August 14, 2000	S.T.B. Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
August 14, 2000	S.T.B. Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Reply Verified Statement of Christopher D. Kent and Michael R. Baranowski.
August 14, 2000	Postal Rate Commission, Docket No. R2000-1, Rebuttal Verified Statement of Christopher D. Kent.

September 28, 2000	S.T.B. Docket No. 42051 Wisconsin Power and Light Company v. Union Pacific Railroad Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher.
December 14, 2000	S.T.B. Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Opening Verified Statement of Christopher D. Kent and Benton V. Fisher.
March 13, 2001	S.T.B. Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Christopher D. Kent and John C. Klick.
March 13, 2001	S.T.B. Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Christopher D. Kent and Benton V. Fisher
May 7, 2001	S.T.B. Docket No. 42054 PPL Montana, LLC v. The Burlington Northern Santa Fe Railway Company, Rebuttal Verified Statement of Christopher D. Kent and Benton V. Fisher.
January 15, 2002	S.T.B. Docket No. 42056 Texas Municipal Power Agency v. The Burlington Northern Santa Fe Railway Company, Reply Verified Statement of Christopher D. Kent and John C. Klick.
May 22, 2002	Finance Docket No. 32760. Union Pacific Corporation, Union Pacific Railroad Company and Missouri Pacific Railroad Company --Control and Merger-- Southern Pacific Transportation Company, St. Louis Southwestern Railway Company, SPCSL Corp., and The Denver and Rio Grande Western Railroad Company.
May 24, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Opening Evidence and Argument of Norfolk Southern Railway Company
September 20, 2002	Finance Docket No. 42070. Duke Energy Corporation v. CSX Transportation, Inc., Reply Evidence and Argument of CSX Transportation, Inc.
September 30, 2002	Docket No. 42069 Duke Energy Corporation v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
October 11, 2002	Docket No. 42072 Carolina Power & Light Company v. Norfolk Southern Railway Company, Reply Evidence and Argument of Norfolk Southern Railway Company
November 12, 2002	Docket No. 42070 Duke Energy Corporation v. CSX Transportation, Rebuttal Evidence and Argument of CSX Transportation
April 4, 2003	Docket No. 42057 Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence and Argument of The Burlington Northern and Santa Fe Railway Company

July 7, 2003	Docket No. 42054 PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway, Defendant's (BNSF's) Reply Evidence and Argument on Reopening
October 8, 2003	Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
January 26, 2004	Finance Docket No. 42058. Arizona Electric Power Cooperative Inc. v. the Burlington Northern and Santa Fe Railway Company and Union Pacific Railroad Company.
March 22, 2004	STB Docket No. 42071 Otter Tail Power Company v. The Burlington Northern and Santa Fe Railway Company, Supplemental Reply Evidence of The Burlington Northern and Santa Fe Railway Company
May 24, 2004	STB Docket No. 41191 (Sub-No. 1) AEP Texas North Company v. The Burlington Northern and Santa Fe Railway Company, Reply Evidence of The Burlington Northern and Santa Fe Railway Company
April 4, 2005	Docket No. 42071 Otter Tail Power Company v BNSF Railway Company, Reply of BNSF Railway Company to Supplemental Evidence

JOHN KRUPAR

Mr. Krupar is a Partner with Oliver Wyman, an international management consulting company, and has over 24 years of industry and consulting experience. Mr. Krupar is sponsoring the portions of Part III-D of CSXT's Reply Evidence that relate to the SFRR's ongoing G&A activities and compliance with rail industry and external regulatory requirements.

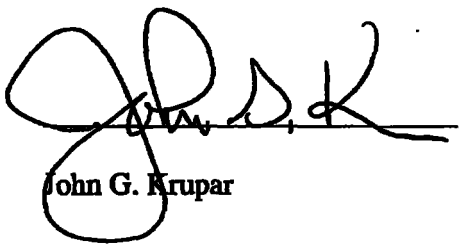
With a focus on operational transformation, Mr. Krupar has led engagements that have delivered over $25 billion in benefits and included strategy, organizational redesign, operations, global sourcing, marketing, shared service development, global strategic sourcing, Lean operations, and Lean Six Sigma deployment and implementation.

Prior to joining Oliver Wyman, Mr. Krupar worked at Six Sigma Academy, General Electric, and Kaiser Aluminum & Chemical Company after spending five years in the United States Army.

Mr. Krupar holds a Bachelor's of Science in International Relations from the United States Military Academy and a Masters of Science in Management from the Krannart School of Purdue University.

VERIFICATION

I, John G. Krupar, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



John G. Krupar

Executed on January 8, 2010.

DAVID A. MAGISTRO, P.E.

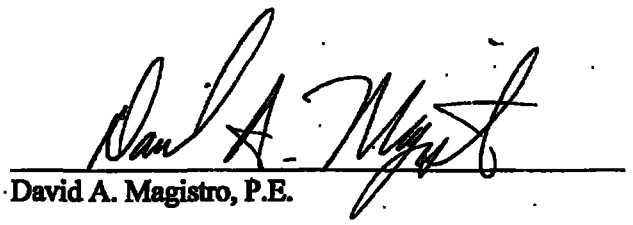
Mr. Magistro is a Senior Engineer/Project Manager with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Magistro has more than 10 years of experience with structural design, the last 9 years of which were focused on movable bridges and railroad structures. Mr. Magistro is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to bridges. Mr. Magistro has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Magistro's experience includes structural steel design, fixed bridge and movable bridge inspection, fixed bridge and movable bridge design including structural and mechanical aspects, plan production, and project management for numerous railroad and transportation agency clients. Mr. Magistro holds a Bachelor of Science, Civil Engineering from Kansas State University.

Mr. Magistro's resume with additional project experience is attached hereto.

VERIFICATION

I, David A. Magistro, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



David A. Magistro, P.E.

David A. Magistro, P.E.

Senior Engineer/Project Manager

Mr. Magistro has more than 10 years of experience with structural design, the last 9 years of which were focused on movable bridges and railroad structures. His experience includes structural steel design, fixed bridge and movable bridge inspection, fixed bridge and movable bridge design including structural and mechanical aspects, plan production, and project management for numerous railroad and transportation agency clients.

Employee No.
04910

Department No.
53

Office Location
Overland Park, KS

Date joined firm
3/30/09

Years with other firms
11

Education
Bachelor of Science, Civil Engineering; Kansas State University (1998)

Professional Registrations
Professional Engineer: Missouri (2003/#2003001064/exp. 12/31/09), Kansas (2009/# 20754/exp. 4/30/11), Oklahoma

Memberships
American Railway Engineering and Maintenance-of-Way Association (AREMA) (2005 - Present), Including Committee 10 (2009 - Present) and Committee 15 (2009 - Present) Member

Heavy Movable Structures (HMS) (2001), Registrar

Project Experience

Burlington Northern Santa Fe Bridge 231.4 Structural Inspection, Load Rating and Structural Repairs - Project Manager / Field Inspector / Design Engineer
Responsible for the comprehensive structural inspection and load rating of the floor system for the roadway portions of this double-deck structure over the Mississippi River in Fort Madison, IA. The inspection and load rating was followed by a structural repairs phase of work. Mr. Magistro was responsible for the design and construction sequencing of the structural steel repairs for approach span through plate girders and floor system components including stringers and floorbeams. (6/08 - 3/09)

Burlington Northern Santa Fe Bridges 5.8, 6.2, and 6.7 Structural Inspection, Load Rating and Structural Repairs - Project Manager / Field Inspector
Responsible for comprehensive inspection and load rating analysis of these three structures over north Willamette Boulevard, north Lombard Street, and north Fessenden Street in Portland, OR. All three structures consist of a combination of deck plate girder spans and deck truss spans resting on either structural steel towers or concrete piers. Mr. Magistro also managed the follow-up project to design structural retrofits to increase the load capacity of these structures. (1/08 - 12/08)

Burlington Northern Santa Fe Bridge 117.35 Electrical / Mechanical Rehabilitation - Project Manager / Mechanical Design Engineer
Responsible for the replacement of the drive system on this span drive vertical lift bridge over the Illinois River in Beardstown, IL. The project included replacing the existing central reducer, drive motors, auxiliary drive system, shafts, bearings, and couplings. (9/07 - 11/08)

Norfolk Southern Bridge Rehabilitation - Design Engineer
Responsible for the replacement of the curved segments on the rolling girders of this double track rolling bascule span over the South Branch Elizabeth River in Gilmerton, VA. The project included structural design and detailing, plan production, construction specifications, construction sequencing and contractor coordination. (5/07 - 1/09)

STV

Canadian Pacific Rail Bridge Bearing Repair & Truss Jacking - Project Manager / Design Engineer
Responsible for design and detailing of jacking frames used to longitudinally jack two approach spans through trusses adjacent to this 360-foot swing span over the Mississippi River in La Crosse, WI. The project included construction sequencing and field assistance during construction. (5/07 - 12/07)

Virginia Department of Transportation I-264 Berkley Bridge Rehabilitation - Design Engineer
Participated in the rehabilitation of a 4-leaf bascule bridge over the New Elizabeth River in Norfolk, VA. The project consisted of design and integration of a new drive system and machinery on top of an existing system of equipment and machinery. The design includes two complete designs to accommodate the original 2-leaf bascule built in 1950 and the second bascule pair built in 1992. Mr. Magistro's responsibilities included design of the new mechanical equipment, as well as structural retrofits required for installation of the new equipment. (6/06 - 9/07)

Burlington Northern Santa Fe Abo Canyon Double Track Capacity Design Project - Bridge Lead Engineer / Design Engineer
Responsible for bridge layouts, design, quantity calculations and cost estimates for 9 bridge structures along a 5-mile stretch of second mainline track for the BNSF Railroad through Abo Canyon, NM. (10/04 - 3/06)

Burlington Northern Santa Fe Bridge 0.80 Emergency Stringer Replacement - Project Manager / Design Engineer
Responsible for this emergency replacement of eight stringers in the movable span floor system of this 450-foot swing span over the Missouri River in Kansas City, MO. The scope of the project also included shop inspection during fabrication of the fracture critical stringers. (8/04 - 10/04)

Canadian Pacific Rail Bridge Span Alignment Lock Design - Project Manager / Design Engineer
Responsible for design and detailing of a new span alignment and span locking device for this 360-foot swing span over the Mississippi River in La Crosse, WI. The project included structural modifications to the approach span where the new device was located. (12/03 - 10/04)

Burlington Northern Santa Fe Bridge 37.0 Fender Replacement - Project Manager / Design Engineer
Responsible for design and detailing of a new fender system for the 260-foot swing span over the Snohomish River in Everett, WA. (5/03 - 4/04)

Burlington Northern Santa Fe Richmond Turntable Rehabilitation - Project Engineer
Responsible for design of the new mechanical components in the rehabilitation of this 110-foot turntable structure in Richmond, CA. The project included design and details for new end trucks, new enclosed gear

reducer to replace open gear set, new shafts and bearings, and new structural supports. (8/02 - 5/03)

Burlington Northern Santa Fe Bridge 14.2 Pier Rehabilitation - Project Engineer
Assisted in development and design of rehabilitation details for the rest pier, bridge bearings, lift tower structural support steel, and end floorbeam top flange replacement for this bridge located near Steilacoom, WA. The rest pier was rehabilitated and the live load bearing was replaced while maintaining both rail and navigation traffic. (3/02 - 11/03)

Elgin Joliet & Eastern Bridge 198 Mechanical Rehabilitation - Design Engineer
Responsible for the mechanical rehabilitation of this skewed 306-foot tower drive vertical lift bridge over the Des Plaines River in Joliet, IL. The project included replacement of an open gear set with an enclosed gear reducer, as well as replacement of all impacted shafts, pinions, bearings, and couplings. Mr. Magistro was also responsible for the design of new mechanical system components, construction sequence, and field assistance during construction. (5/01 - 11/02)

Elgin Joliet & Eastern Bridge Mechanical Rehabilitation - Design Engineer
Responsible for the mechanical rehabilitation of this Scherzer single leaf rolling bascule span over the East Chicago Canal in Gary, IN. The project included replacement of the drive motor and central reducer, and all associated shafts, bearings, and couplings; installation of a new auxiliary motor and clutch; and upgrade of the control system. Mr. Magistro was also responsible for the design of the structural support system rehabilitation for new mechanical components, and construction sequencing and field assistance during construction. (4/01 - 5/03)

CSX Transportation Bridge L653.4 Span Replacement - Project Engineer
Participated in the inspection to evaluate the existing condition of the movable span for purposes of the United States Coast Guard Cost Apportionment. Mr. Magistro was responsible for the new bridge deck details including timber ties, steel ties, and rail joints for this on-line swing span replacement with a new 360-foot vertical lift span over the Mobile River near Hurricane, AL. (5/00 - 2/03)

Burlington Northern Santa Fe Bridge 1136.3 Rail Joint Replacement - Design Engineer
Responsible for the replacement of the rail joints on this Abbott Style single leaf bascule bridge over the Old River in Orwood, CA. The project also involved installation of steel ties under the new joints, replacement of one approach span and rehabilitation of the span lock. Responsibilities also included engineering design, plan production and field assistance during construction. (5/00 - 4/01)

ROBERT C. PHILLIPS, P.E.

Mr. Phillips is a Vice President of the Rail Division of STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Phillips has more than 30 years of experience with track design and maintenance, grade crossings, bridge construction, signal and communication systems, maintenance and protection of traffic, and the installation of fiber-optic cable within railroad rights-of-way. Mr. Phillips is sponsoring portions of Sections III-B and III.F of CSXT's Reply Evidence. Mr. Phillips has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Phillips is responsible for overseeing and directing STV/RWA's commuter and freight rail planning and engineering projects. Mr. Phillips worked for Norfolk Southern in various capacities for 12 years, where he gained operating experience in engineering, track maintenance, and train operations. His responsibilities included supervising and training train crews, ensuring operating rules compliance, and investigating accidents and injuries. Mr. Phillips holds a Bachelor of Science, Civil Engineering from Virginia Polytechnic Institute and a Master of Business Administration from Averett College.

Mr. Phillips' resume with additional project experience is attached hereto.

Robert C. Phillips, P.E.

Vice President/Project Manager

Mr. Phillips, Vice President of the Rail Division, is responsible for overseeing and directing STV/RWA's commuter and freight rail planning and engineering projects. He has more than 30 years of experience with track design and maintenance, grade crossings, bridge construction, signal and communication systems, maintenance and protection of traffic, and the installation of fiber-optic cable within railroad rights-of-way. Mr. Phillips worked for Norfolk Southern in various capacities for 12 years, where he gained operating experience in engineering, track maintenance, and train operations. His responsibilities included supervising and training train crews, ensuring operating rules compliance, and investigating accidents and injuries.

Employee No.
91356

Department No.
53

Office Location
Charlotte, NC

Date joined firm
6/2/94

Years with other firms
19

Education
Master of Business Administration; Averett College (1992)

Bachelor of Science, Civil Engineering; Virginia Polytechnic Institute (1975)

Professional Registration
Professional Engineer: Virginia (1997/#030702/exp. 2/28/11) and Pennsylvania (2000/#PE056524-E/exp. 9/30/11)

Project Experience

Norfolk Southern Heartland Corridor Clearance Improvements CM - Senior Project Manager

Overseeing this $200 million project to provide clearance improvements to 29 railroad tunnels and seven bridges on the 530-mile-long Heartland Corridor, which extends from Columbus, OH, to Norfolk, VA. The improvements will facilitate a new, faster route for freight rail traffic between the Atlantic coast and the heartland of the United States, while also generating local development opportunities for the states through which the lines run. A key goal is to increase clearance in the 29 tunnels in Virginia, West Virginia, Kentucky, and Ohio by raising tunnel roofs and lowering tunnel floors. Mr. Phillips' services include creating overhead bridge jacking plans to obtain vertical clearances, modifying slide fences, providing utility coordination, creating stormwater pollution prevention plans (SWPPPs) at tunnel portals, creating railroad bridge lowering plans, and reviewing track design. His responsibilities also include conducting preconstruction meetings with contractors as well as weekly progress meetings, reviewing construction schedules, monitoring and documenting contractor work, reviewing monthly contractor pay estimates, and coordinating between the contractor and railroad forces. This project constitutes an innovative public-private partnership venture between the Norfolk Southern, various participating states, and the Federal Highway Administration (FHWA). (4/07 - Present)

Norfolk Southern Railway On-Call Services Contract - Principal-in-Charge

Responsible for plan review and CE&I services on an on-call, as-needed basis for over 700 projects involving proposed roadway, bridge, and retaining wall construction affecting railway facilities throughout the 22-state Norfolk Southern system. Projects included overseeing construction on overhead bridges, underpasses, floodwalls, utility crossings, parallel

construction of utilities, roadways, bikeways, and grade crossings. (2/04 - Present)

CSX Post-Hurricane Katrina/Rita Emergency Rail Reconstruction Project - Principal-in-Charge
Oversaw design and construction inspection for this $100 million emergency rail reconstruction project. Mr. Phillips was in charge of assessing damage to the six major rail bridges ranging to over 10,000 feet in length, developing repair or replacement plans, providing project management and construction management, and providing on-site inspection during the reconstruction period. In total, over 75 miles of track was severely damaged and in need of emergency repair. (8/05 - 9/07)

STB Railroad Coal Rate Case Litigation Cost Assessments - Project Manager
Led a team of project managers, senior engineers, and other railroad consultants in assembling the planning, engineering, and construction costs to build a hypothetical contemporary operating railroad in Charlotte, NC, as part of a cost assessment for a several coal rate cases. Cost assessments included major earthwork, bridge and culvert construction, track, communications and signalization, engineering design, construction management, material costs and logistics, mobilization, and contingencies. Cases included Norfolk Southern (NS) vs. Duke Energy, NS vs. CP&L, CSX vs. Duke Energy, AEC vs. BNSF & UP, Otter Tail vs. BNSF, AEP Texas North vs. BNSF. (2002 - 2004)

Norfolk Southern Fiber-Optic Cable Installation - Project Manager
Responsible for the construction management of the installation of the fiber backbone along Norfolk Southern's right-of-way along several routes: Cleveland, OH, to Boyce, VA, via Pittsburgh and Harrisburg, PA; Kalamazoo to Dearborn, MI; Dearborn, MI, to Toledo, OH; Toledo to Cleveland, OH; Cleveland, OH, to Buffalo, NY; and Cleveland, OH, to Pittsburgh, PA. Mr. Phillips oversaw staffing, permitting, inspection, safety operations, and final route approval. More than 100 managers and inspectors were involved in this major trunk line installation. Mr. Phillips also provided safety training, led Norfolk Southern operations meetings, attended weekly scheduling meetings, coordinated work trains and flagmen, and provided engineering reviews, change orders, and construction administration. (1999 - 2002)

Norfolk Southern Fiber-Optic Cable Installation in North and South Carolina - Project Manager
Coordinated with Norfolk Southern personnel and monitored the installation of fiber-optic cables belonging to Qwest Communications along several hundred miles of Norfolk Southern right-of-way in North Carolina and South Carolina. All phases of installation were involved, including plow train operations, long directional bores, and bridge attachments. Mr. Phillips provided periodic progress reports to Norfolk Southern and authorized minor changes from the approved construction plans to meet local conditions. He

was also responsible for monitoring the railroad safety aspects of the installations. (1998 - 1999)

CSX System-Wide Grade Crossing Sign Project - Team Leader
Led one of seven teams for this project which required the installation of standard identification signs at every roadway grade crossing on the CSX Transportation system. During this process STV/RWA was able to completely update the CSX grade crossing inventory list. (1997 - 1998)

CSX Systemwide Grade Crossing Inventory - Project Manager
Managed multiple teams to perform a grade crossing inventory encompassing over 35,000 grade crossings on the CSX Transportation system in 21 states, to meet a Federal Railroad Administration (FRA) deadline. The project included deployment of multiple teams to inventory crossings, installing standard identification signs at every crossing to enhance safety and reporting, and updating CSX's inventory, including digital imagery of each crossing. All work was performed under a tight deadline of 180 days and completed one month ahead of schedule. (10/97 - 6/98)

NCDOT Norfolk Southern over Route 220 Bridge Replacement - Field Engineer
Provided construction field coordination between Norfolk Southern and the North Carolina Department of Transportation (NCDOT) for the replacement of a Norfolk Southern single-track, single-span railroad bridge with a double-track, 4-span railway bridge over US 220 in Price, NC. (1996 - 1997)

Norfolk Southern Automobile Mixing Facility - Field Engineer
Responsible for shop inspection of structural steel at the fabrication plant in Colfax, NC, to be utilized in construction of this new automobile mixing facility in Shelbyville, KY. STV/RWA provided preliminary and final hydraulic/hydrologic design as well as railway, roadway, highway bridge, and railway bridge design. (1996)

Norfolk Southern over US 401 Bridge Replacement - Field Engineer
Handled the construction field coordination between Norfolk Southern and the North Carolina Department of Transportation for replacement of the Norfolk Southern Bridge over US 401 in Fuquay-Varina, NC. (1995 - 1996)

Norfolk Southern Merritt Drive Improvements - Field Engineer
Responsible for construction observation for a detour bridge and replacement of the existing Norfolk Southern railroad bridge on Merritt Drive in Greensboro, NC. (1995 - 1996)

Norfolk Southern Route 250 Bridge Replacement - Project Manager
Provided construction field coordination between Norfolk Southern and the Virginia Department of Transportation for the construction of a temporary detour bridge and a new thru-plate girder replacement railroad bridge in Waynesboro, VA. (1994 - 1995)

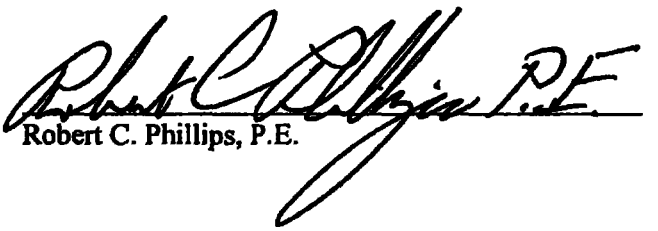
Norfolk Southern - Former Trainmaster

Supervised train crews and yard personnel, ensured operating rules compliance, investigated all accidents and injuries, scheduled local train and yard engine operations, and trained employees on Federal Railroad Administration and Norfolk Southern operating rules through annual operating rule classes for track and transportation employees in Manassas and Danville, VA. (1981 - 1987)

Norfolk Southern - Former Track Supervisor
Supervised track maintenance crews and production gangs, responsible for track inspection program, and ensured FRA Track Safety Standards for Class of track were in compliance. Mr. Phillips maintained the Norfolk Southern Safety Program over assigned territory and investigated all accidents and injuries, scheduled track maintenance operations, and trained employees on FRA Track Safety Standards and Norfolk Southern track maintenance policy. (1975 - 1980)

VERIFICATION

I, Robert C. Phillips, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Robert C. Phillips, P.E.

DENNIS K. PREWITT

Mr. Prewitt is a Construction Project Manager with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Prewitt has more than 25 years of experience providing construction engineering and inspection services for railway projects. Mr. Prewitt is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to earthwork. Mr. Prewitt has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Prewitt applies his extensive expertise to bridge inspections, bridge replacements requiring maintenance and protection of traffic, structural steel protective coatings, siding and mainline track upgrades, and earthwork.

Mr. Prewitt's resume with additional project experience is attached hereto.

VERIFICATION

I, Dennis K. Prewitt, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Dennis Prewitt

Dennis K. Prewitt

Dennis K. Prewitt

Construction Project Manager

Mr. Prewitt has more than 25 years of experience providing construction engineering and inspection services for railway projects. He applies his extensive expertise to bridge inspections, bridge replacements requiring maintenance and protection of traffic, structural steel protective coatings, siding and mainline track upgrades, and earthwork.

Employee No.
91687

Department No.
53

Office Location
Duluth, GA

Date joined firm
11/4/96

Years with other firms
15

Education
Coursework in Physics; Wright State University (1978)

Coursework in Physics; Washington & Jefferson College (1977)

Training/Certifications
Roadway Worker Safety Protection; CSX Transportation (2007/#49CFR214C/exp. 2/18/10)

On-Track Machinery; CSX Transportation (2009/#49CFR214D/exp. 2/18/10)

Contractor Safety; CSX Transportation (2009/exp. 2/18/10)

Environmental Awareness; CSX Transportation (2009/exp. 2/18/10)

Security Awareness ; CSX Transportation (2009/exp. 2/18/10)

Roadway Worker Safety; Norfolk Southern Safety Program (2009/#49CFR214C/exp. 1/5/10)

Project Experience

RAIL

CTA Ravenswood and North Main Tie Renewal - Construction Manager
Overseeing construction services, including reviewing and reporting coordination between the client and contractor, for the $20 million Ravenswood and North Main tie renewal for the Chicago Transit Authority. Mr. Prewitt is analyzing and validating the construction strategy and schedule and providing constructability review to verify that the schedule is properly sequenced and the durations are reasonable. He is monitoring and reviewing the contractor's requests and receipt of Illinois Department of Transportation (IDOT) permission for lane closures in accordance with the schedule. In addition, Mr. Prewitt is reviewing the contractor's schedule updates and confirming that the schedule is in accordance with the specifications. He is coordinating and processing the contractor's request for inspection and CTA's acceptance of work prior to putting the track back in service after any shutdown; as well as at the closeout of each milestone. Additionally, Mr. Prewitt is confirming that the contractor's traffic control procedures are implemented in accordance with the permit and include a precondition survey identifying conditions on the ground beneath and immediately adjacent to the CTA structures. (2008 - Present)

Norfolk Southern Rickenbacker Intermodal Facility - Inspector
Provided construction management and inspection for the construction of a new $33 million intermodal freight facility in Lockbourne, OH. The facility will be used for the transfer of shipping containers between trains and trucks. The new intermodal facility will provide increased capacity and improved levels of service, thereby allowing Central Ohio to regain and expand shipping and economic opportunities, including job creation and other public benefits. (2006 - 2008)

Norfolk Southern Route 330 Bridge Replacement - Inspector
Provided protection of railway interests by checking to make sure the railroad tracks were not affected during the demolition and construction of the new Route 330 Bridge over Norfolk Southern in Corinth, KY. The project included the demolition of the existing structure, excavation to

bedrock for abutments and piers, construction of piers and grading adjacent to track, setting of steel girders over tracks, and erosion control. (2006)

Norfolk Southern US 27 Bridge - Inspector
Made sure that railroad tracks and operations were not affected during the construction of two bridges on US 27 over Norfolk Southern tracks in Norwood, KY. Construction included blasting adjacent to tracks for new roadway, temporary shoring installations for excavation to bedrock for abutments and piers, setting steel girders over tracks, erosion control, and erecting concrete bridge decks and parapet walls over the Norfolk Southern right-of-way. (2006)

CSX Timber Trestle Replacement - Inspector
Performed construction inspection for the replacement of existing timber trestles with a concrete-and-timber-ballast deck structure for this bridge in Stephensport, KY. Work included construction layout staking, driving 30-inch pipe piles to bedrock and auger spoils from pipe piles, placement of re-bar cages and concrete in piles, construction of concrete abutments and pier caps, removal of the existing open deck trestle and replacement with timber ballast deck, and installation of walkways and handrails. (2006)

Norfolk Southern Monticello Street Bridge - Inspector
Verified that the railroad track and operations were protected during construction of the new Monticello Street Bridge over Norfolk Southern right-of-way in Somerset, KY. Construction included blasting adjacent to tracks for new roadway and sewer installations, excavation to bedrock for abutments and piers, construction of temporary towers, setting curved steel girders over tracks, erosion control, construction of a Mechanically Stabilized Earth (MSE) wall, and placement of the concrete bridge deck over Norfolk Southern tracks. (2006)

CSX Bridge over the Wabash River Thru-Truss Repair and Swing Span Replacement - Inspector
Performed construction inspection for the repair of a 5-span thru-truss and replacement of the swing span of this bridge in Vincennes, IN. Work included the replacement of existing bottom-flange-angles on all floor beams, bottom lateral bracing, and lateral-to-chord gussets. Mr. Prewitt inspected the removal of the existing swing span and its replacement with a deck plate girder bridge. (2006)

Norfolk Southern NC 54 Underpass - Inspector
Inspected the construction of a new double-track railroad bridge in Clegg, NC. Mr. Prewitt provided construction inspection during the installation of temporary retaining walls; drilling of eight, 72-inch caissons; driving H-piles for abutment footings; construction of concrete abutments and piers; setting of steel girders; and placement of cast-in-place concrete deck and parapet walls. (2004 - 2005)

Norfolk Southern Noise Abatement Walls - Inspector

On-Track Machinery; Norfolk Southern Safety Program (2009/#49CFR214D/exp. 1/5/10)

Bridge Worker Safety; Norfolk Southern Safety Program (2009/#49CFR214B/exp. 1/5/10)

Contractor Safety; Norfolk Southern Safety Program (2009/exp. 1/5/10)

Environmental Awareness; Norfolk Southern Safety Program (2009/exp. 1/5/10)

Security Awareness; Norfolk Southern Safety Program (2009/exp. 1/5/10)

e-RAILSAFE System Badge; NS, CSX, BNSF, UP, KCS (2008/exp. 5/18/10)

Bituminous Concrete Inspector - Level I; Ohio DOT

Portland Cement Concrete Inspector - Level I; Ohio DOT

Certified Inspector, Corrugated Metal Culverts over 10-foot Spans; Ohio DOT

Certified Inspector, Structural Steel Protective Coatings with Lead Abatement; Ohio DOT

Bridge Inspector, Concrete and Structural Steel

Computer Skills
Microsoft Project

Provided construction management and inspection for several miles of noise abatement walls along the Norfolk Southern right-of-way in Cleveland. (2003 - 2004)

Norfolk Southern Livernois Intermodal Yard Improvements - Inspector
Performed construction management and inspection for this intermodal yard upgrade in Detroit. Improvements to the rail yard included storm sewers, detention ponds, new loading and storage tracks, grading, new roadway, security fencing and gates, high-mast tower lighting, new water and electric services, new electrical distribution and site lighting, and demolition and removal of structures and features. (2003)

Norfolk Southern System-wide Fiber-Optic Cable - Inspector
Responsible for conducting daily on-site observation at all work locations and verifying compliance of construction to approved plans and specifications for the system-wide installation of fiber-optic technology along the Norfolk Southern right-of-way between Cleveland, and Washington, D.C. Mr. Prewitt assured right-of-way integrity during outside contractor operations and created a database for tracking pay items, offsets, depths, mileposts, and completion percentages. (2000 - 2002)

CSX Bridge over Neil Avenue - CSX Construction Manager/Inspector
Responsible for construction observation for a 2-track railroad bridge over Neil Avenue in Columbus, OH. The project included detour track and one mile of new mainline track. Mr. Prewitt maintained daily communication with designated representatives and verified compliance of construction to approved plans and specifications. He also maintained a daily and weekly status report of construction events. In addition, Mr. Prewitt ordered materials for CSX crews for completion of the work. (2000)

CSX New York State Bridge Inspections - Team Leader
Evaluated 100 CSX railway bridges from Buffalo to Albany, NY, and provided detailed inspection reports, photographs, and video with audio description for all structures. (1999)

Norfolk Southern New Mainline Construction - Inspector
Performed construction inspection for drainage improvements, roadway, railway bridge construction, and new track along eight miles of new mainline in Tateville, KY. Mr. Prewitt was responsible for inspecting more than 1 million cubic yards of earthwork and eight miles of track installation. Ninety percent of the grading required blasting of the existing rock high-wall cuts. (1998)

CSX MCI/Worldcom and Williams Communication Fiber-Optic Cable - Inspector
Completed construction engineering and inspection services for fiber-optic cable installation within the CSX right-of-way in Akron, OH. Mr. Prewitt provided engineering representation for pre-bid and progress meetings and final inspection. He performed daily on-site observation at all work locations

on CSX property and provided worker safety orientation and enforced compliance with safety rules. Mr. Prewitt maintained daily communication with designated representatives and verified compliance of construction to approved plans and specifications. He also maintained a daily and weekly status report of construction events. (1998)

CSX Grade Crossing Signs System-Wide - Team Leader
Led a team for the installation of 8,000 standard identification signs at every roadway grade crossing on the CSX railway system in Michigan, Ohio, and Indiana. The signs were installed at each crossing facing traffic. Each sign is about the size of an automobile license plate and carries the AAR crossing inventory number, the railroad milepost (including letter prefix to identify subdivision), and a toll-free telephone number for emergencies. (11/97 - 4/98)

CSX Bridge No. 270 over Buck Run - Inspector
Provided construction inspection for the partial replacement of the 846-foot-long, single-track railway bridge over Buck Run in Okeana, OH. Approximately 646 feet of timber trestle were replaced with an open timber deck steel girder superstructure. Foundations were established using 30-inch pipe piles. Intermediate bents were constructed of steel with bolted connections. Railroad traffic was maintained during construction by using span-by-span construction and temporary spans. (1997)

CSX Bridge over SR 126 - Inspector
Observed construction operations for this 2-track railroad bridge over SR 126 in Woodlawn, OH. The project included a double-track detour with new embankment, and temporary detour trestle. (1997)

Norfolk Southern US 52 Relocation - Inspector
Verified that the railroad right-of-way was protected during the adjacent construction of US 52 in Pritchard, WV. Roadway construction included blasting adjacent to the right-of-way, crossing the railroad right-of-way with new drainage, and a temporary construction haul road that crossed the railroad. (1997)

Norfolk Southern Automobile Mixing Facility - Inspector
Inspected structures on an as-needed basis for an automobile mixing facility in Shelbyville, KY. The project included preliminary and final hydraulic/hydrologic, railway, roadway, highway bridge, and railway bridge design. The project also included 2.5 million cubic yards of earthwork and blasting, 18 miles of track installation, a 45-acre paved vehicle storage yard, three bridges, and two access roads. (1996)

Norfolk Southern SR 32 Bridges - Inspector
Provided construction inspection for new railroad bridges and tracks in Piketon, OH. Work included construction of approximately a one-mile, double-track run-around detour and one temporary trestle; installation of H-piles for high-wall abutment foundations and piers; construction of concrete

high-wall abutments and piers; placement of steel girders; placement of cast-in-place concrete deck; and construction of approximately one mile of new track. (1994)

Norfolk Southern Kenton Lands Road - Inspector
Provided construction inspection for a new railroad bridge and tracks in Erlanger, KY. Work included construction of run-around track detour; installation of two 40-foot-deep sheet-pile cofferdams to bed rock for high-wall abutment foundations; blasting of bed rock for required footing rock socket; construction of concrete high-wall abutments; construction of several hundred feet of concrete retaining wall for new Kenton Lands Road underpass approaches; and placement of steel girders, ballast, and track for the new bridge. (1993)

ROADWAY AND BRIDGES

ODOT I-71, I-75, and I-74 Bridge Inspections - Inspector
Provided inspection of structural steel protective coating for 26 bridges along interstate highways for the Ohio Department of Transportation (ODOT). Work included grit-blasting all structural steel to near white finish; application of primer, intermediate, and finish coats of paint; lead abatement; and site clean-up. (1996)

Clermont County Sewer District Cook Road Force Main and Automated Pump Station - Inspector
Provided construction inspection for a new 12-inch ductile iron pipe force main and automated pump station in Miami Township, OH. Work included construction of one automated pump station with all associated equipment, valves, switching equipment, computer controls, sumps, vaults, emergency generator, and chemical storage facilities. The project included the installation of approximately 1.5 miles of 12-inch force main with associated pressure relief valves, vaults, and pressure testing. (1995)

Clermont County Water District Clough Pike Water Main - Inspector
Provided construction inspection for a new 24-inch water main in Clermont County, OH. Work included the installation of approximately two miles of 24-inch water main with associated fire hydrants, valves, stream crossings, service taps, casing installation, and pressure testing. (1995)

Hamilton County Engineer Culvert Inspections - Inspector
Completed inspections of all culverts greater than 10 feet in width in Hamilton County, OH. Culverts were measured at specified points, measurement points were referenced, defects were documented, and the culvert was rated per the State of Ohio Bridge Rating System. Each culvert was re-visited for three years and measurements were taken at the referenced points to ascertain if the culverts were stable or moving. Mr. Prewitt also checked for scour, metal deterioration, cracks, joint separations, and rust perforations. (1993 - 1995)

Butler County Cin-Day Road Improvements and Signalization - Inspector
Performed construction inspection for roadway improvements and signalization for the Butler County Engineer in West Chester, OH. Work included installation of a new storm sewer system; approximately 0.5 mile of new embankment and roadway with curb, gutters, and sidewalks; installation of a 12-inch water main; and signalization of the re-aligned intersection. (1994)

ODOT SR 131 Bridge Replacements - Inspector
Completed construction inspection for three bridge replacements in Newtonsville, OH. Work included the demolition of two single-span bridges and one 8-foot-by-8-foot box culvert; replacement of one bridge with single-span cast-in-place concrete deck and new approach pavements; and the replacement of the other bridge with two 8-by-8-foot precast concrete box culverts. The project required approximately 0.25 mile of new embankment and pavement along improved road profiles. (1992)

ODOT US 50 Bridge Replacements - Inspector
Provided construction inspection for three bridge replacements along US 50 in Marathon, OH. Work included the demolition of three single-span bridges; replacement of one bridge with single-span, prestressed concrete box beams and new approach pavements; replacement of two bridges with 8-by-8-foot precast concrete box culverts; and placement of approximately 0.5 mile of new embankment and pavement along improved road profiles. (1992)

Emery Industries New Truck Bridge - Inspector
Provided construction inspection for a new 100-ton truck bridge over Mill Creek and new access roads for coal trucks entering the Emery Industries power plant in Cincinnati. Work included driving of 18-inch closed-bottom, pipe piles approximately 70 feet deep for each of the 3-span structure's abutments and piers; placement of rebar cages and super plasticized concrete into each pipe pile; placement of concrete and rebar for abutments and piers; construction of a pre-stressed concrete box beam bridge deck; placement of deck waterproofing; placement of parapets and curbs; and construction of approximately 0.25 mile of embankment, subbase, and concrete pavement. (1991)

County of Clermont McKeever Pike Bridge Replacement - Inspector
Provided construction inspection for replacement of the McKeever Pike Bridge over the East Fork of the Little Miami River in Williamsburg, OH. Work included demolition of two spans of a historic 3-span, thru-truss and preservation of the third span; construction of a new 3-span, prestressed, concrete, box-beam bridge; and construction of approximately 1,000 linear feet of new pavement and bridge approaches. (1990)

ODOT I-275/Winton Road Entrance Ramp - Inspector

Inspected the construction of a new entrance ramp along I-275 in Mount Healthy, OH. Work included construction of a 0.75 mile of new embankment; placement of under drains, storm sewers, and a concrete box culvert; and approximately one mile of paving consisting of a 12-inch aggregate subbase, 9-inch concrete base, and 6-inch asphalt overlay. (1989)

ODOT Bituminous Concrete Lab - Inspector/Lab Technician
Conducted testing to certify aggregate stockpiles in Lebanon, OH, for use in Ohio DOT (ODOT) bituminous concrete mixes for District 8 paving projects. Mr. Prewitt conducted sieve analysis, bitumen analysis, specific gravity analysis, and air volume analysis of asphalt during production at various ODOT-certified mixing facilities. (1987 - 1988)

ODOT SR 350 Bridge - Inspector
Provided construction inspection for a new highway bridge over a stream in Fort Ancient, OH. Work included construction of cast-in-place concrete deck of a single-span bridge with abutments and wing walls and a new channel alignment for the stream. (1987)

City of Oxford Sewer Rehabilitation - Inspector
Performed construction inspection for the rehabilitation of a clay pipe sewer system in Oxford, OH. Work included pressure cleaning of all clay pipe sewer lines in the city; video inspection and pressure testing of all pipe joints; pressure grouting of all joints failing pressure tests; pressure cleaning and grout slurry coating of all manholes; and replacing sewer runs that were too deteriorated to rehabilitate. (1986)

ODOT Tylersville Road Improvements - Inspector
Completed construction inspection for roadway improvements in Mason, OH. Work included grading for a new 4-lane highway; installing storm sewers, sanitary sewers, and under drains; placement of subbase; placement of new concrete and asphalt overlays; and placement of right-of-way fencing. (1986)

ODOT I-75 Widening - Inspector
Provided construction inspection during bridge repair and the widening of I-75 in Dayton, OH. Work included demolition of existing curb and railing on bridges; placement of new concrete Jersey-type barriers on bridges; bridge deck sounding and removal of deteriorated concrete; placement of micro-silica and latex concrete on bridge decks; new high-mast tower lighting; grading and embankment for new traffic lanes; placement of subbase; and placement of new concrete and asphalt overlays. (1985)

SEWER & WASTEWATER TREATMENT

Clermont County Sewer District Middle East Fork Wastewater Treatment Plant Phase II - Inspector

Performed construction inspection for this wastewater treatment plant in Batavia, OH. Work included the construction of primary settling tanks and associated equipment, aeration tanks and associated equipment, sludge tanks and associated equipment, clarifiers and associated equipment, a million gallon overflow lagoon, a computerized control building, and solar-powered sludge drying beds. (1991 - 1992)

Village of Williamsburg Wastewater Treatment Plant - Inspector
Completed construction inspection for a new wastewater treatment plant in Williamsburg, OH. Construction work included a new control building and operations center; a new sewage treatment process using a sequential batch reactor; a primary sewage sump; new bar screens; and new sewer lines and manholes throughout the village. (1990)

Clermont County Sewer District Interceptor Sewer - Inspector
Inspected the installation of five miles of new 18-inch interceptor sewer, one mile of 6-inch force main, and one mile of 12-inch force main in Stonelick Township, OH. Installation of the 18-inch gravity sewer included manholes and service taps, and the force mains included pressure relief valves and pump stations. Blasting was required for the installation of pump station sumps and vaults. (1989)

OTHER

Cincinnati Gas & Electric Company William H. Zimmer Nuclear Power Station - Document Controller
Performed document control and expedited Nuclear Regulatory Commission quality assurance documents within the construction and engineering division for this nuclear power station in Moscow, OH. (1981 - 1984)

WILLIAM J. RENNICKE

Mr. Rennicke is a Partner with Oliver Wyman, an international management consulting firm. Mr. Rennicke is sponsoring the portions of Part III-D of CSXT's Reply Evidence that relate to the SFRR's ongoing G&A activities and compliance with rail industry and external regulatory requirements.

Mr. Rennicke specializes in transportation transactions, strategic planning, management, marketing, economics, and operations. He has particular expertise in business process restructuring and organizational redesign to improve financial and operating performance of railroads.

Mr. Rennicke's transportation career spans four decades, including senior management and operating positions at railways and motor carriers. He has been at the forefront of carrier restructuring and financial improvement activities for both private and government transport companies around the world. He has also managed the development of many strategic and financial planning, simulation, and control models for freight railroads.

Before joining Oliver Wyman, Mr. Rennicke held various senior positions at the Boston and Maine Railroad. He is a member of the Transportation Research Forum and the Council of Supply Chain Management Professionals.

Mr. Rennicke holds a B.S.B.A. in accounting from the School of Business Administration at Georgetown University and an M.B.A. with a concentration in transportation and logistics from the University of Minnesota.

VERIFICATION

I, William J. Rennicke, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

William J. Rennicke

Executed on January 7, 2010.

JOSEPH V. SCHUPPERT

Mr. Schuppert is CSX's Director Performance Analysis, with offices in Jacksonville, Florida. He has occupied this position since February 1, 2004 and has been with CSX since February 20, 1989. Mr. Schuppert is sponsoring the portions of Part III-D of CSXT's Reply Evidence that relate to the development of General & Administrative (G&A) staffing and costs (Part III-D-3c), Loss and Damage (Part III-D-6), Insurance (Part III-D-7), and Ad Valorem Taxes (Part III-D-8).

As Director Performance Analysis at CSX, Mr. Schuppert's responsibilities include planning and analysis of CSX's Corporate, General and Administrative costs, which include Loss & Damage, Insurance, and Operating Taxes.

Mr. Schuppert received his Bachelors of Science in Accounting from Jacksonville University in 1978, and was awarded a Masters of Business Administration from University of North Florida in 1993. He spent four years in the Navy as a Supply Corps Officer and was discharged as a Lieutenant in 1982. Between military service and joining CSX in 1989, he worked five years at Ryder/PIE (a national LTL truck carrier) as an operational auditor and payroll supervisor, and one year at Prudential Insurance performing financial audits of their investment holdings.

At CSX Mr. Schuppert spent his first seven years in Internal Audit and then moved into the Costs & Budgets Department in support of numerous Operating departments for eight years, before moving into financial support of the Corporate and G&A functions.

VERIFICATION

I, Joseph V. Schuppert, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Joseph V. Schuppert

Executed on January 15, 2010.

JOHN T. SHARKEY, P.E.

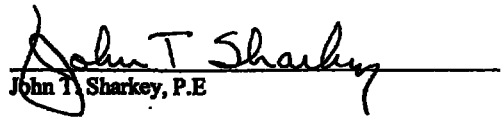
Mr. Sharkey is Vice President–Technology for Campbell Technology Corporation, CTC, which provides design, project management, construction inspection and other consulting engineering services for railroads, public agencies and other consulting engineering firms. Mr. Sharkey is a registered professional engineer in Illinois and Texas with over 37 years of experience in the railroad signal industry. Mr. Sharkey is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to signals and communications. Mr. Sharkey has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Sharkey's experience includes 27 years in management in a class I railroad Communication & Signal department, with 10 years as General Manager of the department. He spent 9 years in management at a leading North American C&S Manufacturing/Engineering company and holds patents on the "out of service" feature of, and "railed based communications" with, the latest generation constant warning time device. He has been involved in all aspects of design, installation, and maintenance of railroad signal systems including accident investigations and litigation. He has been a member of hundreds of diagnostic survey teams. He was Vice Chair of the Signal Liaison Committee of the Association of American Railroads (AAR) C&S Division during the Federal Railroad Administration Highway- Part 234 – Grade Crossing Signal System Safety rulemaking and participated in the development of the draft regulations. Mr. Sharkey holds an A.S. Electronic Technology from Elgin Community College, a B.S.E.E. from University of Illinois, and a M.B.A. from Illinois Institute of Technology.

Mr. Sharkey's resume with additional project experience is attached hereto.

VERIFICATION

I, John T. Sharkey, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



John T. Sharkey, P.E

John T. Sharkey, P.E.

Summary

John T. Sharkey, P.E., is Vice President–Technology for Campbell Technology Corporation, CTC, which provides design, project management, construction inspection and other consulting engineering services for railroads, public agencies and other consulting engineering firms. He is a registered professional engineer in Illinois and Texas. He has over 37 years of experience in the railroad signal industry. This includes 27 years in management in a class I railroad Communication &Signal department, with 10 years as General Manager of the department. He spent 9 years in management at a leading North American C&S Manufacturing/Engineering company and holds patents on the "out of service" feature of, and "railed based communications" with, the latest generation constant warning time device. He has been involved in all aspects of design, installation, and maintenance of railroad signal systems including accident investigations and litigation. He has been a member of hundreds of diagnostic survey teams. He was Vice Chair of the Signal Liaison Committee of the Association of American Railroads (AAR) C&S Division during the Federal Railroad Administration Highway- Part 234 – Grade Crossing Signal System Safety rulemaking and participated in the development of the draft regulations.

Relevant Professional Experience

- Chairs the American Railway Engineering and Maintenance-of-Way Association, AREMA, Committee 36, Highway-Rail Grade Crossing Warning Systems, since 1998.
- Currently involved as engineering expert in matters involving railroad-highway grade crossing issues.
- Developed the "3-wire" and "6-wire" supervised interconnect circuits for highway-rail grade crossings, which has been adopted as an AREMA recommended practice and an Illinois Commerce Commission policy.
- Developed and taught application design classes for latest generation of Constant Warning Time device and control systems. These classes were given to Class 1 railroad signal design engineers, consultants, and contractors in North America and the United Kingdom.
- Designed, or approved the design of, approximately 1200 Highway-Rail Grade Crossing Warning System projects.
- Designed, or approved the design of approximately 800 miles of railroad centralized traffic control systems
- Performed "in-service" operational tests, or supervised the in-service operational tests of, approximately 600 Highway-Rail Grade Crossing Warning System projects and 800 miles of CTC.
- Chaired the Association of American Railroads C&S Division, 1994-1995

Education

- M.B.A., Illinois Institute of Technology, 1988
- B.S.E.E., University of Illinois, 1972
- A.S. Electronic Technology, Elgin Community College, 1969

Employment History

- Campbell Technology Corporation, Vice President – Technology, 2008 to present
- Safetran Systems Corporation, General Manager – Technology & Standards, 2003-2008
    - US Patent 7,441,727
    - US Patent 7,575,202
- Safetran Systems Corporation, General Manager – Marketing & Technology, 1999-2003
- Elgin Community College, Electronic Technology Instructor, 1980
- Illinois Central Railroad (now CN Ry), General Manager–C&S, 1994 -1999
- Illinois Central Railroad, Engineer –Signals, 1989-1994
- Illinois Central Gulf Railroad, Signal Operations Engineer, 1986-1989

- Illinois Central Gulf Railroad, Signal Planning Engineer, 1983-1986
- Illinois Central Gulf Railroad, Signal Design Engineer, 1979-1983
- Illinois Central Gulf Railroad, Signal Supervisor,1978-1979
- Illinois Central Gulf Railroad, Field Signal Engineer, 1975-1978; Assistant Engineer-Signals, 1974-1975; Junior Engineer-Signals, 1972-1974

Professional Organizations

- Association of American Railroads Communication and Signal Division, member 1975 to 1998
- AAR ATCS Strategic Planning Committee 1993- 1999
- National Committee of Uniform Traffic Control Devices 1988 to present
- American Railway Engineering & Maintenance-of-Way Association (AREMA) 1998 to present
- Institute of Transportation Engineers – Grade: Member – 1997 to present
- FHWA Technical Working Group on Highway-Rail Traffic Control Systems – 1999 to 2003
- Transportation Research Board AHB60 – Railroad Highway Grade Crossings – 1999 to present
- National Cooperative Highway Research Program – September 2002 to present
- Institute of Electrical and Electronic Engineers – 2007 to present
- American Public Works Association – 2009 to present

Recent Publications

- Co-author "Supervised Interconnection Circuits at Highway-Rail Grade Crossing" March 1998, Mansel, Waight & Sharkey, ITE Journal
- Co-author "Supervised Interconnection Circuits at Highway-Rail Grade Crossing" January 2000, Mansel, Waight & Sharkey, TRB Paper
- Author "Supervised Interconnection Circuits at Highway-Rail Grade Crossing" Sharkey, RT&S (Railroad Track & Structures Magazine) , February 2000
- Contributor ITE Recommended Practice "Preemption of Traffic Signals at or Near Railroad Grade Crossings", 2004
- Railroad-Highway Grade Crossing Handbook – Revised 2nd Edition – 2007
  - Notable Contributor to section on Train Detection, Signal Maintenance, and LED signal design considerations.

Recent Presentations

2009 University of Wisconsin - Highway-Rail Grade Crossing Safety Course, Madison, WI - May, 2009
Instruction: 1.Train Detection and Warning Systems,
2. Traffic Signal Preemption, and
3. Wayside Horn Systems

2008 Mid-States Highway-Rail Grade Crossing Safety Conference, Grapevine, TX – May, 2008
Presentation: Use of New Technologies for Highway-Rail Intersections and Train Controls

2008 University of Wisconsin - Highway-Rail Grade Crossing Safety Course, Madison, WI - Jan, 2008
Instruction: Train Detection and Warning Systems

2008 Transportation Research Board Annual Meeting, Washington D.C. – Jan, 2008
Panelist: Session 466 : Intermodal Pedestrian & Trespass Issues

2007 Eastern Rail-Highway Safety Conference, Albany, NY – Oct, 2007
Presentation: Recent Technical Developments Generated by Crossing Accidents

2007 Southeastern Rail-Highway Safety Conference and Workshop, Louisville, KY – May, 2007
Presentation: Industry Technical Update

2007 University of Wisconsin - Highway-Rail Grade Crossing Safety Course, Madison, WI - Mar, 2007

SETH SCHWARTZ

Mr. Schwartz is President of Energy Ventures Analysis, Inc. ("EVA"), with offices located at 1901 North Moore Street, Suite 1200, Arlington, VA 22209. Mr. Stamberg is sponsoring portions of Section II-B of CSXT's evidence that relate to the feasibility of intermodal alternatives to CSXT's rail service for the transportation at issue, as well as Exhibits II-B-1 and II-B-2. He is also sponsoring the portions of CSXT Reply Part III-A that relate to SFRR coal traffic volumes, forecasts and projections of future SFRR coal traffic volumes, and volumes of synthetic gypsum shipments from the Stilesboro plant. Mr. Schwartz has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Schwartz received a Bachelor of Science degree in Geological Engineering from Princeton University in 1977. He was employed by Energy and Environmental Analysis, Inc. from 1977 to 1981 as a project manager. He was a co-founder of EVA in 1981 and has been a partner in this firm since then.

In his career, Mr. Schwartz has specialized in the analysis of coal markets, coal supply and demand, coal prices, coal transportation and coal procurement activities by coal customers. The clients for whom I perform these studies include coal customers, such as electric power and industrial coal consumers, coal producers, coal transportation companies, investors and lenders to the coal and power industries, and regulatory agencies. These projects include:

- Fuel supply studies for existing and new coal-fired power plants, evaluating the availability and cost of coal and petroleum coke at the mine from different supply regions and the transportation cost by mode from each supply region to the plant;
- Management audits of fuel procurement activities on behalf of power companies and public utility commissions;
- Forecasts of coal supply, coal demand and coal prices;

- Analysis of existing and projected pollution control technologies and emission costs, including the effect on coal markets; and,
- Financial and operational analyses of coal operations and power plant operations on behalf of investors and lenders.

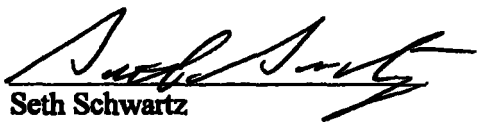
Over the course of his career, Mr. Schwartz has testified numerous times in federal and state courts, arbitration panels and regulatory hearings regarding coal prices, coal procurement, coal transportation and coal contract issues. He has presented papers in front of industry trade conferences on these issues.

EVA produces trade publications which Mr. Schwartz manages, including:

- COALCAST short-term and long-term forecasts
- Monthly stockpile report
- Monthly coal trade report
- Quarterly coal financial report

VERIFICATION

I, Seth Schwartz, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Seth Schwartz

Executed on January 13, 2010.

JOHN B. STAMBERG, P.E.

Mr. Stamberg is Vice President of Energy Ventures Analysis, Inc. ("EVA"), with offices located at 1901 North Moore Street, Suite 1200, Arlington, VA 22209. Mr. Stamberg is sponsoring portions of Section II-B of CSXT's evidence that relate to the feasibility of intermodal alternatives to CSXT's rail service for the transportation at issue, as well as Exhibits II-B-1 and II-B-2. Mr. Stamberg has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Stamberg received a Bachelor of Science degree in Civill Engineering from University of Maryland in 1966 and a Master of Science in Civil Engineering from Stanford University in 1967. He was previously employed by the US Environmental Protection Agency from 1967 to 1974 as the Chief of the Municipal technology Branch in the Office of Air and Water Programs and the Chief of Biological Treatment in the Office of Research and Development. He was a Director of Energy and Environmental Analysis, Inc. from 1974 to 1981. He was a co-founder of EVA in 1981 and has been a partner in EVA since then. He is a registered professional engineer in the State of Louisiana and a member of a number of engineering societies.

Mr. Stamberg prepares engineering design and economic analyses for a variety of civil engineering projects, including transportation of bulk commodities. Examples of these projects include:

- Conceptual design and cost estimate for barge and ocean going vessel delivery of coal and disposal of ash and scrubber residual for the repowering of an older power plant in Texas;
- Conceptual analysis of alternative coal source delivery to a Arkansas power plant that evaluated a revived rail line option and a barge option including conveyance

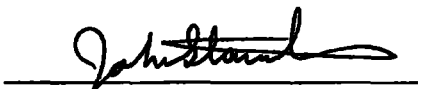
from a proposed upgraded dock and conveyance system on the navigable waterway;

- Conceptual design and cost estimate to modify a barge delivery coal fired power plant to accept rail delivered coal, including new and modification of the coal yard conveyors and associated permitting modifications for a Florida utility;
- Developed logistics and located potential off-site coal unloading sites and developed cost for the delivery alternative sources of coal and coastal sources of pet coke to three independent power plants in California.
- Evaluated the design and capabilities, cost and permitting of a coal and limestone barge unloading dock in Maryland; and
- Designed and estimated the cost of installing a conveyor in lieu of trucking unprocessed mineral ore from a non-connected pit mine in Virginia.

Mr. Stamberg holds patents or has patents pending for wastewater treatments systems and mineral processing and has authored 17 technical publications.

VERIFICATION

I, John Stamberg, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



John Stamberg

Executed on January 13, 2010.

MICHAEL P. SULLIVAN

Mr. Sullivan is Assistant Vice President – Utility Coal South in the CSXT Coal Department. He has held that position since 2001. Mr. Sullivan is sponsoring the portions of Sections I and II-B of CSXT's Reply Evidence that relate to the commercial relationship between CSXT and SECI, the history of negotiations between CSXT and SECI, and CSXT's development of market-based tariff rates for SECI after expiration of CSXT's contract with SECI.

As Assistant Vice President-Utility Coal South, Mr. Sullivan is responsible for marketing CSXT Coal Services to fourteen major utilities located in the Southern Region of CSXT service territory. Mr. Sullivan and his team negotiate coal transportation contracts with all of CSXT's utility customers in Alabama, Mississippi, Georgia, North Carolina, South Carolina, and Florida, including SECI. Mr. Sullivan has been personally involved with CSXT's relationship with SECI since 2001. He also has an understanding of CSXT's dealings with SECI before 2001, based on his review of CSXT's files and discussions with other CSXT personnel who were directly involved in CSXT's relationship and negotiations with SECI before 2001.

VERIFICATION

I, Michael P. Sullivan, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Michael P. Sullivan

Executed on January 15, 2010.

ARNOLD S. TESH, CRE

Arnold S. Tesh, CRE, FRICS is Senior Vice President, Economics. He is part of FTI Consulting, Inc.'s Network Industries Strategies group, located in Washington, D.C. With nearly 45 years of experience, he is an internationally recognized expert in real and personal property valuation, consulting, and management. Mr. Tesh is sponsoring CSXT's evidence with respect to the SFRR's land acquisition costs as set out in Section III-F-1 of CSXT's Reply Narrative.

Since 1962, Mr. Tesh has worked in various aspects of real estate, general business, railway transportation, maritime, and aviation, including appraisal, counseling, management, negotiation, brokerage, leasing, development, ad valorem assessment, expert testimony, financing, and investment. He has extensive experience in valuing transportation related assets, such as railway rights-of-way, rail yards, and supporting facilities, mining and processing plants, inter-modal facilities and equipment, and large transportation related industrial properties and equipment.

Mr. Tesh is a member of the Counselors of Real Estate (past Vice President and 2009 Board of Directors) and a Fellow of the Royal Institution of Chartered Surveyors. He is on the National Association of Realtors (1.1 million constituents) 2009 Executive Committee and the NAR representative on the Appraisal Foundation Advisory Committee. He is a licensed and certified real estate appraiser.

Mr. Tesh is a recognized international expert in acquisition, disposal, disposal, negotiation, management, finance, appraisal, leasing, and litigation involving major real property and personal property asset portfolios. He has extensive experience in counseling and valuation for diverse real property including equity and mortgage portfolios (shopping centers, office buildings, industrial parks, etc.), and personal property assets (machinery, equipment, ocean-going vessels, and aircraft). He has advised investors, government agencies, attorneys, accountants and various state and federal courts as to methodology, value, damages, and business decisions for ventures totaling tens of billions of dollars.

He is an advisor, negotiator, and witness resolving issues involving acquisition, disposition, eminent domain, reorganization, liquidation, stock ownership disputes, leasing issues, damages, collateral value, and contract disputes.

Mr. Tesh was the chairman of Future Diagnostics, a healthcare company. He also has extensive experience valuing healthcare facilities, including hospitals.

As Director of Real Estate in the United States Railway Association's Law Department, Mr. Tesh was chief real property advisor and valuation witness in the bankruptcy reorganization of Penn Central, Erie Lackawanna, Lehigh Valley, Lehigh and Hudson River, Central of New Jersey, Ann Arbor, Reading, et al. This included Class 1 railroad property 17 states, the District of Columbia, and two Canadian provinces. He testified before the Special Court created by Congress in the largest eminent domain case in the history of the United States. Certain of his approaches, particularly for unique transportation, communication, and energy properties, have been adopted as standards within the counseling and valuation professions.

Mr. Tesh has valued tens of thousands of miles of right-of-way and dozens of yards for railroads in rate cases before the US Surface Transportation Board. In most of these cases, the STB accepted his valuation methods and opinions concerning land values. He has also used these right-of-way valuation methods in cases affecting electric power and telecommunication corridors. He spent more than year in Alaska consulting and valuing the Alaska Railroad including its intermodal port facilities. He consulted for the Ports of Long Beach and Los Angeles on the development and construction of the Alameda Corridor Project, a 2.4 billion dollar, 20- mile, high capacity rail corridor to consolidate rail container traffic between the ports of Los Angeles and Long Beach and the Los Angeles rail yards. He provided expert advice regarding development and alternative uses for Potomac Yards, outside Washington, DC; Tacoma Yard in Washington State, and the West Side Yards, in Manhattan. He also supervised and participated in the valuation of the Sunnyside Yard in Queens, NY.

Mr. Tesh has an extensive maritime and port consulting background. He was an investor and CEO of Costa Rica Transdevelopment, which involved the planning, funding, and development of sister ports linked by a railroad; a $1.2 billion project. He has also valued fleets of commercial vessels and sub-oceanic telecommunications assets between the United States and Japan.

He has aviation related and aircraft valuation experience. He has valued real estate and businesses affected by airport flight paths and aircraft noise. He has reviewed and prepared valuations for business and commercial aircraft fleets for fixed-base operations (FBO) and corporate assets. He has valued fleets of aircraft for collateral value in connection with portfolio analysis.

He has many years of experience in consulting and valuing mining projects--including coal, bauxite, and phosphate. Among other assignments he was retained by Blue Coal, the largest anthracite coal operation in the U.S. to value its assets in reorganization. He valued the Agrifos phosphate mining operations in Florida on behalf of its creditors. He valued the largest anthracite coal reserves and mining operations in Pennsylvania.

As an independent fiduciary for a Fortune 50 pension fund, Mr. Tesh has been involved in major asset management, negotiation, and strategy decisions involving billions of dollars of assets.

He performs counseling assignments and valuations that include determinations of both debt and equity interests. They include, but are not limited to, railroads, telecommunications facilities, public utilities, major retail portfolios, communication and energy corridors, port and maritime facilities, aircraft, aviation facilities, and mega-land holdings.

He was president of a subsidiary of a NYSE REIT, which developed, owned, and managed over 15 million square feet of retail shopping centers.

He has established his reputation as an expert witness, advisor, and negotiator in resolving issues involving eminent domain, reorganization, orderly liquidation, damages, collateral value, contract disputes, and special-purpose properties.

Mr. Tesh has focused on developing solutions to valuation problems and negotiating strategies involving public utilities, railroads, port, and maritime facilities, preferred health provider organizations, and various stock ownership disputes including majority/minority valuation issues. Each solution is unique to the asset class and purpose of the assignment. The counseling and valuation professions have adopted certain of his approaches as standards:

Mr. Tesh has written numerous articles for general and professional publications. Among those, he authored a White Paper on the Resolution Trust Corporation on behalf of the American Society of Real Estate Counselors. He was a contributing author to the Iowa Appraisal Manual and the Federal Highway Administration Procedural Manual. He authored an article on ethics in Real Estate for the American Society of Real Estate Counselors. The Harvard University Environmental Law Review has quoted his opinions regarding the valuation of aesthetics. He coauthored an article concerning right-of-way and easement issues affecting electric power and telecommunication corridors.

Mr. Tesh is an arbitrator for FINRA, the Financial Industry Regulatory Authority (formerly the National Association of Securities Dealers). He has spoken before various professional organizations including the American Bar Association and the Center for Business Intelligence.

He is also a board member of the Northwestern University Medical School Asher Center. He has lectured before various professional organizations including the Center for Business Intelligence and the American Bar Association.

Mr. Tesh is a graduate of the University of Arizona. He served in the United States Navy.

ILLUSTRATIVE PROFESSIONAL ACHIEVEMENTS

As Deputy Assessor in Los Angeles County Mr. Tesh was responsible for commercial and industrial valuations – as well as methodology development, appeals and testimony.

As a self-employed consultant, Mr. Tesh has handled billions of dollars of assessment issues on behalf of regional mall shopping centers, hotels and office buildings for major developments in the US and in particular the Midwest, including Illinois.

As Chief Appraiser for Vanguard in Cedar Rapids, Mr. Tesh was responsible for appraisals for county and municipal governments as well as the private sector. He also handled assessment appeals for various counties under contract.

As Independent Fiduciary pursuant to ERISA, Mr. Tesh had responsibility for a billion-dollar-plus portfolio of real property comprising major shopping malls and office buildings located throughout the US.

SELECTED PRINCIPAL CLIENTS:

- Most Major railroads, including Amtrak, ConRail, Burlington Northern Santa Fe Railway,
- Union Pacific, CSX Transportation and Norfolk Southern
- IBM
- Wachovia Bank, re: various mining issues
- Blue Coal Company
- Dominion Resources
- Entergy
- Dart Industries bankruptcy reorganization
- The US Government, the Commonwealths of VA & PA and the States of IA and CT
- Baltimore Archdiocese, Catholic Church, re: Brownfields purchase agreement
- State of Connecticut (Eminent Domain)
- Native American Rights Fund
- Prudential Insurance Company concerning vessel and aircraft valuation

MAJOR PROPERTIES ON WHICH MR. TESH HAS HAD ASSIGNMENTS:

- The Illinois Central, The Northern Indiana Commuter Transportation District (NICTD) South Shore Line and Illinois Center in Chicago
- Over 30 thousand miles of transmission, railroad, and communication corridor assets throughout the US
- US Army realignment and 9/11 recommissioning in Utah
- Pipelines, tank farms, and petro-chemical plants in Texas, Virginia, Pennsylvania
- Electric generating plants including the Susquehanna plant in PA, the Taylorville plant in IA, and the Collins, Holland, Shelby and Kendall plants in IL, as well as hypothetical railroad and communications corridor acquisitions of land underlying dozens of electric generating plants throughout the US
- Coal and phosphate mining operations
- The Ports of LA, Long Beach, San Juan PR, and railroad system port-related properties in Seattle, Tacoma, Baltimore, Philadelphia, and in Costa Rica, Limon and Guanacaste
- Convention centers, resorts and gaming facilities in VI, HI, Costa Rica, Mexico, FL, PA, Panama
- Heavy industrial properties including Kaiser Aluminum in CA, Alcoa in IA, Atchison Steel in KS, Iowa Steel, Bethlehem Steel (partial assets) in PA and Archer Daniels Midland Corn Sweeteners in IA

- Hundreds of millions of square feet of office buildings, scattered throughout most major US Cities
- All of the fixed assets of the Alaska Railroad
- The railroad real estate assets of the bankrupt estates under the RRR Act. This involved 23,000 of ROW in 17 states, Washington, DC, and two Canadian provinces
- Native American real property for reuse in different regions of the US including Alaska
- Sub-oceanic assets for a telecommunications company providing services between the United States and Japan.
- Aircraft valuations as collateral for portfolio analysis and bankruptcy.
- Telecommunication asset valuations for companies providing regional and international services.
- Fixed asset valuations for credit card processing centers across the US. This includes telecom and computer center machinery and equipment.

ADDITIONAL APPRAISAL AND COUNSELING ACTIVITIES:

- Testified as chief government real property witness before Special Court in Penn Central Bankruptcy
- Advised and gave unsworn testimony regarding ConRail privatization
- Testified in numerous state and federal courts in land use cases
- Served, for the Center for Business Intelligence, as Chair Of "Valuation Methodologies In a Deregulated Environment"
- At Northern Virginia Community College, served for several years as Adjunct Professor of real estate finance, appraisal courses, brokerage management, and appraisal standards. Serves as Chair of real estate curriculum committee
- Taught special purpose property valuation at Kellogg Center at Michigan State University in East Lansing
- Authored rights of way valuation section for the Federal Highway Administration about 1980
- Conducted a major study of irregular and limited market properties throughout East and Midwest to determine prices relative to general market properties – around 1980
- Made major contributions to the development of corridor valuation methodologies for surface, subsurface, and air rights issues. These issues involve railroads, pipelines, electric utilities, and telecommunications companies.
- Co-authored the Iowa State Appraisal Manual in mid-70's

EMPLOYMENT HISTORY

FTI Consulting, Inc. Washington, DC. In 1999, Mr. Tesh joined the economic consulting practices of Klick Kent & Allen of Alexandria, VA and Kahn Consulting of New York, NY. Both of these entities became divisions of FTI Consulting, of Annapolis, Maryland. Mr. Tesh established this firm's real property counseling and valuation practice. In this capacity, Mr. Tesh also continues to emphasize negotiation and litigation support activities.

Northern Virginia Community College, Commonwealth of Virginia. Since 2000, Mr. Tesh has served as Adjunct Professor, Business and Real Estate currently teaching both live and televised courses throughout the Commonwealth – including Real Estate Finance, Appraisal, Brokerage Management, and Appraisal Standards. He is also the Chair of the curriculum committee

Tesh & Daly Advisors, LLC. Washington, DC. In 1998, Mr. Tesh and others formed Tesh & Daly Advisors, LLC. Mr. Tesh then devoted all of his professional time to this Washington, DC entity that specializes in counseling, negotiation, valuation, and litigation support for business and real property operating and valuation issues.

Arnold S. Tesh Advisors Washington, DC. In 1987, Mr. Tesh joined forces with other experts to form Arnold S. Tesh Advisors. He took an active role in providing expert counseling, negotiation, and valuation services for clients throughout the world. The firm specializes in general real property and business issues, rail corridor analysis, asset valuation, real property economics, and expert testimony for both foreign and domestic portfolios. In 1996 Arnold S. Tesh Advisors was sold to Zell Partners, Ltd. of Washington, DC. Mr. Tesh was Of Counsel to Zell Partners and was actively involved in its major litigation and counseling projects.

Jackson-Cross Company Washington, DC and Philadelphia, PA. Between 1982 and 1987, Mr. Tesh was an officer of Jackson-Cross Company. He held the positions of President and Chief Executive Officer of Jackson-Cross Appraisal Company and President and Chief Executive Officer of Jackson-Cross Advisors. In his various roles with this company, Mr. Tesh provided expert advice and counsel for some of the largest and most complex assignments in the fields of valuation and counseling. They include mergers, acquisitions involving several hundred millions of dollars, railroad transfers, bankruptcies, reorganizations, finance and legislative counseling with respect to transportation and real property issues.

United States Railway Association Washington, DC. Between 1977 and 1982, Mr. Tesh served the USRA in various high-level capacities. As its Director of Real Estate, he developed the strategy and coordinated in-house and contractor efforts in the largest real estate litigation in the history of the United States. He testified regularly in the matter of the bankruptcy of the railroads covered by the Rail Revitalization and Reorganization Act of Congress. Due largely to his efforts, $17 billion in claims against the government parties were disposed of at a cost of less than one-sixth of that amount.

He was personally responsible for asset analysis and expert testimony for the Penn Central, Erie Lackawanna, Reading, Ann Arbor, Lehigh Valley, Lehigh and Hudson River and Central of New Jersey. He negotiated the professional services contracts for research and expert testimony regarding real property acquired by ConRail.

Arnold S. Tesh Associates Coral Springs, FL. During 1976-77, Mr. Tesh served as president of this company, specializing in consulting for matters related to real estate investment, development and management. During this time, he negotiated multi-million dollar workouts, development ventures, and income escalations.

General Growth Properties Des Moines, IA . From 1973 to1976, Mr. Tesh served as president of a subsidiary of General Growth Properties. His responsibilities for this New York Stock Exchange listed company included tax management and negotiations; as well as site selection, acquisition, development, and marketing services. In addition to administering the subsidiary company, he had specialized decision-making and negotiating responsibilities for over one-half billion dollars worth of regional mall shopping centers, apartments, motels and recreational facilities. Although the company was designed as a service entity for its NYSE parent, it evolved into a primary profit center.

Vanguard Appraisal Company Cedar Rapids, IA. Between 1972 and 1973, Mr. Tesh was Chief of Valuation for this national appraisal company. He was responsible for both government and private tax negotiation and appraisals. His projects, located primarily in the Midwest, typically involved commercial, industrial, residential and agricultural properties.

Los Angeles County Assessor Los Angeles, CA. From 1966 to 1972, Mr. Tesh was Deputy Assessor for Los Angeles County. He represented the County in Assessment Appeals Board actions involving all types of real property assets. He was also responsible for market value opinions (primarily on commercial and industrial properties) through the use of cost, comparable sale and income approaches. He was empowered to negotiate assessment changes and to litigate when appropriate.

EDUCATION

Undergraduate Studies: *University of Arizona* (BA) Public Law and Public Speaking Graduate Studies: *California State University, County of Los Angeles,* International Politics and Real Estate one-year full-time (with pay) graduate curriculum in valuation and real property economics, receiving, upon graduating, a license from the California Board of Equalization

CERTIFICATE COURSES

University of San Diego, Tampa University, and Arizona State University

ARBITRATOR

National Association of Securities Dealers Regulation

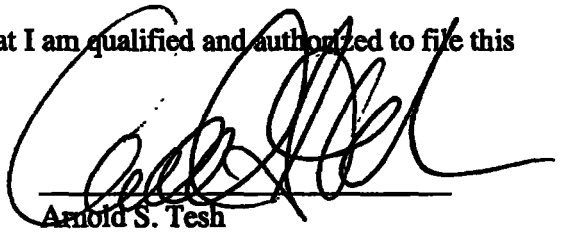
Arbitration Panel Member and Chair

REPRESENTATIVE BOARD/COMMITTEE MEMBERSHIPS

- Member (2009), National Association of Realtors Executive Committee
- Representative on TAFAC (The Appraisal Foundation Advisory Council)
- Future Diagnostics Inc. (1990's) Chair of this national healthcare management firm
- Northwestern University Medical School Asher Center Advisory Board Meme (Active)
- Board of Directors Counselors of Real Estate (1997 through 2000 – having been a Counselor since 1984) Also former Vice President, and Committee Chair
- 2004 Chairman of the Legislative and Regulatory Subcommittee of the National Association of Realtors (NAR)
- 2008 National Association of Realtors Executive Committee
- Member of the Military Base Encroachment Council
- Chair of the Real Estate Curriculum Committee and Adjunct Professor for the Northern
- Virginia Community College System (Second largest in the United States)

VERIFICATION

I, Arnold S. Tesh, declare under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



Arnold S. Tesh

Executed on January___, 2010.

STATEMENT OF QUALIFICATIONS

DAVID R. WHEELER

My name is David R. Wheeler. I am th founder of Rail Network Analytics. My office is located at 9222 Nottingham Way, Mason, Ohio 45040.

I am sponsoring portions of the testimony and evidence presented in Section III-B and Section III-C (relating to the RTC Model simulations presented by SECI and CSXT) of the foregoing Reply Evidence and Argument of CSX Transportation, Inc. I have read the testimony set forth in those sections, and the statements constined therein are trus and correct to the best of my knowledge, information and belief.

I received a Bachelor of Science degree in engineering and computer science from Merrimack College in 1985. I also received a Masters of Business Administration degree in finance and operations management from Miami University in 1992. I have training in the Six Sigma methodology and hold a Six Sigma Blackbelt certification. Throughout my career, i have focused on advanced analytical techniques for operational improvements and strategic planning. I have more than fifteen years experience in areas including rail operations analysis, capacity analysis, simulation, stand-alone rate cases litigation, structured problem solving using the Six sigma methodology, supply chain efficiency and mergers & acquisitions. I have experience not only in the simulation of railroads, but also in other high technology industries including cockpit simulation work on the F-16 and F-22 fighter aircraft.

My background and experience are described in greater detail in the attached Curriculum Vitae.

VERIFICATION

I, David Wheeler, verify under penalty of perjury that I have read the sections of the foregoing Reply Evidence of CSX Transportation, Inc. that I have sponsored, as described in the foregoing Statement of Qualifications, that I know the contents thereof, and that the sections of the Reply Evidence I have sponsored are true and correct. Further, I certify that I am qualified and authorized to file this statement.



David Wheeler

Executed on January 14, 2010.

DAVID R. WHEELER
9222 Nottingham Way
Mason, Ohio 45040
(513) 252-4541

Founder, Rail Network Analytics: *June 2001 – Current*

See attached company profile

UNION PACIFIC RAILROAD, Omaha, Nebraska: *1996-June 2001*

- General Director, Capacity & Operations Analysis (Network Planning)

1) Responsibility: Develop the Company's one through five year capital expansion program. Have direct responsibility to the Executive VP of Operations and the Executive VP Network Design and Integration for the Railroad's Capacity budget ($200MM+ per year).

Accomplishments: Performed demand versus supply forecasts based on market growth and ranked capacity constrained corridors based on simulations (Rail Traffic Controller-RTC and RAILS) and other operations research methods. Developed line-of-road, manifest yard and intermodal terminal capacity expansion projects to meet demand. Developed return on investment indicators, net present value and payback for each project and gained consensus on more than 240 multi-million dollar capital projects across all levels of the Company in 1997, 1998, 1999, 2000 and 2001. Implemented an emergency capacity plan to recover the Houston Gulf Coast service area in 1998. Third quarter 2001 operating ratio dropped below 80 with much success attributed to capacity planning efforts.

2) Responsibility: Lead strategic operating analysis to identify the synergies of mergers, acquisitions, strategic alliances as well as lawsuit defense for long-term net income growth.

Accomplishments: Developed system-wide line and terminal capacity plans for the Southern Pacific merger application to the Surface Transportation Board (STB). Analyzed potential acquisitions to create a trans-continental transportation system. Developed verified statements for operations and capacity requirements on rate cases and submitted to the Surface Transportation. Developed the acquisition brief, filing, environmental impact analysis and bid price for the acquisition of the Northeast Kansas and Missouri Railroad. Evaluated merger mitigation cases in Wichita and Reno and recommended road closures and crossing protection.

3) Responsibility: Identify operating process improvements, implement action plans, drive accountabilities and implement measurement control systems to reduce failure costs.

Accomplishments: After Black Belt training program, used Six Sigma methodology to analyze critical operating processes in corridors that included the Sunset West corridor (New Orleans-LA) which consumes more than $1 billion in operating costs annually. Used innovative operations research techniques to resolve key operating issues at terminals and line of road operations. Identified the critical processes causing variability, implemented action plans and reduced failure costs through methodical analysis and management with data. Led cross-functional teams to gain buy-in.

4) Responsibility: Determine network impacts from new or modified service products– including resource demand versus capacity and profitability of existing service versus proposed service.

Accomplishments: Developed capacity throughput estimates based on innovative and unique capacity estimation analyses. Used simulation tools to identify the impact of new intermodal and manifest service proposals between Memphis and Los Angeles and Chicago and Los Angeles. Using cross-functional teams, gained consensus to coordinate the start of new intermodal service to coincide with planned capacity improvements.

5) Responsibility: Lead, develop and motivate the Capacity & Operations Analysis team to solve critical near and long-term issues at the Company.

Accomplishments: Led the benchmarking effort to develop best-in-industry operations research team.

UNION PACIFIC RAILROAD, Omaha, Nebraska: *1995 –1996*

- Senior Project Manager: Financial Planning – Mergers & Acquisitions

➢ Developed and managed the valuation model used for the acquisition of the Mexican National Railway. Model incorporated full financials in US dollars and pesos and accommodated sensitivity analyses on future operating costs, annual operating ratio and capital expenditure plans.

➢ Developed and recommended bid ranges for the Vice President Strategic Planning and participated in the bid strategy process with the Board of Directors.

➢ Developed financial and operational analyses for the Chicago Northwestern, Southern Pacific and Mexican Railway concessions.

➢ Conducted due diligence on the Mexican Railway and potential US partners including SBC Communications and GE Capital.

➢ Performed lease/buy analysis on intermodal containers and made recommendations to Senior Management.

UNION PACIFIC RAILROAD, Omaha, Nebraska: *March 1993 –1995*

- Project Manager - Transportation Research

➢ Managed multiple research projects focused on route optimization, line and terminal simulations, redeployment opportunities and schedule reliability.

➢ Concentrated on cost reductions through process improvements and capital investments. Used linear programming models for asset utilization studies.

➢ Participated in cross-functional team activity to develop comprehensive operating solutions.

DEPARTMENT OF DEFENSE, Dayton, Ohio: *June 1985 – March 1993*

- Systems Manager - Advanced Tactical Fighter F-22 Program

➢ Systems Manager on the Integrated Product Development Team responsible for managing cost, schedule and technical development of the Communication, Navigation and Identification suite on the F-22 tactical fighter for the Air Force.

- Project Engineer – F-16 Fighter Communications Program

➢ Project Engineer on the $1.5 million research and development and $12 million production effort involving the acquisition of a tunable blade antenna for use on the F-16 aircraft program. Simulation lead for the pilot-user cockpit interface.

EDUCATION

Masters in Business Administration, Finance, Operations Management
Miami University, Oxford, Ohio. December 1992

Bachelor of Science, Electrical Engineering, minor in Computer Science
Merrimack College, North Andover, Massachusetts May 1985

WILLIS S. WHITE, III, P.E.

Mr. White is a Project Manager/Senior Engineer/Associate with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. White is a senior civil engineer and project manager with more than 25 years of experience in the design and construction of highway and railway bridges and infrastructure improvements. Mr. White is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to bridges. Mr. White has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. White has particular expertise in hydrology/hydraulics, drainage design, stormwater management, and bridge scour evaluations. Mr. White has been responsible for environmental permitting for work in sensitive watersheds and waterway requiring coordination with the U.S. Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA). He is experienced in the use of the HEC-RAS and HEC-2 software, and the USGS/FHWA Step Backwater Program "WSPRO." Mr. White also has considerable experience with construction staging and the design of falsework and excavation shoring. Mr. White holds a Bachelor of Science, Civil Engineering and a Master of Science, Civil Engineering; from Virginia Polytechnic Institute and State University.

Mr. White's resume with additional project experience is attached hereto.

VERIFICATION

I, Willis S. White, III, P.E., verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.

Willis S. White, III, P.E.

Willis S. (Bill) White, III, P.E.

Project Manager/Senior Engineer
Associate

Mr. White is a senior civil engineer and project manager with more than 25 years of experience in the design and construction of highway and railway bridges and infrastructure improvements. He has particular expertise in hydrology/hydraulics, drainage design, stormwater management, and bridge scour evaluations. Mr. White has been responsible for environmental permitting for work in sensitive watersheds and waterway requiring coordination with the U.S. Army Corps of Engineers (USACE) and the Federal Emergency Management Agency (FEMA). He is experienced in the use of the HEC-RAS and HEC-2 software, and the USGS/FHWA Step Backwater Program "WSPRO." Mr. White also has considerable experience with construction staging and the design of falsework and excavation shoring.

Employee No.
91111

Department No.
53

Office Location
Jacksonville, FL

Date joined firm
7/5/78

Years with other firms
0

Education
Master of Science, Civil Engineering; Virginia Polytechnic Institute and State University (1978)

Bachelor of Science, Civil Engineering; Virginia Polytechnic Institute and State University (1972)

Professional Registration
Professional Engineer: Alabama (1990/#17993/exp. 12/31/09), Florida (1995/#49112/exp. 2/28/11), Georgia (1991/#PE019183/exp. 12/31/10), Kentucky (1993/#17923/exp. 6/30/10), Louisiana (1985/#22084/exp. 3/31/11), Mississippi (1990/#10971/exp. 12/31/09), Missouri (1990/#E-024331/exp. 1/31/10), North Carolina (1981/#10156/exp. 12/31/09), Ohio (1991/#E-55253/exp. 12/31/09), South Carolina (1987/#11882/exp. 6/30/10), Tennessee (1990/#21496/exp. 12/31/11), Virginia (1984/#014715/exp. 5/31/11), and West Virginia (1994/#11330/exp. 6/30/10)

Project Experience

Norfolk Southern Lacy Siding - Senior Engineer
Responsible for environmental permitting with the St. Johns River Water Management District and FEMA coordination for the construction of the Lacy Siding in Jacksonville, FL. The project consists of constructing 1.5 miles of track, including a new 186-foot single-track bridge to carry the track over Six-Mile Creek. (2007 - Present)

The Parc Group Nocatee Parkway Phase II - Senior Engineer
Leading bridge hydraulics design in accordance with FEMA requirements for the Durbin Creek Bridge and the US 1 Flyover Bridge, as part of Phase II of this project to design a parkway serving a new development in St. Johns and Duval Counties, FL. Mr. White is providing input for the bridge design recommendations, and is responsible for the Bridge Hydraulics Report. (3/06 - Present)

CSX Public Projects GEC - Senior Engineer
Providing bridge design review and shop drawing review in accordance with CSX guidelines for various projects that impact CSX Railroad in Georgia, Indiana, Maryland, North Carolina, and Pennsylvania. These projects are being designed by state agencies or outside private entities. Mr. White is responsible for providing guidance on construction inspection estimates. (1/06 - Present)

CSX Bridge Replacements/Repairs GEC - Senior Engineer
Responsible for bridge hydraulics design to meet FEMA requirements, as well as bridge permitting with municipal, state, and federal regulatory agencies, for the replacement or repair of more than 25 bridges in Alabama, Florida, Georgia, Illinois, Indiana, Kentucky, Mississippi, New York, Ohio, South Carolina, and West Virginia, under several consecutive General

Engineering Contracts (GEC) with CSX. Mr. White is coordinating with agencies responsible for environment, waterway navigation, stormwater management, state-owned real estate easements, historic/archaeological assessment, and construction activity. One particularly notable project was the replacement of Bridge SG573.6 over Tanyard Creek in Atlanta, GA, which involved meetings with local civic groups, the City Parks Commission, and the City Council. Mr. White worked closely with CSX's Vice President of Public Relations for Georgia and Florida to obtain permitting for this project. Another project, Bridge No. 23 over the St. Louis Bay in Bay St. Louis, MS, won the design award for Best Non-Highway Bridge from the Precast/Prestressed Concrete Institute. (1/05 - Present)

Norfolk Southern Heartland Corridor Clearance Improvements - Senior Engineer
Provided erosion control design review and QA/QC of erosion control plans for the Heartland Corridor Clearance Project, a public-private clearance improvement initiative funded by the Federal Highway Administration (FHWA), local state governments (Ohio, Kentucky, West Virginia, and Virginia), and the Norfolk Southern Corporation. The 530-mile-long corridor, which runs from Columbus, OH, to Norfolk, VA, currently contains 37 tunnels and 31 bridges with clearance limitations for today's larger freight rail movements. This project will remove those clearance restrictions by raising tunnel roofs and lowering tunnel floors, which will provide a new, quicker route for freight rail traffic between the Atlantic coast and the heartland of the United States. The Heartland Project is projected to be complete in 2010. (6/07 - 7/07)

ITL Technology Contrail Development - Senior Engineer
Provided structural design review and QA/QC plan review for a transitional beam system designed to allow for the efficient transport of cargo on oceangoing container ships in Jacksonville, FL. (4/07 - 5/07)

Kansas City Southern Meridian Rail Siding - Senior Engineer
Provided final design review of the track layout and stormwater management plan for the addition of 1.6 miles of new double-track rail siding in Meridian, MS. (2/07 - 5/07)

Florida East Coast Railway Bridge Construction Program - Senior Engineer
Performed field inspection, plan and calculation checking and revision, and all required hydraulic analysis and construction permitting for various bridges over waterways throughout the state of Florida on the Florida East Coast Railway. Mr. White has applied for and received bridge construction permits for between four and six bridges per year, working primarily with the Florida Water Management Districts. He has also provided all coordination with FEMA for rail bridges over waterways at various locations. (2002 - 2007)

CSX Various Bridge Construction Projects - Senior Engineer

Certifications
Roadway Worker Protection Training Facilitator; CSX Transportation (2/16/07/exp. 12/31/09)

Memberships
American Society of Civil American Engineers

American Society of Highway Engineers

Society of American Military Engineers

American Railway Engineering and Maintenance of Way Association (AREMA): Chairman, Subcommittee 1 of Committee 15 (Steel Structures)

Computer Skills
HEC-RAS backwater computer software, HEC-2 software, WSPRO Step Backwater Program

Performed field inspection, plan and calculation checking and revision, and all required hydraulic analysis and construction permitting for between 12 and 18 bridges over waterways per year throughout CSX right-of-way across the southeastern United States. Mr. White has applied for and successfully received bridge construction permits from the U.S. Army Corps of Engineers (USACE), various state departments of the environment, the U.S. Coast Guard, and several municipal agencies, and has coordinated with FEMA for rail bridges over waterways at numerous locations. The client's satisfaction with the work over a 4-year period led to the establishment of a subsequent 3-year General Engineering Contract for these services. (2001 - 2007)

Norfolk Southern Rocky Creek Bridge Replacement - Senior Engineer
Provided project permitting with the U.S. Army Corps of Engineers (USACE) Savannah District, City of Macon, and Bibb County Engineering Departments (acting as the FEMA Floodplain Administrator) for the replacement of this 122-foot single-track thru-truss span over Rocky Creek in Macon, GA. The single-truss span was replaced with three precast concrete box beam spans. Mr. White performed permitting and hydraulic modeling, which was difficult because of the water level effects of Tobesofkee Creek, which shares the floodplain with Rocky Creek at this location. (2006)

CN Bridge MM 1.95 over Three Mile Creek Replacement - Senior Engineer
Provided bridge hydraulics design, project permitting, and structural design and plans for the replacement of an approximately 180-foot, single-track bridge over a tidal channel in Mobile, AL, for Canadian National (CN). (9/04 - 11/06)

CN Bridge LZ 11.8 over Comite River Span Replacements - Senior Engineer
Responsible for bridge hydraulics design, permitting, and structural design and plans for the replacement of the 734-foot, single-track timber approach spans on either side of the channel span on this bridge in Stevensdale, LA, for Canadian National (CN). (6/04 - 11/06)

CN Bridge LZ 12.9 over Amite River Span Relocation - Senior Engineer
Provided bridge hydraulics design and project permitting for this Canadian National (CN) project in Denham Springs, LA, involving the relocation of a 115-foot, single-track, thru-girder span on the bridge and the replacement of the span's piers. Mr. White was also responsible for structural design and plans. (5/03 - 11/06)

CSX Hurricane Katrina Bridge Repairs/Replacements - Senior Engineer
Responsible for construction inspection and regulatory agency coordination for the repairs and replacements of CSX's six major bridges that were damaged or destroyed by Hurricane Katrina. Bridges included Bridge 709.5 over Singing River near Gautier, MS; Bridge 723.6 over Biloxi Bay in Biloxi, MS; Bridge 752.5 over the St. Louis Bay in Bay St. Louis, MS; Bridge 769 over Pearl River near Rigolets, LA; Bridge 775.4 over Rigolets Pass in Rigolets, LA; and Bridge 776.8 over Blind Rigolets. (2005)

Norfolk Southern Swift Creek Trestle Replacement - Senior Engineer
Provided project permitting for the replacement of a single-track, 173-foot-long timber trestle in Genoa, FL, over Swift Creek. The trestle was replaced with a 182-foot, single-track precast concrete trestle. Mr. White provided all coordination with Florida's Suwanee River Water Management District, including application for a Sovereign Submerged Land Easement for the project. (2002)

CSX MCI WorldCom/Williams Communication Fiber-Optic Builds - Project Manager
Supervised the fiber-optic construction engineering and inspection services on CSX right-of-way across the southeastern United States. Mr. White coordinated and monitored activities of field and office staff and acted as a liaison with CSX management. (1997 - 2001)

CSX Railroad Timber Trestle Replacements - Project Manager/Senior Engineer
Provided field survey and design of the replacement for more than 4,000 feet of timber trestle at 40 locations in the southeastern United States. The existing timber structures were replaced with rehabilitated steel spans or precast concrete spans placed on substructures, which included specially designed steel or concrete bents. At some locations, portions of the existing structure were retained. (1995 - 2000)

FDOT District-Wide Scour Evaluations - Project Manager
Oversaw in-depth bridge scour evaluations in accordance with the Florida Department of Transportation (FDOT) Guidelines for Scour Evaluation Studies on numerous bridges for District 2 in northern Florida. Mr. White submitted scour study reports for each structure evaluated. Projects included data collection and qualitative analysis (Phase I); hydrologic/assessment for scour analysis (Phase II); geotechnical and structural scour assessment (Phase III); and recommended plan of action (Phase IV). (1995 - 2000)

FDOT Bridge Scour Projects - Project Manager
Managed Phases I, II, III, and IV FDOT and NCDOT bridge scour evaluation studies for more than 200 bridges in North Carolina and Florida. Mr. White also oversaw the design for structural repairs and bridge scour countermeasures. (1990 - 2000)

NCDOT Bridge Scour Projects - Project Manager
Managed Phases I, II, III, and IV FDOT and NCDOT bridge scour evaluation studies for more than 200 bridges in North Carolina and Florida. Mr. White also oversaw the design for structural repairs and bridge scour countermeasures. (1990 - 2000)

CSX Increased Train Traffic Signs - Project Manager
Managed the sign installation work at approximately 800 highway grade crossings in Ohio, Indiana, Michigan, and Illinois. Mr. White was responsible for all organization and direction of work. The project was

completed on time even though some installations were performed during severe winter weather. (1999)

Norfolk Southern Miscellaneous Engineering Services - Project Manager
Supervised plan review and CE&I services on an on-call, as-needed basis for more than 700 highway and railway grade separation bridges throughout the 22-state Norfolk Southern system. Mr. White supervised services including temporary structures, falsework, excavation bracing, detours, site drainage, and erosion control. (1985 - 1999)

CSX Conrail Bridge Inspection Program - Project Manager
Directed the critical bridge inspections of approximately 750 Conrail bridges acquired by CSX in Indiana, Ohio, Pennsylvania, New York, and Illinois. The project was completed on time under a fast-track 3-month schedule. (1998)

CSX Emergency Grade Crossings - Project Manager
Managed the installation of special signing at approximately 23,000 grade crossings in 17 states, using a field crew of 35 personnel. The project was completed ahead of schedule and under budget. (1998)

CSX System-Wide and Conrail Acquisition Grade Crossing Signs - Project Manager
Managed the installation of standard identification signs at every roadway grade crossing on the CSX railway system. The project involved more than 28,000 crossings. (1997 - 1998)

CSX Tar River Trestle Replacement - Senior Engineer
Provided the field survey and design of the replacement of approximately 1,800 feet of timber trestle in Greenville, NC. The existing timber structure was replaced with precast concrete components, tied to existing channel spans which were retained. (1996)

Norfolk Southern Automobile Mixing Facility - Senior Engineer
Performed structure design and stream hydrology in connection with two steel deck plate girder railroad structures for an automobile mixing facility in Shelbyville, KY. The project included preliminary and final hydraulic/hydrologic, railway, roadway, highway bridge, and railway bridge design. Mr. White also assisted in obtaining USACE permits. The project included 2.5 million cubic yards of earthwork, 18 miles of track installation, a 45-acre paved vehicle storage yard, three bridges, and two access roads. (1996)

SCDOT Hydraulic, Hydrologic, and Bridge Scour Services - Project Manager
Oversaw services for more than 70 projects for the South Carolina Department of Transportation (SCDOT) involving stormwater management, NPDES, wetland evaluation, sediment and erosion control and bridge scour studies throughout South Carolina. (1993 - 1996)

NCDOT Highway Storm Drainage Systems - Designer/Senior Engineer/Project and Program Manager
Designed open and enclosed systems, stormwater retention and detention, stream crossings, and erosion control for more than 400 miles of storm drainage systems on roadways ranging from 2-lane private roads to multi-lane interstate highways in North and South Carolina. (1985 - 1996)

SCDOT Highway Storm Drainage Systems - Designer/Senior Engineer/Project and Program Manager
Designed open and enclosed systems, stormwater retention and detention, stream crossings, and erosion control for more than 400 miles of storm drainage systems on roadways ranging from 2-lane private roads to multi-lane interstate highways in North and South Carolina. (1985 - 1996)

City of Charlotte Chipley/Fugate Area Storm Drainage Improvement Planning Study - Project Manager
Provided planning and modeling services for a drainage basin starting at the intersection of Mayview Drive/Monroe Road and ending at Briar Creek in Charlotte, NC. Services included the preparation of a planning report, hydraulic/hydrologic analysis, citizen involvement process, and field surveys. Mr. White utilized city standard watershed models, including HEC-1 and HYDRA. (1995)

CSX over Trenholm Road and O'Neil Court - Senior Engineer
Designed a 183-foot steel deck plate girder railway bridge and a 178-foot steel deck plate girder railway bridge in Columbia, SC. (1992 - 1993)

USACE Military Ocean Terminal - Project Manager/Senior Engineer
Managed the design of the rehabilitation of 3.5 miles of railroad track on concrete wharves at Military Ocean Terminal in Sunny Point, NC. (1992)

Beverly Crest Development Corporation Beverly Crest Dam - Project Manager
Managed the design, plans, specifications, permits, and construction inspection for an earthfill dam and spillways impounding 31 acres in Charlotte, NC. (1992)

City of Greensboro Merritt Drive Improvements - Senior Engineer
Provided railway and structural engineering for a new 180-foot, 5-lane highway bridge in Greensboro, NC. Mr. White was also responsible for a 155-foot, 4-track railroad underpass carrying Norfolk Southern over Merritt Drive, including a 2-track temporary trestle and a railroad at-grade crossing. (1992)

Village of Raintree Earth Dam Spillway Improvements - Project Manager/Senior Engineer
Managed complete investigation and modification of three dams owned by the Village of Raintree in Charlotte, NC, including the enlargement of emergency spillways. Mr. White also supervised the complete dam and spillway replacement of the Homewood Suites Inn to comply with the Dam

Safety Act. He prepared plans and specifications and performed project bidding and construction inspection. Mr. White also coordinated all reviews with the North Carolina State Dam Safety Engineer. (1989 - 1991)

RF&P Railroad Bridge over Braddock Road - Senior Engineer
Responsible for the design and plan preparation of the Richmond, Fredericksburg, and Potomac railroad bridge over Braddock Road in Alexandria, VA. The project included urban widening, a 4-track railroad bridge, and all staged construction to maintain rail traffic. (1991)

Mecklenburg County Westside Basins Stormwater Management Master Plan - Senior Engineer
Supervised field data collection for the Westside Basins stormwater management master plan in Mecklenburg County, NC. (1991)

NCDOT Bridge Waterway Studies - Senior Engineer
Conducted channel hydraulics studies for bridge replacements on the Toe River, New River, Watauga River, and Yadkin River in western North Carolina, as well as the Caney Fork Creek, Wayehutta Creek, and Sardis Branch. (1985 - 1990)

Goulston Company Bearskin Creek Flood Study - Senior Engineer
Revised the floodplain and floodway for 1.3 miles of the improved Bearskin Creek channel in Monroe, NC, including the submission of the Letter of Map Revision to FEMA. (1989)

Zaremba Centerpoint Inc. Campbell Creek Channel Relocation - Senior Engineer
Designed the channel relocation for approximately 1,000 feet of Campbell Creek to permit property development and for all FEMA Floodway revisions and environmental permitting for the Independence Square East Shopping Center in Charlotte, NC. Mr. White also handled special channel design to accommodate stream biological requirements and hydraulic analysis. (1989)

NCDOT I-95 Bridge Widenings - Project Manager/Senior Engineer
Provided field survey and design for the raising, widening, and rehabilitation of eight bridges on or over I-95 in Harnett and Johnston Counties, NC. (1988)

Seaboard Coast Line Railroad Bridge over Decker Boulevard - Senior Engineer
Designed a railroad overpass in Cayce, SC, for the Seaboard Coast Line Railroad. (1988)

NCDOT US 258 over Meherrin River - Senior Engineer
Responsible for bridge hydraulics, wetlands mitigation, Coastal Area Management Act (CAMA) permit drawings, and roadway drainage for the bridge replacement and roadway approaches in Murfreesboro, NC. (1988)

SCDOT I-26 Bridge Widenings - Senior Engineer

Designed the widening of dual bridges at four locations on I-26 over railways and roadways in Dorchester and Lexington Counties, SC. (1987)

Norfolk Southern over Charlotte Outer Loop - Project Manager
Responsible for the design and construction engineering of a 2-track, 449-foot-long welded steel girder structure, including a detour track in Charlotte, NC. (1986)

NAVFAC Cherry Point Air Station Storm Drainage System - Senior Engineer
Designed storm drainage system rehabilitation for the Marine Corps Air Station in Cherry Point, NC. (1986)

NCDOT Storm Drainage Systems - Senior Engineer
Designed storm drainage systems for the Harris Boulevard Extension, the 5.5-mile-long Tyvola Road Extension from I-77 to Billy Graham Parkway, Rama Road Widening, and Kannapolis Loop in Charlotte, NC. (1982 - 1986)

USACE Storm Drainage System - Senior Engineer
Designed a storm drainage system for a $40.5 million project at an East Coast military base at a classified location. (1984)

NCDOT I-40 Bridge Design - Senior Engineer
Provided design for highway bridges on I-40 between Warsaw and Burgaw, NC. (1984)

Southern Railway Bridge over I-277 - Senior Engineer
Designed a 4-span steel deck plate girder structure in downtown Charlotte, NC. (1983)

Southern Railway Bridge over I-277 - Senior Engineer
Responsible for the design of a 4-span steel deck plate girder structure in downtown Charlotte, NC. (1983)

City of Columbia Railroad Relocation Project - Hydraulic and Structure Design Engineer
Provided hydraulic and structural design for large culverts for the Columbia, SC, railroad relocation. The project included a lowered rail corridor through downtown Columbia and interrupted every major drainage system between the downtown area and the Congaree River. (1982 - 1983)

NCDOT Interstate Highway Bridge Widening - Senior Engineer
Conducted the field survey and design for raising, widening, and rehabilitating bridges on or over I-95 and I-26 at 12 locations in various counties in North and South Carolina. (1982 - 1983)

Boy Scouts of America Earth Dam Improvements - Design Engineer
Responsible for the enlargement of a vegetation lined emergency spillway and additional embankment height for a dam and lake on Hoppers Creek as

required by the Dam Safety Act at this Boy Scouts of America Camp in McDowell County, NC. (1982)

ET&WNC Railroad Bridge - Design Engineer
Designed the East Tennessee and Western North Carolina Railroad (ET&WNC) open deck thru-girder railroad bridge over State Route 67 in Johnson City, TN. (1982)

Cone Mills Buffalo Lake Dam Spillway Enlargement - Senior Engineer
Prepared hydraulic calculations, plans, and specifications for a reinforced concrete emergency spillway to comply with the Dam Safety Act in Greensboro, NC. (1981)

Southern Railway Bridge over Brookwood Interchange - Design Engineer
Responsible for the design of trapezoidal steel deck plate girder spans to carry an industrial lead track with turnouts on the Southern Railway Bridge over the Brookwood Interchange in Atlanta, GA. (1979)

NCDOT I-85 over Catawba River - Design Engineer
Designed a 1,074-foot, 9-lane highway bridge on I-85 over the Catawba River in Mecklenburg County, NC, which required construction staging to maintain the four lanes of interstate traffic. (1979)

IBM Plant Site Development - Design Engineer
Designed storm drainage for the Charlotte, NC, IBM plant parking facilities. Mr. White also designed a small pond and earth dam for the site landscaping plan. (1978 - 1979)

Publications

Amendments to Chapter 15 (Steel Structures), AREMA *Manual for Railway Engineering*.

Presentations/Teaching

Facilitator, Norfolk Southern/CSX Railway Roadway Worker Safety Training.
Presenting approved training classes to railroad contractors in accordance with FRA requirements as detailed in 49CFR Part 214 for roadway worker safety. (1/06 - Present)

Presentation on Railroad Bridge Engineering, R.E. Lee Engineering Magnet High School, Jacksonville, FL. (10/06)

Railroad Bridge Rating Class, RWA University. (8/06)

GEORGE T. ZIMMERMAN

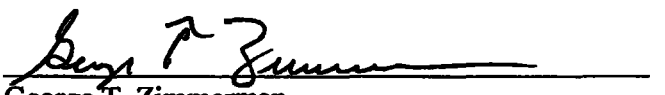
Mr. Zimmerman is a Project Manager/Senior Engineer with STV/RWA, a professional firm offering engineering, architectural, planning, environmental and construction management services. Mr. Zimmerman is a project manager and railway engineer with nearly 30 years of experience on roadway and bridge projects and particular expertise in freight planning, design, and construction management. Mr. Zimmerman is sponsoring portions of Section III.F of CSXT's Reply Evidence relating to track construction. Mr. Zimmerman has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

Mr. Zimmerman's resident engineering and inspection experience includes grade crossings and roadway, railway, and highway bridges. Mr. Zimmerman manages STV's relationship with Norfolk Southern, working with the railroad on a daily basis and assisting in the preparation of proposals and contracts. In addition, Mr. Zimmerman provides structural design and plan reviews for railway and bridge projects. Mr. Zimmerman holds a Bachelor of Science, Civil Engineering from West Virginia University.

Mr. Zimmerman's resume with additional project experience is attached hereto.

VERIFICATION

I, George T. Zimmerman, verify under penalty of perjury that I have read the portions of the Reply Evidence of CSX Transportation, Inc. that I have sponsored (as described in the foregoing Statement of Qualifications), that I know the contents thereof, and that the evidence I have sponsored is true and correct. Further, I certify that I am qualified and authorized to file this statement.



George T. Zimmerman

George T. Zimmerman, P.E.

Project Manager/Senior Engineer

Mr. Zimmerman is a project manager and railway engineer with nearly 30 years of experience on roadway and bridge projects and particular expertise in freight planning, design, and construction management. His resident engineering and inspection experience includes grade crossings and roadway, railway, and highway bridges. Mr. Zimmerman manages STV's relationship with Norfolk Southern, working with the railroad on a daily basis and assisting in the preparation of proposals and contracts. In addition, Mr. Zimmerman provides structural design and plan reviews for railway and bridge projects.

Employee No.
91137

Department No.
53

Office Location
Duluth, GA

Date joined firm
5/16/79

Years with other firms
0

Education
Bachelor of Science, Civil Engineering; West Virginia University (1979)

Professional Registration
Professional Engineer: Georgia (#019811/exp. 12/31/10), Kansas (#17069/exp. 4/30/09), Missouri (#2003000042/exp. 12/31/09), Ohio (#65833/exp. 12/31/09), and South Carolina (#12625/exp. 6/30/10)

Memberships
American Railway Engineering and Maintenance of Way Association (AREMA); Roadway and Ballast Committee Member

American Society of Civil Engineers

Project Experience

Rochester & Southern Railroad Silver Springs Connection Track - Project Manager
Reviewing design for rail design on the Rochester & Southern Railroad in Silver Springs, NY. The connecting track will allow unit coal train movement from Norfolk Southern Railroad to the Rochester & Southern Railroad. Mr. Zimmerman is also coordinating with Norfolk Southern. (2007 - Present)

Vulcan Materials Company Skippers Quarry Loop Track - Project Manager
Providing project administration and coordinating staff in multiple offices for the preliminary and final design of a 0.75-mile loop track, including a 100-foot-long open deck railroad trestle, for Vulcan Materials Company at Skippers Quarry in Skippers, VA. The track will be used for loading unit rail trains with railroad ballast and other crushed aggregate materials. (1/07 - Present)

Norfolk Southern Heartland Corridor Clearance Improvements - Project Manager
Coordinating various teams working on portions of the Heartland Corridor Clearance Project, a public-private clearance improvement initiative funded by the Federal Highway Administration (FHWA), local state governments (Ohio, Kentucky, West Virginia, and Virginia), and the Norfolk Southern Corporation. The 530-mile-long corridor, which runs from Columbus, OH, to Norfolk, VA, currently contains 37 tunnels and 31 bridges with clearance limitations for today's larger freight rail movements. This project will remove those clearance restrictions by raising tunnel roofs and lowering tunnel floors, which will provide a new, quicker route for freight rail traffic between the Atlantic coast and the heartland of the United States. Mr. Zimmerman is overseeing staff for the raising of a bridge at Harding Street in Bluefield, WV; stormwater and erosion control plans at various tunnel sites; and numerous bridge lowering and slide fence clearance tasks. (1/07 - Present)

Norfolk Southern On-Call Services Contract - Project Manager
Managing plan review and CE&I services on an on-call, as-needed basis for more than 750 proposed roadway, bridge, and retaining wall construction projects affecting railway facilities throughout the 22-state Norfolk Southern system. Mr. Zimmerman has been overseeing construction on overhead bridges, underpasses, floodwalls, utility crossings, parallel construction of utilities, roadways, bikeways, and grade crossings since 1992. (1992 - Present)

Norfolk Southern Jeffersonville Road Widening - Project Manager
Managing the preliminary layout and design of a 4-span, 93.5-meter-long steel deck plate girder railroad bridge in Macon in Bibb County, GA. The single-track bridge will carry Norfolk Southern over Jefferson Road, which was widened from two to five lanes. The project includes track realignment to allow off-line construction. (2002 - 2007)

GDOT Railroad Bridges over Butler Street and Piedmont Avenue - Senior Engineer
Provided bridge design for the widening of two CSX railroad bridges over Butler Street and Piedmont Avenue in Fulton County, GA, and two retaining walls. (2002 - 2006)

STB Railroad Coal Rate Case Litigation Cost Assessments - Project Manager
Responsible for determining values for track work items and construction staging of the work plan for this project, which included assembling the planning, engineering, and construction costs to build a hypothetical contemporary operating railroad in Charlotte, NC, as part of a cost assessment for a several coal rate cases. Cost assessments included major earthwork, bridge and culvert construction, track, communications and signalization, engineering design, construction management, material costs and logistics, mobilization, and contingencies. Cases included Norfolk Southern (NS) vs. Duke Energy, NS vs. CP&L, CSX vs. Duke Energy, AEC vs. BNSF & UP, Otter Tail vs. BNSF, AEP Texas North vs. BNSF. (2000)

GDOT S.R. 3 Connector - Senior Engineer
Designed a replacement bridge and adjoining roadway over I-75 on the SR 3 Connector in Whitfield County, GA. The 8-lane bridge replaced a 2-lane structure of insufficient capacity. Work included horizontal and vertical design, construction plans, right-of-way plans, and construction staging plans, as well as pavement marking and signing plans. All design work was done in metric. (1995)

CSX Double-Track Program - Project Manager
Designed seven miles of track parallel to the CSX main line in Marietta, GA. The project included a study of several grade crossing eliminations and retaining wall structures. (1995)

Norfolk Southern Automobile Mixing Facility - Project Manager

Provided preliminary and final hydraulic/hydrologic, railway, roadway, highway, and railway bridge design for this Ford automobile mixing facility in Shelbyville, KY. The project included 2.5 million cubic yards of earthwork, 18 miles of track installation, a 45-acre paved vehicle storage yard, three bridges, and two access roads. (8/96 - 12/97)

Norfolk Southern Third Mainline Track - Project Manager
Managed engineering services for the design and construction of a 2.9-mile third main track from adjacent to CSX's Queensgate rail yard to Mitchell Avenue in Cincinnati, OH. Mr. Zimmerman provided project management as well as the design of all earthwork, track work, and retaining structures for Norfolk Southern. (6/94 - 7/95)

USCOE Omaha District Wharf Track Military Ocean Terminal - Senior Engineer
Provided engineering services for track material research for the rehabilitation of 3.5 miles of railroad track on concrete wharfs in Sunny Point, NC. (1994)

CSX Ronald Reagan Parkway - Project Manager/Resident Engineer
Managed the construction engineering inspection of the CSX bridge over Ronald Reagan Parkway near Lawrenceville in Gwinnett County, GA. (2/92 - 12/93)

Norfolk Southern I-64 over Norfolk Southern - Resident Engineer
Observed construction field activities and represented the Norfolk Southern Railroad for two bridges over the railway, one at milepost 4.43 VB, and one at milepost 5.04 NS in Norfolk, VA. (1/90 - 2/92)

City of Virginia Beach Pungo Ferry Bridge - Resident Engineer
Provided construction management and inspection services, and represented the City of Virginia Beach for the construction of the replacement of the obsolete swing span with a 3,400-foot highway bridge over the Intracoastal Waterway in Virginia Beach, VA. The project included roadway approaches and the placement of a geosynthetic stabilized embankment over adjacent wetlands. (1989 1992)

Norfolk Southern over Harris Boulevard - Resident Engineer
Provided construction management for a double-track Norfolk Southern underpass built using a temporary detour alignment in Newell, NC. (7/88 - 6/89)

City of Charlotte Tyvola Road Extension - Resident Structural Inspector
Inspected this 3.6-mile, 5-lane roadway extension in Charlotte, NC, including a new interchange with a 7-lane bridge over Billy Graham Parkway, eight reinforced concrete box culverts, and a 6-lane bridge over Sugar Creek. (6/87 - 6/89)

Piper Glen Development Corporation Rea Road Extension - Engineer

Provided construction coordination and management for 1.65-mile roadway extension to serve as the main thoroughfare for Piper Glen Development in Mecklenburg County, NC. The $2.5 million roadway and highway bridge project were built to be taken into the NCDOT system and connected to the Charlotte Outer Beltway. (6/87 - 6/89)

Private Developer Silas Creek Crossing Shopping Center - Resident Inspector
Provided construction observation for a 200,000-sf retail shopping center, highway bridge, and concrete box culvert in Winston Salem, NC. (7/88 - 3/89)

CSX Railroad over Monroe Road - Resident Engineer
Provided construction management and coordination with the railroad for this thru-girder single-track railroad structure in Charlotte, NC. The project included a temporary detour trestle, track realignment, staged construction, and coordination with the highway portion of the project. The underpass is located in what was one of the emerging growth corridors of the Charlotte area. (6/87 - 12/88)

CSX Railroad Relocation, Consolidation, and Grade Crossing Elimination - Contract "A" Resident Engineer, Contract "B" Assistant Resident Engineer
Supervised the $16.7 million construction of a railway roadbed, including 7,600 linear feet of grading, in Columbia, SC. The project included drainage, dewatering, utilities, and retaining walls. (4/83 - 4/87)

Graham County Development Corporation Graham County Railroad - Resident Engineer
Provided construction management and testing services for the $1.65 million rehabilitation of 12.65 miles of track and 13 small railroad bridges, including drainage improvements and 1.25 miles of track relayed with heavier rails on a steep mountainous grade, for this railroad between the re-established connection to the Southern Railway at Totpon, NC, to the Bemis Lumber Company yard in Robbinsville, NC. (1/81 - 4/83)

Statesville Redevelopment Authority Newtonville Subdivision - Resident Engineer
Provided construction management, inspection, and field testing services for the redevelopment of the $500,000 Newtonville Subdivision for the City of Statesville, NC. This project included the total removal of all existing facilities and the construction of all new infrastructure including excavation, drainage, utility installation, and street construction. (11/79 - 7/80)

IBM Research and Manufacturing Facility University Research Park - Engineer
Provided staging and design, earthwork, and site plan staging for balancing of cuts and fills for recreational facilities during construction of the building site and railway in Charlotte, NC. (5/79 - 11/79)

Teaching Experience

Instructor, Introduction to Construction Inspection, Module 13: General Structural Steel Inspection; North Carolina American Public Works Association (APWA) (1999 - Present)

Instructor, STV/RWA Railroad Inspector's Workshops on various subjects including Safety, Project Management, and Project Reporting (1995 - 2006)