

PUBLIC VERSION

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

STB Docket No. 42071

**OTTER TAIL POWER COMPANY
v.
BNSF RAILWAY COMPANY**

Supplemental Evidence of BNSF Railway Company

NARRATIVE & EXHIBITS

Volume I of I

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ABBREVIATIONS

Terms:

AVP	Assistant Vice President
BNSF	BNSF Railway Company
CTC	Centralized Traffic Control
DARA	Density Adjusted Revenue Allocation
DCF	Discounted Cash Flow
EIA	Energy Information Administration
FED	Failed Equipment Detector
FTI	FTI Consulting, Inc.
G&A	General and Administrative
HR	Human Resources
L&D	Loss & Damage
LMR	Land Mobile Radio
LUM	Locomotive Unit-Mile
MGT	Million Gross Tons
MMP	Modified Mileage Prorate
MOW	Maintenance of Way
MRL	Montana Rail Link
MSP	Modified Straight-Mileage Prorate
NS	Norfolk Southern Railway Co.
OTM	Other Track Materials
OTP	Otter Tail Power Company
OTRR	Otter Tail Railroad
PRB	Powder River Basin
RRVW	Red River Valley and Western Railroad
RCAF	Rail Cost Adjustment Factor
RCAF-A	Rail Cost Adjustment Factor, adjusted for changes in productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for changes in productivity
RTC	Rail Traffic Controller
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
STB	Surface Transportation Board
T&E	Train and Engine Crew
TMPA	Texas Municipal Power Agency
UP	Union Pacific Railway Company
URCS	Uniform Railroad Costing System

CASE NAMES

<i>AEPCO</i>	<i>Arizona Electric Power Cooperative, Inc. v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42058 (STB served August 20, 2002)</i>
<i>Coal Rate Guidelines</i>	<i>Coal Rate Guidelines, Nationwide, 1 I.C.C.2d 520 (1985)</i>
<i>CP&L or CP&L/NS</i>	<i>Carolina Power and Light Company v. Norfolk Southern Railway Company, STB Docket No. 42072 (STB served December 23, 2003)</i>
<i>Duke v. CSX or Duke/CSX</i>	<i>Duke Energy Corporation v CSX Transportation, Inc., STB Docket No. 42070 (STB served February 4, 2004)</i>
<i>Duke v. NS or Duke/NS</i>	<i>Duke Energy Corporation v. Norfolk Southern Railway Company, STB Docket No. 42069 (STB served on November 6, 2003)</i>
<i>General Procedures</i>	<i>General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases, STB Ex Parte No. 347 (SuIII.B-No.3) (served March 12, 2001)</i>
<i>Nevada Power II</i>	<i>Bituminous Coal-Hiawatha Utah, to Moapa, Nevada, 10 I.C.C.2d 253 (1994)</i>
<i>OPPD</i>	<i>Omaha Public Power Dist. v. The Burlington Northern Railway, 3I.C.C.2d 853 (1987)</i>
<i>PPL I</i>	<i>PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42054 (STB served August 19, 2002)</i>
<i>PPL II</i>	<i>PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42054 (STB served March 24, 2003)</i>
<i>PPL III</i>	<i>PPL Montana, LLC . The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42054 (STB served August 31, 2004)</i>
<i>TMPA</i>	<i>Texas Municipal Power Agency v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42056 (served March 24, 2003)</i>
<i>Xcel</i>	<i>Public Service Company of Colorado D/B/A Xcel Energy v. The Burlington Northern and Santa Fe Railway Company, STB Docket No. 42057 (STB served June 8, 2004) and (STB served January 19, 2005)</i>

I: Counsel's Argument and
Summary of Evidence

I. COUNSEL'S ARGUMENT AND SUMMARY OF EVIDENCE

This is the Supplemental Evidence of defendant BNSF Railway Company,¹ filed pursuant to the Board's December 13, 2004 order in this proceeding, as modified on January 19, 2005 and February 18, 2005. The format of this Supplemental Evidence complies with the Board's March 12, 2001 decision in STB Ex Parte No. 347 (Sub-No. 3), *General Procedures for Presenting Evidence in Stand-Alone Rate Cases*.

The Board instructed BNSF to limit its Supplemental Evidence to two issues. First, the Board instructed BNSF to present modified SAC calculations based on an operating plan for the SARR that includes certain coal traffic originating at southern PRB coal mines that BNSF had excluded from the SARR traffic group for purposes of its March 22, 2004 Supplemental Reply Evidence. Second, the Board instructed both parties to address how the Board can "assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3. BNSF has complied with the Board's instructions, as discussed below.²

A. REVISED SAC CALCULATIONS

The Board noted in its December 13, 2004 order that there were significant differences in the traffic group assumptions posited by Otter Tail in its January 9, 2004 Opening Supplemental Evidence and by BNSF in its March 22, 2004 Supplemental Reply Evidence: "Otter Tail's evidence includes, while BNSF's excludes, 13.7 million tons of rerouted non-coal traffic on the northern portion of the SARR and 85 million tons of coal traffic traveling south from southern

¹ BNSF has changed its name from The Burlington Northern and Santa Fe Railway Company to BNSF Railway Company.

² While BNSF has complied with the Board's order to submit supplemental evidence, it is BNSF's position that this proceeding has been automatically dismissed by operation of law pursuant to 49 U.S.C. § 11701(c), since it has been pending for more than three years.

PRB mines.” December 13, 2004 Decision at 1. According to the Board, these substantial differences in traffic group assumptions made it difficult for the Board to evaluate the SAC evidence in this case: “If we should determine that we do not agree with the entire position of either party, we may be left without the evidence needed to complete our SAC analysis.” *Id.* at 1-2.

The Board therefore instructed BNSF to present a revised set of SAC calculations based on a traffic group for the PRB portion of the SARR similar to that posited by Otter Tail in its Opening Supplemental Evidence -- *i.e.*, a traffic group that included about 85 million tons of coal (in the base year of OTRR operations) that BNSF had not included in its March 22, 2004 Supplemental Reply Evidence. Specifically, the Board ordered BNSF “to file supplemental evidence showing the effect if the disputed southbound coal traffic originating south of Cordero were included in the traffic group.” December 13, 2004 Order at 3. All of this traffic originates at PRB mines from Cordero to Antelope and moves south on the OTRR to a fictional interchange with the residual BNSF at Converse Junction. The Board ordered Otter Tail similarly to present a revised set of SAC calculations based on a traffic group that excluded rerouted non-coal traffic from the OTRR’s northern lines, consistent with BNSF’s traffic group assumptions in its Supplemental Reply Evidence. *Id.* at 2. The Board ordered the parties not to address other issues, such as the proper allocation of revenues on cross-over traffic or unit cost calculations. *Id.* at 3.

While BNSF does not believe that the inclusion of the approximately 85 million tons of southbound coal is appropriate, for reasons explained in Section III.A.1 of BNSF’s March 22, 2004 Supplemental Reply Narrative, BNSF has made the required change in its traffic group for purposes of this Supplemental Evidence in compliance with the Board’s December 13, 2004

order. In addition, BNSF has modified the SARR operating plan and the SARR capacity assumptions to reflect the impact of including the previously excluded southbound coal traffic, as the Board instructed in its December 13, 2004 and February 18, 2005 decisions. BNSF shows in this Supplemental Evidence that even when the OTRR traffic group is expanded to include the southbound PRB traffic that BNSF previously excluded from the SAC analysis, SAC costs exceed SAC revenues and Otter Tail's rate reasonableness claim must be dismissed.

The methodology and assumptions used by BNSF to produce this Supplemental Evidence are described in detail in the sections of this Narrative that follow.³ BNSF's approach is straightforward and a detailed summary is not necessary. First, BNSF added to the OTRR shipper group the base year coal movements originating at mines from Cordero south and exiting the OTRR at Converse that BNSF had excluded from its Supplemental Reply Evidence. BNSF projected volume growth for the modified traffic group using the same assumptions used in prior filings. BNSF calculated revenues for the modified SARR traffic group using the same two approaches to the allocation of revenue on cross-over traffic that BNSF used in its Supplemental Reply Evidence -- the density-adjusted-revenue-allocation procedure ("DARA") and the Board's MSP methodology using modified origin/termination credits. BNSF projected revenues using the same methodologies and assumptions used in the Supplemental Reply Evidence. Since the parties agreed that the most current forecast of the RCAF index should be used, BNSF updated its revenue calculations using a December 2004 DRI-WEFA RCAF forecast. BNSF also updated the revenue calculations for the issue traffic by substituting actual revenues on historical movements for projected revenues used in prior filings.

³ For the convenience of the Board, BNSF has reproduced and is filing with this Supplemental Evidence all of the electronic workpapers used to make the SAC calculations, whether or not the workpaper has been changed in this Supplemental Evidence.

BNSF revised its capacity assessment for the OTRR using the same Rail Traffic Controller (“RTC”) model that BNSF used in its Supplemental Reply Evidence. As BNSF has previously explained, BNSF modeled two segments of the OTRR with the RTC model to assess the OTRR’s capacity requirements: the OTRR’s PRB lines and the OTRR’s northern segment. For the Glendive-Gillette and Fargo-Big Stone segments of the OTRR, BNSF accepted Otter Tail’s capacity assumptions. In this Supplemental Evidence, BNSF followed the same approach. Since the traffic added to the OTRR traffic group for purposes of this Supplemental Evidence used only the OTRR’s PRB lines, BNSF did not have to modify its capacity assumptions for any part of the OTRR other than the PRB lines. BNSF’s revised RTC analysis shows that an additional 54.33 miles of mainline track, mine spurs and yard track are required on the OTRR’s PRB lines.

BNSF also revised its operating plan for the OTRR. The only lines of the OTRR affected by the inclusion of the previously excluded southbound PRB coal traffic were the PRB lines. Therefore, BNSF’s witness Mr. Wheeler used the revised RTC simulation of the PRB lines discussed above to generate new transit times for OTRR trains on the PRB lines. The revised transit times did not change significantly from those used in BNSF’s Supplemental Reply Evidence. BNSF used the same transit times for other portions of the OTRR as it used in the Supplemental Reply Evidence, since those lines were not affected by the traffic group changes. The revised transit times for OTRR trains were then used by BNSF’s witness Mr. Plum to calculate revised locomotive and car requirements for the OTRR. Mr. Plum used the same methodology that BNSF used in its Supplemental Reply Evidence to identify the OTRR’s revised equipment requirements. Similarly, BNSF used the same methodologies described in BNSF’s Supplemental Reply Evidence to establish equipment ownership and operating costs,

including fuel costs, and to establish operating and non-operating personnel requirements and costs. The OTRR's G&A costs were revised slightly to account for the higher traffic volumes on the OTRR's PRB lines. BNSF also modified the OTRR's MOW costs to account for the higher traffic densities on the southern PRB portion of the OTRR and for the additional facilities required to handle the additional traffic. Loss and Damage, Insurance and Ad Valorem Taxes were modified to reflect the increased traffic volumes.

BNSF's construction cost witnesses also restated the road property investment costs to reflect the changes in capacity requirements for the OTRR. Using the same methodologies and unit costs described in BNSF's Reply and Supplemental Reply Evidence, BNSF modified the construction costs set out in BNSF's Supplemental Reply Evidence to account for the additional yard and mainline track capacity and for the additional facilities needed to serve the expanded traffic group. As a result of these changes, road property investment costs increased by \$121,927,000.

The results of BNSF's revised SAC calculations are set out below in Table I.1. Even with the traffic group changes that have been made for purposes of this Supplemental Evidence, it is clear that Otter Tail's complaint must be dismissed.

Table I.1
Summary Of Stand-Alone Cost Results
(All Figures In Millions Of Dollars)

Year	Annual Revenue	Stand-Alone Cost	Difference
2002	\$474.90	\$742.30	(\$267.50)
2003	\$472.00	\$734.70	(\$262.60)
2004	\$480.00	\$758.40	(\$278.40)
2005	\$485.60	\$796.00	(\$310.40)
2006	\$496.70	\$820.90	(\$324.20)
2007	\$489.30	\$841.50	(\$352.20)
2008	\$504.40	\$865.60	(\$361.10)
2009	\$518.80	\$890.80	(\$372.00)
2010	\$535.90	\$919.00	(\$383.20)
2011	\$547.90	\$945.80	(\$397.90)
2012	\$553.00	\$972.40	(\$419.40)
2013	\$561.40	\$999.30	(\$437.90)
2014	\$565.90	\$1,027.50	(\$461.60)
2015	\$575.60	\$1,056.60	(\$481.00)
2016	\$585.80	\$1,086.80	(\$501.00)
2017	\$596.20	\$1,118.00	(\$521.80)
2018	\$606.40	\$1,149.80	(\$543.40)
2019	\$616.90	\$1,182.60	(\$565.80)
2020	\$627.60	\$1,216.40	(\$588.80)
2021	\$637.00	\$1,250.80	(\$613.80)

B. CROSS-SUBSIDY ISSUE

In its Supplemental Reply Evidence, BNSF urged the Board to exclude the southbound PRB coal that is the focus of this Supplemental Evidence on grounds that Otter Tail sought to include that traffic to provide a cross-subsidy for other traffic, including the issue traffic, that used a distinct set of SARR facilities. The Board in its December 13, 2004 decision acknowledged BNSF’s concern over the possibility of a cross-subsidy, but it stated that “even if disputed traffic would pay for facilities it does not use, it is unclear that the correct remedy would be to exclude the traffic entirely.” December 13, 2004 Decision at 2. While the Board instructed BNSF to submit supplemental evidence showing the effect on its SAC calculations of

including the southbound PRB traffic, it also instructed both parties “to address how we might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy.” *Id.* at 3.

BNSF explains in Section III.A.8 of the Narrative below that the Board can use the cross-subsidy test developed in *PPL* to ensure that “any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy.”⁴ In fact, when the previously excluded southbound PRB traffic is added to the OTRR traffic group, the SARR posited by Otter Tail bears a close resemblance to the SARR posited by PPL. In both cases, the SARR consists of two parts with different characteristics: (1) a short, relatively dense, north-south segment that is dominated by short-haul movements of coal from mine origins to interchanges with the residual incumbent, and (2) a much larger, lower-density, east-west segment that is dominated by long-haul movements and which includes virtually all of the issue traffic route of movement. Indeed, Otter Tail’s SARR replicated the same BNSF lines at issue in *PPL*, namely BNSF’s PRB lines from Converse in the south to Eagle Butte and Buckskin in the north, and from Donkey Creek in the east to Jones Jct., Montana, in the west. Otter Tail merely extended those east-west lines to Glendive and then to Fargo and Big Stone.

Application of the *PPL* cross-subsidy test is straightforward. The objective of the *PPL* test is to determine whether the revenues from traffic using the SARR’s east-west lines cover the collective attributable costs of those lines. If the Board finds that the collective attributable costs exceed the revenues generated by the traffic that uses the east-west lines, then the Board should dismiss Otter Tail’s rate reasonableness claims on grounds that Otter Tail’s SAC evidence

⁴ The Board’s cross-subsidy test is addressed in three decisions in the *PPL* case. See *PPL Montana, LLC v. The Burlington Northern and Santa Fe Railway Company*, STB Docket No. 42054 (served August 20, 2002) (“*PPL I*”), (served March 24, 2003) (“*PPL II*”), and (served August 31, 2004) (“*PPL III*”).

includes an impermissible cross-subsidy from the north-south traffic. BNSF demonstrates in Section III.A.8 below that, based on BNSF's cost and revenue calculations, Otter Tail has impermissibly relied on a subsidy from short-haul traffic using only the north-south portion of the OTRR to subsidize the movement of the longer-haul traffic using the east-west portion of the OTRR.⁵

Alternatively, if the Board finds that the challenged rates exceed a reasonable maximum rate, the Board should apply the *PPL* test at the rate prescription stage to ensure that "any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3. The logic of the *PPL* test applies with equal validity when the Board is assessing the reasonableness of the challenged rate and when the Board is setting a prescribed rate. In both cases, the question is whether the SARR would enter a contestable market to handle the east-west traffic given the revenues that would be available to it from the east-west traffic. BNSF demonstrates in Section III.A.8.d of the Narrative below how the *PPL* test should be applied at the rate prescription stage, if the Board were to find that the challenged rates exceed a reasonable maximum rate.

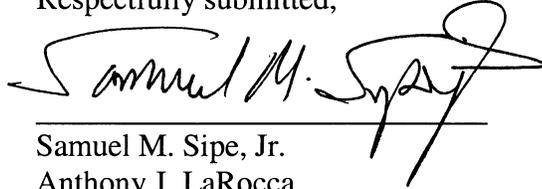
C. CONCLUSION

As demonstrated below in the Narrative of this Supplemental Evidence, even when the OTRR's traffic group is expanded to include the southbound PRB traffic that BNSF previously

⁵ The results of BNSF's cross-subsidy analysis are set out in Supplemental Evidence Exhibit III.A-4. BNSF has provided linked electronic workpapers that will allow the Board easily to carry out the cross-subsidy analysis after the Board resolves the parties' disputes over the cost and revenue calculations.

excluded, SAC costs exceed SAC revenues. Therefore, the Board should dismiss Otter Tail's complaint.

Respectfully submitted,



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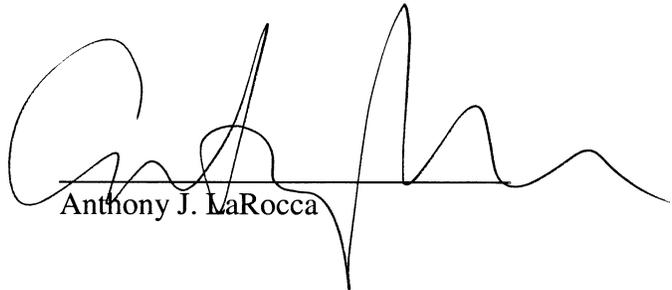
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March 1, 2005

CERTIFICATE OF SERVICE

I hereby certify that on March 1, 2005, I caused six copies of the foregoing Supplemental Evidence of BNSF Railway Company, f/k/a The Burlington Northern And Santa Fe Railway Company to be served by hand upon the following counsel for Otter Tail Power Company.

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III.A: Traffic Group

III. STAND-ALONE COST

A. TRAFFIC GROUP

1. Stand-Alone Railroad Traffic -- Introduction

The parties' traffic group assumptions have changed significantly over the course of this proceeding. Before addressing the specific traffic group assumptions that are the subject of the Board's December 13, 2004 order, BNSF provides in Section III.A.1 below a summary of the assumptions that have been made in the evidentiary filings to date. Sections III.A.2 and 3 describe the modified traffic group that BNSF has used in this Supplemental Evidence as the basis for its revised SAC calculations. Sections III.A.4 to 7 describe the revenues associated with this modified traffic group. Section III.A.8 addresses the Board's instruction that the parties "address how [the Board] might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3.

a. Otter Tail's Opening Traffic Assumptions

Otter Tail's original traffic group assumptions were included in its June 13, 2003 opening SAC presentation. Otter Tail's original SARR, the OTRR, was a multi-commodity railroad that handled coal and non-coal traffic.¹ In the base year of operations -- 2002 -- Otter Tail's opening SARR was assumed to handle 180 million tons of coal traffic and 25 million tons of non-coal traffic.² Virtually all of the traffic was handled as cross-over traffic. Of the entire OTRR traffic group, only one movement, the movement to complainant's Big Stone plant, was served from origin to destination by the OTRR.

¹ Otter Tail submitted an extensive errata on July 14, 2003. That errata modified substantially the capacity and operating plan for the SARR, but it did not modify Otter Tail's traffic group assumptions.

² OTP Opening Exh. III-A-5 at 1, column 5, rows 101 and 107 respectively.

Most of the coal traffic handled by the original OTRR moved only on the short north-south segment of the OTRR in the PRB from mine origins to an interchange point with the residual BNSF at Donkey Creek, Wyoming, in the north or Converse, Wyoming, in the south. This coal traffic group consisted of most, but not all, of the coal traffic that BNSF originates in the PRB. Otter Tail purported to exclude from its opening traffic group PRB coal traffic originated by BNSF in the real world that would not travel at least 1.1 percent of the through movement on the OTRR. OTP Opening Nar. at III-A-19, note 24. Otter Tail claimed that this exclusion of coal traffic was necessary because it would not be appropriate for Otter Tail to apply its market-based revenue divisions methodology to such short-haul traffic.

The vast majority of the original OTRR's non-coal traffic was intermodal and automotive traffic that was assumed to travel on the OTRR's northern line through Glendive, Montana. Most of this traffic consisted of movements that BNSF routes in the real world between Snowden, Montana, and Fargo, North Dakota, through Minot, North Dakota. Otter Tail assumed that the OTRR would reroute this traffic over the OTRR's longer Glendive line.

b. BNSF's Reply Traffic Assumptions

In its October 8, 2003 Reply Evidence, BNSF challenged Otter Tail's opening traffic group in four areas and presented SAC evidence based on a revised traffic group. First, BNSF excluded about 54 million tons of coal traffic (in the base year) that originated at mines from Cordero south to Converse and moved south to exit the SARR at Converse. *See* BNSF Reply Nar. at III.A-24. BNSF explained that this traffic should not be included in the OTRR traffic group because it shares no facilities with the issue traffic. Separately, BNSF noted that movements to OPPD, included in this 54 million tons of southbound traffic, should not be included after 2003 because BNSF has lost the OPPD traffic. *Id.* at note 26.

Second, BNSF noted that Otter Tail had failed consistently to apply its own 1.1 percent test for the exclusion of short-haul coal traffic. BNSF noted that Otter Tail had included in its traffic group about 14 million tons (in the base year) of coal that did not travel at least 1.1 percent of the through movement on the OTRR. Most of this coal exited the OTRR at Donkey Creek. BNSF excluded this traffic from its reply traffic group to conform to Otter Tail's own traffic selection criteria. *See Id.* at III.A-32.

Third, BNSF excluded coal traffic moving to Xcel's Riverside and Highbridge plants beginning in 2007 because Xcel plans to convert these plants from coal to gas in mid-2006. *See Id.* at III.A-34. In the Board's June 8, 2004 Decision in the *Xcel* case, the Board concluded that "Xcel's representations to the MPUC leave little doubt as to its intent to convert these plants" to gas. *Xcel*, STB Docket No. 42057, slip op. at 54 (served June 8, 2004). BNSF also modified the tonnage growth assumptions for coal movements to Superior Dock to account for the capacity limitations at the Superior Dock and to reflect BNSF's share of this traffic. BNSF Reply Nar. at III.A-39.

Fourth, BNSF excluded from Otter Tail's opening OTRR traffic group { } tons of high-speed intermodal traffic that move in the real world over BNSF's Minot, North Dakota line on BNSF trains designated as Z trains. *Id.* at III.A-3. As BNSF explained, it was clear that the OTRR would provide inferior service for this competitive, high-priority traffic. *Id.* at III.A-39 to 49.

c. Otter Tail's Supplemental Opening

After BNSF submitted its Reply Evidence but before Otter Tail's Rebuttal Evidence was due, the Board issued a decision in *Duke/NS*, in which the Board made it clear that the allocation of revenues on cross-over traffic should be based on an assessment of the relative costs of providing service over the two segments of a cross-over movement, not on a market-based

inquiry. *Duke/NS*, STB Docket No. 42069, slip op. at 19-20 (served November 6, 2003). In light of this Board decision, Otter Tail sought and obtained permission to submit supplemental opening evidence. In its January 9, 2004 Opening Supplemental Evidence, Otter Tail based its SAC calculations on an assumption that cross-over revenues would be allocated based on costs rather than on a purported extrapolation from real-world interline divisions.

Otter Tail claimed that the change from a market-based to a cost-based allocation methodology required a change in its OTRR traffic group. Specifically, Otter Tail argued that it had excluded from its original OTRR about 31 million tons of coal originated by BNSF in the real world that traveled less than 1.1 percent of the through movement on the OTRR. As noted above, Otter Tail claimed to have excluded this traffic because it would be inappropriate for Otter Tail to apply its market-based revenue divisions methodology to such traffic. Since Otter Tail's Opening Supplemental Evidence abandoned its market-based allocation methodology, Otter Tail argued that it was no longer necessary to exclude the 31 million short-haul tons of coal. Otter Tail's January 9, 2004 Opening Supplemental Evidence therefore expanded the OTRR traffic group to include the previously excluded 31 million tons on coal. *See* OTP Supp. Op. Nar. at I-1. Otter Tail made no other traffic group changes.³

d. BNSF's Supplemental Reply

BNSF replied to Otter Tail's new OTRR traffic group assumptions on March 22, 2004. BNSF made three major changes to the OTRR traffic group. First, in response to Otter Tail's abandonment of its market-based revenue allocation methodology and the related 1.1 percent

³ Otter Tail presented this new traffic group as an "alternative" to the traffic group it posited on opening to be used only if the Board allocates revenues on cross-over traffic based on costs. The Board has asked the parties to base their supplemental evidence on the coal traffic group in Otter Tail's "alternative" case, so BNSF only addresses Otter Tail's "alternative" case in this Supplemental Evidence.

exclusion criteria, BNSF added 14 million tons of coal traffic to the OTRR traffic group that BNSF had excluded from its October 8, 2003 Reply Evidence on grounds that the movements violated Otter Tail's own 1.1-percent exclusion criteria. *See* BNSF Supp. Reply Nar. at III.A-15. This traffic originated at northern PRB mines and exited the OTRR at Donkey Creek.

Second, BNSF added to the OTRR shipper group about 1 million of the 31 million tons that Otter Tail added in its January 9, 2004 Opening Supplemental Evidence. These additional 1 million tons also originate in the northern PRB mines and exit the SARR at Donkey Creek. *Id.* at III.A-14. BNSF did not accept the addition of the remaining 30 million tons added by Otter Tail in its Opening Supplemental Evidence because that traffic originates at mines from Cordero south and exits the OTRR at Converse. As BNSF had explained in its October 8, 2003 Reply Evidence, this traffic should not be included in the SARR traffic group because it does not share any facilities with the issue traffic.

Third, BNSF excluded from its Supplemental Reply all rerouted non-coal traffic. After BNSF filed its October 8, 2003 Reply, the Board issued decisions in *Duke/NS* and *Duke/CSX*, in which the Board refined the principles to be applied in determining whether non-issue traffic could be rerouted for purposes of a SAC analysis from its real-world route of movement onto a SARR's lines. In particular, the Board made it clear that when the rerouting of traffic results in a longer haul, there is a "rebuttable presumption" that the longer haul is less efficient than the existing route. *Duke v CSX*, STB Docket No. 42070, slip op. at 16 (served February 4, 2004). Given the longer haul for the rerouted traffic, inferior service as compared to BNSF's real-world service, and the minimal sharing of facilities between the rerouted traffic and the issue traffic, BNSF excluded all rerouted non-coal traffic. Since the OTRR line between Snowden and

Glendive, Montana, was no longer needed, BNSF also modified the OTRR configuration to exclude this line segment.

e. Otter Tail Rebuttal

On rebuttal, Otter Tail declined to submit SAC evidence addressing the alternative SARR configuration BNSF proposed in its Supplemental Reply. Otter Tail argued that the southbound PRB traffic originating at mines from Cordero south should be included in the SARR traffic group, and it refused to accept BNSF's exclusion of that traffic. (Otter Tail completely ignored BNSF's treatment of the OPPD traffic.) Otter Tail also rejected the modifications that BNSF had made to the Riverside, Highbridge and Superior Dock movements. Otter Tail included this traffic.

Otter Tail did make one change to its rebuttal OTRR traffic group involving non-coal traffic. Otter Tail accepted BNSF's argument that BNSF's Z trains could not be rerouted over the OTRR and it excluded those trains from its rebuttal SAC presentation. However, Otter Tail did not accept BNSF's position that all rerouted non-coal traffic should be excluded, and Otter Tail left in the OTRR shipper group all rerouted non-coal traffic other than the Z-train traffic and it left in the OTRR the line segment between Snowden and Glendive, Montana.

f. Summary Of Traffic Group Changes

Set out below in Table III.A-1 are the base year traffic assumptions that have been presented in this case until now.

**Table III.A-1
Otter Tail and BNSF Base Year (2002) Volume Assumptions for the OTRR⁴
(Millions of Tons)**

	Otter Tail			BNSF	
	Opening	Supp Opening (Alternative)	Rebuttal (Alternative)	Reply	Supplemental Reply
	13-Jun-03	9-Jan-04	29-Apr-04	8-Oct-04	22-Mar-04
	(1)	(2)	(3)	(4)	(5)
Coal	180.3	212.1	212.1	112.3	127.6
Non Coal	25.2	25.2	21.2	21.2	7.5
Total	205.5	237.3	233.3	133.5	135.1

g. December 13, 2004 Order

The Board’s December 13, 2004 order focused on the differences between Otter Tail’s OTRR posited as the alternative case in Otter Tail’s Rebuttal (including traffic traveling less than 1.1 percent of the through movement on the SARR and excluding Z trains) and BNSF’s Supplemental Reply OTRR (which excludes all rerouted intermodal traffic). The Board noted that the principal differences between the parties’ traffic group assumptions in these two SAC presentations resulted from the fact that “Otter Tail’s evidence includes, while BNSF’s excludes, 13.7 million tons of rerouted non-coal traffic on the northern portion of the SARR and 85 million tons of coal traffic traveling south from southern PRB mines.” December 13, 2004 Decision at 1. The Board expressed concern that this disparity between the parties on traffic

⁴ Sources include the following: (1) OTP Opening Exh. III-A-5; (2) Otter Tail Supplemental Reply electronic workpapers "Otter Tail Railroad Coal Traffic Forecast - Supplemental.xls" worksheet "2002-2021 Tonnage" and ottertailsac02x - MSP.xls worksheet "Sum by Group and Year;" (3) Otter Tail Supplemental Reply electronic workpapers "Otter Tail Railroad Coal Traffic Forecast rebuttal alt.xls" worksheet "2002-2021 Tonnage" and "ottertailsac02x rebuttal alt.xls" worksheet "Sum by Group and Year." (4) BNSF Reply electronic workpapers “Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls,” worksheet “summary” and “non coal drop traffic.xls;” (5) BNSF Supplemental Reply electronic workpapers “Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls,” worksheet “summary” and “non coal_supp.xls.”

issues resulted in an incomplete record: “If we should determine that we do not agree with the entire position of either party, we may be left without the evidence needed to complete our SAC analysis.” *Id.* at 1-2.

The Board instructed the parties to revise their previously filed SAC evidence to reflect an OTRR traffic group that excluded the rerouted northern traffic and included the southbound PRB traffic. Specifically, it ordered Otter Tail to “file supplemental evidence showing the effect if the disputed rerouted northern non-coal traffic were excluded from the traffic group.” December 13, 2004 Decision at 2. The Board ordered BNSF “to file supplemental evidence showing the effect if the disputed southbound coal traffic originating south of Cordero were included in the traffic group.” *Id.* at 2-3.

In its Supplemental Reply, BNSF had argued that the Board should exclude the southbound traffic because of the likelihood that the traffic had been included by Otter Tail for the purpose of creating a cross-subsidy for traffic using the OTRR’s east-west lines. BNSF Supp. Reply at III.A-7-11. BNSF argued that the magnitude of the subsidy could not be determined until the Board resolved other disputed SAC issues in the case, but that “if the traffic were included in the SARR traffic group, a cross-subsidy analysis would have to be undertaken at some point.” *Id.* at III.A-11. The Board apparently agreed with BNSF, and it ordered both parties to “address how we might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy.” December 13, 2004 Decision at 3.

Finally, the Board made it clear that the scope of the supplemental evidence was limited, and it specifically instructed the parties that their “supplemental submissions must be confined to the two issues discussed here: the impact on the SAC analysis of including or excluding the two

categories of disputed traffic mentioned above, and how to assure that no cross-subsidy would be created by including the southbound southern PRB coal traffic.” *Id.*

2. BNSF’s Revised Base Year Traffic

As instructed by the Board, BNSF has revised its Supplemental Reply traffic group to add the previously excluded traffic originating at PRB mines from Cordero south and moving south on the OTRR to an interchange with the residual BNSF at Converse Junction. With this change, BNSF’s base-year traffic volume for the SARR increases by 85 million tons. BNSF made no other changes to the SARR’s base-year traffic group.⁵

**Table III.A-2
OTRR Base Year (2002) Volumes (Millions of Tons)
Comparison of BNSF Base Year Traffic Assumptions
(March 22, 2004 and March 1, 2005)**

	BNSF Supplemental Reply ⁶	BNSF Supplemental Evidence ⁷
	March 22, 2004	March 1, 2005
Coal	127.6	212.1
Non Coal	7.5	7.5
Total	135.1	219.6

3. BNSF’s Revised Projected Volumes

In BNSF’s Reply and Supplemental Reply, BNSF established the traffic volumes for all years other than the base year using Otter Tail’s basic forecast methodology. *See* BNSF Supp.

⁵ *See* BNSF Supplemental Evidence electronic workpaper “Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls.” BNSF utilized the traffic file from its Supplemental Reply evidence, titled “Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls,” to identify the additional tonnages.

⁶ *See* BNSF Supplemental Reply electronic workpapers “Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls” worksheet “summary” and “non coal_supp.xls.”

⁷ *See* BNSF Supplemental Evidence electronic workpaper “Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls” worksheet “summary.”

Reply at III.A-28-29. Specifically, Otter Tail used BNSF's 2003 origin/destination forecast to develop tonnages for coal movements in 2003. To develop traffic volumes for years 2004-2021, Otter Tail used a PRB demand forecast published in January 2003 by the U.S. Department of Energy, Energy Information Administration ("EIA"). Otter Tail started with the 2003 volumes determined using BNSF's 2003 forecast and adjusted those volumes each year to account for the annual change projected by the EIA's PRB forecast. Otter Tail capped volume growth to particular destinations at 85 percent of each plant's capacity. BNSF accepted Otter Tail's forecast assumptions and its plant capacity calculations. BNSF uses the same forecast assumptions here.

While BNSF accepted Otter Tail's forecast methodology, BNSF excluded from the projected SARR traffic group coal moving to Xcel's Riverside and Highbridge plants beginning in 2007 and it modified the tonnage growth assumptions for movements to the Superior Dock to account for capacity limitations at the Superior Dock. These exclusions were discussed above. BNSF has made the same adjustments here to Otter Tail's traffic growth assumptions. In addition, as noted above, BNSF explained in its Reply and Supplemental Reply Evidence that the SARR shipper group should not include OPPD's North Omaha and Arbor plants beginning in 2004. *See* BNSF Supp. Reply at III.A-13, note 27. BNSF has excluded those movements after 2003 from the revised traffic group. Given the strict limits the Board imposed on the scope of this Supplemental Evidence, BNSF has not investigated whether developments in the market subsequent to the filing of Reply and Supplemental Reply Evidence would support further modifications to the OTRR traffic group.

Finally, BNSF substituted actual volumes of the issue traffic on historical movements for the forecast volumes used in prior filings. BNSF has not made any other changes to the traffic

forecast contained in its Supplemental Reply Evidence. The revised traffic volume assumptions BNSF has used in this Supplemental Evidence are set out in the table below:

**Table III.A-3
OTRR Total Volumes (Millions of Tons)
Comparison of BNSF Traffic Assumptions⁸
(March 22, 2004 and March 1, 2005)**

	BNSF Supp Reply March 22, 2004 ⁹	BNSF Supp Evidence March 1, 2005 ¹⁰	Difference
2002	135.1	219.6	84.5
2003	132.3	218.8	86.5
2004	133.6	215.8	82.2
2005	134.0	216.9	82.9
2006	136.7	220.7	84.0
2007	138.5	223.7	85.2
2008	140.8	226.9	86.1
2009	142.4	229.2	86.8
2010	144.8	232.9	88.1
2011	145.8	234.3	88.4
2012	146.3	235.0	88.6
2013	146.5	235.3	88.8
2014	146.8	235.7	88.9
2015	147.0	236.1	89.0
2016	147.3	236.5	89.2
2017	147.7	237.1	89.4
2018	147.9	237.4	89.5
2019	148.1	237.8	89.7
2020	148.3	238.1	89.8
2021	148.4	238.1	89.8

⁸ See BNSF Supplemental Evidence Exhibit III.A-1 for a detailed summary of the OTRR volume forecast.

⁹ See BNSF Supplemental Reply electronic workpapers “Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls” worksheet “summary” and “non coal_supp.xls.”

¹⁰ See BNSF Supplemental Evidence electronic workpaper “Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls” worksheet “summary” and BNSF Supplemental Reply electronic workpaper “non coal_supp.xls.”

4. BNSF's Revised Base-Year Revenues

The primary dispute between the parties on the determination of base-year revenues involves the proper division of revenues on cross-over traffic between the OTRR and the residual incumbent. BNSF has proposed two alternative methodologies in this case for calculating the revenues to be credited to the OTRR on cross-over traffic, and BNSF presents SAC results using those same methodologies here.

First, BNSF used the density adjusted revenue allocation procedure (“DARA”) which allocates revenues between the SARR and the residual incumbent taking into account the relative density of the on-SARR and off-SARR segments of a cross-over movement. The DARA methodology reflects the economies of density that exist on rail lines by assuming that movements traversing high-density lines need to contribute relatively less revenue per ton to cover unattributable costs than movements traversing low-density lines. *See* BNSF Reply at III.A-82 to 100; BNSF Supp. Reply at III.A-31 to 43.¹¹ The DARA methodology is described in detail in BNSF’s Reply Nar. III.A-87 to 90. BNSF applied the same DARA methodology to allocate revenues here using revised densities resulting from the addition of the previously excluded southbound PRB traffic.¹²

BNSF also explained in its Supplemental Reply Narrative that the Board’s MSP methodology substantially overcompensates the SARR for the costs associated with the

¹¹ The Board’s January 19, 2005 decision in *Xcel* rejected the use of the DARA methodology in that case. BNSF has filed a petition for review of the Board’s January 19, 2005 decision in the United States Court of Appeals for the District of Columbia Circuit and intends to address the flaws in the Board’s treatment of DARA in that appellate proceeding. The Board, in its December 13, 2004 decision in this case, specifically instructed the parties not to address the issue of the proper allocation of revenues on cross-over traffic in this supplemental filing, so BNSF does not address here the flaws in the Board’s *Xcel* discussion of DARA.

¹² *See* BNSF Supplemental Evidence electronic workpaper “coal move__supp.xls”.

origination of coal in unit trains in the PRB by providing the SARR with a 100-mile origination credit. *See* BNSF Supp. Reply Exh. III.A-9. BNSF presented revenue calculations for cross-over traffic based on a modified mileage prorated methodology that uses more appropriate mileage block credits for originating and terminating coal, merchandise and intermodal traffic. *See* BNSF Supp. Reply Exh. III.A-10. BNSF uses the same revised mileage blocks, set out at page 12 of BNSF Supp. Reply Exh. III.A-9, for purposes of its alternative revenue calculations here.

Table III.A-4 below reproduces Table III.A-5 from BNSF’s Supplemental Reply Narrative, adding the revised revenue data using DARA and the modified mileage block approach.

**Table III.A-4
Comparison Of Cross-Over Traffic Revenue Allocations to OTRR And Residual BNSF Under Otter Tail’s Generic and Adjusted MSP Approach And DARA**

	Average Length of Haul	Revenue (Millions)			Mills per Ton-Mile			
		Generic MSP	Adjusted MSP	DARA	Generic MSP	Adjusted MSP	DARA	
Coal Traffic								
Via Donkey Creek								
	OTRR	{ }	{ }	{ }	{ }	{ }	{ }	{ }
	Residual BNSF	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Via Converse								
	OTRR	{ }	{ }	{ }	{ }	{ }	{ }	{ }
	Residual BNSF	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Other Interchanges								
	OTRR	{ }	{ }	{ }	{ }	{ }	{ }	{ }
	Residual BNSF	{ }	{ }	{ }	{ }	{ }	{ }	{ }
Non-Coal Traffic								
	OTRR	{ }	{ }	{ }	{ }	{ }	{ }	{ }
	Residual BNSF	{ }	{ }	{ }	{ }	{ }	{ }	{ }

5. BNSF's Revised Coal Revenue Projections

a. 2003 Projected Revenues

BNSF has accepted Otter Tail's use of BNSF's 2003 forecast to establish revenues for the OTRR's coal movements for 2003. *See* BNSF Reply Nar. at III.A-102.

b. Updated Issue Traffic Revenues

BNSF has updated the issue traffic revenue to substitute the actual revenues received by BNSF on historical movements of the issue traffic in place of the projected revenues. For future revenues generated by the issue traffic, BNSF applies the same escalation assumption used by the parties in past submissions.

BNSF began applying a fuel surcharge on its common carrier movements last year, including the issue traffic movement, that is separate from the base common carrier rate. The fuel surcharge is intended to compensate BNSF for the extraordinary costs that have resulted from the recent spike in fuel costs. BNSF did not include the amounts received from Otter Tail under the fuel surcharge in the issue traffic revenues contained in this Supplemental Evidence.¹³ The fuel surcharge is not the subject of this rate reasonableness case and there has been no evidence submitted by the parties relating to the fuel surcharge. Moreover, the proper treatment of a fuel surcharge in a SAC analysis has not previously been addressed by the Board. The Board has strictly limited the scope of supplemental evidence in order to bring this case to a close, thus making it inappropriate to address the impact of the fuel surcharge in these supplemental filings.

¹³ If the fuel surcharge revenues were included in the revenues produced by the challenged rate, any rate reduction that resulted from the Board's SAC analysis would have to use as the starting point the issue traffic revenues including the fuel surcharge.

The Board may never have to address the fuel surcharge in this case. For reasons explained elsewhere, BNSF believes that the challenged rates do not exceed a reasonable maximum rate and that no rate reduction would be appropriate. However, if the Board concludes that the challenged rate exceeds a reasonable maximum rate and that a maximum rate should be prescribed, the parties can address the effect of the fuel surcharge on the level of any prescribed rate in subsequent pleadings.

c. Revenues Through the Term Of Existing Coal Contracts

Otter Tail used the provisions of individual shipper contracts to project revenues to specific OTRR destinations after 2003. In BNSF's Reply and Supplemental Reply Evidence, BNSF corrected Otter Tail's application of the escalation provisions, termination dates and other provisions affecting future revenues in several existing contracts. *See* BNSF Reply Nar. at III.A-104 to 110; *see also* BNSF Supp. Reply Nar. at III.A-44, note 71. BNSF has used the same assumptions used in BNSF's Reply Evidence with respect to the provisions of individual contracts to project revenue escalation under existing contracts in this Supplemental Evidence.

As a result of the inclusion of new southbound RPB traffic, the SAC revenue projections now require consideration of a few contracts for the southbound PRB traffic that were not included in BNSF's Supplemental Reply Evidence. However, to minimize the disputes between the parties, BNSF accepts the contract assumptions that Otter Tail proposed in its Opening Supplemental Evidence for this new traffic.

Many of BNSF's coal transportation contracts adjust the rate periodically based upon either the RCAF-U index, the RCAF-A index, or some percentage of one or both of those indices. Consequently, to properly project future revenues under existing coal transportation contracts, a forecast of RCAF indices must be employed. In its Reply, BNSF used the then current version of the DRI-WEFA forecast of the RCAF-U and RCAF-A, published in June of

2003. On rebuttal, Otter Tail accepted the use of a current forecast of the RCAF and used the December 2003 DRI-WEFA forecast. For this Supplemental Evidence, BNSF has updated the RCAF-U and RCAF-A indexes to use actual historical index values through the first quarter of 2005 and has again incorporated the most current DRI-WEFA RCAF forecast, published in December 2004, to forecast future OTRR revenues.

d. Revenues After Expiration of Existing Coal Contracts

Otter Tail's methodology for projecting revenues on individual movements after the expiration of existing contracts differed as to movements involving competitive and sole-served plants. The parties have disagreed with respect to three issues in the projection of post-contract revenues: the designation of OTRR shippers as sole-served or competitive; the new rate that should be assumed upon expiration of existing contracts; and the escalation of the new rate that will occur after the expiration of existing contracts.

Shipper Designation: A methodology for projecting future revenues that differs based on the classification of a plant as sole-served or competitive requires accurate designation of the SARR shippers as competitive and sole-served. The parties disagree on the proper designation of several OTRR movements. *See* BNSF Reply Nar. at III.A-111 to 112. In projecting revenues for purposes of this supplemental evidence, BNSF applies the same designations that it used to prepare its Reply and Supplemental Reply Evidence. The southbound PRB traffic that BNSF is including in the OTRR traffic group for purposes of this Supplemental Evidence include some new movements that BNSF has not addressed in prior evidentiary submissions. As to those movements, BNSF accepts Otter Tail's designations as sole-served or competitive for purposes of this Supplemental Evidence.

New Rate Upon Contract Expiration: For sole-served plants, Otter Tail assumes that the new rate upon expiration of a contract will equal the expired contract rate. BNSF explained that

this assumption ignores its historical experience of rate reductions when contracts expire. *See* BNSF Reply Nar. at III.A-112 to 114. Based on a study of BNSF’s recently negotiated contracts to sole-served destinations, BNSF assumed that rates would decline by { } when existing contracts expire. BNSF continues to apply that assumption here.

For competitive plants, Otter Tail assumes that the new rate upon expiration of a contract will be the lesser of the expiring contract rate or a “competitive marketplace” rate. BNSF accepted this approach, but it corrected Otter Tail’s calculation of the “competitive marketplace” benchmark. *See* BNSF Reply Nar. at III.A-114 to 124. BNSF uses the same “competitive marketplace” benchmark here that it used in its Reply and Supplemental Reply Evidence.

Escalation of New Rates: Otter Tail also projected the escalation of the new rates upon contract expiration differently for sole-served and competitive shippers. BNSF rejected Otter Tail’s methodology for escalating rates to sole-served shippers, which assumes that the rate escalation provisions set forth in the expired contract will continue throughout the rest of the DCF period, and used instead an escalation assumption that was derived from recently signed BNSF coal contracts.¹⁴ For competitive shippers, BNSF accepted Otter Tail’s basic approach to projecting rate escalation, but BNSF modified Otter Tail’s calculations slightly to produce an assumed escalation of { } percent of the RCAF-U for shipper and railroad equipment respectively. BNSF applies this same assumption here.

6. Revised Non-Coal Revenue Projections

BNSF has agreed with Otter Tail’s methodology for projecting non-coal revenues, which uses BNSF’s Long Range Plan. BNSF applies the same methodology here to project non-coal revenues that it used in its Reply and Supplemental Reply Evidence.

¹⁴ *See* BNSF Reply Nar. at III.A-130 and BNSF Reply electronic workpaper “Renewal Rate Reduction for Sole Served Destinations.xls.”

7. Total Traffic Summary

The revised revenue assumptions BNSF has used in this Supplemental Evidence are set out in the table below.

Table III.A-5
OTRR Total Revenues (Millions)
Comparison of BNSF Revenue Assumptions
(March 22, 2004 and March 1, 2005)¹⁵

	BNSF Supp Reply March 22, 2004 ¹⁶	BNSF Supp Evidence March 1, 2005 ¹⁷	Difference
2002	\$430.4	\$474.9	\$44.5
2003	\$430.4	\$472.0	\$41.6
2004	\$431.9	\$480.0	\$48.1
2005	\$432.0	\$485.6	\$53.6
2006	\$447.3	\$496.7	\$49.4
2007	\$442.8	\$489.3	\$46.5
2008	\$458.4	\$504.4	\$46.0
2009	\$472.1	\$518.8	\$46.7
2010	\$489.5	\$535.9	\$46.4
2011	\$501.2	\$547.9	\$46.7
2012	\$506.7	\$553.0	\$46.3
2013	\$515.4	\$561.4	\$46.0
2014	\$519.8	\$565.9	\$46.1
2015	\$528.9	\$575.6	\$46.7
2016	\$538.4	\$585.8	\$47.4
2017	\$548.1	\$596.2	\$48.1
2018	\$557.6	\$606.4	\$48.8
2019	\$567.4	\$616.9	\$49.5
2020	\$577.4	\$627.6	\$50.2
2021	\$586.5	\$637.0	\$50.5

¹⁵ See BNSF Supplemental Evidence Exhibit III.A-1 for a detailed summary of the OTRR revenue forecast.

¹⁶ See BNSF Supplemental Reply electronic workpapers "Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls" worksheet "summary" and "non coal_supp.xls."

¹⁷ See BNSF Supplemental Evidence electronic workpaper "Otter Tail Railroad Coal Traffic Forecast_BNSF Supp.xls" worksheet "summary" and BNSF Supplemental Reply electronic workpaper "non coal_supp.xls."

8. Cross-Subsidy Analysis

In its December 13, 2004 decision, the Board acknowledged BNSF's concern that a subsidy could be created by including in the SAC analysis the southbound PRB traffic originating at Cordero and other mines south of Cordero. BNSF had previously urged the Board to address this subsidy concern by excluding the southbound PRB traffic from the SAC analysis altogether. BNSF Supp. Reply Nar. at III.A-11. If the costs imposed on the SARR to handle this traffic and the revenues generated by the traffic were excluded from the SAC analysis, no subsidy attributable to this traffic could exist. The most simple approach for dealing with traffic that shares no facilities with the issue traffic or that has only a marginal overlap of common facilities is to exclude the traffic from the SAC analysis altogether. In the interest of simplifying SAC litigation, the Board should adopt such an approach here.

While acknowledging BNSF's cross-subsidy concern, the Board in its December 13, 2004 decision stated that "even if disputed traffic would pay for facilities it does not use, it is unclear that the correct remedy would be to exclude the traffic entirely." December 13, 2004 Decision at 2. Without deciding whether to include or exclude the southbound PRB traffic in the final SAC analysis, the Board therefore instructed BNSF to modify its SAC calculations to include the southbound PRB traffic and also "to address how we might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." *Id.* at 3.

As noted above, BNSF is presenting in this Supplemental Evidence modified SAC calculations showing the impact of including the southbound traffic. BNSF also explains below that if this traffic is included, the subsidy generated by the southbound PRB traffic that has been added to the OTRR traffic group can be addressed by applying the cross-subsidy test developed in the *PPL* case. Application of the *PPL* cross-subsidy test is particularly appropriate in this case

because the SARR at issue here bears a close resemblance to the SARR at issue in *PPL*. In both cases, the SARR consists of two distinct SARR segments with different characteristics: (1) a short, relatively dense, north-south segment that is dominated by short-haul movements of coal from mine origins to interchanges with the residual incumbent, and (2) a much larger, lower-density, east-west segment that is dominated by long-haul movements and which includes virtually all of the issue traffic route of movement. Moreover, as in *PPL*, the short-haul cross-over traffic moving on the north-south portion of the OTRR generates revenues far out of proportion to the work performed by the OTRR, creating the strong likelihood that the north-south traffic has been included in the OTRR for the purpose of subsidizing the longer-haul traffic that uses the OTRR's lower-density east-west lines.

The Board in *PPL* already prescribed the test for cross-subsidy in cases where the complainant posits a SARR with these characteristics. That test involves a comparison of the revenues that would be available to the SARR from traffic using the longer, lower-density route to the collective attributable costs of that traffic, *i.e.*, the costs that the SARR would incur by handling that traffic. If those revenues do not cover the collective attributable costs, then the Board concludes that the traffic using the longer, lower-density segment of the SARR is impermissibly being subsidized by the traffic using the shorter, denser segment of the SARR. The Board should apply that test here.

BNSF explains below that the application of the *PPL* test eliminates the effects of any cross-subsidy provided by the north-south traffic both in the assessment of the reasonableness of the challenged rate, and, if the rate is found to be unreasonable, in the prescription of a maximum reasonable rate. If the Board finds after resolving the parties' disputes over cost and revenue calculations that revenues from traffic using the OTRR's east-west lines do not cover the

collective attributable costs of that traffic, then the Board should dismiss Otter Tail's rate reasonableness claims on grounds that Otter Tail's SAC evidence includes an impermissible cross-subsidy from the north-south traffic. Alternatively, if the Board finds that SAC revenues exceed SAC costs and that the traffic using the east-west lines generates revenues sufficient to cover its collective attributable costs, the same *PPL* analysis of the east-west lines should be applied in determining the maximum reasonable rate on the issue traffic. Specifically, in setting the prescribed rate, the Board can use the *PPL* analysis of the east-west lines to make sure that it does not reduce rates on traffic using the east-west lines to levels that are insufficient to cover the collective attributable costs of the traffic using the east-west facilities. In this way, the Board can "assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3. This is explained further below.

a. There Is Substantial Evidence That Traffic Using Only The North-South Portion Of The OTRR Is Subsidizing The East-West Facilities

The OTRR has two distinct segments -- a short, relatively dense, north-south segment and a much larger, lower-density, east-west segment. When the OTRR traffic group is expanded to include the southbound PRB traffic that BNSF previously excluded, the OTRR traffic group includes 160 million tons of short-haul traffic that uses only the north-south OTRR lines.¹⁸ According to Otter Tail, these short-haul movements are responsible for generating \$173 million in the base year, or one-third of the OTRR's total coal revenues.¹⁹ Yet these movements

¹⁸ BNSF Supplemental Evidence electronic work paper "coal move_supp.xls," Worksheet "Cross-Subsidy."

¹⁹ *Id.*

traverse, on average, only 25 miles on the SARR.²⁰ The southbound PRB movements originating at mines from Cordero south constitute 50 percent of the revenue and 53 percent of the volume attributable to the traffic that uses only the north-south SARR facilities.²¹

The magnitude of any cross-subsidy generated by the short-haul traffic using only the north-south portion of the OTRR cannot be determined conclusively until the Board resolves the disputes between the parties on specific cost and revenue issues. However, there is abundant evidence that such traffic generates a substantial cross-subsidy of the east-west facilities.

First, this short-haul traffic contributes an enormous amount of revenue to the OTRR that is far out of proportion to the work performed by the OTRR to handle the traffic. BNSF's Supplemental Reply Exhibit III.A-2 identified the revenues generated by the Cordero south traffic under the Board's generic MSP methodology for each originating mine. (For the Board's convenience, that exhibit is reproduced here as Supplemental Evidence Exhibit III.A-2.) This traffic generates a little over \$86 million of revenue in the base year, about 17 percent of the OTRR's total coal revenues.²² One-third of this traffic traverses the OTRR for no more than 8 miles.²³ The vast majority of the revenue generated by the Cordero south traffic is attributable *solely* to the fact that the MSP methodology provides the SARR with a 100-mile origination block. In fact, 80 percent of the revenue generated by these short-haul movements results

²⁰ *Id.*

²¹ *Id.*

²² *Id.*

²³ BNSF Supp. Reply Nar. at III.A-9, note 20, referring to Exhibit III-A.2, and BNSF Supplemental Evidence electronic work paper "coal move_supp.xls," Worksheet "Cross-Subsidy."

exclusively from the application of a 100-mile origin block credit.²⁴ The revenue allocation based on the 100-mile block of credit does not accurately reflect the costs incurred by the OTRR to originate unit coal trains, as BNSF described in its Supplemental Reply Exhibit III.A-9. It is clear that the Cordero South traffic was included by Otter Tail in the OTRR traffic group to game the results of the SAC analysis.

Further evidence of a cross-subsidy generated by the southbound PRB traffic is seen in the imbalance between the revenue that the OTRR is assumed to receive from these short-haul movements and the revenue that is left for the residual incumbent. BNSF's Supplemental Evidence Exhibit III.A-2 shows that the OTRR handles the new southbound PRB traffic on average 2 percent of the through movement but receives 10 percent of the through revenues. Moreover, that exhibit shows that the OTRR is assumed to receive revenues per net ton-mile that are almost five times greater than the residual incumbent receives.²⁵

There is also substantial reason to believe that the short-haul traffic exiting the SARR at Donkey Creek is generating a cross-subsidy. Supplemental Evidence Exhibit III.A-3 presents the same data contained in BNSF Supplemental Evidence Exhibit III.A-2 for the short-haul Donkey Creek traffic. As shown in that exhibit, this off-at-Donkey Creek traffic moves on average only 15 miles on the OTRR. The OTRR is assumed to carry this traffic for only 1.6

²⁴ The percentage of revenue attributable to the 100-mile origination credit can easily be calculated from the data in BNSF Supplemental Evidence Exh. III.A-2. That exhibit shows that the average OTRR miles for the southbound traffic are 24. Thus, the total mileage credits for these movements are 124 (100 for the origination and 24 for the miles themselves). Of the 124 mileage credits, 100, or 80 percent, are attributable to the origination credit.

²⁵ In fact, one-third of this southbound PRB traffic moves fewer than 8 miles on the OTRR but generates OTRR revenues of 120 mills per net ton-mile, *more than fourteen times* the 8.5 mills allocated by MSP to the residual BNSF for handling this cross-over traffic. See BNSF Supplemental Evidence electronic work paper "coal move_supp.xls," Worksheet "Cross-Subsidy."

percent of the total movement miles but Otter Tail claims almost 12 percent of the total through revenue generated by these movements. In addition, this short-haul Donkey Creek traffic generates almost \$58 million in the base year, 87 percent of which is attributable solely to the 100-mile origination credit. Like the southbound PRB traffic, this short-haul Donkey Creek traffic also generates a disproportionate amount of revenue when compared to the revenues allocated to the residual incumbent. Supplemental Evidence Exhibit III.A-3 shows that the OTRR is assumed to receive revenues per net ton-mile that are *more than eight times greater* than the residual incumbent receives.

A second reason to believe that the short-haul north-south traffic is cross-subsidizing the east-west traffic is that there is a minimal sharing of facilities between this short-haul traffic and the traffic that uses the east-west route of movement, including the issue traffic. Where a discrete group of shippers shares few or no facilities with the issue traffic, the likelihood is that complainants have included that traffic not to share the costs of commonly used facilities, but rather to generate a subsidy for the facilities used by the issue traffic. Otter Tail has sought to game the SAC analysis in this way by including large volumes of traffic on the OTRR's north-south segment that share virtually no facilities with the issue traffic.

As BNSF explained in its Supplemental Reply, the southbound coal movements that BNSF excluded from the Supplemental Reply Evidence share no facilities at all with the issue traffic that Otter Tail included in its SARR. Otter Tail disputes BNSF's assertion that there is no sharing of facilities, noting that Otter Tail has sourced coal from southern PRB mines in the past and may do so again in the future. {

}²⁶ Even if Otter Tail were to begin originating coal from Black Thunder, the issue traffic would still not share any mainline facilities with over 90 percent of the southbound coal traffic, which originates at mines from Black Thunder south.²⁷

Similarly, the short-haul traffic that exits the OTRR at Donkey Creek has only a marginal sharing of facilities with the issue traffic and other traffic using the OTRR's east-west lines. As noted in Supplemental Evidence Exhibit III.A-3, the short-haul traffic exiting the OTRR at Donkey Creek travels on average only 15 miles on the OTRR. However, the issue traffic originating at mines on the Campbell Subdivision travel more than 1,000 miles on the SARR.²⁸ Thus, the OTRR's short-haul Donkey Creek traffic shares only 1.5 percent of the issue traffic route of movement.

b. Application Of The *PPL* Test Will Allow The Board To Determine Whether The OTRR's East-West Facilities Are Being Subsidized By The North-South Traffic

In *PPL*, the Board described the test it will apply to determine whether the complainant in a SAC case has designed a SARR that relies on an impermissible cross-subsidy. There is no reason for the Board in this case to look beyond the test for cross-subsidy that it already developed in *PPL*, since the *PPL* test will suffice to determine the existence of a cross-subsidy here. Indeed, if the southbound PRB traffic is included in the traffic group here, the SARR posited by Otter Tail closely resembles the SARR at issue in *PPL*.

²⁶ See BNSF's Supplemental Evidence electronic workpaper "2004 OTP Freight Bills.xls".

²⁷ See Supplemental Evidence Exhibit III.A-2: Of the 84.5-million ton southbound traffic total, 79.3 million tons originate at mines from Black Thunder south to Converse.

²⁸ BNSF Supplemental Evidence electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence).xls."

As the Board explained in *PPL*, the complainant in that case “designed a system made up of a short, heavily traveled North-South Part heading north out of the PRB, and a far longer Western Part going to its plant in Billings, MT.” *PPL III* at 4. Otter Tail followed the same approach here. The SARR posited by Otter Tail also contains two discrete segments: a short, relatively high-density north-south segment and a much longer, lower density east-west segment.

The Board in *PPL* was concerned about the disparity in size and density between the two parts of the SARR: “PPL’s chosen SAC model lent itself to a cross-subsidy challenge given the striking disparity in the size and density of these two parts of the system.” *PPL II* at 7. That disparity exists here as well. The average density on the OTRR’s north-south lines is 78.4 million gross-tons/mile, which is 37 percent higher than the average density of 57.1 million gross tons/mile on the OTRR’s east-west lines.²⁹ The OTRR’s north-south segment is only 94.5 route miles, compared to the east-west segment 1,106.1 route miles (or 92 percent of the total OTRR route miles).³⁰

The Board in *PPL* was also concerned that much of the traffic on the north-south segment of the SARR never used the east-west facilities. The Board noted in *PPL* that “the Western Part would comprise 70% of the [SARR] in length, [but] only 15% of the [SARR] tonnage would move over any of the Western Part.” *PPL III* at 2. Those same characteristics exist in this case. Here, the east-west lines of Otter Tail’s SARR comprise more than 90% of the SARR in length, while only 27 percent of the SARR traffic (after excluding the rerouted non-coal traffic) uses

²⁹ See BNSF’s Supplemental Evidence electronic workpaper “LUMS and Carmiles (OTP-BNSF) (Supp. Evidence).xls,” worksheet “GTM Summary”.

³⁰ *Id.*

those lines.³¹ More important, as in *PPL*, the high-density north-south portion of Otter Tail's SARR is dominated by short-haul traffic that exits the SARR at either Converse or Donkey Creek. As a result, the vast majority of the traffic using the north-south portion of Otter Tail's SARR -- 87 percent³² -- never even touches the SARR's east-west facilities. The average length of haul for traffic that uses OTRR's north-south lines is 25 miles compared to the average length of haul on the SARR's east-west lines of 716 miles.³³

Finally, Otter Tail's SARR replicates the same BNSF lines at issue in *PPL*, namely BNSF's PRB lines from Converse in the south to Eagle Butte and Buckskin in the north, and from Donkey Creek in the east to Jones Jct., Montana, in the west. Otter Tail merely extended those east-west lines to Glendive and then to Fargo and Big Stone. Similarly, Otter Tail's SARR serves the same mines as PPL's SARR, and Otter Tail's SARR hypothesizes the same fictional interchanges with the BNSF at Converse Junction and Donkey Creek as PPL's SARR where it interchanges virtually the same volume of traffic with the residual incumbent.

The disparity in density and length of haul between the *PPL* SARR's north-south and east-west lines led the Board to conclude that "PPL sought to take advantage of the density of traffic on the North-South Part, by submitting a system that used the revenues gained from that part to offset the cost of the Western Part." *PPL III* at 4. Such a cross-subsidy by traffic using only the north-south lines of the SARR would be directly contrary to the SAC principle that shippers should not be required to pay for facilities from which they derive no benefit. *PPL II* at 6. In a contestable market, a new rail entrant serving the north-south segment would never incur

³¹ BNSF Supplemental Evidence electronic work paper "coal move_supp.xls," Worksheet "Cross-Subsidy."

³² *Id.*

³³ *Id.*

the costs to construct and operate the east-west lines of the proposed SARR because the revenues available from the traffic using those east-west lines would not cover the collective attributable costs incurred to serve that traffic.

To determine whether the revenues from traffic using the dense north-south portion of the *PPL* SARR were being used to offset the costs of the SARR's larger, lower density east-west lines, the Board first identified the collective attributable costs of the east-west lines, *i.e.*, the construction and operating costs that would be incurred by the SARR as a direct result of its handling the east-west traffic. The Board then compared those costs to the full through revenues available from the east-west traffic.³⁴ The Board's analysis concluded that "the longer Western Part would fail to recover sufficient revenues to cover the cost of constructing and operating that part." *PPL III* at 4. The Board viewed this "as an impermissible cross-subsidy, because it would use the revenues generated on a smaller, though higher density, portion of the system to cross-subsidize the larger, lower-density Western Part that would serve PPL's plant." *Id.*

Otter Tail appears to have engaged in the same strategy of using the "revenues generated on a smaller, though higher density portion of the system to cross-subsidize the larger, lower density" east-west portion of the OTRR serving Otter Tail's plant. The Board should apply the same test it developed in *PPL* to test for the existence of a cross-subsidy and to prevent a cross-subsidy from affecting any rate prescription that results from its SAC analysis.

³⁴ Effectively, the Board assumed that the east-west traffic had free use of the north-south facilities. This assumption ignores the incremental capital costs on the north-south lines that would be incurred as a direct consequence of handling the east-west traffic.

c. If The Board Determines That The Revenues Generated By The East-West Traffic Do Not Cover The Collective Attributable Costs Of The East-West Facilities, The Board Should Dismiss Otter Tail's Complaint

The mechanics of the *PPL* test are quite straightforward and can be applied readily here. The collective attributable costs of the east-west traffic on Otter Tail's OTRR must first be identified. If the revenues generated by the east-west traffic do not cover their collective attributable costs, then the Board would conclude that the traffic moving over the short, dense north-south lines is providing an impermissible cross-subsidy to make up for the shortfall.

The collective attributable costs of the east-west traffic consist of three components: (1) the cost to construct the lines and other facilities that comprise the east-west portion of the OTRR³⁵; (2) the direct operating costs incurred by the east-west traffic over the entire route of movement; and (3) the indirect operating costs that would be avoided if the OTRR did not handle the east-west traffic. The east-west construction costs can be determined using the parties' workpapers to identify the facilities associated with the east-west portion of the OTRR and by applying appropriate unit costs for the construction of those facilities. BNSF has carried out these calculations using its SAC construction cost evidence in this Supplemental Evidence.³⁶ Those calculations can easily be modified to reflect the construction cost evidence accepted by the Board as the best evidence of record.

³⁵ As noted previously, the Board in *PPL* did not assess the incremental capital costs on the north-south lines that would be incurred to handle the east-west traffic. The record in that case did not contain evidence on those costs.

³⁶ Construction costs attributable to the east-west segment, which begins on the OTRR mainline just west of the east leg of the Campbell subdivision wye track, are developed in separate tabs bearing the designation "Campbell West" in the BNSF electronic work paper "III F OTRR Construction_Supp Evidence.xls."

Direct operating costs attributable to the east-west traffic can also be developed through a bottom-up “analysis of the annual volumes, the types of railcars used, train sizes, distance traveled, and other characteristics of the traffic.” *PPL III* at 5. The following operating costs can be determined using this approach: train and engine personnel; locomotive lease expense; locomotive maintenance expense; locomotive operating expenses; railcar lease expense; railcar maintenance expense; ad valorem taxes; trackage rights; insurance. To develop these costs, BNSF identified the relevant operating parameters for the full route of movement for all traffic using any portion of the OTRR west of Campbell. The specific calculations BNSF has used to identify the bottom-up operating costs for the east-west traffic in this case are set out in BNSF’s electronic work papers.³⁷

In *PPL*, the complainant urged the Board to apply URCS-based variability percentages to reduce the amount of these direct operating expenses that could be allocated to the traffic using the east-west lines of the SARR. The Board correctly found that the bottom-up calculation of these expenses identified the full costs for these expense categories that would be avoided by the SARR if the east-west traffic was not handled, so there was no basis for reducing these costs by a variability factor. *PPL III* at 8.

The parties in *PPL* disagreed on the proper approach to calculating the indirect operating costs attributable to the east-west traffic. The complainant first allocated these indirect expenses (G&A, MOW, L&D, and operating managers) on a top-down basis between the east-west and

³⁷ Detailed operating parameters attributable to traffic using any portion of the east-west segment were developed in BNSF Supplemental Evidence electronic work papers “LUMs and Carmiles (OTP-BNSF) (Supp Evidence).xls,” Worksheet “Cross Subsidy Scenario SUMMARY” and “BNSF Crew Count (Supp Evidence).xls,” Worksheet “Road Crew Summary (v2).” Operating expenses associated with these operating parameters were developed in BNSF Supplemental Evidence electronic work paper “OPR_EXP_supEvid.xls.xls,” Worksheet “Summary.”

north-south portions of the SARR using relative ton-miles and train-miles. *Id.* at 6. The complainant then reduced the portion of these expenses allocated to the east-west portion using the URCS variability percentages. BNSF objected to this approach, but the Board used complainant’s methodology because it found that a cross-subsidy existed even if complainant’s approach were accepted. *Id.* at 9.

In this case, BNSF urges the Board to adopt an approach that assigns these so-called “indirect” operating expenses to the east-west and north-south portions of the OTRR in a way that more accurately identifies costs directly attributable to the east-west traffic group. BNSF has developed a two-step process to identify the MOW, G&A, L&D and operating manager costs attributable to the east-west traffic group. In the first step, BNSF used the detailed work papers underlying the development of MOW, G&A, L&D and operating manager expenses for the OTRR as a whole and identified the personnel and activities that could be linked geographically to the east-west segment or linked directly to the traffic moving over the east-west segment.³⁸ Costs for these personnel and activities were included as costs directly attributable to the east-west traffic group.

In the second step, costs for those personnel and activities that could not be linked directly to either the east-west segment or to traffic moving over the east-west segment were allocated between the east-west and north-south segments using OTRR operating statistics. Specifically, costs for operating managers were allocated to the east-west segment based on the ratio of train miles associated with the through movement of all traffic touching any portion of

³⁸ *See, e.g.*, BNSF Supplemental Evidence electronic work paper “III D 4 Maintenance of Way_Supp Evidence.xls,” Worksheet “Personnel Campbell West.” Because L&D costs for the OTRR are developed based on tons, L&D costs attributable to the east-west segment are based directly on the tons moving over the east-west segment.

the east-west segment to total OTRR train miles.³⁹ G&A and MOW costs not directly assignable to the east-west segment were allocated to that segment based on the ratio of gross ton-miles associated with the through movement of all traffic touching any portion of the east-west segment to total OTRR gross ton-miles. Details of these calculations are set forth in the BNSF electronic work papers.⁴⁰

It would be inappropriate for the Board to apply variability percentages to reduce the operating costs assigned to the east-west segment of the OTRR in the first step described above for the same reason that the Board rejected PPL's use of the variability percentages to reduce the direct operating costs. As the Board found in *PPL III*, the entire amount of those expenses, which were calculated from the ground up, would be avoided if the east-west traffic was not handled by the OTRR. *See PPL III* at 8.

In addition, as to the costs assigned through the second step described above -- *i.e.*, costs that could not be directly attributed to the east-west traffic group but had to be allocated using operating statistics -- it would not be appropriate to apply the URCS variability percentages. The URCS variability percentages are inconsistent with the Board's cross-subsidy test. The URCS variabilities are designed to identify the portion of operating expenses that vary directly with changes in traffic levels. But the *PPL* cross-subsidy test looks at the changes in cost that would result from *both* changes in traffic levels and changes in the size of the overall rail facility. The URCS variability percentages do not attempt to identify the costs that would be avoided if a set of facilities were not in existence. URCS variability percentages assume the existence of the

³⁹ BNSF Supplemental Evidence electronic work paper "OPR_EXP_supEvid.xls.xls," Worksheet "Summary," Column "W."

⁴⁰ BNSF Supplemental Evidence electronic work papers "OPR_EXP_supEvid.xls.xls," Worksheet "Summary," Column "W" and "III D 4 Maintenance of Way_Supp Evidence.xls."

facilities and attempt to identify the extent to which costs associated with traffic using those facilities vary as traffic levels change.⁴¹

BNSF presents the results of its cross-subsidy analysis in Table III.A-6 below and in BNSF Supplemental Evidence Exhibit III.A-4.⁴² These results are based on BNSF's cost and revenue assumptions in this Supplemental Evidence. These assumptions may change after the Board resolves the evidentiary disputes between the parties. However, BNSF has linked the

⁴¹ The URCS variability percentages are based on regression analyses that use two variables. One is a capacity variable -- designed to reflect the size of the plant in terms such as route miles or track miles -- and the other is an output variable -- designed to reflect the effects of changes in the level of output in terms of gross-ton-miles, train-miles, car-miles, among other things. The percent variables produced from these regression equations are meaningful only if one assumes that during the relevant costing period, the capacity of the rail system for which the unit costs are being developed stays essentially unchanged. That assumption is usually appropriate in the Board's URCS applications involving existing railroads. Here, however, the question is whether the east-west facilities would exist at all without a cross-subsidy. To identify the avoidable costs associated with the east-west traffic, it must be assumed that the output *and capacity* on the east-west lines would be reduced to zero. (This is consistent with the assumption that no road property costs associated with the east-west lines would be incurred.) Use of the URCS variability percentage implicitly assumes that the only expenses that would be avoided are those that would be saved by reducing output to zero and it fails to account for the fact that all expenses -- output- and capacity-related expenses -- would be reduced to zero. In addition, the coefficients underlying the URCS variabilities reflect the characteristics of major Class I railroads with large fixed plants and a wide array of traffic. It has not been established that these coefficients are relevant to the much smaller and simpler OTRR.

⁴² BNSF presented a cross-subsidy analysis in its October 8, 2003 Reply Evidence. *See* BNSF Reply Nar. at III.A-135 to 139. That analysis was done before the Board issued its most recent decision in the *PPL* case, and it was done based on a SARR configuration that has changed significantly since Reply Evidence was filed. The Board should therefore focus on the analysis submitted with this Supplemental Evidence. Otter Tail also submitted cross-subsidy analyses in its June 13, 2003 Opening Evidence and its April 29, 2004 Rebuttal Evidence. Those analyses should be disregarded. First, the traffic group and SARR configuration that are the subject of this Supplemental Evidence are significantly different from those at issue in Otter Tail's Opening and Rebuttal Evidence. Second, Otter Tail's development of operating expenses is based on the string program, which is unreliable. Moreover, the output of the string program cannot be adjusted to account for any changes that the Board makes to the underlying traffic group or SARR configuration.

relevant workpapers in such a way that the cross-subsidy analysis will automatically be updated if the Board modifies the underlying cost and revenue assumptions.⁴³

Table III.A-6
Cross-Subsidy Analysis
Collective Attributable Costs of E/W Traffic Exceed Revenues
(All Figures in Millions of Dollars)

Year	Annual Revenue	Stand-Alone Cost	Difference
2002	\$381.87	\$602.34	(\$220.47)
2003	\$379.92	\$596.39	(\$216.47)
2004	\$388.81	\$620.56	(\$231.75)
2005	\$393.91	\$649.79	(\$255.88)
2006	\$403.72	\$671.91	(\$268.19)
2007	\$396.29	\$687.97	(\$291.68)
2008	\$409.75	\$709.97	(\$300.22)
2009	\$421.98	\$731.90	(\$309.92)
2010	\$437.21	\$757.53	(\$320.33)
2011	\$447.44	\$780.56	(\$333.12)
2012	\$450.83	\$802.52	(\$351.69)
2013	\$458.29	\$824.87	(\$366.58)
2014	\$466.19	\$848.29	(\$382.11)
2015	\$474.19	\$872.52	(\$398.33)
2016	\$482.54	\$897.66	(\$415.12)
2017	\$491.00	\$923.75	(\$432.75)
2018	\$499.35	\$950.28	(\$450.93)
2019	\$507.95	\$977.77	(\$469.82)
2020	\$516.78	\$1,006.23	(\$489.45)
2021	\$524.93	\$1,034.88	(\$509.95)

If the Board’s analysis of the east-west traffic group in this case concludes that the collective attributable costs of that traffic group are not covered by the revenues generated by

⁴³ BNSF created a separate set of calculations in the electronic spreadsheets within each major stand-alone cost area (i.e., construction costs, maintenance of way, crew costs, tons and revenues, locomotive unit miles and car miles, operating expenses, etc.) to compute and summarize the components related to cross subsidy. Therefore, if the Board makes a change to a particular cost category, that change will flow through to both the full OTRR and OTRR West of Campbell summaries. The sections relating to the cross-subsidy calculations are delineated clearly within each of the spreadsheets.

that traffic, then the Board should dismiss the complaint, as it did in *PPL*. No further SAC analysis would be required.

- d. In The Event That The Board Finds The Challenged Rates To Be Unreasonable, The *PPL* Test Should Be Applied At The Rate Prescription Stage To Ensure That Any Rate Prescription Does Not Reflect An Impermissible Cross-Subsidy From The North-South Traffic

The Board's December 13, 2004 decision instructed the parties to "address how we might assure that any rate prescription resulting from the SAC analysis would not reflect an impermissible cross-subsidy." December 13, 2004 Decision at 3. In the event that the Board concludes that the challenged rates are unreasonable and that a reduction in the issue traffic rate is required, the Board must ensure that the level of the *prescribed rate* does not reflect an impermissible subsidy from traffic using only the north-south facilities. This involves determining that the revenues generated by the east-west traffic *after* those revenues are reduced in the rate prescription stage of the analysis are still sufficient to cover the collective attributable costs of that traffic. As described below, the same *PPL* test should be applied in conjunction with the Board's rate reduction methodology to ensure that the OTRR's east-west traffic, including the issue traffic, continues to generate revenues sufficient to cover its costs without a subsidy from the north-south traffic after new rates are prescribed.

The Board in *PPL* did not have to address the question of how it would apply its cross-subsidy test at the rate prescription stage of a SAC analysis because the Board found that *PPL* had not demonstrated that the rates should be reduced at all. However, the logic of the *PPL* test applies with equal validity at the rate prescription stage and the calculations are the same. At both stages, the question is whether a SARR would enter the market to handle the east-west traffic given the revenues assumed to be available from that traffic and the costs that would be

incurred to handle it. To demonstrate the use of the *PPL* test at the rate prescription phase of the analysis, BNSF has developed a simple hypothetical.

In Supplemental Evidence Exhibit III.A-5, BNSF presents a schematic of a SARR that, like the OTRR, has a short, dense north-south segment and a long, lower density east-west segment. The issue traffic is assumed to originate on the north-south segment but moves over the entire east-west segment. Most of the traffic that originates on the north-south segment of the SARR does not use any of the facilities on the east-west segment. Due in part to the high densities on the north-south segment, the traffic using only the north-south segment of the SARR generates revenues that significantly exceed the costs to build the north-south facilities and to operate over those facilities.⁴⁴

In this hypothetical, BNSF assumes that the traffic using the east-west lines, including the issue traffic, also generates sufficient revenues to cover its collective attributable costs, namely the costs to construct the east-west facilities and to provide service for the east-west traffic over those facilities. This hypothetical assumes that at cost and revenue levels found by the Board, the east-west traffic generates \$1700 in revenues to cover collective attributable costs of \$1500. The north-south traffic generates revenues of \$300 to cover costs of \$200. Thus, in the hypothetical set out in Supplemental Evidence Exhibit III.A-5, the traffic using the east-west portion of the SARR is not receiving a cross-subsidy from the north-south traffic under the *PPL* test. The north-south traffic is not being asked to contribute revenues to cover the cost of

⁴⁴ To simplify the hypothetical, BNSF has presented costs and revenues as a single, present-value figure rather than carrying out the analysis over the full DCF period. The costs for the north-south segment are assumed to be the present value of the full costs to construct and operate over the north-south lines over the long term. The costs for the east-west line are assumed to be the present value of the full collective attributable costs of the east-west facilities. The revenues for each segment represent the present value of the assumed revenue stream from traffic using each segment.

facilities that the north-south traffic does not use, since the east-west traffic already generates sufficient revenues to cover those costs.

As illustrated in Supplemental Evidence Exhibit III.A-6, the Board would conclude in this hypothetical example that the challenged rates are unreasonable. There is no cross-subsidy being provided by the traffic using the relatively dense north-south portion of the SARR, and the total revenues generated by the SARR traffic group of \$2000 exceed total SAC costs of \$1700. In this hypothetical, the Board would conclude that the SARR shippers are being charged \$300 more than they should be charged, as SAC revenues exceed SAC costs by \$300. Under the Board's rate reduction methodology, the Board would therefore reduce all rates by 15 percent, including the issue traffic rate, in order to produce total SAC revenues that equal total SAC costs.

Supplemental Evidence Exhibit III.A-7, however, shows that the application of the percent reduction methodology produces revenues for the east-west traffic that now do not cover the collective attributable costs of that traffic. The 15-percent reduction in revenues on the east-west traffic reduces the revenues from \$1700 to \$1445. However, the collective attributable costs of the east-west traffic have not changed, and those costs of \$1500 now exceed the revenues generated by the traffic moving over the east-west lines. The *north-south* traffic, however, still generates revenues in excess of costs. Thus, the only reason that SAC revenues equal SAC costs after the rate reduction is made is that the north-south traffic is subsidizing the east-west traffic. Contrary to the rule against cross-subsidy, the north-south traffic is now assumed to "pay for facilities it does not use." December 13, 2004 Decision at 2. If the challenged rate is reduced by 15 percent, the resulting prescribed rate would "reflect an impermissible cross-subsidy." *Id.* at 4.

In its March 24, 2003 decision in the *PPL* case, the Board recognized that application of the Board's rate reduction methodology could exacerbate a subsidy that already exists. *See PPL II* at 4, note 14. The Board correctly observed that if revenues available from traffic using certain facilities do not cover the cost of those facilities, then any assumed *reduction* in the revenues from that traffic in the rate prescription phase of the SAC analysis would only exacerbate the existing revenue deficiency. The same reasoning applies, however, even if the revenues available from traffic using the facilities *do* cover the costs of those facilities -- a reduction in those revenues through the Board's rate reduction methodology could produce a situation where the revenues no longer cover the cost of the facilities.

In the hypothetical presented above, the SARR would never build the east-west lines if revenues were reduced by 15 percent, since the revenues that would be generated by that traffic would not cover the collective attributable costs of the traffic. To avoid such a result, the prescribed revenues on the east-west lines must be set at a level that will fully cover the costs of those facilities. It would be inconsistent with SAC principles to establish a prescribed rate that the Board considered to be reasonable *only* because it was propped up by a subsidy from traffic that shares virtually no common facilities with the issue traffic.

The Board can use the results of the cross-subsidy calculations described previously to ensure that the revenues on the east-west lines are reduced only to the point that those revenues equal the collective attributable costs of the east-west traffic. Supplemental Evidence Exhibit III.A-7 shows that any reduction in revenues on the traffic using the east-west facilities must be limited to \$200 ($\$1700 - \$200 = \1500), or 12 percent, to avoid a revenue shortfall on the east-west lines of the SARR. Any rate reduction in excess of this amount would violate the

prohibition on cross-subsidy since it would produce a SARR whose east-west lines do not generate revenues that cover their costs.

III.B: Stand-Alone
Railroad

B. STAND-ALONE RAILROAD SYSTEM

1. Route and Mileage

BNSF's October 8, 2003 Reply Evidence accepted the basic route proposed by Otter Tail for the OTRR but corrected several errors Otter Tail made in its calculation of route miles. BNSF Reply Nar. at III.B-1 to 3. BNSF's March 22, 2004 Supplemental Reply Evidence eliminated the segment of the OTRR between Snowden, Montana and Glendive, Montana because BNSF excluded the only traffic that used this segment. BNSF Supp. Reply Nar. at III.B-1. BNSF also excluded certain southbound connections to certain mines included by Otter Tail in the OTRR because BNSF excluded the traffic moving south through Converse that used these connections. The OTRR that was the subject of BNSF's Supplemental Reply Evidence totaled 1,206.74 route miles. *Id.*

As described above in Section III.A, BNSF has added about 85 million tons of coal traffic (base year) to the OTTR's traffic group contained in BNSF's previously filed Supplemental Reply Evidence pursuant to the Board's December 13, 2004 Order. All of this traffic originates at mines from Cordero to Antelope and it all moves south and exits the OTRR at Converse. With the addition of this traffic, it is necessary to add back the southbound mine connections that BNSF excluded in its Supplemental Reply. These additions, which add 3.42 route miles to the OTRR, are identified in Table III.B-1 below.

TABLE III.B-1

Route Miles Added in BNSF's Supplemental Evidence

Subdivision	Addition	Milepost	Route Miles
Orin	South Connection to Cordero	23.67	0.06
Orin	South Connection to Reno	42.94	0.70
Orin	South Connection to Rochelle	49.16	0.06
Orin	South Connection to Nacco	62.23	0.06
Orin	South Connection to Nacco	62.38	2.48
Orin	South Connection to Antelope	64.90	0.06
	TOTAL		3.42

The addition of these southbound connections increases the OTRR route miles from 1,206.74 in BNSF's Supplemental Reply Evidence to 1,210.16 in this Supplemental Evidence.¹

2. Track Miles and Weight of Track.

BNSF's witness Mr. Wheeler has determined the additional capacity required by the OTRR to handle the expanded traffic group that is the subject of this Supplemental Evidence. To assess the additional capacity needs, Mr. Wheeler used the same Rail Traffic Controller (RTC) analysis he used to prepare BNSF's Supplemental Reply Evidence. As BNSF explained in the previous rounds of SAC evidence it has filed, Mr. Wheeler conducted separate RTC analyses of the OTRR's PRB lines and its Glendive-Fargo line. BNSF Reply Nar. at III.B-17 to 34. BNSF accepted Otter Tail's capacity assumptions for the other portions of the OTRR. The traffic that has been added in this Supplemental Evidence uses only the PRB lines of the OTRR. No other lines are affected by the expansion of the OTRR traffic group.

¹ BNSF Supplemental Evidence electronic workpaper "III F Miles_Supp Evidence.xls."

Therefore, for purposes of this Supplemental Evidence, Mr. Wheeler confined his revised RTC analysis to the PRB lines of the OTRR. BNSF's SAC calculations in this Supplemental Evidence use the same capacity assumptions for other lines of the OTRR that were used in BNSF's March 22, 2004 Supplemental Reply Evidence.

To carry out his revised RTC analysis of the OTRR's PRB lines in this Supplemental Evidence, Mr. Wheeler first obtained a revised train list from BNSF's witness Mr. Plum. Mr. Plum developed that revised train list by starting with BNSF's Supplemental Reply train list.² Mr. Plum added to that list the empty trains attributable to the base year movements of the southbound PRB traffic that BNSF previously excluded from the OTRR's traffic group. In light of the increase in traffic, Mr. Plum also recalculated the growth in the number of trains between the base year and peak year. Additionally, Mr. Plum determined that BNSF's Supplemental Reply train list had incorrectly routed a small number of trains (18 trains in the peak period) that were destined to Smithers Lake north from their origin mines through Gillette instead of south to Converse. However, all operating costs and revenues for these movements were calculated correctly in BNSF's Supplemental Reply Evidence, assuming the proper southbound movement, so Mr. Plum corrected this error in the train list for purposes of the Supplemental Evidence. This small change, 18 trains spread out over eleven days, had no impact on the OTRR capacity requirements.

When Mr. Wheeler obtained the revised train list from Mr. Plum, he noticed that the train list contained a number of trains moving through Donkey Creek that were not included in Mr. Wheeler's March 22, 2004 Supplemental Reply RTC analysis of the PRB lines. Upon investigating, he determined that the train list used in BNSF's Supplemental Reply RTC analysis

² BNSF Supp. Reply electronic workpaper "Orin Line Train List v1 (Supplemental).xls."

had inadvertently failed to contain all of the trains corresponding to the traffic that BNSF had added to the OTRR's traffic group in the Supplemental Reply. As noted above in Section III.A of this Narrative, BNSF had added a significant amount of traffic to the OTRR in its Supplemental Reply that corresponded to movements that exited the OTRR at Donkey Creek. As a result of this inadvertent error, BNSF's Supplemental Reply RTC simulation was based on a somewhat understated number of trains that would have run on the OTRR during the peak period. This error in the train list used in the RTC simulation did not affect BNSF's calculations of operating costs or revenues in the Supplemental Reply Evidence. BNSF's Supplemental Reply Evidence included all operating costs for the traffic group that BNSF used in the Supplemental Reply, including the movements that were inadvertently left off of the RTC train list, and it included all revenues for that traffic.³ The effect of this inadvertent error relating to the train list was that the Supplemental Reply RTC model understated slightly the capacity required at the Donkey Creek Yard and on the Campbell subdivision lines.⁴ Mr. Wheeler has used the correct train list here.⁵

Mr. Wheeler used the same operating parameters in this Supplemental Evidence RTC analysis that he used in the Supplemental Reply RTC analysis with two exceptions. First, in the Reply and Supplemental Reply RTC analysis, Mr. Wheeler included in the RTC model real-world random failures experienced on the PRB lines replicated by the OTRR. BNSF Reply Nar. at III.C-50 to 53. However, he reduced the number of real-world failures to account for the

³ BNSF Supp. Reply electronic workpapers "Otter Tail Railroad Coal Traffic Forecast_BNSF Revised.xls" and "LUMs and Carmiles (OTP-BNSF) v3 (Supplemental).xls."

⁴ As noted below, adding the missing traffic required the addition of only two yard tracks at Donkey Creek Yard and one siding on the Campbell subdivision.

⁵ See BNSF Supplemental Evidence Exhibit III.B-1.

lower volume of traffic over the OTRR as compared to the real-world lines. *Id.* at III.C-53, n.63. In this Supplemental Evidence, Mr. Wheeler used the same approach to determine the number of random failures that would occur on the OTRR, taking into account the higher traffic volumes that result from the addition of the southbound PRB traffic.⁶ Second, Mr. Wheeler increased the dwell time for empty trains at Converse Yard from the three hours used in BNSF's Supplemental Reply RTC model to six hours in this Supplemental Evidence for the reasons discussed further below. See Section III.B.3.a.(1) below.

After identifying the train list and the operating parameters, Mr. Wheeler made the following modifications to the OTRR's PRB capacity included in BNSF's Supplemental Reply Evidence as an initial attempt to address the likely impact of the modified traffic group used in this Supplemental Evidence. As BNSF has previously described, the modeling process for the RTC is an iterative process. The revised capacity assumptions set out below became the basis for Mr. Wheeler's first iteration of the RTC analysis.

First, Mr. Wheeler modified the capacity of the Converse Yard to address the substantially higher volume of traffic that would flow through that yard. As a starting point for the new model, Mr. Wheeler determined that the number of yard tracks proposed by Otter Tail in its opening evidence (six in addition to the double tracking on the mainline) would not be sufficient for the additional traffic. Therefore, he constructed one additional 8,000-foot yard track (in addition to the six yard tracks provided by Otter Tail).

Second, with the increased traffic on the southern portion of the OTRR, Mr. Wheeler concluded that the OTRR could not operate efficiently with the 15 miles of single track between MP 45 and 60.1 on the Orin Subdivision over undulating terrain that has grades of more than one

⁶ BNSF Supplemental Evidence electronic workpaper "Orin_Random_Failures.XLS."

percent. Therefore, Mr. Wheeler constructed double track between MP45 and MP51.06. Mr. Wheeler included crossovers at MP49.24 and MP45 to facilitate movement of trains between tracks to reduce delays caused by train meets and passing trains.

Third, the addition of the trains moving through Donkey Creek Yard that were inadvertently omitted from the train list used in BNSF's Supplemental Reply RTC analysis required additional yard capacity at Donkey Creek. Mr. Wheeler increased the capacity of the Donkey Creek yard by adding two 8,000-foot interchange/inspection tracks.⁷

Mr. Wheeler performed his first simulation based upon the foregoing configuration of the PRB portion of the OTRR.⁸ Significant congestion was evident near the Eagle Butte, Dry Fork, Buckskin and Rawhide mines.⁹ This congestion locked up the movement of trains.

Mr. Wheeler therefore developed a second iteration of capacity on the Campbell subdivision segment of the OTRR to address this congestion. Mr. Wheeler added a single siding between MP7.6 and MP9.36 on the Campbell Subdivision to facilitate the fluid movement of loaded and empty trains moving in and out of the mines. When Mr. Wheeler performed a simulation using this revised configuration, the congestion at the mines was reduced. This

⁷ Mr. Wheeler's Supplemental Reply model also contained some track capacity that BNSF's construction cost experts did not include in the OTRR's costs for purposes of BNSF's Supplemental Reply Evidence because the tracks were not used by the traffic included in BNSF's Supplemental Reply traffic group. This consisted of a 2.9 mile stretch of double track on the Reno subdivision. *See* files included in BNSF Supp. Reply electronic workpaper "Orin Supplemental Scenario.ZIP." In addition, the 3.42 miles of track corresponding to the southbound mine connections discussed above were included in Mr. Wheeler's Supplemental Reply RTC model but the cost of those tracks was not included in BNSF's Supplemental Reply evidence because those tracks were not used by the Supplemental Reply traffic group. Mr. Wheeler has not modified the RTC for purposes of this Supplemental Evidence as it relates to those tracks, but as discussed in Section III.F below, BNSF has included the costs for those facilities in this Supplemental Evidence.

⁸ BNSF Supplemental Evidence electronic workpaper "Orin_RTC_Iteration_1.ZIP."

⁹ *Id.*

second iteration also identified significant congestion near MP8 and MP12 on the Orin Subdivision between Caballo Rojo and Cordero (MP17.7 to MP21) where helper activity occurs, and between Reno Junction and Cordero (MP43 to MP 24) on the single track section.¹⁰ As a result, the model locked up.

Mr. Wheeler developed a third iteration of capacity to address the mainline congestion found in the second iteration. Mr. Wheeler added double track between MP8.16 and MP11.94, moved an existing crossover at MP17.83 to MP18.95 and constructed a new crossover at MP18.95 to create a universal crossover. Finally, Mr. Wheeler addressed the single track constraint between MP43 and MP24 by constructing a mainline siding between MP31.94 and MP33.66, identical to that constructed by Otter Tail in its design of the OTRR. When Mr. Wheeler ran the simulation using the RTC model based upon this revised configuration, traffic flowed smoothly to completion.¹¹

Table III.B-2 summarizes the capacity additions resulting from Mr. Wheeler's modeling of the PRB segment of the OTRR.

¹⁰ BNSF Supplemental Evidence electronic workpaper "Orin_RTC_Iteration_2.ZIP."

¹¹ BNSF Supplemental Evidence electronic workpaper "Orin_RTC_Iteration_3.ZIP." Prior to beginning his analysis using the RTC Model, Mr. Wheeler included more additional capacity in the model than that described above for the three iterations. This capacity was put into the model before conducting the analysis in the event that the analysis showed that additional capacity was necessary. However, Mr. Wheeler conducted the analysis without that additional capacity (by "turning off" that capacity in each iteration), and it turned out that the additional capacity was not required. No costs for that capacity have been included in BNSF's SAC calculations.

TABLE III. B-2

Incremental Capacity Requirements for BNSF Modeling of Converse-Gillette Segment of the OTRR

Capacity Iteration	Capacity Improvement	Subdivision	From MP	To MP
1	Remove Converse Yard as designed in BNSF Supplemental Reply Nar. and reconstruct Converse Yard to reflect the number of tracks provided by Otter Tail in its Opening evidence (including double track)	Orin	65.13	70
1	Construct one additional 8,000-foot long yard track in Converse Yard (beyond the number of tracks provided by Otter Tail)	Orin	65.40	67.70
1	Construct double track including crossovers at MP49.24 and MP45	Orin	45	51.06
1	Construct two additional 8,000-foot long yard tracks in Donkey Creek Yard	Black Hills	584.70	586.12
1	Construct double track ¹²	Reno	0	2.9
1	Construct south connections to Cordero (MP 23.67, 0.06 route miles), Reno (connecting to MP 42.94 on the Orin Subdivision and requiring construction of 0.7 route miles on the Reno Subdivision), Rochelle (MP49.16, 0.06 route miles), Nacco (two --one at MP62.23, 0.06 route miles, and one at MP 62.38, 2.48 route miles), and Antelope (MP64.90, 0.06 route miles) ¹³	Orin		
2	Construct additional 8,700-foot long mainline siding	Campbell	7.60	9.36
3	Construct double track (as designed in OTRR opening design)	Orin	8.16	11.94
3	Construct one crossover (two turnouts) at MP18.95 and move existing crossover at MP17.83 to MP18.95 to create universal crossovers at MP18.95	Orin		
3	Construct mainline siding	Orin	31.94	33.66

¹² Mr. Wheeler included these capacity improvements in his modeling of the OTRR in BNSF's Supplemental Reply Evidence, but they were not constructed by BNSF in that Reply Evidence because BNSF excluded the traffic that used them.

¹³ These are the capacity improvements for the route miles added to the OTRR in this Supplemental Reply Evidence, as discussed in Section III.B.1 above.

The revised track configuration for the OTRR is shown in track charts labeled BNSF Supplemental Evidence Exhibit III.B-2. Table III.B-3 below compares the OTRR track miles from BNSF’s Supplemental Reply Evidence and BNSF’s Supplemental Evidence.

TABLE III. B-3
Comparison of
Calculation of Tracks Miles for OTRR in BNSF’s Supplemental Reply and Supplemental Evidence

Type of Track	BNSF Supp. Reply¹⁴	BNSF Supp. Evidence¹⁵	Difference
Mainline Track	1,380.49	1,400.66	20.17
Mine Spurs	6.92	10.34	3.42
Set-Out Track	20.58	20.58	0
Yards ¹⁶	60.48	91.22	30.74
Total	1,468.47	1,522.80	54.33

¹⁴ BNSF Supplemental Reply electronic workpaper “III F OTRR Construction_Supplemental Reply.xls” at worksheet “Segment Data.” The miles for each type of track do not sum to the total miles due to rounding.

¹⁵ BNSF Supplemental Evidence electronic workpaper “III F OTRR Construction_Supp Evidence.xls” at worksheet “Segment Data.”

¹⁶ BNSF categorized all of the track in the Terry Yard, which is made up of an 8,000-foot track and two 600-foot set-out tracks, as yard miles. Otter Tail included the 8,000-foot yard track in its mainline track miles, and the two 600-foot set-out tracks in its set-out track miles.

3. Yards

Otter Tail proposed 11 yard/interchange locations for the OTRR -- Converse, Donkey Creek, Campbell and Dutch, Wyoming; Moran Junction, Terry, Glendive, and Snowden, Montana; Mandan and Fargo, North Dakota; and Benson, Minnesota. OTP Opening Nar. at III.B-8 to 11. BNSF accepted the facilities proposed by Otter Tail for the Campbell, Moran Junction, Terry, and Benson Yards. BNSF Reply Nar. at III.B-36 to 37. BNSF made changes to the facilities at the other yards, eliminated the Snowden Yard (because of BNSF's elimination of the portion of the OTRR line between Glendive and Snowden), and added an interchange connection at the JY Connector near West Fargo, North Dakota. *Id.* at III.B-37 to 51, 52-53. BNSF Supp. Reply Nar. at III.B-11 to 15.

As noted above, additional changes have been made in this Supplemental Evidence to the capacity at yards at Converse and Donkey Creek. In addition, as described below, a number of changes are required in the facilities at the Converse Yard. These modifications are summarized below:

- Converse Yard - this yard should be configured with the number of yard tracks proposed by Otter Tail in its opening evidence and one additional 8,000-foot-long inspection/interchange track, a locomotive service facility, a car repair facility (including bad-order car tracks), and spare car storage tracks.
- Donkey Creek Yard - two 8,000-foot-long inspection/interchange tracks should be added to the facilities for this yard set forth in BNSF's Supplemental Reply Evidence.¹⁷

¹⁷ The OTRR yards at Campbell and Dutch, WY; Moran Junction and Terry, MT; Mandan, ND; and Benson, MN; and the interchange connection added at the JY Connector remain the same as provided by BNSF in its Reply Evidence. BNSF Reply Nar. at III.B-36 to 37, 50-51, 52-53. The OTRR yards at Glendive, MT and Fargo, ND remain the same as provided by BNSF in its Supplemental Reply Evidence. BNSF Supp. Reply Nar. at III.B-12 to 13, 14 to 15.

The changes to the Converse and Donkey Creek Yards are discussed in more detail below.

a. Converse Yard

(1) Inspection/Interchange Tracks

In its opening evidence, Otter Tail envisioned Converse Yard as primarily a point of interchange of coal trains with BNSF. OTP Opening Nar. at III.B-9. To accommodate this interchange, Otter Tail included six tracks at Converse Yard. OTP Opening Exh. III.B-1 at 2. Otter Tail also provided two mainline tracks running adjacent to the yard. *Id.*

On Reply, BNSF substantially reduced the size of Converse Yard since it excluded a significant volume of traffic that Otter Tail assumed would use that yard. BNSF witness Loren Mueller determined that a single 8,500-foot-long interchange track and one mainline track would be adequate at Converse Yard. BNSF Reply Nar. at III.B-48 to 50. BNSF retained this configuration of the Converse Yard in the Supplemental Reply Evidence. BNSF Supp. Reply Nar. at III.B-11. However, BNSF has added a substantial volume of traffic in this Supplemental Evidence that will use the Converse Yard. With the incremental southbound PRB traffic added in this Supplemental Evidence, an average total of 20 empty trains per day (40 trains per day including loaded trains) pass through Converse Yard during the peak week of the peak year.¹⁸ This is a five-fold increase over the average of four empty trains a day that traversed this yard in BNSF's Reply Evidence.¹⁹ The increase in trains passing through Converse Yard in this Supplemental Evidence transforms the yard into a major terminal facility similar to the Donkey

¹⁸ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP" at file "N. CONVERSE - S. CONVERSE.CSV."

¹⁹ BNSF Reply electronic workpaper "Trains Per Day Per Segment Separated v1.xls," worksheet "All Trains."

Creek Yard and Glendive Yard. Indeed, Converse Yard will be the busiest yard on the OTRR, with the average 20 empty trains per day moving through the yard being one-third greater than the average of 15 empty trains per day moving through Donkey Creek Yard during the peak week of the peak year.²⁰ Therefore, Mr. Mueller concluded that the dwell time required for the initial terminal inspection and servicing at Converse Yard should be the same as the six-hour dwell time for this inspection and servicing at Donkey Creek Yard and Glendive Yard set forth in BNSF's Reply Evidence. BNSF Reply Nar. at III.C-28 to 33, 36.

As discussed above, Mr. Wheeler's modeling confirmed that the number of tracks in the Converse Yard proposed by Otter Tail in its opening evidence, with the addition of one 8,000-foot inspection/interchange track, was adequate for the increased level of traffic at Converse Yard in this Supplemental Evidence. *See* Section III.B.2 above. Mr. Mueller reviewed the results of Mr. Wheeler's modeling and agreed that Mr. Wheeler's configuration of the Converse Yard is appropriate. Mr. Mueller advised BNSF's engineering witness Cassie Gouger to use this configuration in designing Converse Yard. Mr. Mueller reviewed the final design of Converse Yard prepared by Ms. Gouger and agreed that it is appropriate. BNSF Supp. Exh. III.B-2, p. 2, sheet 2 of 2.

Additional facilities must also be provided at Converse Yard in order to service efficiently the increased number of empty trains passing through the yard. As discussed below, these include a locomotive service facility, a car repair facility and spare car storage tracks.

²⁰ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP," at file "E. DONKEY CRK - W. DONKEY CRK.CSV." Donkey Creek Yard has more tracks than Converse Yard, however, because of the complexity of the traffic flows into and out of the Donkey Creek Yard.

(2) Locomotive Service Facility

The average of 20 empty trains per day passing through Converse Yard during the peak week of the peak year will have 60 locomotives requiring servicing at the yard (with three locomotives per train).²¹ This is one-third greater than the 45 locomotives that will require servicing each day from the average of 15 empty trains per day at Donkey Creek Yard during the peak week of the peak year.²² Therefore, Mr. Mueller concluded that the locomotive service facility at Converse Yard should duplicate the basic design of the locomotive service facility at the Donkey Creek Yard, but also that it should be increased in size by one-third to handle the increased number of locomotives. Mr. Mueller instructed BNSF's engineering witness Mr. Primm to use this approach in designing the locomotive service facility at Converse Yard. He also instructed Ms. Gouger to use this approach in designing the tracks associated with the locomotive service facility. Mr. Mueller reviewed Mr. Primm's design of the locomotive service facility, and Ms. Gouger's design of the associated trackage at Converse Yard, and agreed that they are appropriate. *Id.*

(3) Car Repair Facility

Based upon the average rate of { } bad-order cars per empty train calculated in BNSF's Reply Evidence²³, an average of approximately 29 bad-order cars per day can be expected to be switched out of the average of 20 empty trains per day at Converse Yard during

²¹ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP" at file "N. CONVERSE - S. CONVERSE.CSV."

²² BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP," at file "E. DONKEY CRK - W. DONKEY CRK.CSV."

²³ BNSF Reply Nar. at III.B-40 to 41, BNSF Reply electronic workpaper "Bad Order Calculation.xls," at worksheet "Bad Order Ratio."

the peak week of the peak year.²⁴ This is approximately one-third more than the average of 22 bad-order cars per day that can be expected from the average of 15 empty trains per day at Donkey Creek Yard during the peak week of the peak year.²⁵ Therefore, Mr. Mueller concluded that the car repair facility at the Converse Yard should duplicate the basic design of the car repair facility at the Donkey Creek Yard set forth in BNSF's Reply Evidence, but also that it should be increased in size by one-third to handle the increased number of bad-order cars per day. Mr. Mueller instructed Mr. Primm to use this approach in designing the car repair facility at the Converse Yard, and he instructed Ms. Gouger to use this approach in designing the tracks associated with the car repair facility. Mr. Mueller reviewed the car repair facility designed by Mr. Primm, and the associated tracks designed by Ms. Gouger, and agreed that they are appropriate. *Id.*

(4) Spare Car Tracks

With one-third more empty trains per day at Converse Yard than at Donkey Creek Yard on average during the peak week of the peak year, Mr. Mueller concluded that the OTRR would require approximately one-third more spare cars at Converse Yard than at Donkey Creek Yard. Thus, he instructed BNSF engineering witness Ms. Gouger to duplicate at Converse Yard the basic design of the 12-track spare car yard at Donkey Creek Yard (as originally provided by OTRR) set forth in BNSF's Reply Evidence, but to increase the size of the spare yard by approximately 33% at Converse Yard. Mr. Mueller reviewed the spare car storage tracks designed by Ms. Gouger at Converse Yard and agreed that they are appropriate. *Id.*

²⁴ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP" at file "N. CONVERSE - S. CONVERSE.CSV."

²⁵ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP," at file "E. DONKEY CRK - W. DONKEY CRK.CSV."

b. Donkey Creek Yard

With the addition of the trains that were inadvertently omitted from the train list used in the Supplemental Reply RTC analysis, an average of 15 empty trains per day pass through Donkey Creek Yard during the peak week of the peak year.²⁶ This is an increase of 4 trains per day over the average of 11 trains per day in this yard in BNSF's Reply Evidence. BNSF Reply Nar at III.B-41.²⁷ As discussed above, based on this increase and the results of his modeling of the PRB Segment of the OTRR, Mr. Wheeler determined that two additional 8,000-foot inspection/interchange tracks should be added to the Donkey Creek Yard. *See* Section III.B.2 above. Mr. Mueller reviewed Mr. Wheeler's recommendation and agreed that it is appropriate. Mr. Mueller instructed Ms. Gouger to add these two inspection/receiving tracks to the Donkey Creek Yard designed by BNSF in its Reply Evidence. Mr. Mueller reviewed Ms. Gouger's design of the Donkey Creek Yard and agreed that it is appropriate. BNSF Supp. Exh. III.B-2, p. 4, sheet 2 of 2

²⁶ BNSF Supplemental Evidence electronic workpaper "SUPPLEMENTAL TRANSIT TIME DATA.ZIP," at file "E. DONKEY CRK - W. DONKEY CRK.CSV."

²⁷ BNSF Reply electronic workpaper "Trains Per Day Per Segment Separated vl.xls," at worksheet "All Trains."

III.C: Operating Plan

C. OPERATING PLAN

BNSF presents in this section of the Supplemental Evidence a revised operating plan for the OTRR based on the traffic group described in Section III.A above.

1. General Parameters

a. Traffic Flow And Interchange Points

Changes in the traffic group used by BNSF in this Supplemental Evidence were described above in Section III.A of this Narrative. Changes in the modeling assumptions used by BNSF for purposes of this Supplemental Evidence were addressed above in Section III.B.2, including changes in the train list used in Mr. Wheeler's RTC analysis. No changes were made in the basic parameters governing the operations of OTRR trains. Moreover, since the traffic that has been included in this Supplemental Evidence in response to the Board's December 13, 2004, Decision only uses the OTRR's PRB lines, no changes were made to the traffic flow assumptions or operating statistics for other parts of the OTRR.

b. Trains And Equipment

(1) Train Sizes and Train Frequency

BNSF obtained train sizes for the coal traffic added in this Supplemental Evidence from the traffic tapes provided by BNSF in discovery. The type of equipment used by the OTRR remains the same, although the number of equipment units must be adjusted to account for the revised level of traffic. The derivation of adjusted equipment requirements is addressed below. Train frequency is affected by the addition of traffic in this Supplemental Evidence. Traffic movements occurring during the peak OTRR traffic period are depicted in Mr. Wheeler's RTC model simulation, described previously.

(2) Switch Locomotives And Crews

In its Supplemental Reply Evidence, BNSF included 16 switch crew personnel and 4 SD-40-2 switch locomotives. These corresponded to a two-person crew 24 hours a day at both Donkey Creek and Glendive with two switch locomotives at each location.¹ As described in Section III.B.3, this Supplemental Evidence reflects a larger number of trains moving through Converse and Donkey Creek yards than did BNSF's prior evidence. To accommodate these increased traffic volumes, BNSF's witness Mr. Mueller has determined that an additional round-the-clock two-person switch crew and one SD-40-2 locomotive would be needed to meet new requirements at Donkey Creek. In addition, two round-the-clock two-person switch crews and three SD-40-2 locomotives would be needed at Converse. As a result, the total switch crew personnel necessary for the Supplemental Evidence traffic group would be 40, and the total number of SD-40-2 switch locomotives would be 8.²

2. Cycle Time

a. BNSF's Development Of Cycle Times

(1) PRB Segment of the OTRR

As discussed above in Section III.B.2., BNSF's witness Mr. Wheeler used the RTC model to evaluate the impact of the changes BNSF made to the OTRR traffic group assumptions in this Supplemental Evidence on OTRR capacity. Mr. Wheeler used the same RTC model simulations to produce modified transit times for trains operating on the PRB lines of the

¹ See BNSF Supp. Reply at III.C-5. These numbers were the same as those provided for by Otter Tail in its opening evidence. *Id.*

² No additional helper locomotives or crew are required to serve the supplemental evidence traffic group. Nor are additional locomotive or crew required for work trains.

OTRR.³ The iterative process used by Mr. Wheeler to model the OTRR operations was described above in Section III.B.2. In carrying out the RTC simulations, Mr. Wheeler sought to ensure that transit times on the simulated lines did not change significantly from the transit times in the Supplemental Reply Evidence. As seen in Mr. Wheeler’s workpapers, the transit times for this segment of the OTRR are consistent with the transit times for this segment generated by Mr. Wheeler’s RTC analysis for BNSF’s Supplemental Reply Evidence.⁴ Mr. Wheeler provided the new transit time data to BNSF’s witness Mr. Plum, who used the data to adjust the OTRR equipment requirements, as discussed below.

(2) Remaining Segments of the OTRR

Since the traffic group changes at issue here did not affect any segments of the OTRR other than the PRB lines, no changes were made to the transit times of other OTRR segments.

b. Locomotives

Additional SD-70MAC locomotives would be required to transport the new coal traffic specified in BNSF’s Supplemental Evidence.⁵ To determine the new locomotive requirements for the OTRR based on the revised traffic levels in this Supplemental Evidence, BNSF used the transit time data for trains operating on the OTRR’s PRB lines produced by Mr. Wheeler’s RTC analysis. Mr. Wheeler’s transit time data were provided to BNSF’s witness Mr. Plum, who

³ BNSF Supplemental Evidence electronic workpaper “OTTER_TAIL_FINAL_TRANSIT_TIMES - C.XLS.” As discussed in Section III.B.2. above, Mr. Wheeler modified the inputs for two of the non-transit time portions of the cycle time – the dwell time at Converse Yard and random failures. The time assumptions for other non-transit time portions of the cycle are as set forth in BNSF’s Reply Evidence. BNSF Reply Nar. at III.C-27 to 53.

⁴ BNSF Supplemental Evidence electronic workpaper “OTTER_TAIL_FINAL_TRANSIT_TIMES - COMPARISON.XLS.”

⁵ No changes were made to non-coal traffic, so no additional non-coal locomotives would be required.

applied the same methodology BNSF used in its Reply Evidence to determine coal locomotive requirements. That methodology is described in detail on pages III.C-63 through III.C-66 of BNSF's October 8, 2003 Reply Narrative. Mr. Plum used the same peaking factor developed in BNSF's October 8, 2003 Reply for purposes of the calculations of equipment requirements in this Supplemental Evidence. BNSF's updated analysis determined that the OTRR would require 37 additional SD-70MAC locomotives, or a total of 204 road locomotives, to serve the OTRR's coal traffic on its peak day.⁶

c. Railcars

The revisions to OTRR's coal traffic in this Supplemental Evidence also required recalculation of OTRR's requirements for coal cars. BNSF recalculated car requirements using the same methodology used in the October 8, 2003 Reply. That methodology is explained on pages III.C-71 through 73 of BNSF's October 8, 2003 Reply narrative. BNSF determined that OTRR will require 1936 coal cars to serve the Supplemental Evidence level of traffic in OTRR's base year (2002), an increase of 213 coal cars over the 1723 coal cars identified by BNSF in its Supplemental Reply Evidence.⁷

⁶ The derivation of base year coal locomotives from the peak year requirement is set out in BNSF Supplemental Evidence electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence).xls" worksheet "2002 SUMMARY." The incremental coal traffic contained in this Supplemental Evidence does not affect the number of helper locomotives required.

⁷ Compare BNSF Supplemental Evidence electronic workpaper "LUMs and Carmiles (OTP-BNSF) (Supp Evidence).xls" worksheet "2002 SUMMARY" with BNSF Supplemental Reply electronic workpaper "LUMs and Carmiles (OTP-BNSF) v3 (Supplemental).xls," worksheet "2002 SUMMARY."

D. OPERATING EXPENSES

1. Locomotives

The number of locomotives required by the OTRR to serve the modified traffic group that is the subject of this Supplemental Evidence was discussed above in Section III.C. Locomotive expenses for these locomotives are addressed below.¹

a. Leasing

BNSF's development of annual lease costs for each locomotive type is addressed in Section III.D.1.a of its October 8, 2003, Reply Evidence. The unit lease costs that BNSF uses to assess locomotive costs do not change as a result of the modification of the OTRR traffic group or the addition of locomotives to serve the expanded traffic group. Table III.D.-1 shows total locomotive lease costs for the OTTR based on the number of locomotives required for the BNSF Supplemental Evidence traffic group.

**Table III.D.1-1
BNSF Locomotive Costs – 2002**

	BNSF Supp. Reply	BNSF Supp. Evidence
1. Number of SD70MAC Locomotives	181	218
2. Annual SD70MAC Unit Lease Cost	{ }	{ }
3. Number of C44-9 Locomotives	27	27
4. Annual C44-9 Unit Lease Cost	{ }	{ }
5. Number of SD40-2 Locomotives	8	12
6. Annual SD40-2 Unit Lease Cost	{ }	{ }
7. Total Locomotive Lease Cost	{ }	{ }

b. Maintenance

BNSF's Supplemental Evidence also recalculates locomotive maintenance costs based on a revised number of LUMs for locomotives required to transport the BNSF

¹ See BNSF Supplemental Evidence electronic workpaper "OPR_EXP_sup Evid.xls," worksheet "Summary."

Supplemental Evidence traffic group. LUMs for SD70MACs used to transport coal increase as a result of the additional coal traffic. The unit costs developed in BNSF's Reply Evidence are applied to the new number of LUMs.² Table III.D.1-2 shows BNSF's Supplemental Evidence costs for locomotive maintenance.

**Table III.D.1-2
BNSF Locomotive Maintenance – 2002**

	BNSF Supp. Reply	BNSF Supp. Evidence
SD70MACs		
1. Locomotive Unit-Miles	18,887,685	20,133,786
2. Cost/LUM	{ }	{ }
3. Annual Maintenance	{ }	{ }
4. Annual Overhaul Charge/Unit	{ }	{ }
5. Total Number of Units	181	218
6. Total Overhauls	{ }	{ }
C44-9s		
7. Locomotive Unit-Miles	3,563,851	3,563,851
8. Cost/LUM	{ }	{ }
9. Annual Maintenance	{ }	{ }
10. Annual Overhaul Charge/Unit	{ }	{ }
11. Total Number of Units	27	27
12. Total Overhauls	{ }	{ }
SD40-2s		
13. Locomotive Unit-Miles	272,880	483,120
14. Cost/LUM	{ }	{ }
15. Annual Maintenance	{ }	{ }
16. Annual Overhaul Charge/Unit	{ }	{ }
17. Total Number of Units	8	12
18. Total Overhauls	{ }	{ }
19. Total Annual Maintenance	\$20,572,110	\$ 24,377,537

² See BNSF Supplemental Evidence electronic workpapers "OPR_EXP_supEvid.xls," and "Revised Locomaint_Otter Tail_supplemental-supEvid.xls," worksheet "Summary."

c. Locomotive Servicing

For purposes of this Supplemental Evidence, BNSF has calculated locomotive servicing costs in the same manner described in the BNSF Reply Evidence modified only to reflect the revised number of LUMs specified in this Supplemental Evidence.³

d. Fuel

BNSF calculates fuel costs in this Supplemental Evidence in the same method described in BNSF’s Reply Evidence.⁴ The following table shows BNSF’s Supplemental Evidence fuel costs.

**Table III.D.1-3
BNSF Fuel Costs**

	BNSF Supp. Reply	BNSF Supp. Evidence
SD70MACs		
1. Locomotive Unit Miles	18,887,685	20,133,786
2. Gallons/Locomotive Unit Mile	3.60	3.60
3. Total Gallons	67,945,451	72,428,105
4. Price/Gallon	\$0.7243	\$0.7243
C44-9s		
6. Locomotive Unit Miles	3,563,851	3,563,851
7. Gallons/Locomotive Unit Mile	2.92	2.92
8. Total Gallons	10,405,835	10,405,835
9. Price/Gallon	\$0.7243	\$0.7243
SD40-2s		
11. Locomotive Unit Miles	272,880	483,120
12. Gallons/Locomotive Unit Mile	3.26	3.26
13. Total Gallons	889,203	1,574,288
14. Price/Gallon	\$0.7243	\$0.7243
Total Fuel Costs	\$57,396,013	\$61,139,144

e. Other

This section intentionally left blank.

³ *Id.*

⁴ See BNSF Supplemental Evidence electronic workpaper “Otter Tail Fuel Corrected_supplemental-supEvid.xls.”

2. Railcars

a. Leasing And Maintenance

BNSF calculates railcar leasing and maintenance costs in this Supplemental Evidence in the same manner described in BNSF’s Reply Evidence. BNSF includes the costs for the revised number of railcars required to handle the BNSF Supplemental Evidence traffic group.⁵ BNSF’s revised railcar count is addressed in Section III.C.2.d above. The following table sets forth BNSF’s Supplemental Evidence railcar leasing and maintenance costs.

**Table III.D.2-1
BNSF Railcar Lease and Maintenance Costs**

	BNSF Supp. Reply	BNSF Supp. Evidence
Car Type		
Coal		
Count of Gondolas	1,477	1,619
Annual Cost per Gondola	{ }	{ }
Cost of Gondolas	{ }	{ }
Count of Open Top Hoppers	246	317
Annual Cost per Hopper	{ }	{ }
Cost of Hoppers	{ }	{ }
Total Coal Cars	{ }	{ }
General Freight		
A – Equipped Box	{ }	{ }
B – Unequipped Box	{ }	{ }
C – Covered Hopper	{ }	{ }
E – Equipped Gondola	{ }	{ }
F – Flat	{ }	{ }
G – Unequipped Gondola	{ }	{ }
H – Unequipped Open Hopper	{ }	{ }
J – Gondola	{ }	{ }
K – Equipped Hopper	{ }	{ }
L – Specialty	{ }	{ }
P – Conventional Intermodal	{ }	{ }

⁵ See BNSF Supplemental Evidence electronic workpaper “Railcar Costs_supplemental_supEvid.xls.”

	BNSF Supp. Reply	BNSF Supp. Evidence
Car Type		
Q – Lighter Weight, Low Profile	{ }	{ }
R - Refrigerator	{ }	{ }
S – Stack Car	{ }	{ }
T – Tank	{ }	{ }
U - Containers	{ }	{ }
V – Vehicular Flat	{ }	{ }
Z – Trailers	{ }	{ }
Total Railcar Costs	{ }	{ }

b. Private Car Allowance

Treatment of private car allowances does not change as a result of changes in the BNSF Supplemental Evidence traffic group.

c. Other

This section intentionally left blank.

3. Personnel

a. Operating Personnel

(1) Staffing Requirements

Section III.D.3.a. of BNSF’s October 8, 2003 Reply Evidence and BNSF’s March 22, 2004 Supplemental Reply Evidence set forth BNSF’s general criticisms of OTRR staffing levels and methodologies. For this Supplemental Evidence, BNSF has modified both T&E personnel and other operating personnel to reflect the modified traffic volume.

BNSF discussed OTRR transportation personnel, other than train crew personnel, in Sections III.D.3.a.(1)(a) and (b) of its Reply Evidence (pages III.D-30 to 37), and Section III.D.3.a.(1) of its Supplemental Reply Evidence (at pages III.D-6 to 7, 9). The substantial increase in the number of trains passing through Converse Yard in this Supplemental Evidence necessitates two modifications of OTRR transportation

personnel, other than train crew personnel. First, BNSF provided five Managers - Train and Locomotive Operations and ten Assistant Managers - Train and Locomotive Operations in the staffing of the OTRR in its Supplemental Reply Evidence. BNSF Supp. Reply Nar. at III.D-9. This staffing included one Assistant Manager - Train and Locomotive Operations at Converse Yard. BNSF Reply Nar. at III.D-33 (this position was included in BNSF's Reply Evidence and not modified by BNSF's Supplemental Reply Evidence). Mr. Mueller concluded that the staffing at Converse Yard should be increased by one Manager - Train and Locomotive Operations and two additional Assistant Managers - Train and Locomotive Operations in order to handle the substantial increase in traffic at this yard in this Supplemental Evidence (for a total of one Manager and three Assistant Managers). These four individuals would provide for full-time coverage at Converse Yard, where they would perform the same functions Mr. Mueller described for these positions at Donkey Creek Yard and Glendive Yard in BNSF's Reply Evidence. *Id.* at III.D-33 to 35. This is equivalent to the staffing that BNSF provided for these positions at OTRR's two other major yards at Donkey Creek and Glendive. *Id.* The addition of these positions at Converse Yard gives OTRR a total of six Managers - Train and Locomotive Operations and 12 Assistant Managers - Train and Locomotive Operations.

Second, Mr. Mueller provided for the assignment of five yardmasters at both the Donkey Creek and Glendive Yards (one position on a full-time basis at each location, for a total of 10 people) in BNSF's Reply Evidence. *Id.* at III.D-35. Mr. Mueller concluded that the substantial increase in traffic at Converse Yard in this Supplemental Evidence necessitated the addition of one full-time yardmaster position (5 total employees) at

Converse Yard. The yardmasters at Converse Yard will perform the same functions Mr. Mueller described for the yardmasters at Donkey Creek Yard and Glendive Yard in BNSF's Reply Evidence. *Id.* at III.D-35 to 36. With the addition of these yardmasters at Converse Yard, OTRR would have a total of three yardmaster positions on a full-time basis (for a total of 15 people).

As to road crews, the coal traffic that BNSF has added to the OTRR traffic group for purposes of this Supplemental Evidence requires additional road crew personnel to staff trains that originate at southern PRB mines and exit the SARR at Converse. BNSF calculated the total crew requirements for this Supplemental Evidence in the same manner and using the same assumptions described in Section III.D.3.a.(1)(c) of BNSF's October 8, 2003 Reply Evidence. Turn and straight crews were assigned as appropriate, and it was optimistically assumed that each turn crew could handle one loaded and one empty train per shift.⁶ A total of 478 road crew personnel are required for the OTRR.

As discussed in Section III.C. above, additional switch crew personnel are required because of the additional coal traffic included in this Supplemental Evidence. A total of 40 switch crew personnel is necessary. No additional helper locomotives are required for the Supplemental Evidence traffic group, so no additional helper crews are needed.

The table below summarizes BNSF's Supplemental Evidence operating personnel.

⁶ The road crew calculations for BNSF's Supplemental Evidence are contained in BNSF Supplemental Evidence electronic workpaper "BNSF Crew Count (SuppEvidence).xls." The timetable data used in the analysis is from Otter Tail Supplemental Opening electronic workpapers contained in "OTTER_TAIL_SUPPLEMENTAL.zip."

**Table III.D.3-1
Comparison of BNSF Supplemental Reply and Supplemental Evidence
Transportation Department Employee Count**

	Position	BNSF Supp. Reply⁷	BNSF Supp. Evidence	Difference
1.	Vice President - Transportation	1	1	-
2.	Administrative Assistant	1	1	-
3.	Director - Safety Rules and Training	1	1	-
4.	Manager - Safety Rules and Training	2	2	-
5.	Director - Operations Control	1	1	-
6.	Manager - Operations Control	5	5	-
7.	Dispatchers	14	14	-
8.	Crew Management	10	10	-
9.	Director - Customer Service	1	1	-
10.	Manager - Customer Service	5	5	-
11.	Director - Train and Locomotive Operations	1	1	-
12.	Manager - Train and Locomotive Operations	5	6	1
13.	Assistant Manager - Train and Locomotive Operations	10	12	2
14.	Yardmasters	10	15	5
15.	Crew Haulers	36	36	-
16.	Train Crew Personnel	515	606	91
17.	Total Transportation Department Personnel	618	717	99

(2) Compensation

BNSF addressed operating personnel compensation in Section III.D.3.a.(2) of its October 8, 2003, Reply Evidence. BNSF has not modified its assumptions about compensation levels for purposes of this Supplemental Evidence. The table below summarizes salary costs for the BNSF supplemental evidence.

⁷ BNSF Supp. Reply Nar. at III.D-9, table III.D.3-1

**Table III.D.3-2
BNSF Supplemental Evidence Operating Personnel Salary Costs**

Position	Personnel	Salary	Total
Vice President - Transportation	1	{ }	{ }
Administrative Assistant	1	{ }	{ }
Director Safety, Rules and Training	1	{ }	{ }
Manager-Safety, Rules and Training	2	{ }	{ }
Director-Operations Control	1	{ }	{ }
Manager-Operations Control	5	{ }	{ }
Dispatchers	14	{ }	{ }
Manager Crew Calling	1	{ }	{ }
Crew Caller	9	{ }	{ }
Yard Masters	15	{ }	{ }
Director-Train and Locomotive Operations	1	{ }	{ }
Manager Train Operations	6	{ }	{ }
Asst. Manager-Train and Locomotive Ops	12	{ }	{ }
Director - Customer Service	1	{ }	{ }
Manager - Customer Service	5	{ }	{ }
Crew Haulers	36	{ }	{ }
Train Crew Personnel	606	{ }	{ }
Total Transportation Department Personnel	717		\$48,429,813

(3) Materials, Supplies And Equipment

BNSF addressed materials, supplies and equipment for operating personnel in Section III.D.3.a.(3) of its October 8, 2003 Reply Evidence (pages III.D-51 to 52). BNSF's Supplemental Reply Evidence included revised calculations that reflected the equipment required for the reduced number of T&E personnel in that evidence. BNSF Supp. Reply Nar. at III.D-11. BNSF's Supplemental Evidence also provides revised calculations that reflects equipment required for the increased number of T&E personnel in this evidence.⁸

b. Non-Operating Personnel

(1) Staffing Requirements

BNSF addressed staffing requirements for non-operating mechanical personnel in Section III.D.3.b.(1) of its October 8, 2003 Reply Evidence (pages III.D-52 to 53) and in its March 22, 2004 Supplemental Reply Evidence (pages III.D-11 to 12). BNSF accepted the mechanical staffing proposed by Otter Tail with three modifications -- (1) the addition of an administrative assistant, (2) the addition of a second mechanical inspector position on a full-time basis at Converse Yard in light of the inspection of empty coal trains at the yard, and (3) a reduction in the mechanical inspector positions at Glendive Yard from one foreman and five carmen on a full-time basis as provided by Otter Tail to one foreman and three carmen on a full-time basis. These latter reductions resulted from BNSF's elimination of the non-coal traffic rerouted by Otter Tail from BNSF's Minot Line to OTRR's Fargo-Glendive Line, which reduced the number of train inspections and

⁸ BNSF Supplemental Evidence electronic workpaper "OPR_EXP_SupEvid.xls," worksheet "Summary."

the number of mechanical inspectors required at Glendive Yard. BNSF Reply Nar. at III.D-52 to 53; BNSF Supp. Reply Nar. at III.D-11 to 12.

As noted above, the staffing for non-operating mechanical personnel in BNSF's Supplemental Reply Evidence included two mechanical inspector positions on a full-time basis at Converse Yard. Mr. Mueller concluded that the substantial increase in the average number of empty trains per day at OTRR's Converse Yard in this Supplemental Evidence necessitated increasing the mechanical inspector positions at this yard by adding a foreman and three mechanical inspector positions on a full-time basis (for a total of a foreman and five mechanical inspector positions on a full-time basis at Converse Yard). Eighteen employees are required to staff these four additional positions on a full-time basis (with 4.5 employees required to staff one position on a full-time basis). This increases the total staffing for mechanical inspector positions at the OTRR's Converse, Donkey Creek and Glendive Yards from 45 employees in BNSF's Supplemental Reply⁹ to 63 employees in this Supplemental Evidence.

With the larger OTRR mechanical work force now assigned at Converse Yard, as well as the additional mechanical facilities staffed by contractors at this location, Mr. Mueller also added a Manager-Mechanical Operations at Converse Yard. This individual would perform the same functions Otter Tail describes for this position at the Donkey Creek and Glendive Yards. OTP Opening Nar. at III-D-23. Mr. Mueller's staffing is also consistent with OTRR's staffing of this position at the Donkey Creek and Glendive Yards. *Id.*

⁹ BNSF Supp. Reply Nar. at III.D-12.

The table below summarizes BNSF's Supplemental Evidence mechanical staffing.

**TABLE III.D.3-3
Comparison of BNSF Supplemental Reply and Supplemental Evidence Mechanical
Department Employee Count**

Position	BNSF Supp. Reply ¹⁰	BNSF Supp. Evidence	Difference
Vice President Engineering and Mechanical	1	1	-
Administrative Assistant	1	1	-
Director - Safety, Rules and Training	1	1	-
Manager - Safety, Rules and Training	2	2	-
Director - Mechanical Operations	1	1	-
Manager - Mechanical Operations	2	3	1
Mechanical Inspectors	45	63	18
Total	53	72	19

(2) Compensation

BNSF addressed non-operating compensation in Section III.D.3.b.(2) of its October 8, 2003 Reply Evidence (page III.D-53). BNSF has not changed the per employee compensation costs for non-operating personnel for purposes of this Supplemental Evidence.

(3) Materials, Supplies And Equipment

Materials, equipment and supplies for mechanical non-operating personnel are included in the consideration of materials, equipment and supplies for operating personnel in Section III.D.3.a.(3) above.

(4) Other

This section intentionally left blank.

¹⁰ BNSF Supp. Reply Nar. at III.D-12, Table III.D.3-3.

c. General and Administrative Expense

(1) Staffing Levels

BNSF set forth its basic critique of OTRR general and administrative (G&A) staffing levels in Section III.D.3.c. of BNSF's October 8, 2003 Reply Evidence (pages III.D-67 to 100) and BNSF's March 22, 2004 Supplemental Reply Evidence (pages III.D-13 to 17). For this Supplemental Evidence, BNSF's witness Mr. McCarren has modified G&A personnel levels and related expenses to reflect the modified traffic volume. The additional 84.5 million tons in 2002, which escalates to more than 90 million additional tons in 2021, will require an additional 5 G&A staff in the marketing, accounting and human resource (HR) areas.

In its March 22, 2004 Supplemental Reply Evidence, BNSF indicated that the addition of approximately 15 million tons of coal would likely justify additional marketing personnel. However, to be conservative, BNSF did not propose any additional marketing staff then. *See* BNSF Supp. Reply at III.D-13. The addition of more than 80 million tons of coal each year requires OTRR to add two additional marketing employees — another coal marketing manager and another coal analyst. The additional coal traffic to be transported on OTRR goes to 26 new destinations owned by 14 customers (excluding subsidiaries). Several of these customers and a significant amount of the traffic are new to OTRR and will require additional marketing efforts. The revised coal marketing staff of 8 in this Supplemental Evidence is consistent with the number BNSF initially projected would be necessary in response to Otter Tail's opening filing. *See* BNSF Reply at III.D-43 to 95.

In addition to marketing personnel, OTRR would need to increase its finance and accounting staff to accommodate \$44.5 million dollars more in coal revenues per year (as

calculated by BNSF). An additional revenue accounting clerk and a senior financial analyst would be needed to handle the additional revenue. In BNSF's Supplemental Evidence, OTRR would receive approximately \$474 million in total annual revenues, an increase of 10% over the \$430 million proposed in the Supplemental Reply Evidence. Recognizing the relationship between finance and accounting staff and revenues, BNSF's proposed 6% staff addition is reasonable.

In its October 8, 2003 Reply Evidence, BNSF determined that the OTRR would require 1430 employees and 13 HR personnel. *See* BNSF Reply at III.D-89 to 90. In its Supplemental Reply Evidence, BNSF reduced that number by one HR Coordinator to reflect OTRR's reduced staffing requirements. In this Supplemental Evidence, that HR Coordinator is returned to the OTRR staff to serve the additional OTRR employees.

The following table compares OTRR's new G&A requirements to those proposed by BNSF in its Supplemental Reply Evidence.

**Table III.D.3-4
Comparison of BNSF Supplemental Reply and Supplemental Evidence G&A
Employee Count**

General & Administrative Department/Position	BNSF's Supp. Reply	BNSF's Supp. Evidence	Difference
1. President's Office			
a. President	1	1	0
b. Administrative Assistant	1	1	0
c. Corporate Secretary	1	1	0
Subtotal – President's Office	3	3	0
2. Finance and Administration			
a. Vice President – Finance	1	1	0
i) Administrative Assistant	1	1	0
b. Vice President – Treasurer	1	1	0
i) Assistant Treasurer	1	1	0
ii) Cash Manager	1	1	0

General & Administrative Department/Position	BNSF's Supp. Reply	BNSF's Supp. Evidence	Difference
c. Controller	1	1	0
i) Assistant Controller - Revenue	1	1	0
ii) Manager - Revenue	1	1	0
iii) Director - Taxes	1	1	0
iv) Director – Financial Reporting	1	1	0
a) Manager Financial Reporting	1	1	0
b) Property Accounting Analyst	1	1	0
c) Sr. Financial Analyst	2	3	1
d) Manager – Accounting	1	1	0
e) Staff Accountant	0	0	0
f) Revenue Accounting Clerk	6	7	1
v) Assistant Controller – Disbursements	1	1	0
a) Manager – Accounts Payable	1	1	0
b) Manager - Payroll	1	1	0
vi) Director Revenue Accountants	1	1	0
vii) Manager Revenue Analysis	1	1	0
a. Revenue Analysts	1	1	0
viii) Manager Car Hire	1	1	0
ix) Disbursement Clerks	1	1	0
x) Payroll Clerks	1	1	0
xi) Manager Misc. Billing	1	1	0
xii) Costs and Budget Clerk	1	1	0
xiii) Secretary	0	0	0
xiv) Director – Internal Audit	1	1	0
Subtotal – Finance and Accounting	33	35	2
4. Information Technology			
a. AVP – Information Technology	1	1	0
i) Director	1	1	0
a) IT Specialists	9	9	0
Subtotal – Information Technology	11	11	0
5. Legal Affairs Department			
a. General Counsel	1	1	0
i) Staff Attorney	1	1	0
ii) Secretary/Paralegal	1	1	0
Subtotal – Legal Affairs Department	3	3	0

General & Administrative Department/Position	BNSF's Supp. Reply	BNSF's Supp. Evidence	Difference
6. Human Resources Department			
a. Vice President – HR	1	1	0
b. AVP – Safety & Claims	1	1	0
c. Director – Safety & Loss Control	1	1	0
i) Manager - Security	1	1	0
d. Director – Recruitment	1	1	0
e. Director – Personnel	1	1	0
i) Human Resources Coordinator	2	3	1
f. Director – Compensation & Benefits	1	1	0
g. Analyst	1	1	0
h. Claims Manager	1	1	0
i. Secretary/Administrative Assistant	1	1	0
Subtotal – Human Resources	12	13	1
6. Marketing Department			
a. Vice President - Marketing	1	1	0
i) Secretary	1	1	0
b. AVP – Coal Marketing	1	1	0
i) Director – Coal Marketing	1	1	0
a) Manager – Coal Marketing	3	4	1
1) Marketing Analyst (Coal)	1	2	1
c. AVP – Merchandise Marketing	1	1	0
i) Director Forest Products	0	0	0
a) Market Mgr. – Forest Products	1	1	0
ii) Director Industrial Products	0	0	0
a) Market Mgr. – Industrial Products	2	2	0
iii) Director Agricultural/Food Products	0	0	0
a) Market Mgr. – Ag/Food Products	1	1	0
iv) Director Intermodal/Automotive	0	0	0
a) Market Mgr – Intermodal/Auto.	1	1	0
v) Director of Marketing Adm.	0	0	0
a) Tariff Administrator	0	0	0
Subtotal – Marketing	14	16	2
7. Materials and Purchasing Department			
a. Director of Purchasing	1	1	0

General & Administrative Department/Position	BNSF's Supp. Reply	BNSF's Supp. Evidence	Difference
i) Manager of Purchasing	2	2	0
Subtotal – Purchasing	3	3	0
8. Real Estate Department			
a. Director of Real Estate	1	1	0
i) Manager of Real Estate	1	1	0
Subtotal – Real Estate	2	2	0
Total – G&A	81	86	5

(2) Compensation

BNSF has not changed its compensation assumptions for G&A personnel from the amounts described in its earlier evidentiary filings. It applies those same assumptions to the larger G&A staff in this Supplemental Evidence.¹¹

(3) Materials, Supplies And Equipment

BNSF has revised the total materials, supplies and equipment costs based on Otter Tail's unit costs and Mr. McCarren's revised personnel levels.¹²

(4) Other General and Administrative Expense

(a) Professional and Outside Services

BNSF has made adjustments to the costs of these services due to the changes in headcount in its Supplemental Evidence.¹³

¹¹ See BNSF Supplemental Evidence electronic workpaper "OPR_EXP_supEvid.xls," Worksheet "Summary."

¹² See *id.*

¹³ See *id.*

(b) Start-Up and Training

Training expenses for T&E employees increase because of the larger crew required to handle the traffic group in the BNSF Supplemental Evidence. Similar adjustments are necessary for hiring additional employees. These additional costs are reflected in BNSF’s Supplemental Evidence.¹⁴ Start-up equity costs have also been updated to reflect the increased capital costs for OTRR in this Supplemental Evidence.¹⁵

d. Other — IT Requirements

OTRR’s capital and operating IT costs have also been adjusted to reflect more personnel in this Supplemental Evidence.¹⁶

4. Maintenance-of-Way

a. Operating Expenses

In this Supplemental Evidence, Mr. Albin has recalculated the OTRR’s MOW costs to reflect the expansion of the SARR traffic group to include certain coal traffic originating at PRB mines south of Cordero and moving south to Converse Yard. Inclusion of that traffic changes the density of several segments of the OTRR from light density to high density. As explained above, it also requires additional facilities, including track and yard facilities. The heavier densities and additional facilities impact the OTRR’s MOW needs, requiring additional internal MOW manpower, and increasing equipment and contract MOW costs. These impacts on MOW costs are discussed below.

¹⁴ See *id.* and BNSF Supplemental Evidence electronic workpaper “T&E_Training_supplemental-supEvid.xls”

¹⁵ See BNSF Supplemental Evidence electronic work paper “BNSF SUPP EVIDENCE EXHIBIT-III-H-1.123,” Worksheet “Construction \$”

¹⁶ See BNSF Supplemental Evidence electronic workpaper “OPR_EXP_supEvid.xls,” Worksheet “Summary.”

Mr. Albin's restatement of OTRR's MOW operating expense is presented in BNSF's Supplemental Exhibit III.D.4-1.¹⁷

(1) Personnel

Mr. Albin concluded, for the reasons discussed below, that the OTRR's MOW personnel would need to increase by eight. As explained in BNSF's October 8, 2003 Reply, Mr. Albin divided OTRR's MOW workforce into six departments: Track, Bridges and Buildings (B&B), Signals, Communications, Electrical and Stores. The Track, Signals, and B&B Departments would be impacted by the changes in tonnage and track miles resulting from the additional traffic included in this Supplemental Evidence. The remaining three departments are not affected significantly by the increase in tonnage and facilities. Mr. Albin determined that since the additional tonnage and facilities have minimal impact on OTRR's communications and electrical systems, no additional communications and electrical workers are required. The additional tonnage also would not have a significant impact on the amount of materials (MOW) required to maintain the OTRR. Accordingly, no additional store workers are necessary.

Mr. Albin also determined that no additional supervisors would be required.

(a) Track

As explained in BNSF's Reply Evidence, Mr. Albin divided the Track Department into eight Roadmaster Districts and assigned crews to each District, taking into account tonnage, miles, track conditions, number of road crossings, turnouts, accessibility and weather conditions not affected by additional tonnage. The Roadmaster

¹⁷ This exhibit also includes the calculations necessary to perform the cross-subsidy analysis.

District that encompasses the affected line segments is based at Donkey Creek and covers 161 route miles.

The increase of tonnage on the Cordero to Converse Jct. segment results in approximately 50 percent increase in tonnage and 20 percent increase in track miles (23 additional main, second main, and siding miles and 31 additional yard track miles) over the Donkey Creek based roadmaster territory. This tonnage increase and the resulting increase in the track miles and turnouts requires an increase in the track MOW workforce. Applying the same standards that Mr. Albin applied to calculate the MOW personnel needs of the OTRR in BNSF's Reply and Supplemental Reply Evidence, Mr. Albin estimated that the OTRR would require an additional two-person welding gang and a three-person district gang, both based at Donkey Creek. The primary duties of these five additional track workers would be to respond and make corrections to the increased number of track indications/outages due to surface/alignment problems, especially at turnouts.

(b) Signals

The increased tonnage results in a substantial increase in the number of signals on the affected line segments. As explained in BNSF's Reply Evidence, Mr. Albin used the standard of one maintainer for every 900 AAR units. BNSF Reply Nar. at III.D-168 to 169. The increase in track capacity between Cordero to Converse and the additional yard facilities at Converse results in an increase in AAR units of 2300, requiring at least two additional signal maintainers based at Donkey Creek.

(c) Bridges and Buildings

The number of B&B workers required to maintain the OTRR is primarily a function of the number and size of buildings and bridge structures and the tonnage on the

line. The increased tonnage and the addition of the fueling facility and mechanical car shop at Converse increases the B&B Department’s workload. Mr. Albin estimated that an additional water service mechanic located at Converse would be required to respond to emergency and day-to-day MOW needs of the Converse facilities.

(d) Workforce Summary

No other MOW staffing levels are affected by the increase in tonnage and facilities on the OTRR. The restated MOW field worker (*i.e.*, non-management) requirements for the OTRR by department are as follows:

**Table III.D.4-1
Comparison of BNSF Supplemental Reply and Supplemental Evidence for MOW
Personnel: Non-Management Field Workers**

Personnel	BNSF Supp. Reply ^[1]	BNSF Supp. Evidence ^[2]	Difference
Track	270	275	5
Bridge and Building	43	44	1
Signal	69	71	2
Telecommunications	37	37	0
Electrical	10	10	0
Purchasing and	8	8	0
Total	437	445	8

^[1] BNSF Supplemental Reply electronic workpaper III D 4 Maintenance of Way_Supplemental Reply.xls at worksheet “Personnel.”

^[2] BNSF Supplemental Evidence electronic workpaper III D 4 Maintenance of Way_Supp Evidence.xls" at worksheet “Personnel.”

OTRR’s total MOW workforce requirements are presented in BNSF Exhibit III.D.4-1.

(2) Equipment

The increase of MOW staff results in a corresponding increase to the equipment needed by OTRR's MOW workforce to perform the required maintenance. Thus, where Mr. Albin added an individual position or gang, he also added the tools and equipment, including vehicles, that that position or gang requires to perform its responsibilities. His restatement of the equipment needs and costs for OTRR MOW forces is presented in BNSF Exhibit III.D.4-1.

(3) Contract Costs

The additional track miles and tonnage also increase all MOW contract costs, since those costs are calculated based on either track miles or tonnage, or both. Mr. Albin used the standards and the unit costs that he relied upon in BNSF's October 8, 2003 Reply Evidence to recalculate the MOW operating expenses for the OTRR to include these additional costs. Those standards are discussed in detail in BNSF's October 8, 2003 Reply Evidence and are not repeated here. The restated contract costs are set out in Table III.D.4-2 and in BNSF Exhibit III.D.4-1.

**Table III.D.4-2
Comparison of BNSF Supplemental Reply and
Supplemental Evidence For Contract Maintenance**

JOB TITLE	BNSF Supp. Reply ^[1]	BNSF Supp. Evidence ^[2]	Difference
Regular and Noxious Weed	{ }	{ }	\$12,177
Ultrasonic Rail Testing	{ }	{ }	\$18,992
Track Geometry Testing	{ }	{ }	\$23,576
Rail Grinding	{ }	{ }	\$103,603
Switch Grinding	{ }	{ }	\$39,168
Crossing Grinding	{ }	{ }	\$0
Yard Cleaning	{ }	{ }	\$33,680
Ditching	{ }	{ }	\$448
Misc. Engineering	{ }	{ }	\$101,724
Bridge Contracting	{ }	{ }	\$0
Building Maintenance	{ }	{ }	\$76,326
Derailment Allowance	{ }	{ }	\$0
Snow Removal Allowance	{ }	{ }	\$0
Casualties	{ }	{ }	\$0
Environmental Remediation	{ }	{ }	\$0
Stabilization	{ }	{ }	\$0
Total Contract Work	\$11,397,161	\$11,806,853	\$409,692

^[1] BNSF Supplemental Reply electronic workpaper III D 4 Maintenance of Way_Supplemental Reply.xls at worksheet "OE Mtce."

^[2] BNSF Supplemental Evidence electronic workpaper III D 4 Maintenance of Way_Supp Evidence.xls" at worksheet "OE Mtce."

b. Capital Costs

The additional tonnage increases the OTRR's capital MOW costs by shortening the useful life of the track structure on the affected line segments. Tie life, for example, has a useful life of 30 years on lighter tonnage line segments, *i.e.*, segments with annual tonnage below 50 MGT. With the addition of the 85 million tons of coal traffic (base

year), the tonnage increases from 5 to 130 MGTs depending on the segment.¹⁸ When the total MGTs per segment increase greater than 50 MGT, tie life decreases by a third, from 30 years to 20 years. This decrease in useful life, in turn, requires tie replacement on the affected lines on a more frequent basis. The increases in capital MOW costs resulting from the additional tonnage are contained in BNSF Exhibit III.D.4-1.

As to program maintenance personnel, Mr. Albin determined that the modifications to the OTRR would not change the number of rail gang employees required to perform normalized maintenance on OTRR, but it would extend the amount of time that each gang works.

As to other normalized maintenance costs, in preparing BNSF's October 8, 2003 Reply, Mr. Albin developed a spreadsheet that incorporates the unit costs and algorithms used to calculate OTRR's capital MOW costs. The spreadsheet automatically generates OTRR's capital MOW costs based on the tonnage, route miles, track miles, and track curvature inputs. Mr. Albin updated the inputs to this spreadsheet to reflect the modifications to OTRR. His restated MOW capital costs are presented in BNSF Exhibit III.D.4-1.

Total MOW costs for the modified OTRR are \$140,736,842¹⁹, of which \$68,299,910 or 48.5 percent are operating expense. This proportion is comparable to the BNSF and other real world railroads. *See* BNSF Reply Table III.D.4-7.

¹⁸ *See* BNSF Supplemental Evidence electronic workpaper "III D 4 Maintenance of Way_Supp Evidence", worksheet "Ton Specific" for updated MGTs per segment.

¹⁹ In the course of preparing this supplemental evidence, BNSF discovered a linking error in its Supplemental Reply Evidence electronic workpaper "III D 4 Maintenance of Way_Supplemental Reply.xls," worksheets "Normal Maintenance," "Normal Track," and "OE Mtce." This error had a minor impact on operating costs.

5. Leased Facilities

This section intentionally left blank.

6. Loss and Damage

Loss and Damage costs have been increased to reflect the higher traffic volume contained in the BNSF Supplemental Evidence traffic group.²⁰

7. Insurance

The OTRR will have higher freight operating expenses as a result of increases in the OTRR traffic. Insurance is calculated as a percentage of total freight operating expenses, so BNSF's Supplemental Evidence reflects a higher insurance cost.²¹

8. Ad Valorem Taxes

BNSF's calculation of ad valorem taxes has been adjusted to reflect the increase in OTRR route miles required to serve the BNSF Supplemental Evidence traffic group.²²

9. Other

This section intentionally left blank.

BNSF has corrected the error in this filing in electronic workpaper "III D 4 Maintenance of Way_Supp Evidence".

²⁰ See BNSF Supplemental Evidence electronic workpaper "OPR_EXP_supEvid.xls."

²¹ *Id.* See also BNSF Reply electronic workpaper "Insurance.xls."

²² See BNSF Supplemental Evidence electronic workpaper "OPR_EXP_supEvid.xls."

III.E: Non-Road Property
Investment

E. NON-ROAD PROPERTY INVESTMENT

Any and all changes made to non-road property investment have been addressed in previous sections.

III.F: Road Property
Investment

F. ROAD PROPERTY INVESTMENT

The traffic group and capacity changes that are the subject of this Supplemental Evidence have been described above and are not repeated here. BNSF has restated the road property investment costs in this Supplemental Evidence to reflect the changes in capacity requirements for yards (Table III.F-1), mainline track (Table III.F-2) and facilities (Table III.F-3) based on the results of the capacity study conducted by BNSF’s witness Wheeler as described in Section III.B.2.

Yards

Yard capacity improvements are identified in Table III.F-1 below.

Table III.F-1 Yard Capacity Improvements			
<u>Segment</u>	<u>Yard</u>	<u>Capacity Improvement</u>	<u>Yard Track Miles</u>
Orin	Converse	New Converse Yard based on the number of yard tracks proposed by Otter Tail plus one track of a minimum 8,000-foot and increased spare car tracks.	27.31
Black Hills	Donkey Creek	Two additional (8,900-foot and 9,200-foot) tracks	3.43
Total Additional Yard Track Miles			30.74

BNSF’s capacity witness Mr. Wheeler proposed through tracks and inspection tracks of 8,000 feet, which is the minimum required to accommodate the train lengths. In designing a yard, the outside track would be 8,000 feet and the other tracks would increase by 300 feet for each adjacent track to provide additional length for the lead tracks. For that reason, the total length of the yard tracks constructed is slightly larger than the length of tracks proposed in the list of capacity improvements set forth in Table III.B-2. The total yard tracks for the new Converse Yard is 27.69 miles; the additional capacity for that yard is 27.31 miles, which is the

new yard minus the 0.38 miles of yard track that were included in the construction costs for the Converse Yard in BNSF’s Supplemental Reply.¹

Mainline Track

Mainline track improvements are identified in Table III.F-2 below.

Table III.F-2					
Mainline Track Capacity Improvements					
Segment	Capacity Improvement	MP	MP	Route Miles	Other Miles
Orin	Crossover (two turnouts)	0.5			
Orin	Double Track (convert switches to Crossovers)	8.16	11.94		3.78
Orin	Crossover	18.95			
Orin	South Connection to Cordero	23.67		0.06	
Orin	Mainline Siding	31.94	33.66		1.72
Orin	South Connection to Reno (the wye track is included in the mainline track on the Reno Subdivision, but a turnout is needed at MP 43.1 on the Orin Line)	43.1			
Orin	Double Track (add two Crossovers)	45.97	51.12		5.15
Orin	South Connection to Rochelle	49.16		0.06	
Orin	Double Track	65.13	70		4.87
Orin	South Connection to Nacco	62.23		0.06	
Orin	South Connection to Nacco (second BNSF owned)	62.38		2.48	
Orin	South Connection to Antelope	64.9		0.06	
Reno	South Wye Track (Connection at Reno)	Orin 42.94		0.7	
Reno	Double Track (add three Crossovers)	0	2.9		2.9
Campbell	Mainline Siding	7.6	9.36		1.76
	Moved switch from MP 42.94 to MP 42.95				-0.01
Total Additional Route and Other Track Miles				3.42	20.77

See BNSF electronic workpaper “III F Capacity Improvements_Supp Evidence.xls” and BNSF Supp. Exh. III.B-2.

The slight discrepancies between the proposed capacity improvements listed in Table III.B-2 and the improvements listed in Table III.F-2 above are attributable to differences between

¹ BNSF’s Supplemental Reply construction costs included only a 1,000 foot bad-order car track and a 1,000 foot spare car track. See III F OTRR Construction_Supplemental Reply.xls” worksheet “Segment Data.”

what was included in the RTC model in the Supplemental Reply and what was actually required to be constructed. The crossover at MP 0.5 was included in the RTC model in BNSF's Supplemental Reply, but the turnouts were not included in the construction costs for the OTRR in BNSF's Supplemental Reply because those turnouts were not needed to provide transportation to the Supplemental Reply traffic group. In this Supplemental Evidence, BNSF Engineering Consultants have added only the two turnouts (*i.e.*, no additional track miles) necessary to handle the traffic at this crossover.

Mr. Wheeler's capacity improvements include two south connections to Reno. For the first connection, the wye track is included in the 2.9 miles of double track on the Reno Subdivision. A turnout has been added at MP 43.1 on the Orin Sub for this connection. The second south connection at Reno requires the construction of 0.7 miles of track on the Reno Subdivision which connects to the Orin Subdivision at MP 42.94 on the Orin line. Because of the construction of this new connection at MP 42.94, the existing switch located at that milepost had to be moved to MP 42.95. This adjustment resulted in a decrease of 0.01 miles of track. In addition to the two new south connections, the RTC model and the construction costs in BNSF's Supplemental Reply already included a North Wye Track on the Reno Subdivision which connects to the Orin Subdivision at MP 42.12 on the Orin line.

Finally, although BNSF witness Wheeler's RTC model calls for double track between MP 45.0 and MP 51.06 on the Orin Subdivision, the actual double track that needs to be added is between MP 45.97 and MP 51.12. This is because the construction costs for the Supplemental Reply included double track to MP 45.97 and thus the only new construction is from that point. The additional 0.06 miles to MP 51.12 is necessary to provide for the distance from the turnout to the clearance point.

Facility Improvements

OTRR facilities also needed to be modified as set out in Table III.F-3 below.

Location	Capacity Improvement
Converse Yard	Six-track, 3-platform fueling facility based on Donkey Creek facility increased by one-third (in lieu of helper locomotive pit)
Converse Yard	Pump House
Converse Yard	Waste Water Treatment Plant
Converse Yard	Rail Car Repair Facility based on Donkey Creek facility increased by one-third
Converse	Yard/crew office increased from 1,608 SF to 3,652 SF to accommodate additional train crews and staff

As discussed in Section III.B.3, BNSF witness Mueller determined that additional facilities would be required at Converse Yard to handle the additional traffic. Based on information provided to him by Mr. Mueller, BNSF's Engineering Consultant James Primm designed new fueling and rail car repair facilities at Converse Yard using as a base for components and unit costs the designs he had used for those facilities at Donkey Creek, but increasing the size of the facilities as directed. The yard/crew office at Converse was based on the existing office design, increasing only the quantities to accommodate the increased staff requirements that Mr. Mueller provided to him.

These changes in track capacity and facilities have a corresponding impact on the final OTRR construction and engineering costs. Accordingly, BNSF's Engineering Consultants Cassie Gouger and Michael Baranowski of FTI Consulting, Inc. have reviewed the evidence submitted in BNSF's October 8, 2003 Reply (as modified by BNSF's March 22, 2004 Errata filing and March 22, 2004 Supplemental Reply Evidence) and adjusted the total OTRR construction costs to account for the required capacity and facility changes. BNSF's Engineering Consultants have not changed the methodology by which they assessed investment levels or

determined the unit costs contained in the Reply Evidence -- only the *quantities* of the various components of the OTRR have been adjusted. These adjustments are discussed below. BNSF's adjusted total costs for road property investment are contained in BNSF's statement of total construction costs in electronic workpaper "III F OTRR Construction_Supp Evidence.xls" and Supp. Exh. III.F-1.

BNSF's total road property investment cost after making the above capacity changes is \$3.91 billion, an increase of \$121.9 million over the total road property investment cost presented in BNSF's March 22, 2004 Supplemental Reply.

1. Land

OTRR acreage requirements are addressed by BNSF in its October 8, 2003 Reply Narrative at pages III.F-3 to 41. Changes to the OTRR acreage requirements that resulted from the elimination of the Snowden to Glendive Line as a result of the exclusion of the re-routed traffic along the Glendive to Fargo line are addressed by BNSF in its March 22, 2004 Supplemental Reply Narrative at pages III.F-2 to 3.

In this Supplemental Evidence, BNSF has not made any adjustments to the total land costs. Although there was a slight increase in total acreage as a result of the additional route miles and additional tracks and/or facilities in the Donkey Creek and Converse Yards, these changes did not affect the total land investment. Because land values in Wyoming are relatively low and the total investment is rounded to the nearest \$100,000, the addition of a few acres had a negligible impact on the total cost. The changes in land quantities can be found in electronic workpaper "OTRR Land Conclusions_Supp Evidence.xls."

2. Roadbed Preparation

BNSF discusses the multiple grading activities involved in preparing a roadbed for the placement of track at pages III.F-46 to 125 of the October 8, 2003 Reply Narrative, and

addresses the restated roadbed expenses to reflect the changed operating requirements of the OTRR due to the elimination of the Snowden to Glendive line in its March 22, 2004 Supplemental Reply at page III.F-3. BNSF's Engineering Consultants have restated roadbed expenses to reflect the modifications to OTRR capacity that were described above. BNSF electronic workpaper "IIIF2 OTRR GRADING_Supp Evidence.xls" contains the restatement of the total quantities and costs for roadbed preparation (including clearing, grubbing, stripping, foundation conditioning, and undercutting), earthworks (including excavation and fine grading), and other small roadbed items (including rip rap, access roads, land for waste quantities, and detours).² Yard drainage and yard access roads were also added at Converse Yard. Donkey Creek quantities were initially used and adjusted to reflect one less inspection track at Converse Yard. These quantities and calculations can be found in BNSF electronic workpaper "IIIF2 OTRR GRADING_Supp Evidence.xls" worksheet "Converse." All roadbed changes are reflected in BNSF's restatement of total construction investment, "III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost." A summary of the earthwork costs is included in Supp. Exh. III.F-2.

3. Track Construction

The various materials that comprise the track structure of the OTRR, as well as Otter Tail's understatement of track construction costs, are discussed in detail in BNSF's October 8, 2003 Reply Evidence at pages III.F-126 to 162. The adjustments made to those costs in BNSF's Supplemental Reply are discussed in BNSF's March 22, 2004 Supplemental Reply Narrative at pages III.F-4 to 7. Because the necessary quantity of components such as ballast, subballast, ties, rail, welds, tie plates, clips, spikes, and anchors depends on the total number of track miles, the

² Culverts are discussed in Section III.F.5 Bridges consistent with the inclusion of bridges and culverts in the same account in the DCF.

addition of 23.59 miles of double tracking, sidings, and connections on the Orin, Reno and Campbell Subdivisions, together with the increase of 30.74 miles of yard tracks in the Donkey Creek and Converse Yards have impacted the final quantities of these track materials. These OTRR changes also have an effect on the final count of turnouts, switch heaters, rail lubricators, and yards of geotextile fabric needed to construct the OTRR, as well as the costs associated with transportation and installation. A description of the necessary changes is set out below. BNSF's restated total cost for track materials, transportation, and installation is \$957.8, an increase of \$40.1 million over the total cost stated in BNSF's Supplemental Reply.

BNSF Engineering Consultants have determined that the increase in traffic volumes has not affected the track specifications contained in BNSF's Reply Evidence (*e.g.*, weight of rail, depth of ballast and subballast). However, as described in Section III.D.4, BNSF has accounted for the increased MOW costs that would result from running higher traffic volumes over these tracks.

The adjusted quantities of OTRR track are developed in BNSF's electronic workpapers "III F track count_Supp Evidence.xls" and "III F OTRR Construction_Supp Evidence.xls" worksheet "Quantities." Electronic workpaper "III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost" states revised total construction costs reflecting the changes in all aspects of track construction, as described below.

a. Geotextile Fabric

BNSF's discussion of geotextile fabric placement along the OTRR is contained in BNSF's October 8, 2003 Reply Narrative at pages III.F-129 to 133 and BNSF's March 22, 2004 Supplemental Reply Narrative at page III.F-5. The increase in the number of turnouts resulting from the construction of additional double track, yard track, sidings and crossovers means a corresponding increase in the amount of geotextiles to be used in OTRR construction.

b. Ballast and Subballast

OTRR ballast and subballast requirements are discussed at pages III.F-133 to 139 of BNSF's October 8, 2003 Reply Narrative and in its March 22, 2004 Supplemental Reply Narrative at page III.F-5. The amount of ballast and subballast required in yards and along the mainline is based on track miles and, therefore, is directly affected by the addition of 54.33 miles of mainline and yard tracks.

c. Ties

BNSF's Engineering Consultants discuss specifications and costs for standard ties and transition ties at pages III.F-140 to 142 of the October 8, 2003 Reply Narrative. Subsequent changes made in BNSF's Reply Evidence are addressed in its March 22, 2004 Supplemental Reply Narrative at page III.F-5. In this Supplemental Evidence, BNSF Engineering Consultants have adjusted the total number of ties to reflect the increase in total track miles needed to accommodate the traffic moving south of Cordero, as well as the increased yard tracks, and the siding on the Campbell subdivision. These capacity requirements mean an increase in the total number of Grade 5 mainline ties, Grade 3 ties placed in yards, and transition ties required for construction of the OTRR.

d. Rail

BNSF's discussion of rail specifications and costs appears at pages III.F-142 to 150 of the October 8, 2003 Reply Narrative and subsequent changes are addressed in its March 22, 2004 Supplemental Reply Narrative at pages III.F-5 to 6. The total quantity of rail required for the OTRR mainline has been adjusted based on the restatement of track miles to reflect the construction of 23.59 miles of double track and mainline sidings. Similarly, the quantities of rail for OTRR yards have been increased to account for the additional yard tracks required in the Converse and Donkey Creek Yards. As described in Section III.B.3, BNSF's Engineering

Consultants have redesigned Converse Yard to include 27.69 track miles (an addition of 27.31 tracks miles from BNSF's original design) and have included 3.43 additional miles of yard tracks at Donkey Creek.³ These mileages include the additional tracks for the six-track fueling facility and three-track car repair shop constructed at Converse Yard.⁴

e. Welds

BNSF's Engineering Consultants discuss the placement and cost of plant welds, field welds and compromise joints at pages III.F-150 to 152 of the BNSF October 8, 2003 Reply Narrative, and subsequent changes made to the quantities of these items as a result of the elimination of the Glendive traffic are discussed in BNSF's March 22, 2004 Supplemental Reply Narrative at page III.F-6. The increase in total track miles discussed above results in a corresponding increase in plant welds, field welds and compromise joints.

f. Switches/Turnouts

BNSF's discussion of the OTRR specifications and investment in turnouts occurs at pages III.F-153 to 157 of the October 8, 2003 Reply Narrative. The subsequent changes made in BNSF's Supplemental Reply are discussed in BNSF's March 22, 2004 Supplemental Reply Narrative at page III.F-6. The yard and track changes discussed above require an additional twenty-two No. 20 turnouts, twenty-eight No. 15 turnouts and eighty-one No. 11 turnouts.⁵ BNSF's Engineering Consultants also have increased the number of turnout components (such as switch heaters, insulated joints and low target switch stands) associated with the increased

³ BNSF electronic workpapers "III F Capacity Improvements_Supp Evidence.xls" and III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost."

⁴ BNSF electronic workpaper "III F OTRR Construction_Supp Evidence.xls" worksheet "Segment Data."

⁵ BNSF electronic workpaper "III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost."

number of turnouts required for the double track segments, new crossovers, and increased yard tracks.

g. Other Track Materials (OTM)

The OTRR requirements for additional track materials, including rail lubricators, tie plates, anchors, spikes, derails and wheel stops, are discussed at pages III.F-157 to 162 of the BNSF October 8, 2003 Reply Narrative. The subsequent changes are discussed in BNSF's March 22, 2004 Supplemental Reply at page III.F-6. While the total number of rail lubricators remains the same, there is a change in the relative number of double track and single track lubricators to reflect the new double track segments. The final quantities of all other OTM components, except switch point derails, are increased to account for the restated track miles. The switch point derail quantity was decreased due to the changes at Converse Yard.

h. Materials Transportation

The transportation of materials from suppliers to the OTRR railheads is discussed at pages III.F-162 to 166 of the October 8, 2003 Reply Narrative. The adjusted costs for transportation as a result of the removal of the Snowden to Glendive line in BNSF's Supplemental Reply are discussed at page III.F-6 of BNSF's March 22, 2004 Supplemental Reply Narrative. The requirement of additional track materials to construct the double track, sidings and yard tracks discussed above means an increase in transportation costs as well. The adjusted costs for transportation appear in electronic workpaper "III F OTRR Construction _Supp Evidence.xls" worksheet "Transportation."

i. Track Labor and Equipment

Track labor requirements and cost are discussed at pages III.F-166 to 168 of BNSF's October 8, 2003 Reply Narrative. Subsequent changes are discussed in BNSF's March 22, 2004 Supplemental Reply Narrative at page III.F-7. Because the cost of basic installation is a per mile

cost, the increase in total track miles resulting from the inclusion of south-bound traffic from mines south of Cordero and the capacity requirements resulting from the correction of the number of trains included in the RTC model discussed above yield a corresponding increase in total track labor costs, which has been accounted for in BNSF's total construction investment.

4. Tunnels

There are no tunnels on the OTRR.

5. Bridges and Culverts

BNSF's Engineering Consultants address bridge investment requirements, as well as the shortcomings of Otter Tail's bridge evidence, at pages III.F-169 to 200 of the October 8, 2003 BNSF Reply Narrative. The reduction in the number of bridges and bridge components due to the elimination of the Snowden branch is discussed in BNSF's March 22, 2004 Supplemental Reply at pages III.F-7 to 8. The capacity improvements addressed in this Supplemental Evidence do not affect any bridges on the OTRR. Therefore, BNSF Engineering Consultants have made no changes to bridge costs in the restatement of road property investment costs.

There were some additional increases in the quantity and cost for culverts. Restated culvert quantities are contained in electronic workpaper "III F OTRR Construction_Supp.Evidence.xls." worksheet "Culvert List." The total increase in cost for culverts is included in "III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost" and in Supp. Exh. III.F-1.

6. Signals and Communications

BNSF discusses the components of a system needed to provide essential communications along the OTRR at pages III.F-201 to 221 of the October 8, 2003 Reply Narrative. The major components include the Centralized Traffic Control (CTC) system, Failed Equipment Detectors (FEDs), and the Microwave and Land Mobile Radio (LMR) systems. The reduced quantities of

these systems' components due to the elimination of the Snowden line are discussed in BNSF's March 22, 2004 Supplemental Reply Narrative at page III.F-9.

The increased double track and sidings needed to accommodate inclusion of the 85 million tons of traffic from mines south of Cordero result in a corresponding increase in signal and communications costs for the OTRR. Although no additional microwave or LMR towers are required to provide communications coverage to the added track, the total cost for the CTC and microwave systems must be increased to accommodate the additional control points on the added turnouts and crossovers. The larger train and MOW crews also result in additional requirements for radio communications.

The restated quantities for affected components of the OTRR signal and communications systems are included in BNSF's restatement of construction costs, contained in electronic workpaper "III F OTRR Construction_Supp Evidence.xls" worksheet "Total Cost."

7. Buildings and Facilities

BNSF discusses buildings (including headquarters, office, MOW, crew and yard buildings) and facilities (including fueling facilities, and locomotive and car repair shops) at pages III.F-221 to 244 of the October 8, 2003 Reply Narrative. The subsequent changes to buildings and facilities due to elimination of the Snowden-Glendive traffic is set forth in BNSF's March 22, 2004 Supplemental Reply Narrative at pages III.F-9 to 11.

As discussed in Section III.B.3, the inclusion of traffic moving from mines south of Cordero has an impact on the OTRR facilities at Converse Yard. First, the large increase in traffic at Converse Yard requires construction of a six-track, three-platform fueling facility in place of the helper locomotive pit that BNSF had included at Converse Yard in its October 8, 2003 Reply Evidence. In accordance with instructions from BNSF witness Mueller, Mr. Primm relied on the design for Donkey Creek, increasing it to include a third platform. The components

and unit costs remained the same and only the quantities were adjusted. The facility designed by Mr. Primm includes a pump house and waste water treatment plant and the necessary support facilities. For the waste water treatment plant, Mr. Primm replicated the cost of the Donkey Creek plant.

As explained in Section III.B.3, BNSF witnesses also determined that the OTRR would require a railcar repair facility at Converse Yard that was approximately one-third larger than the one at Donkey Creek. Therefore, Mr. Primm designed the new facility based on the railcar facility included in BNSF's Reply Evidence for Donkey Creek, but increased the size by 7,500 square feet in order to enclose a third repair track. The increased staffing required at Converse as discussed in Section III.D.3(a) also required an increase in the size of the Converse yard office. Mr. Primm was instructed to design a yard/crew office large enough to accommodate the additional crew and staff, as determined by BNSF operating witness Mueller. Accordingly, Mr. Primm used the design, components and unit costs from the existing yard/crew office, but increased the size from 1,608 square feet to 3,652 square feet.

An explanation of the changes in buildings and facilities appears in BNSF electronic workpaper "III F 7 Facilities_Supp Evidence.xls."⁶

8. Public Improvements

BNSF discusses public improvements, including fences, signs, and crossings, at pages III.F-244 to 251 of the October 8, 2003 Reply Narrative, and the changes to those quantities and costs in BNSF's March 22, 2004 Supplemental Reply at page III.F-11. The total quantity of fences has changed as a result of the increased route miles. The number of roadway signs has been restated to account for the increase in double track and sidings. The restated quantity is

⁶ The schematics for the fueling facility and railcar repair shop at Converse are included in BNSF electronic workpaper "III F Converse Yard Facilities.pdf."

developed in BNSF electronic workpaper “III F OTRR Construction_Supp Evidence.xls” worksheet “Segment Data.” The level of investment required for OTRR crossings is increased slightly as a result of the double tracking and siding on the Orin Subdivision. A restatement of that investment can be found in electronic workpaper “III F 8 Crossings_Supp Evidence.xls.”

These adjustments in public improvement quantities are reflected in BNSF’s restatement of the total costs for OTRR construction, contained in electronic workpaper “III F OTRR Construction_Supp Evidence.xls” worksheet “Total Cost.”

9. Mobilization

BNSF’s discussion of the costs for mobilizing and demobilizing laborers and equipment involved in the construction of the OTRR occurs at pages III.F-251 to 252 of the October 8, 2003 Reply Narrative. There, BNSF applied a 3.5 percent additive to the total construction costs (excluding land and track materials). As it did in its March 22, 2004 Supplemental Reply, BNSF applies this same percentage to the restated construction costs to determine mobilization and demobilization costs for the OTRR. The revised total costs are contained in electronic workpaper “III F OTRR Construction_Supp Evidence.xls” worksheet “Total Cost.”

10. Engineering

BNSF discusses the level of engineering services required to plan, design and oversee construction of the OTRR at pages III.F-252 to 269 of the October 8, 2003 Reply Narrative. The total cost of engineering services includes basic design, preliminary engineering and construction management costs. In its March 22, 2004 Supplemental Reply, BNSF used the same percentage used in its October 8, 2003 Reply to determine the design and preliminary engineering costs and recalculated the construction management cost to reflect certain assumptions about the size of the OTRR construction project (*e.g.*, route miles, the number of bridges, culverts and excavation quantities). BNSF Engineering Consultants followed the same procedures in developing the

engineering costs in this Supplemental Evidence. All engineering cost adjustments are contained in electronic workpaper “III F 10 Engineering_Supp Evidence.xls.”

11. Contingencies

BNSF’s discussion of its ten percent contingency additive to construction costs to address unplanned occurrences during the construction of the OTRR occurs at pages III.F-267 to 269 of the October 8, 2003 Reply Narrative. No adjustments are necessary to this percentage, which was applied to the restated construction costs in BNSF’s Supplemental Reply, as stated in its March 22, 2004 Supplemental Reply Narrative at page III.F-13, and is also applied to the restated costs in this filing, as shown in electronic workpaper “III F OTRR Construction_Supp Evidence.xls” worksheet “Total Cost.”

Table III.F-4 below summarizes the net changes in BNSF road property investment costs attributable to the capacity changes reflected in this Supplemental Evidence.

BNSF Table III.F-4 BNSF Supplemental Evidence Road Property Investment Cost Net Changes from BNSF Supplemental Reply Costs	
Road Property Investment Account	Net Change (\$000)
1. Land	\$0
2. Roadbed Preparation	\$36,133
3. Track	\$40,087
4. Tunnels	\$0
5. Bridges and Culverts	\$122
6. Signals and Communications	\$2,538
7. Buildings and Facilities	\$18,859
8. Public Improvements	\$157
9. Mobilization/Demobilization	\$2,319
10. Engineering	\$10,627
11. Contingencies	\$11,084
TOTAL NET CHANGE	\$121,927

III.G: Discounted Cash
Flow Analysis

G. DISCOUNTED CASH FLOW ANALYSIS

BNSF described its discounted cash flow methodologies in Section III.G of its October 8, 2003 Reply Evidence. While there is no change to this section as a result of the changes to the traffic group presented in this Supplemental Evidence, BNSF has, consistent with prior Board precedent, updated the discounted cash flow to reflect actual values in place of forecasted values where possible. BNSF has also substituted a more current version of the DRI-WEFA forecast of the RCAF-U for the now outdated forecast underlying its Supplemental Reply.¹

1. Cost of Capital

BNSF updated the cost of capital calculations in the discounted cash flow model to use the Board-determined cost of equity for 2003. Because both the debt component and the preferred equity component of the cost of capital were computed by Otter Tail on Opening as averages weighted by expenditures during the OTRR three year construction period and then held constant over the 20-year DCF period, no updating of these cost of capital components is warranted.

2. Inflation Indices

a. Operating Expenses

BNSF updated the RCAF-U index values in the discounted cash flow to reflect actual values through the first quarter of 2005. BNSF also updated the DRI-WEFA forecast of the RCAF-U to reflect the December 2004 forecast in place of the June 2003 forecast used in its

¹ Failure to update forecasted index values in the discounted cash flow when updating the model to use actual index values in place of earlier forecasts would produce an inconsistency between the actual and forecasted values that could impact significantly the discounted cash flow model results. This is because forecasts are based, in significant part, on recent historical trends. If the new actual historical index values exhibit trends that differ from those upon which the original forecast was based, the original forecast would be wrong.

Supplemental Reply.² In addition, BNSF determined that in the “Asset Inflation” tab of the DCF, the formulas for the AAR inflation indexes for quarters 21 through 80 of the DCF period incorrectly applied a factor to convert what were already quarterly index values to a quarterly basis, thereby understating the AAR asset inflation in the DCF. BNSF has corrected the error.

b. Road Property Assets Other than Land

BNSF has updated the AAR indexes used to forecast future changes in road asset values to include index values for 2003 and 2004.³ BNSF also revised its calculation of the forecast of future road property asset inflation to be based on the average of the most current five year period.

c. Land

BNSF did not change the inflation index for land.

² DRI WEFA changed its name to Global Insight. A copy of the December Global Insight Forecast is included as BNSF Supplemental Evidence electronic workpaper “III G DRI-WEFA RCAF Forecast Dec 2004.pdf”.

³ See BNSF Supplemental Evidence electronic workpaper “III G AAR Indices.pdf”.

III.H: Results of SAC
Analysis

H. RESULTS OF SAC ANALYSIS

BNSF has restated the DCF results to reflect the revisions in costs and revenues described above. The new results are set forth in Supplemental Evidence Exhibit III.H-1. The methodologies used remain the same as those described in Section III.H of BNSF's October 8, 2003 Reply Evidence. The Table below summarizes the DCF results for BNSF's Supplemental Evidence.

Table III.H-1
Summary Of Stand-Alone Cost Results
(All Figures In Millions Of Dollars)

Year	Annual Revenue	Stand-Alone Cost	Difference
2002	\$474.90	\$742.30	(\$267.50)
2003	\$472.00	\$734.70	(\$262.60)
2004	\$480.00	\$758.40	(\$278.40)
2005	\$485.60	\$796.00	(\$310.40)
2006	\$496.70	\$820.90	(\$324.20)
2007	\$489.30	\$841.50	(\$352.20)
2008	\$504.40	\$865.60	(\$361.10)
2009	\$518.80	\$890.80	(\$372.00)
2010	\$535.90	\$919.00	(\$383.20)
2011	\$547.90	\$945.80	(\$397.90)
2012	\$553.00	\$972.40	(\$419.40)
2013	\$561.40	\$999.30	(\$437.90)
2014	\$565.90	\$1,027.50	(\$461.60)
2015	\$575.60	\$1,056.60	(\$481.00)
2016	\$585.80	\$1,086.80	(\$501.00)
2017	\$596.20	\$1,118.00	(\$521.80)
2018	\$606.40	\$1,149.80	(\$543.40)
2019	\$616.90	\$1,182.60	(\$565.80)
2020	\$627.60	\$1,216.40	(\$588.80)
2021	\$637.00	\$1,250.80	(\$613.80)

IV: Witness Qualifications
and Verifications

IV. WITNESS VERIFICATIONS

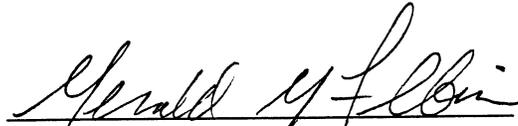
1. Gerald G. Albin

Gerald G. Albin is a Principal and Vice President of TranSystems Corporation, a civil engineering company located in Denver, Colorado. His business address is 4949 S. Syracuse, Suite 620, Denver, CO 80237. Mr. Albin's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Albin sponsors evidence relating to maintenance-of-way costs set forth in Section III.D.4. To the extent that changes have been made to the evidence presented in those Sections in this Supplemental Evidence, Mr. Albin sponsors those changes. Mr. Albin has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 18, 2005


Gerald G. Albin

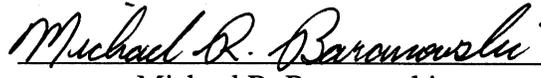
2. Michael R. Baranowski

Michael R. Baranowski is a Senior Managing Director at FTI Consulting, Inc., an economic and financial consulting firm. His business address is 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Baranowski's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Baranowski sponsored evidence relating to Section III.F.2 Roadbed Preparation, III.F.8 Public Improvements, and the Board's DCF model and SAC calculations contained in Sections III.G and III.H. To the extent that changes have been made to the evidence presented in those Sections in this Supplemental Evidence, Mr. Baranowski sponsors those changes. In addition, Mr. Baranowski is also sponsoring evidence relating to the cross-subsidy analysis in Section III.A of the Supplemental Evidence. Mr. Baranowski has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 28, 2005


Michael R. Baranowski

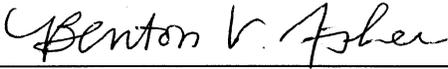
3. Benton V. Fisher

Benton V. Fisher is a Managing Director at FTI Consulting, Inc., an economic and financial consulting firm with offices located at 1201 Eye Street, N.W., Suite 400, Washington, DC, 20005. Mr. Fisher's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Fisher sponsored evidence relating to BNSF's variable costs for the issue movement as well as evidence relating to excluded non-coal traffic, revenue divisions and T&E salaries for the OTRR. His evidence was incorporated in Sections III.A. and III.D.3, of the Narrative. To the extent that changes have been made to the evidence presented in those Sections in the Supplemental Evidence, Mr. Fisher sponsors those changes. Additionally, Mr. Fisher is sponsoring evidence incorporated in Sections III.D.5 through III.D.9 of the Supplemental Evidence. Mr. Fisher has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 28, 2005



Benton V. Fisher

4. Cassie M. Gouger, P.E.

Cassie M. Gouger is a Manager at FTI Consulting, Inc., an economic and financial consulting firm with offices located at 1201 Eye Street, N.W., Suite 400, Washington, DC, 20005. Ms. Gouger is a registered professional civil engineer in the states of Colorado, Illinois, and Wyoming. She has over eleven years experience working on track and yard construction projects for Class 1 railroads, and has assisted in the preparation of engineering testimony on numerous cases before the STB.

Ms. Gouger received a Bachelor of Science Degree in Civil Engineering from Purdue University in 1993, during which she worked for the major national engineering firm of DeLeuw Cather. In 1993 she joined DeLeuw Cather full-time and served as a Construction Inspector of an 18-mile railroad construction project as well as a Design Engineer on railroad capacity improvements. In 1996, Ms Gouger became a Project Manager and Railroad Engineer for TranSystems, Inc. where she designed over 110 miles of new single, double and triple mainline and spur tracks for Class I railroads, including over 20 miles of the Orin Line. She has also assisted in the design of yards and bridges, as well as track upgrading projects. She continued her work as a Transportation Engineer with Felsburg, Holt and Ullevig from 2001 to 2004, where she managed the design team in construction plans, specifications and construction management. She has recently joined FTI where she utilizes her engineering background to provide input for stand-alone cost construction studies.

Ms. Gouger is sponsoring the adjustments in construction costs in Section III.F (except for facilities in Section III.F.7) related to the capacity improvements described in BNSF's Supplemental Evidence. She is also sponsoring the revised track schematics related to the changes in tons and track miles between BNSF's March 22, 2004 Supplemental Reply and this Supplemental Evidence.

Ms. Gouger has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 18, 2005

Cassie M. Gouger
Cassie M. Gouger

5. John C. Klick

John C. Klick is the Executive Vice President of the economic and financial consulting firm of FTI Consulting, Inc. The firm's offices are located at 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Klick's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Klick sponsored evidence regarding flaws in Otter Tail's volume and revenue assumptions, Otter Tail's cross-over revenue divisions methodologies and revenue forecasts. He also sponsored evidence regarding BNSF's modified volume and revenue assumptions, including testimony regarding the development and implementation of BNSF's proposed density adjusted revenue allocation ("DARA") procedure and interpreted the results of his DARA calculations. That evidence was incorporated in Section III.A of the Narrative. To the extent that changes have been made to the evidence presented in that Section in the Supplemental Evidence, Mr. Klick sponsors those changes. In addition, Mr. Klick is also sponsoring evidence relating to the cross-subsidy analysis in Section III.A of the Supplemental Evidence. Mr. Klick has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 18, 2005



John C. Klick

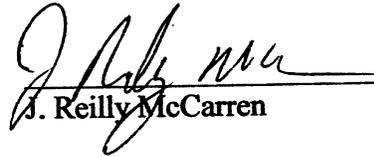
6. J. Reilly McCarren

J. Reilly McCarren is a railroad executive and engineer. His business address is 330 Abbotsford Road Kenilworth, Illinois 60043-1105. Mr. McCarren's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. McCarren sponsored evidence relating to factors affecting General and Administrative expenses, contained in Section III.D.3.c. of the Narrative. To the extent that changes have been made to the evidence presented in that Section in the Supplemental Evidence, Mr. McCarren sponsors those changes. Mr. McCarren has signed a verification of the truth of the statements contained therein. A copy of Mr. McCarren's verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 11, 2005



J. Reilly McCarren

7. Loren E. Mueller

Loren E. Mueller is a railroad transportation consultant. His business address is 614 Regency Crossing, Southlake, TX 76092. Mr. Mueller's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Mueller sponsored evidence relating to operations of the stand-alone railroad. His evidence was incorporated in Sections III.B.3, III.C and III.D.3 of the Narrative. To the extent that changes have been made to the evidence presented in those Sections in the Supplemental Evidence, Mr. Mueller sponsors those changes. Mr. Mueller has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February ____, 2005


Loren E. Mueller

8. Julie A. Murphy

Julie A. Murphy is a Principal with LECG, LLC, an economic and financial consulting firm. Her business address is 1725 Eye Street, Suite 800, Washington DC 20006. Ms. Murphy qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Ms. Murphy sponsored evidence in Section III.A regarding flaws in Otter Tail's volume and revenue assumptions, Otter Tail's cross-over revenue divisions methodologies and revenue forecasts. She also sponsored evidence regarding BNSF's modified volume and revenue assumptions. To the extent that changes have been made to the evidence presented in that Section in the Supplemental Evidence, Ms. Murphy sponsors those changes. Ms. Murphy has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 17, 2005



Julie A. Murphy

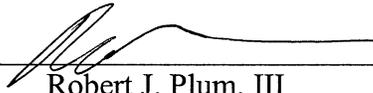
9. Robert J. Plum, III

Robert J. Plum, III, is a Managing Director of FTI Consulting, Inc. (“FTI”), with offices at 1201 Eye Street, N.W., Suite 400, Washington, DC 20005. Mr. Plum’s qualifications appear in Section IV of BNSF’s Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF’s October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Plum sponsored evidence relating to BNSF’s variable costs for the issue movement, OTRR route miles, and the number of locomotives and railcars required by OTRR. His evidence was incorporated in Sections II.A, III.B.1, and III.C.2 of the Narrative. Mr. Plum also sponsored evidence concerning the calculation of the revised number of crew personnel required for the OTRR contained in Section III.D.3. To the extent that changes have been made to the evidence presented in those Sections in the Supplemental Evidence, Mr. Plum sponsors those changes. In this filing, Mr. Plum is also sponsoring evidence concerning recalculation of locomotive and car costs contained in Sections III.D.1 and III.D.2. Mr. Plum has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 18, 2005



Robert J. Plum, III

10. James Primm

James Primm specializes in all aspects of railroad engineering, specifically in the design of maintenance facilities for and the procurement of railcars and locomotives. He is currently working on subcontract for Ralph Whitehead Associates, an engineering consulting firm. His business address while on subcontract is 1000 West Morehead St., Charlotte, NC 28208. Mr. Primm's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Primm sponsored evidence relating to Section III.F.7 Buildings and Facilities. To the extent that changes have been made to the evidence presented in that Section in the Supplemental Evidence, Mr. Primm sponsors those changes. Mr. Primm has signed a verification of the truth of statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the forgoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February 16, 2005.


James F. Primm, II, P.E.

11. David R. Wheeler

David R. Wheeler is the founder and President of Rail Network Analytics. His business address is 9222 Nottingham Way, Mason, OH 45040. Mr. Wheeler's qualifications appear in Section IV of BNSF's Supplemental Reply Evidence submitted to the Board on March 22, 2004.

In BNSF's October 8, 2003 Reply Evidence and March 22, 2004 Supplemental Reply Evidence, Mr. Wheeler sponsored evidence relating to the OTRR's capacity requirements and cycle times, contained in Sections III.B.2, III.B.3 and III.C.2 of the Narrative. To the extent that changes have been made to the evidence presented in those Sections in the Supplemental Evidence, Mr. Wheeler sponsors those changes. Mr. Wheeler has signed a verification of the truth of the statements contained therein. A copy of that verification is attached hereto.

I declare under penalty of perjury that I have read the Supplemental Evidence that I have sponsored, as described in the foregoing Statement of Qualifications, and that the contents thereof are true and correct. Further, I certify that I am qualified and authorized to sponsor this testimony.

Executed on February ____, 2005

A handwritten signature in black ink, appearing to read "D. R. Wheeler", written over a horizontal line.

David R. Wheeler

III.A: Traffic Group

REDACTED

REDACTED

REDACTED

REDACTED

Hypothetical SARR Has Two Distinct Parts; Revenues Exceed Costs on Each Part

East/West

Revenue = \$1700
Costs = \$1500

Revenue = \$300
Costs = \$200

North/South

Excess Revenues Would Suggest A 15% Rate Reduction

East/West

Revenue = \$1700
Costs = \$1500

Revenue = \$300
Costs = \$200

North/South

Total Revenue = \$2000
Total Costs = \$1700
 \$300

Revenue Reduction Required to Equal Costs = $\frac{\$300}{\$2000} = 15\%$

15% Rate Reduction Results in Underrecovery of Costs on East/West Lines

East/West

Reduced Revenues
 $\$1700 * (1-15\%) = \1445
Costs = \$1500

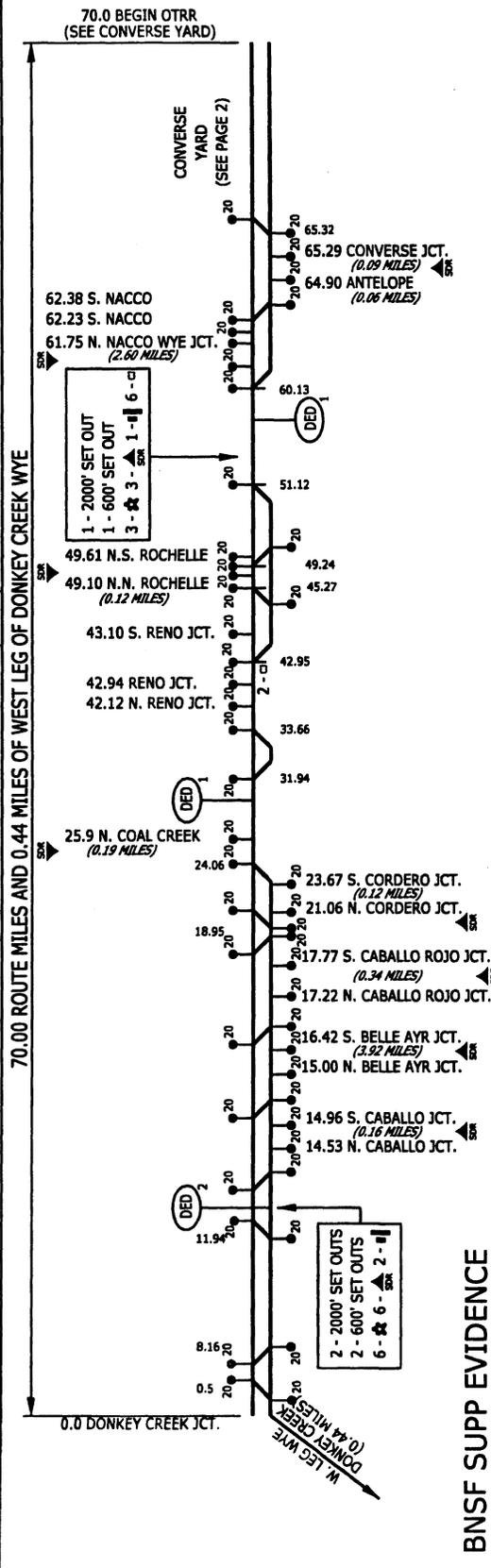
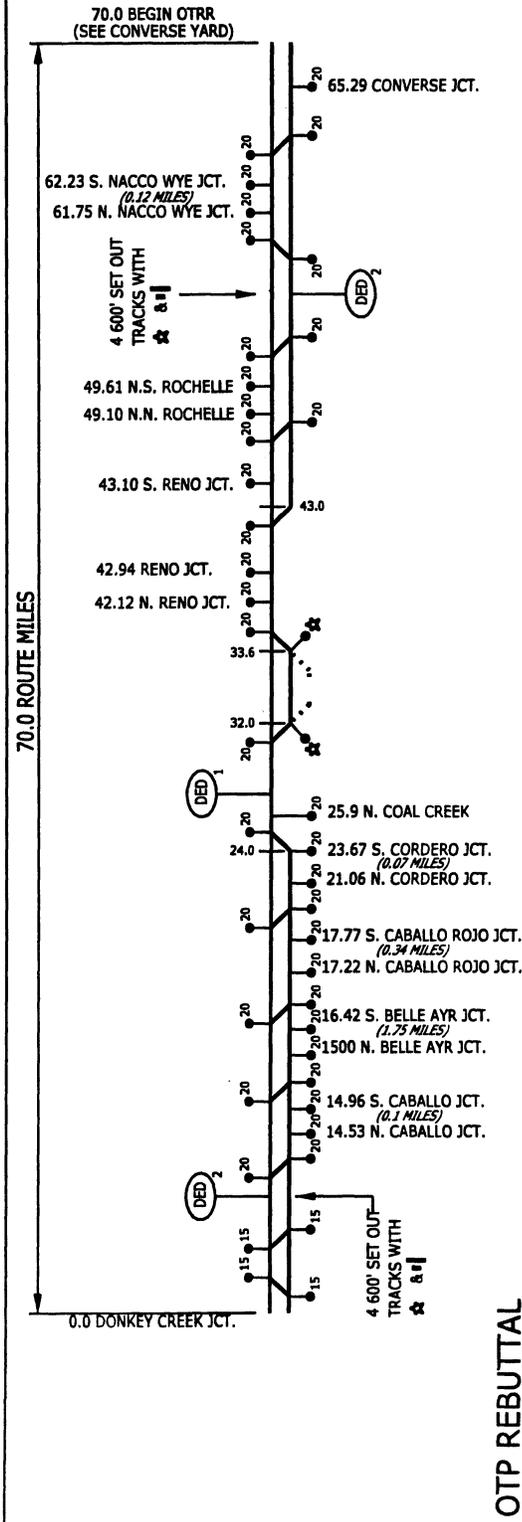
Required Adjustment to Revenues
 $\$1445 + \$55 = \$1500$
Costs = \$1500

Reduced Revenues
 $\$300 * (1-15\%) = \255
Costs = \$200

North/South

SUPPLEMENTAL EXHIBIT III.B-1

REDACTED



- LEGEND:
- TURNOUT
 - TURNOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - ▲ - #15 HAND-THROWN
 - ★ - #11 HAND-THROWN
 - OTHER TRACK MATERIAL
 - SWITCH POINT DERAIL
 - HINGED DERAIL
 - WHEEL STOP
 - COMPROMISE JOINT

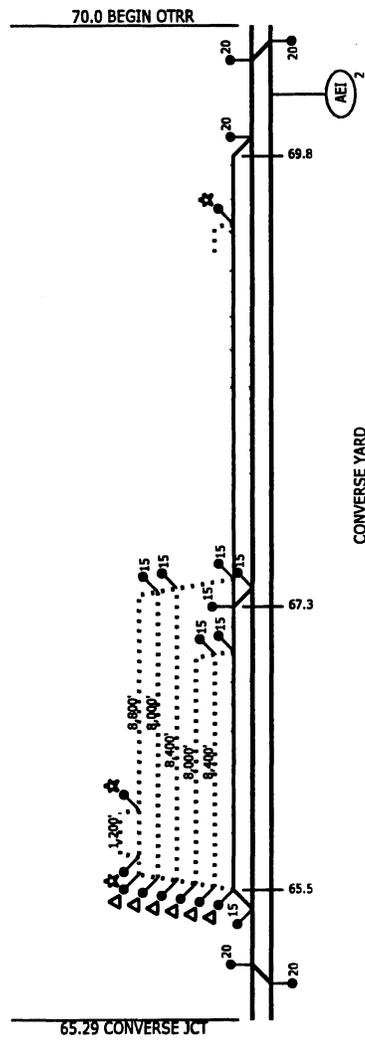
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- RR-OWNED NINE TRACK (0.1 MILES)
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED



MP: 70.00
MP: 0.0

FROM: CONVERSE YARD
TO: DONKEY CREEK JCT.

NOT TO SCALE



OTP REBUTTAL

DISTRICT:

ORIN

FROM: S. END CONVERSE YARD

TO: CONVERSE JCT.

MP: 70.00

MP: 65.29



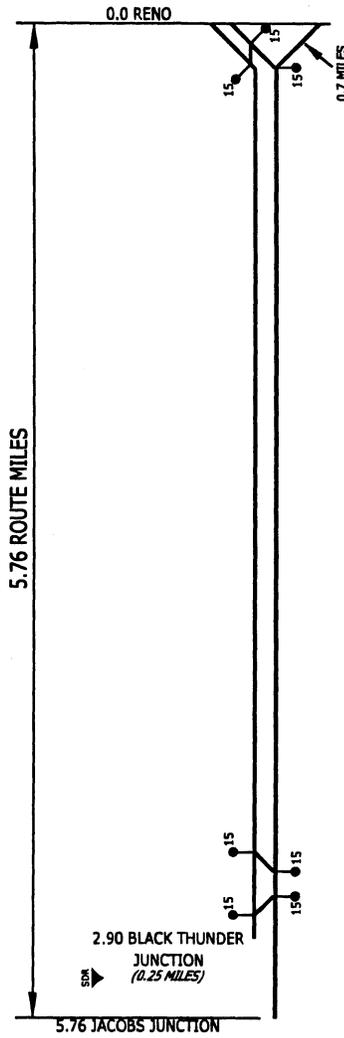
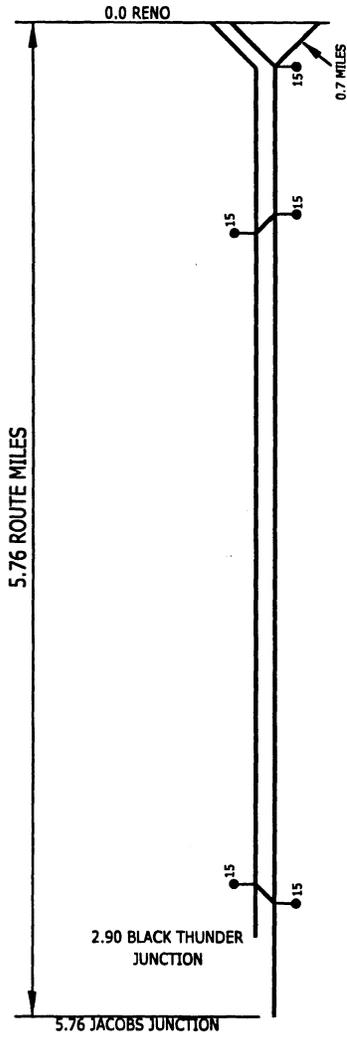
NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- (DED) 1 DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- (AEI) 1 AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT
- TURNOUT TYPES
 - 20 - 20 ELECTRIC
 - 15 - #15 ELECTRIC
 - Δ - #15 HAND-THROWN
 - ★ - #11 HAND-THROWN
- SCOTCH TRACK MATERIAL
 - SA - SWITCH POINT DERAIL
 - AS - HINGED DERAIL
 - WS - WHEEL STOP
 - C - COMPROMISE JOINT



OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

RENO

FROM: RENO

TO: JACOBS JUNCTION



MP: 0.00

MP: 5.76

NOT TO SCALE

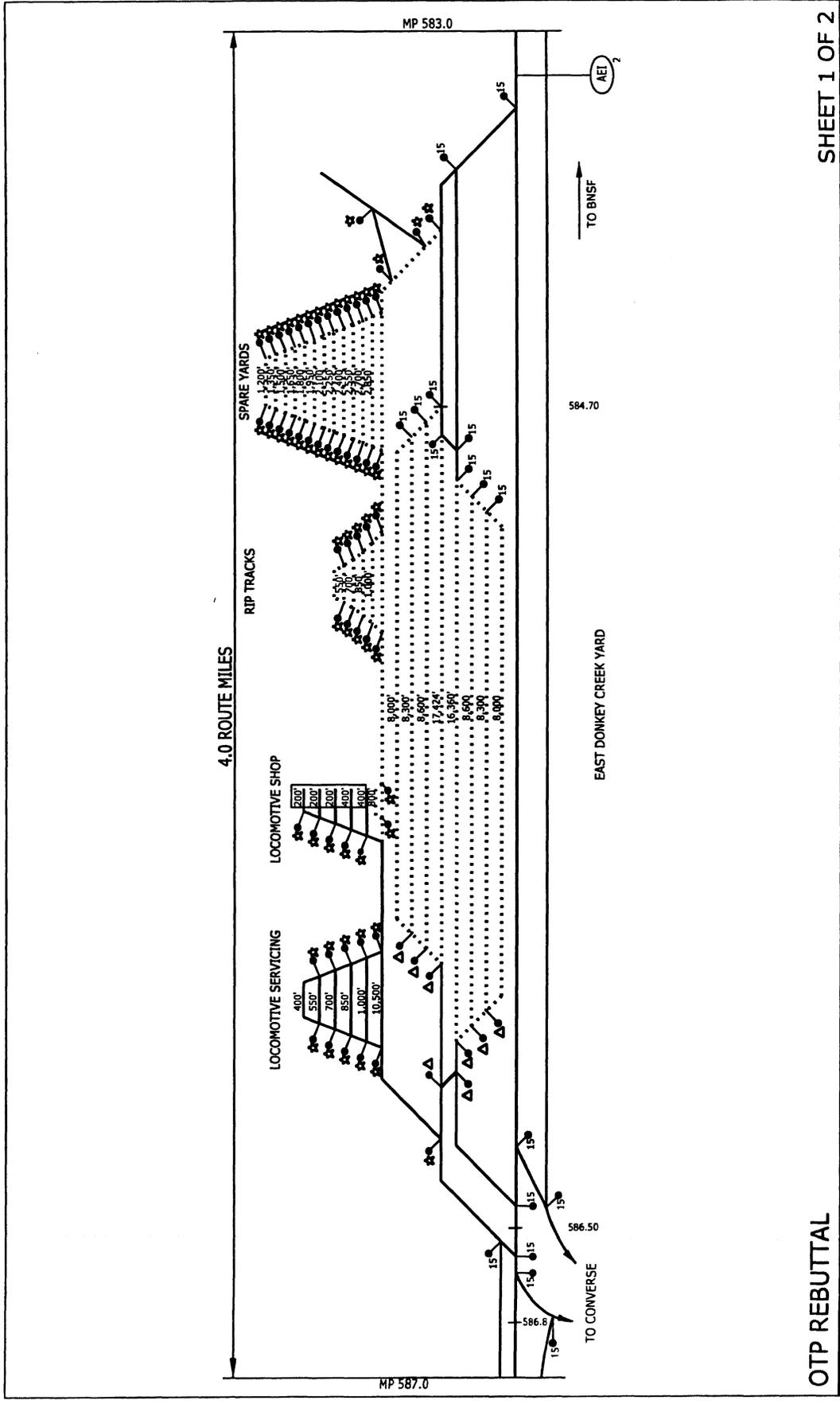
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- (0.7 MILES) RR-OWNED MINE TRACK

DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED

AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT TYPE
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- △ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- DA - HINGED DERAIL
- W - WHEEL STOP
- - COMPROMISE JOINT



OTP REBUTTAL

DISTRICT:

BLACK HILLS

FROM: EAST DONKEY CREEK

TO: DONKEY CREEK JCT.

MP: 583.0

MP: 587.0

NOT TO SCALE

SHEET 1 OF 2

EXHIBIT III.B-2
Page 4

N

LEGEND:

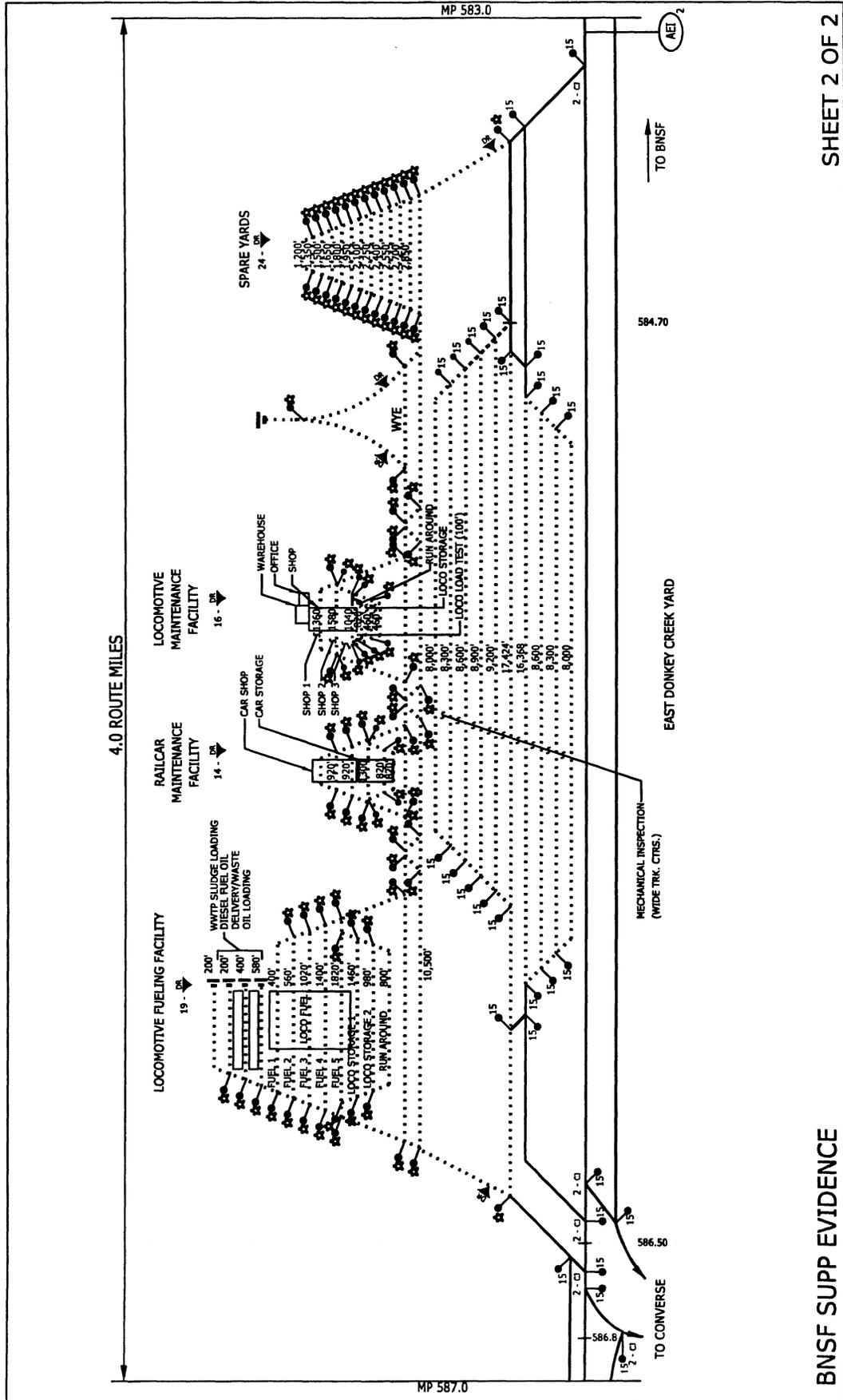
136# RAIL	=====	TURNOUT TYPES	20	TYPE
132# RAIL	=====	70 - #20 ELECTRIC	↑	
132# RELAY RAIL	15 - #15 ELECTRIC	↑	
		Δ - #15 HAND-THROWN	↑	
		★ - #11 HAND-THROWN	↑	
		OTHER TRACK MATERIAL	↑	
		SW - SWITCH POINT DERAIL	↑	
		H - HINGED DERAIL	↑	
		W - WHEEL STOP	↑	
		C - COMPROMISE JOINT	↑	

DEFECTIVE EQUIPMENT DETECTOR
NUMBER OF TRACKS COVERED

AUTOMATIC EQUIPMENT IDENTIFICATION
SCANNER NUMBER OF TRACKS COVERED

DED 1

AET 1



SHEET 2 OF 2

- LEGEND:**
- TURNOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - #15 HAND-THROWN
 - #11 HAND-THROWN
 - OTHER TRACK MATERIAL
 - SW - SWITCH POINT DERAIL
 - DR - HINGED DERAIL
 - W - WHEEL STOP
 - - COMPROMISE JOINT

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED



NOT TO SCALE

BNSF SUPP EVIDENCE

DISTRICT:

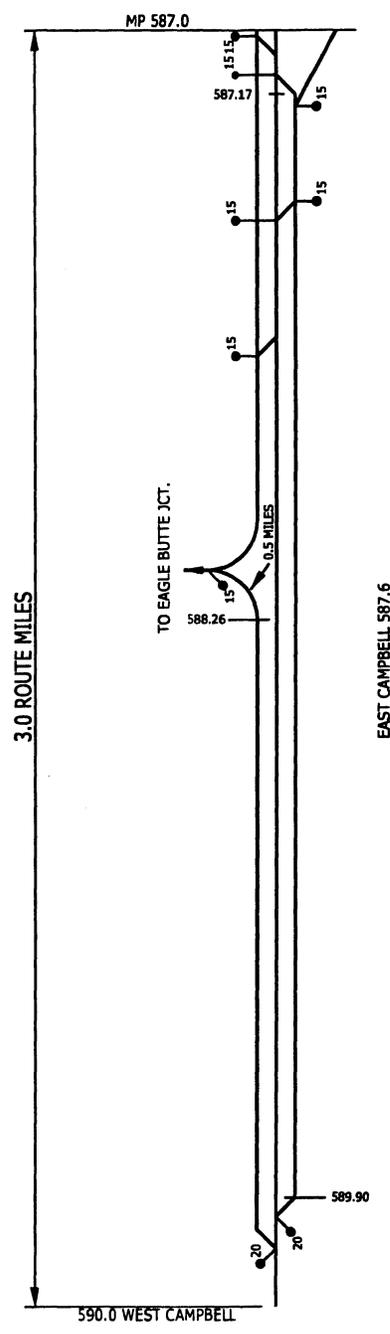
BLACK HILLS

FROM: EAST DONKEY CREEK

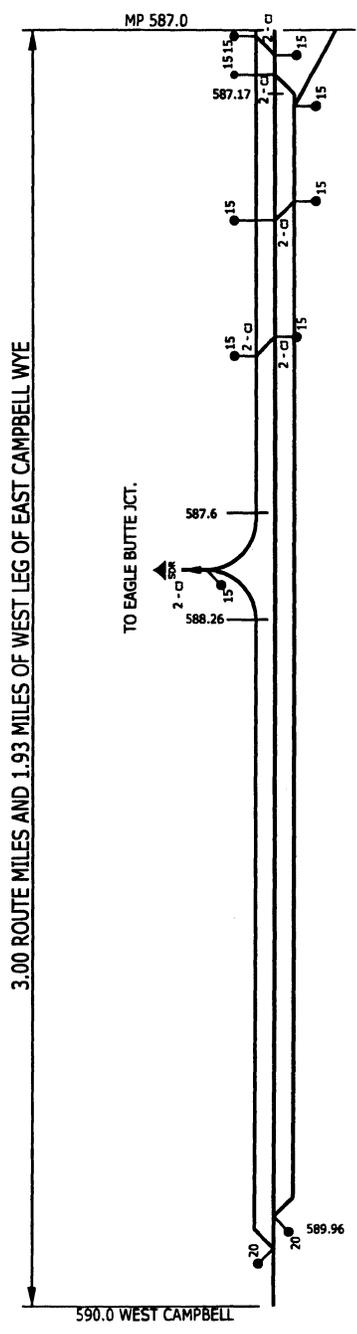
MP: 583.0

TO: DONKEY CREEK JCT.

MP: 587.0



OTB REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

BLACK HILLS

FROM: DONKEY CREEK JCT.

TO: WEST CAMPBELL

MP: 587.0

MP: 590.0

LEGEND:

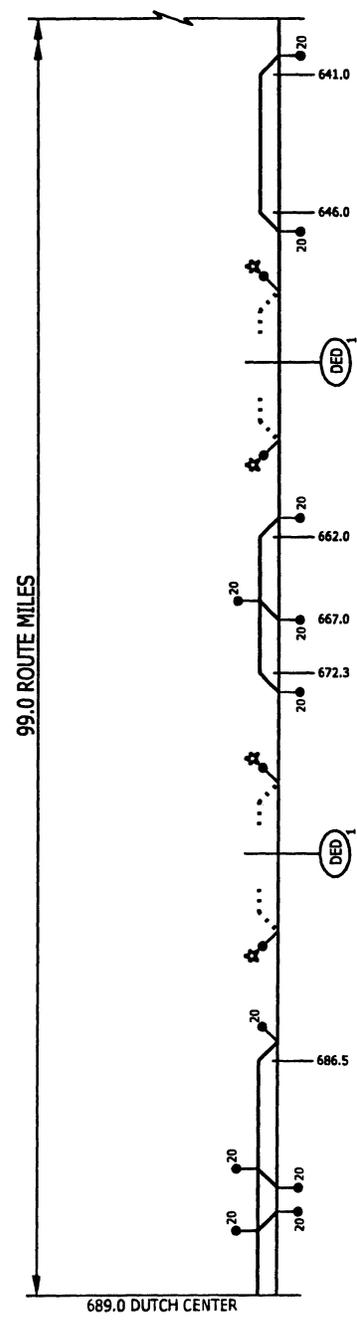
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

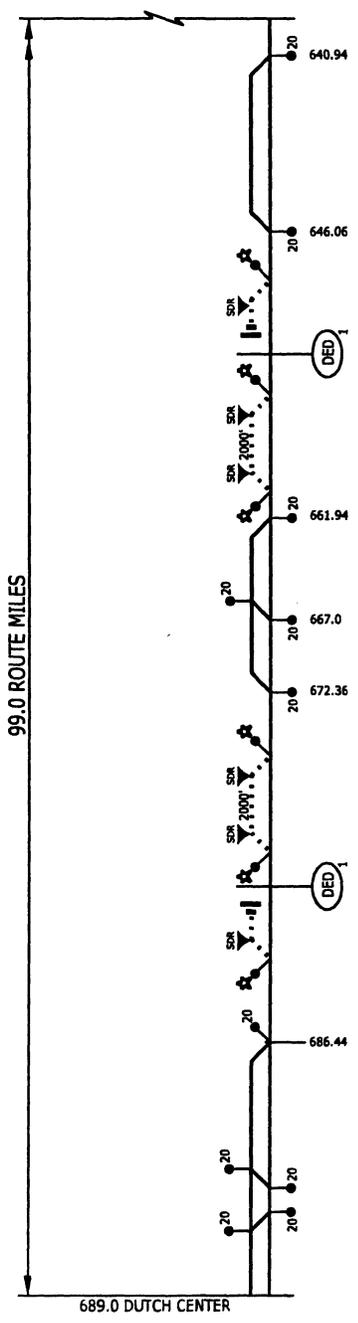
- TURNOUT
- TURNOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- HP - HINGED DERAIL
- W - WHEEL STOP
- C - COMPROMISE JOINT



NOT TO SCALE



OTP REBUTTAL



SHEET 1 OF 2

BNSF SUPP EVIDENCE

DISTRICT:

BLACK HILLS/BIG HORN

FROM: WEST CAMPBELL

TO: DUTCH CENTER

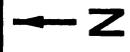
MP: 590.0

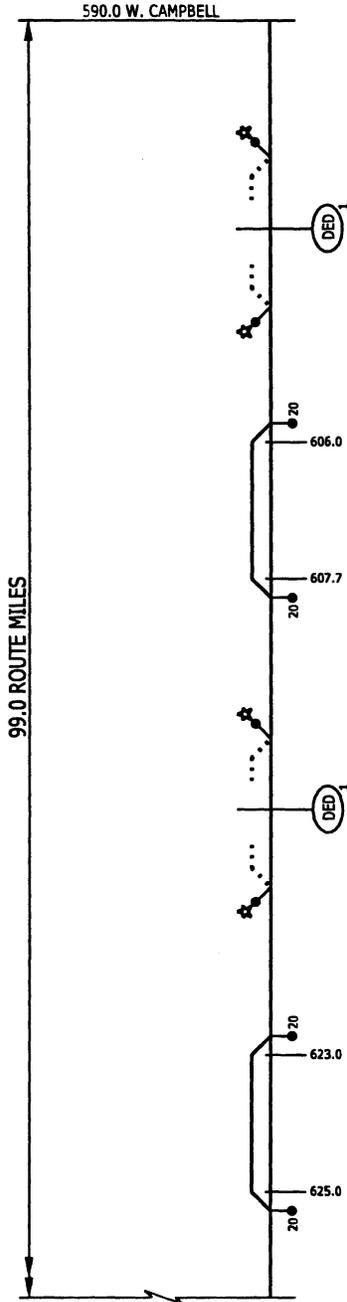
MP: 689.0

NOT TO SCALE

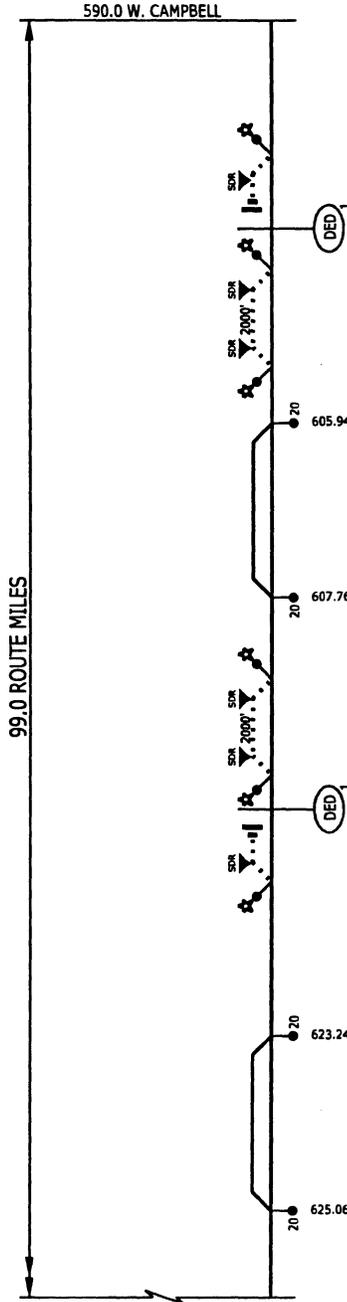
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- TURNOUT TYPE
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED





OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

BLACK HILLS/BIG HORN

FROM: WEST CAMPBELL

TO: DUTCH CENTER

MP: 590.0

MP: 689.0

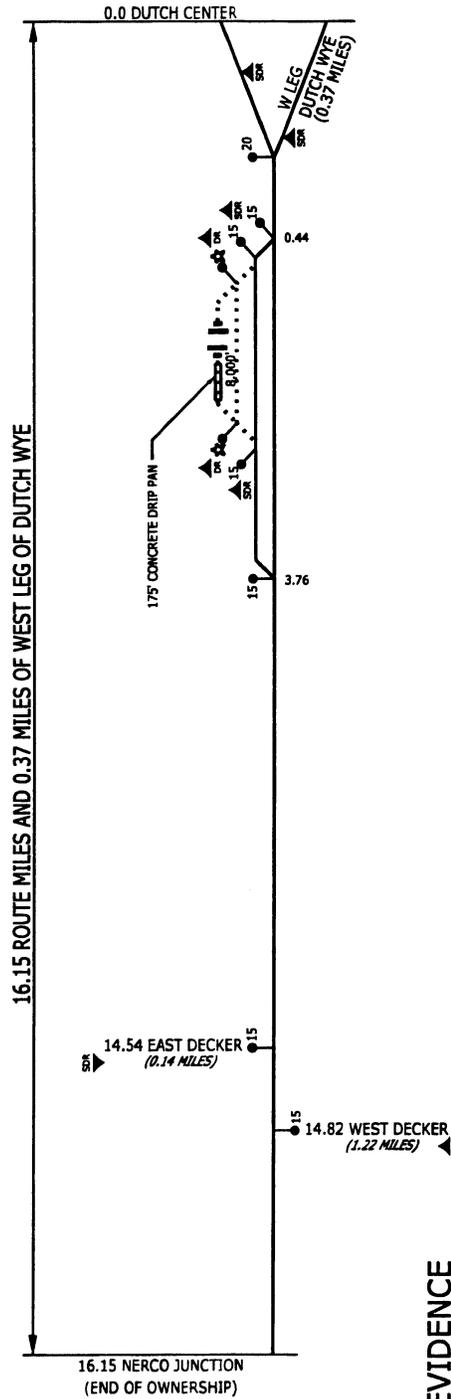
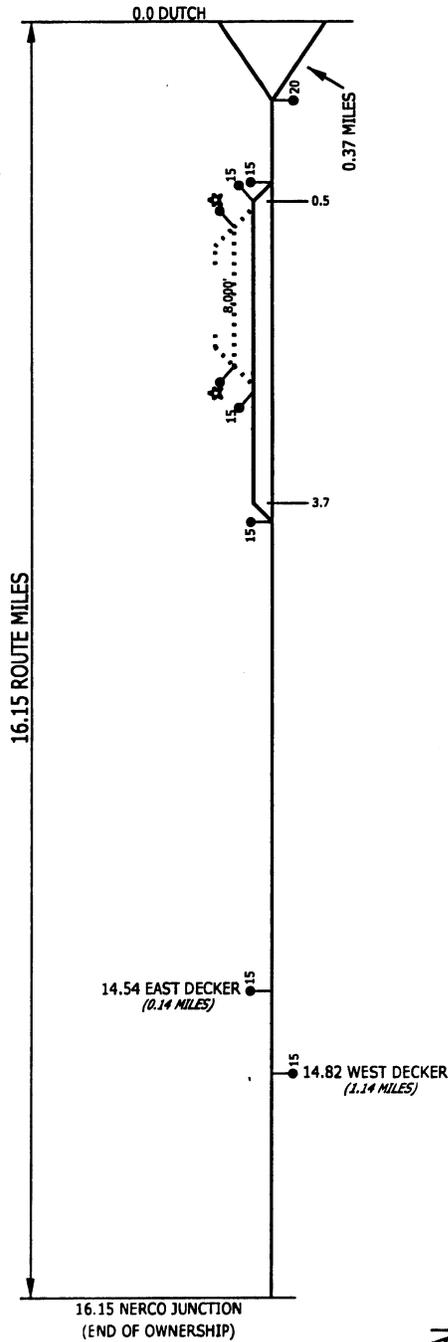
NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AET 1
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
- 1

- TURNOUT TYPE
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- RINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT



NOTE: SPRING CREEK MINE
AT END OF LINE

OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

DUTCH

FROM: DUTCH CENTER

TO: NERCO JCT.



MP: 0

MP: 16.15

NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

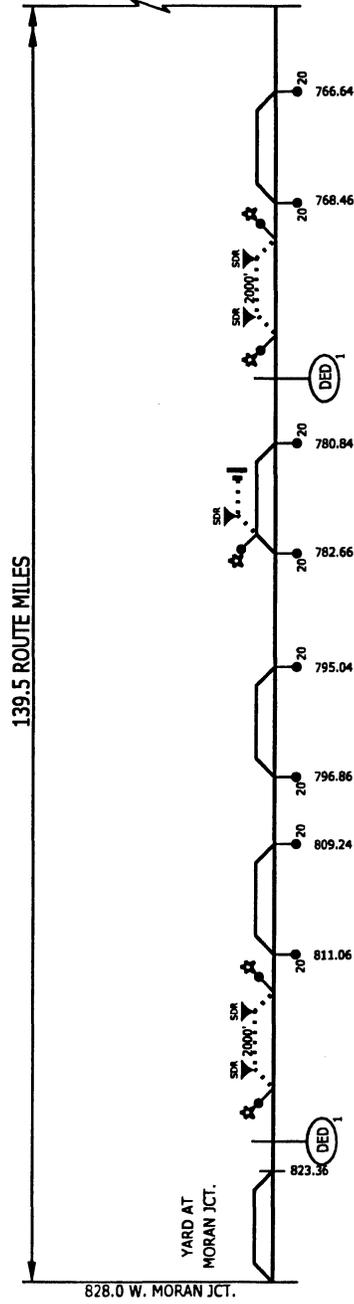
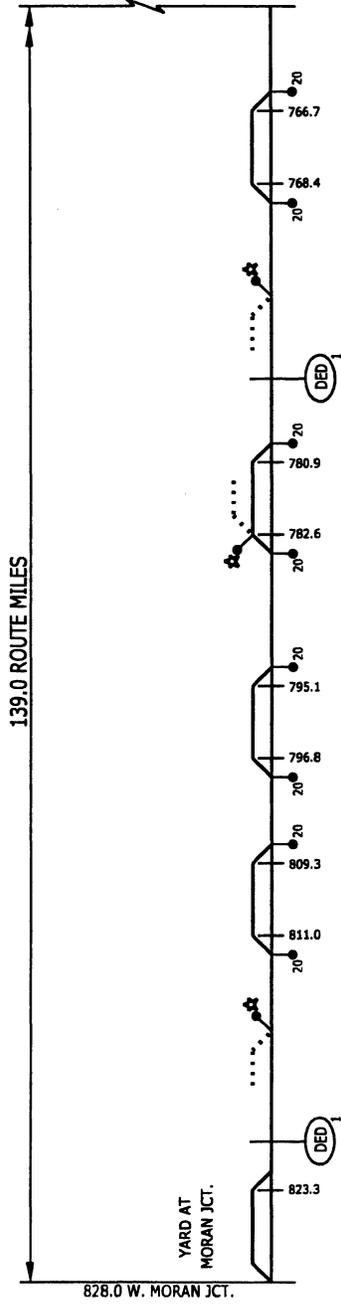
(2.1 MILES) =
DEFECTIVE EQUIPMENT DETECTOR
NUMBER OF TRACKS COVERED

(DE) 1
AUTOMATIC EQUIPMENT IDENTIFICATION
SCANNER NUMBER OF TRACKS COVERED

(AE) 1
NUMBER OF TRACKS COVERED

TYPE

- TURNOUT
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- SOLDER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT



OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

BIG HORN

FROM: DUTCH CENTER

TO: W. MORAN JCT.

MP: 689.0

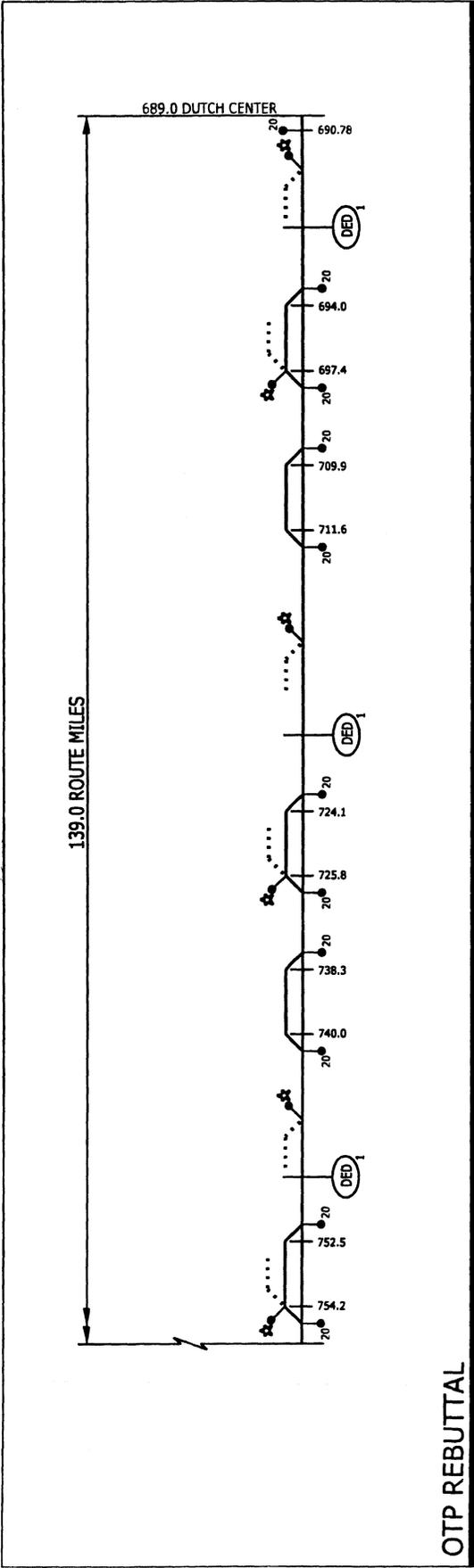
MP: 828.0

NOT TO SCALE

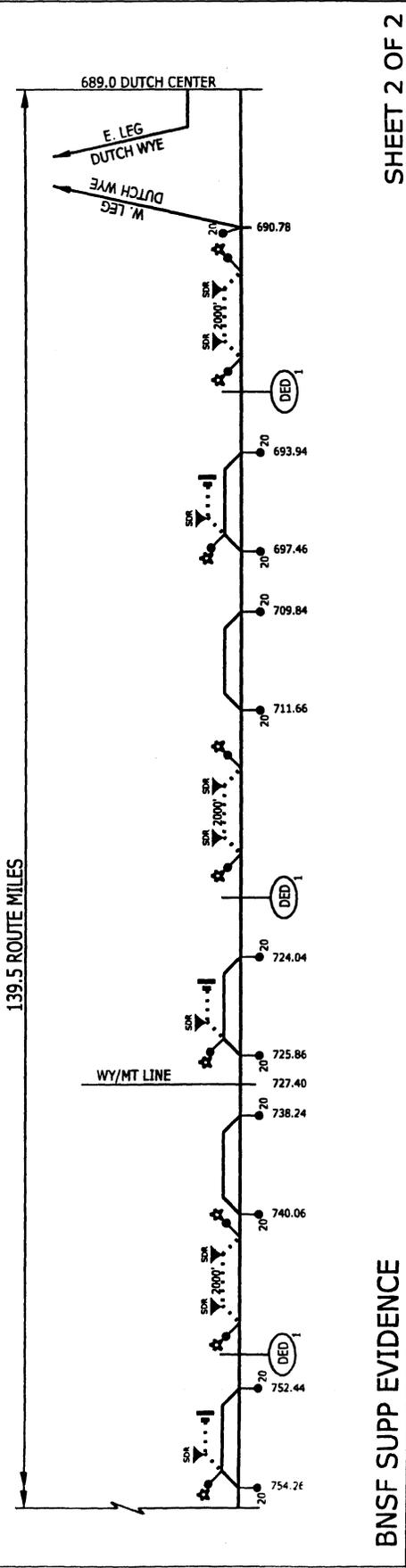
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- TURNOUT
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- SOIL/EL TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- SA - HINGED DERAIL
- WA - WHEEL STOP
- CS - COMPROMISE JOINT
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED





OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

BIG HORN

FROM: DUTCH CENTER

TO: W. MORAN JCT.

MP: 689.0

MP: 828.0

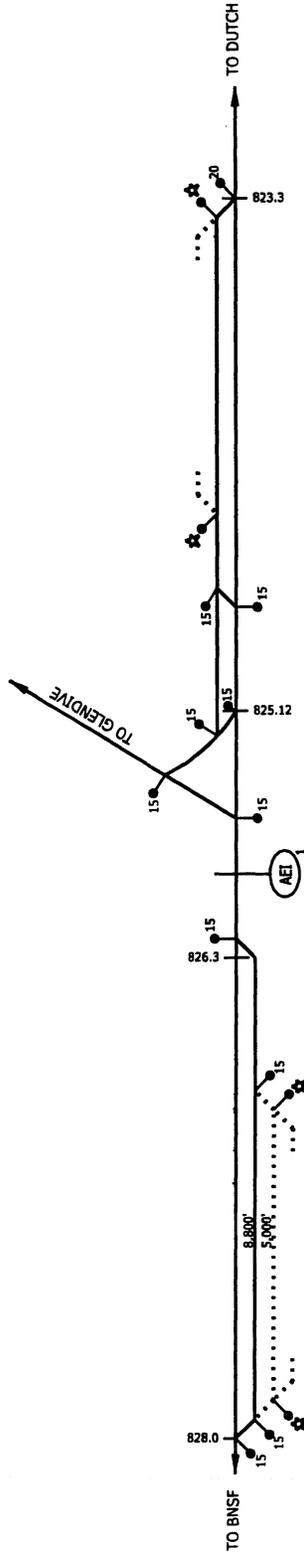


NOT TO SCALE

SHEET 2 OF 2

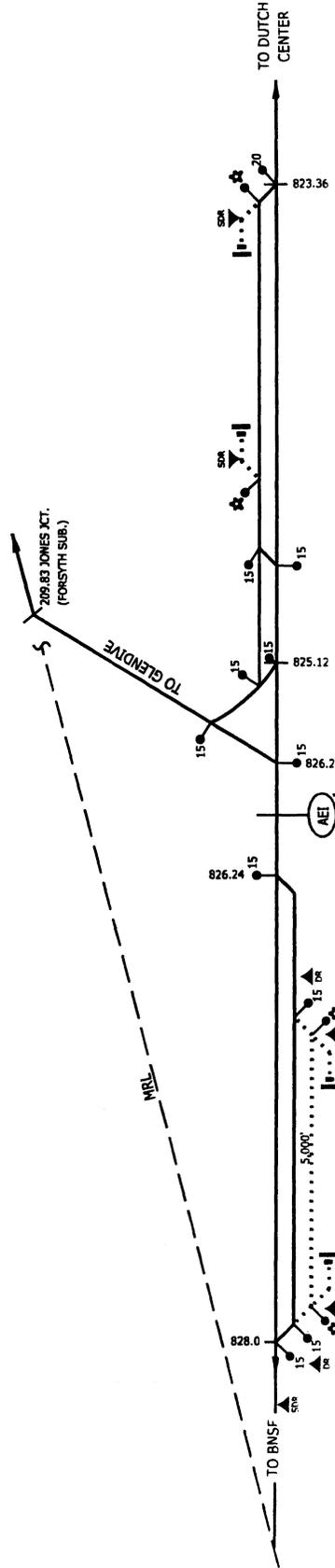
LEGEND:

- TURNOUT TYPE
 - TURNOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - ▲ - #15 HAND-THROWN
 - ▲ - #11 HAND-THROWN
 - OTHER TRACK MATERIAL
 - ▲ - SWITCH POINT DERAIL
 - ▲ - WINGED DERAIL
 - - WHEEL STOP
 - - COMPROMISE JOINT
-
- 136# RAIL
 - 132# RAIL
 - 132# RELAY RAIL
-
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
 - AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
-
- DEAD
 - AEI



MORAN JCT. YARD

OTB REBUTTAL



MORAN JCT. YARD

BNSF SUPP EVIDENCE

DISTRICT:

BIG HORN

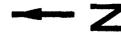
MORGAN JCT. YARD

LEGEND:

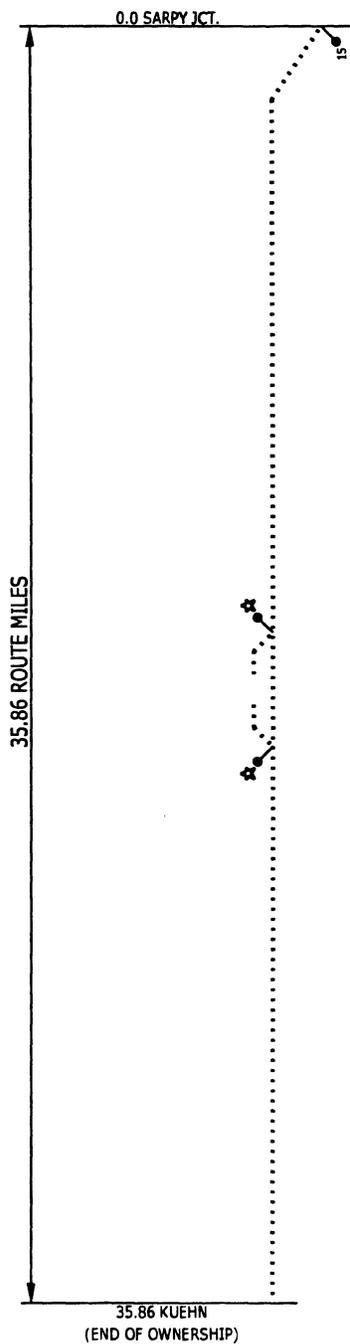
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- (DIED) 1 DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- (AEI) 1 AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

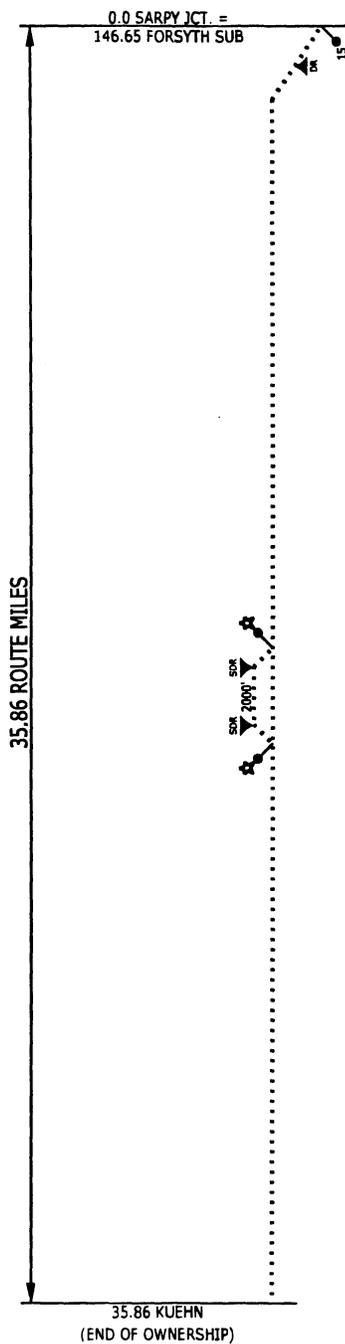
- TURNOUT TYPE
- TURNOUT TYPES
- 20-#20 ELECTRIC
- 15-#15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT



NOT TO SCALE



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

SARPY

FROM: SARPY JCT.

TO: KUEHN (End of Ownership)

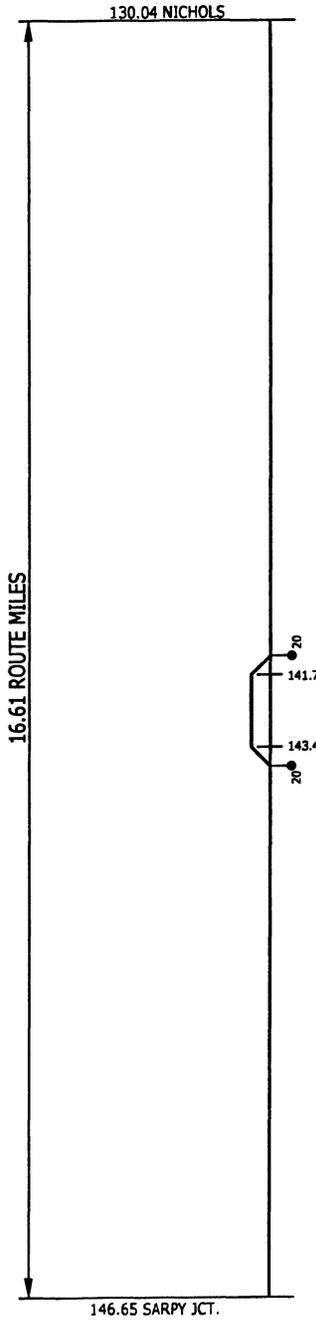
MP: 0.0

MP: 35.86

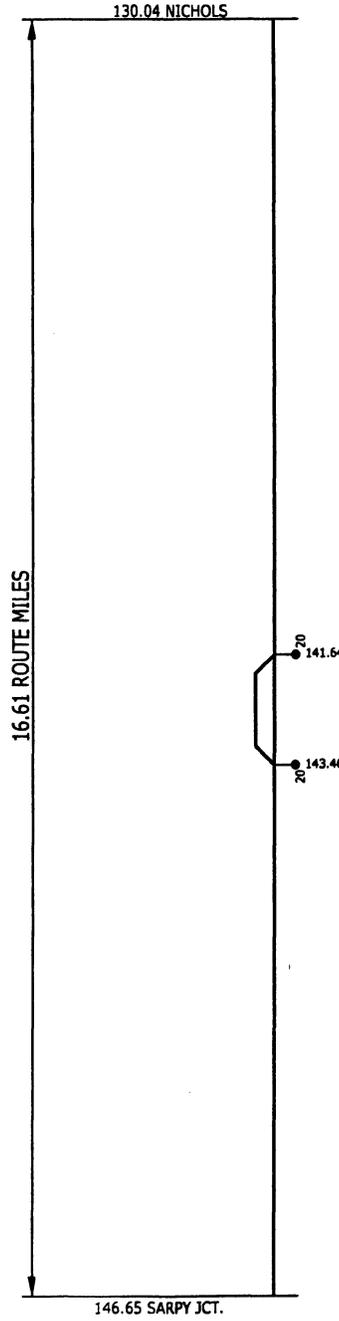
NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
- TURNOUT
- STURMOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - # - #15 HAND-THROWN
- OTHER TRACK MATERIAL
 - SW - SWITCH POINT DERAIL
 - DK - HINGED DERAIL
 - DK - WHEEL STOP
 - DK - COMPROMISE JOINT



OTTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

FORSYTH

FROM: SARPY JCT.

TO: NICHOLS

MP: 146.55

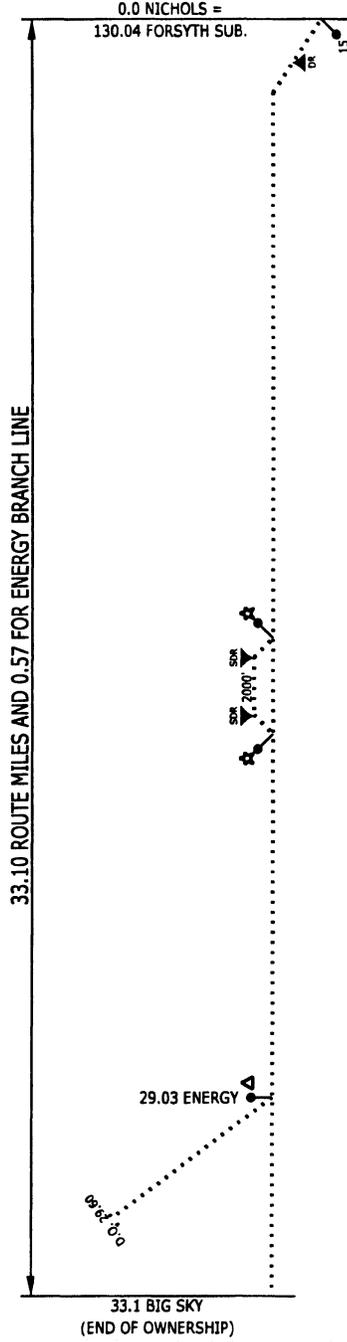
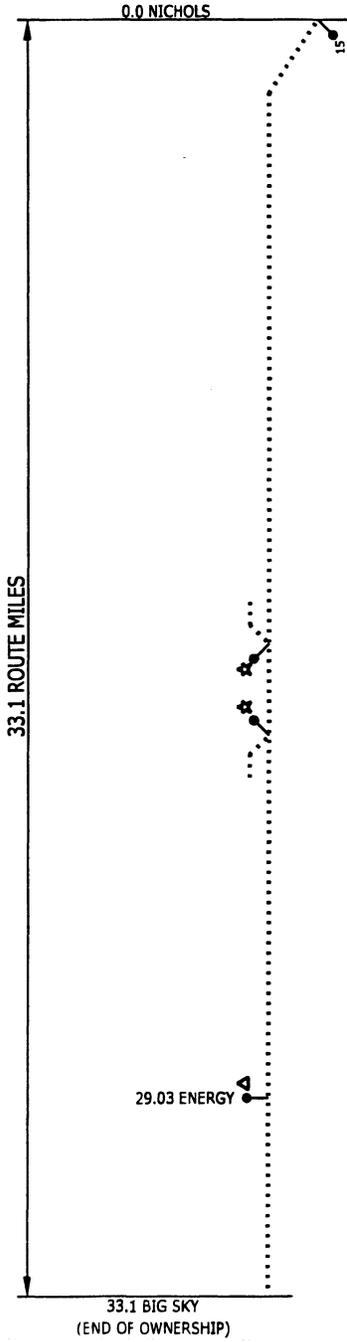
MP: 130.04

NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
- TURNOUT
- STURMOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT





OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

SARPY

FROM: NICHOLS

TO: BIG SKY (End of Ownership)

MP: 0.0

MP: 33.1

NOT TO SCALE

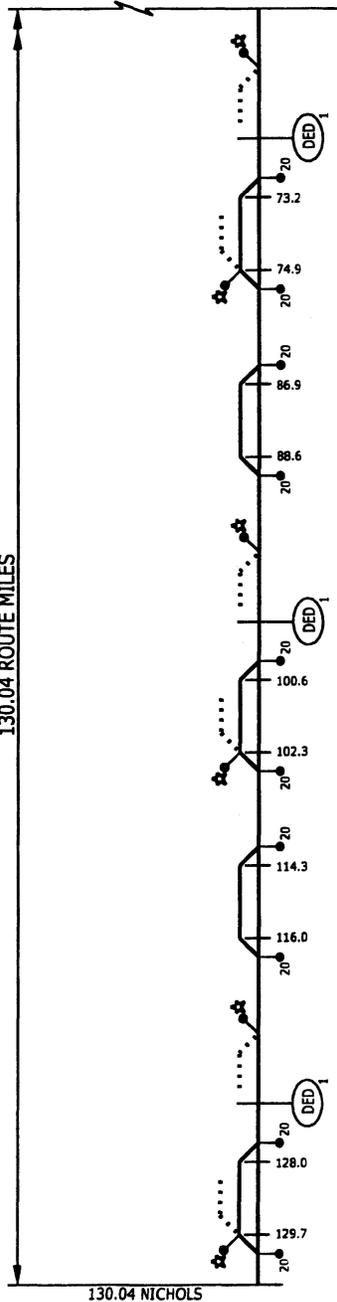
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- TURNOUT
- TURNOUTS
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT
- DEFECTIVE EQUIPMENT DETECTOR
- NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION
- SCANNER NUMBER OF TRACKS COVERED



SHEET 1 OF 2

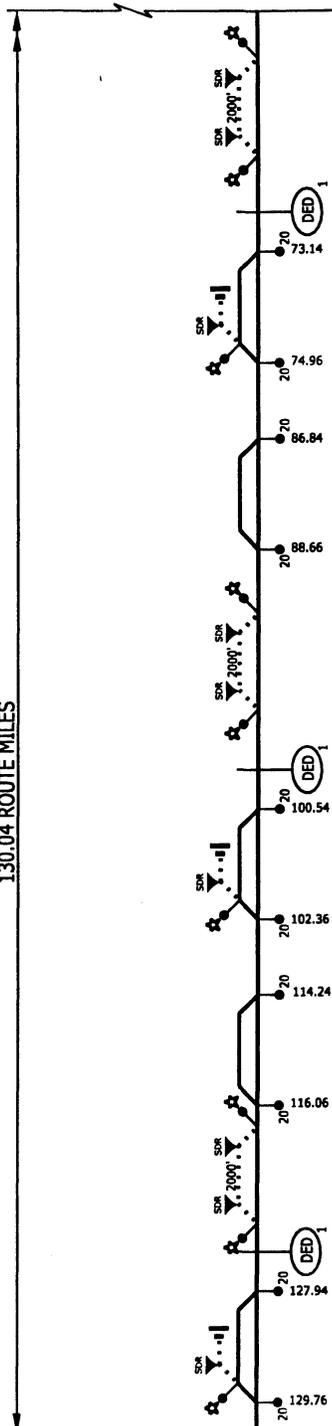
130.04 ROUTE MILES



130.04 NICHOLS

OTP REBUTTAL

130.04 ROUTE MILES



130.04 NICHOLS

BNSF SUPP EVIDENCE

DISTRICT:

FORSYTH

FROM: NICHOLS

TO: GLENDIVE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- DEFECTIVE EQUIPMENT DETECTOR
NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION
SCANNER NUMBER OF TRACKS COVERED

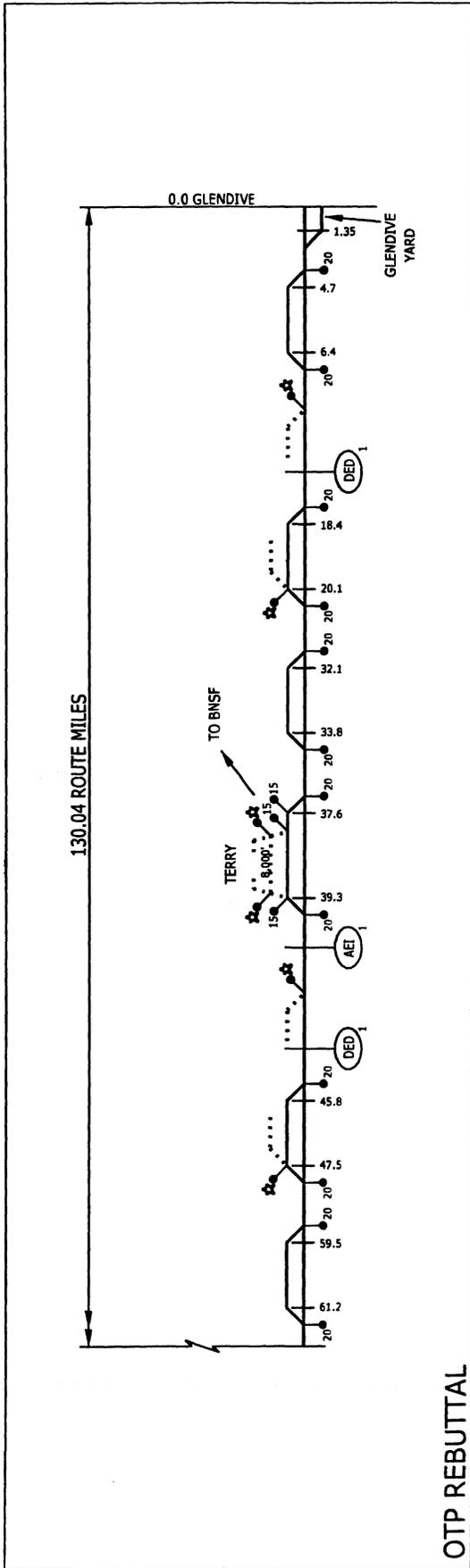
TURNOUT

- TURNOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- SOILER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT

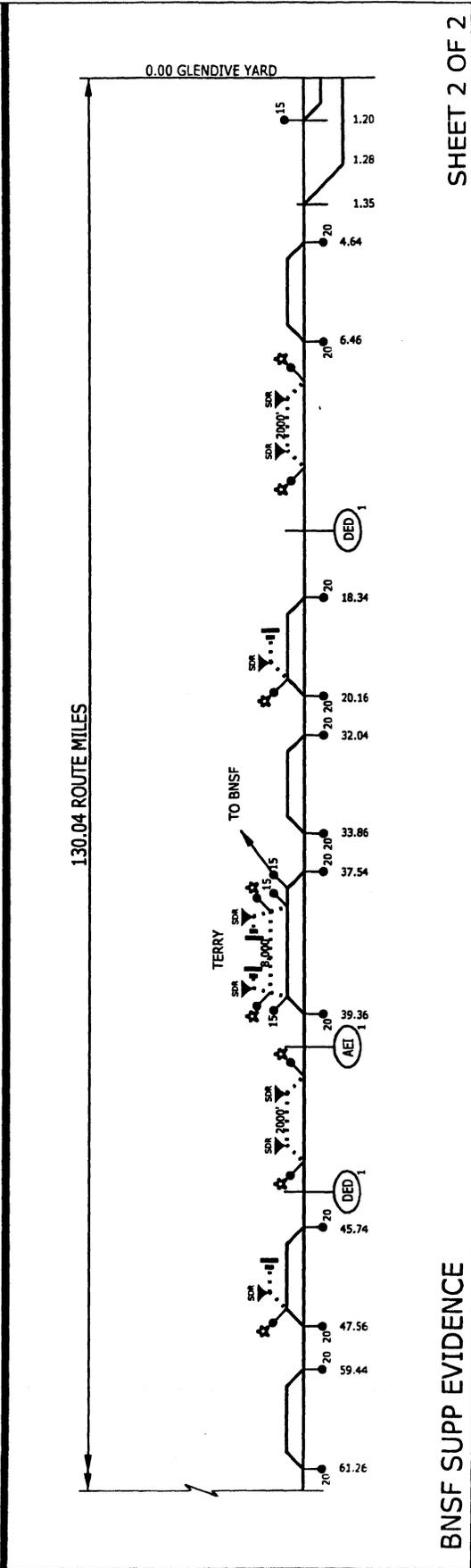


NOT TO SCALE

SHEET 2 OF 2



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

FORSYTH

FROM: NICHOLS

TO: GLENDIVE

MP: 130.04

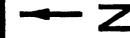
MP: 0.00

LEGEND:

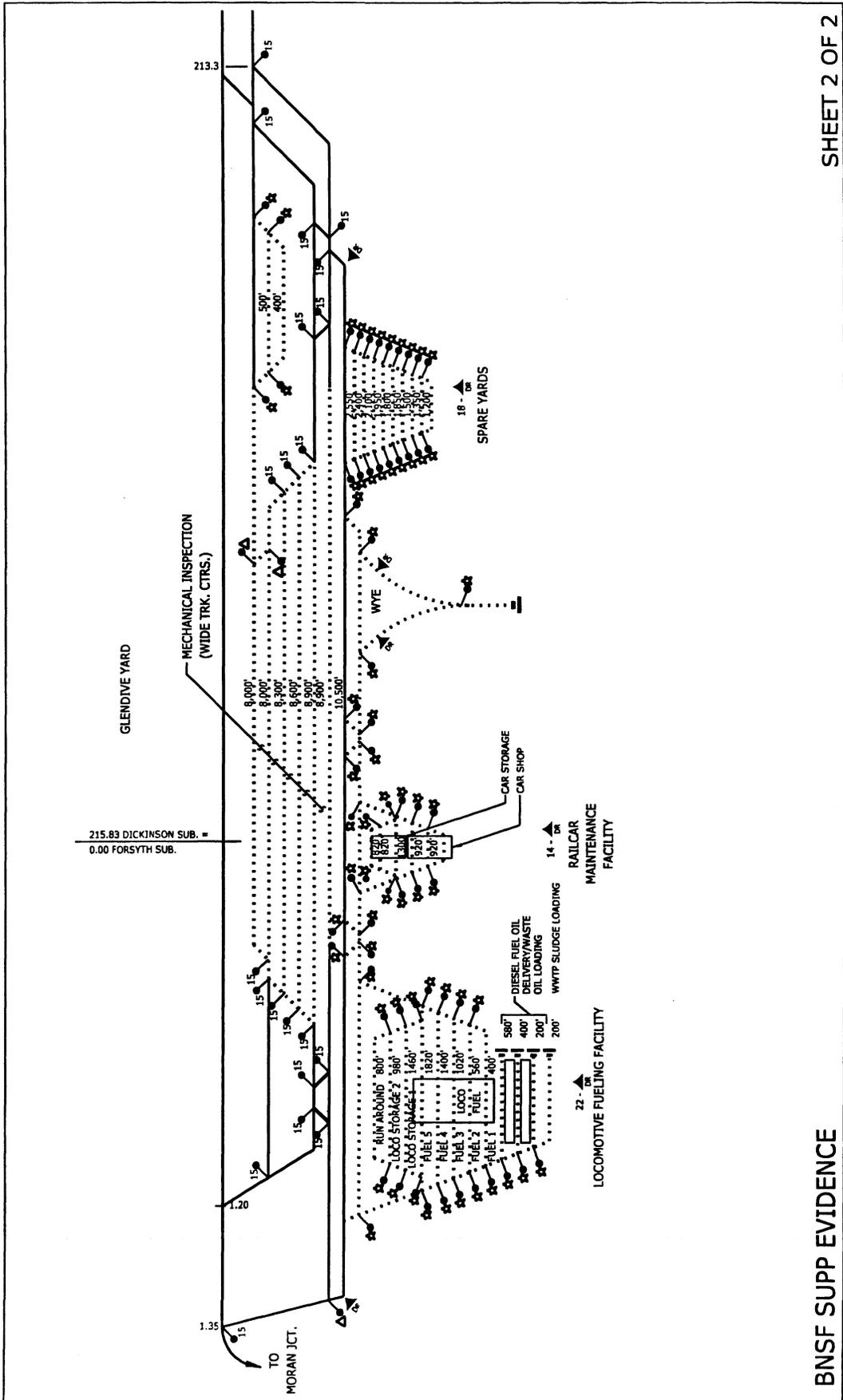
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT TYPE
- STURMOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT



NOT TO SCALE



BNSF SUPP EVIDENCE

DISTRICT:

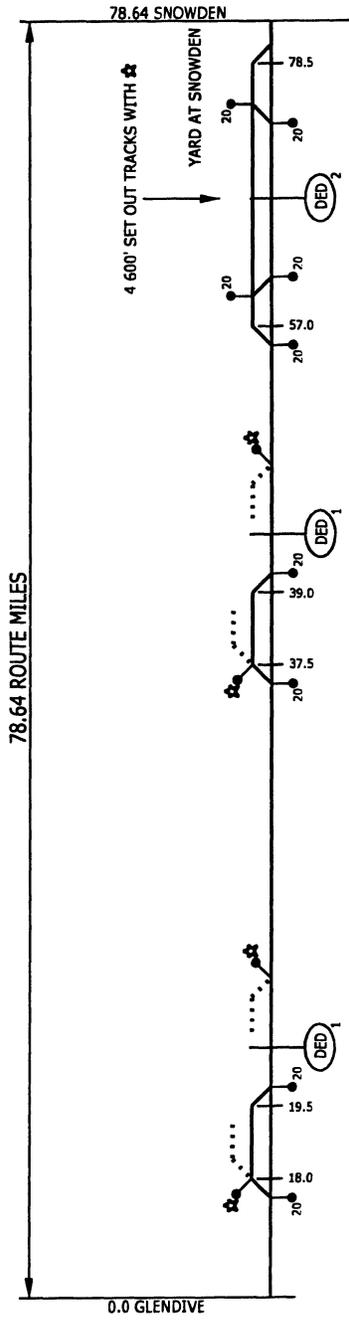
↑
N

NOT TO SCALE

LEGEND:

136# RAIL	TURNOUT	TYPE
132# RAIL	TURNOUT TYPES	
132# RELAY RAIL	70 - #20 ELECTRIC	
	15 - #15 ELECTRIC	
	15 - #15 HAND-THROWN	
	15 - #11 HAND-THROWN	
	OTHER TRACK MATERIAL	
	SW - SWITCH POINT DERAIL	
	H - HINGED DERAIL	
	W - WHEEL STOP	
	C - COMPROMISE JOINT	
(DED) 1	DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED	
(AET) 1	AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED	

GLENDIVE YARD



OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

SIDNEY

FROM: GLENDIVE

TO: SNOWDEN

MP: 1.28

MP: 78.64

NOT TO SCALE

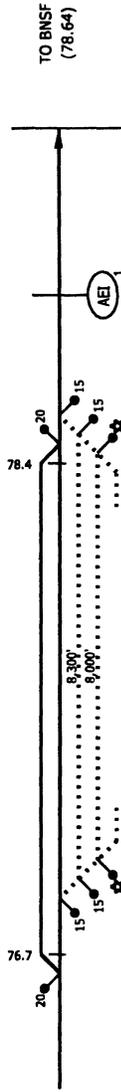
LEGEND:

- 136# RAIL
- 137# RAIL
- 132# RELAY RAIL

- DIED₁ DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AET₁ AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT
- TURNOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- ▲ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT

YARD AT SNOWDEN



OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

SIDNEY

SNOWDEN YARD

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
- TURNOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- ▲ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- ▲ - HINGED DERAIL
- W - WHEEL STOP
- - COMPROMISE JOINT

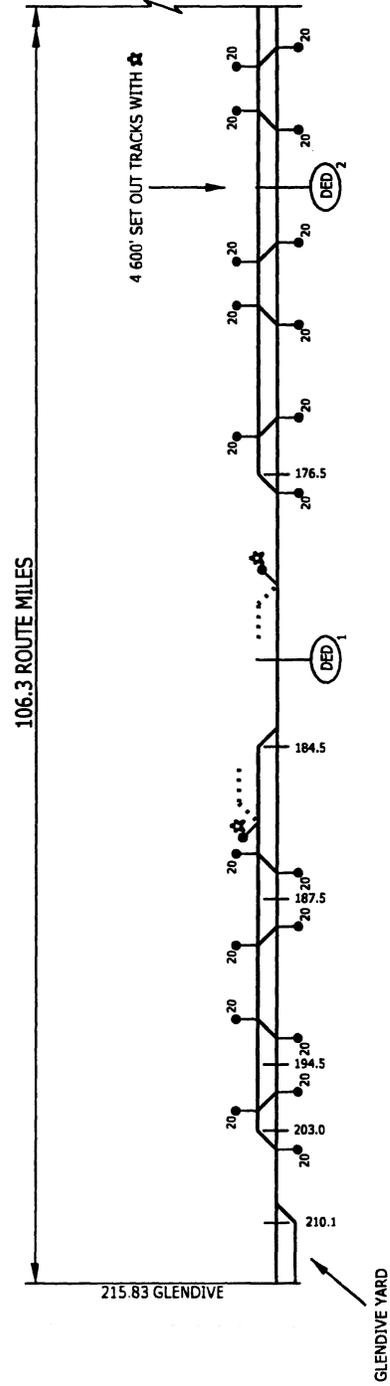
TURNOUT TYPE

- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- ▲ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- ▲ - HINGED DERAIL
- W - WHEEL STOP
- - COMPROMISE JOINT

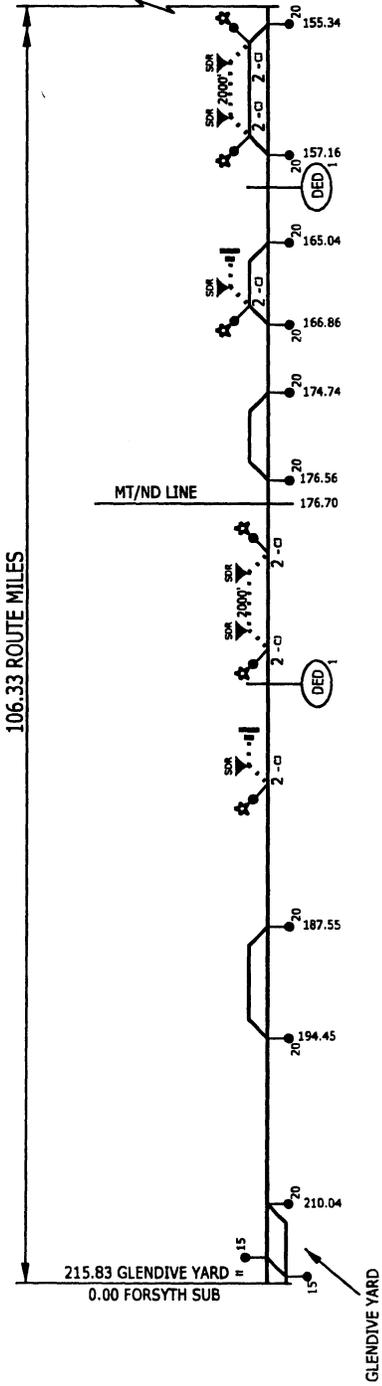


NOT TO SCALE

SHEET 1 OF 2



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

DICKINSON

FROM: GLENDIVE

TO: DICKINSON

MP: 215.83

MP: 109.50

NOT TO SCALE

LEGEND:

TURNOUT TYPE

STURKOUT TYPES

- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- ▲ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN

OTHER TRACK MATERIALS

- SW - SWITCH POINT DERAIL
- DK - HINGED DERAIL
- W - WHEEL STOP
- C - COMPROMISE JOINT

136# RAIL

132# RAIL

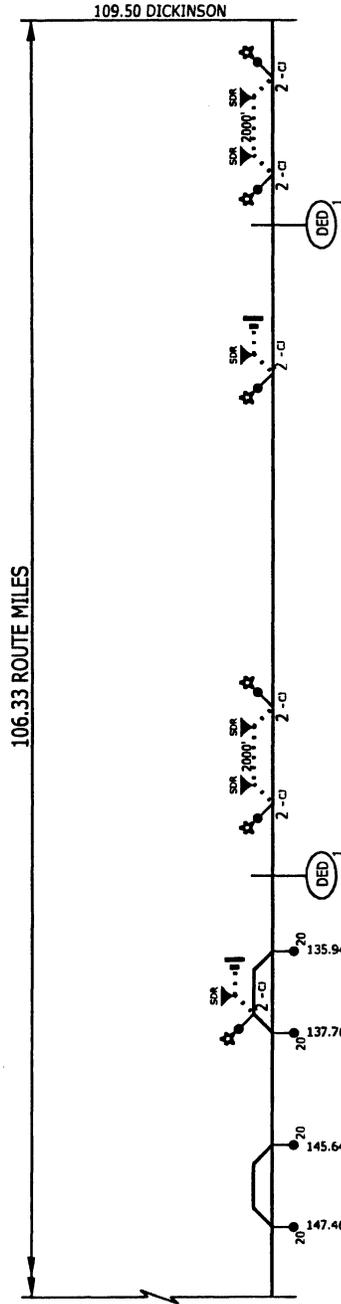
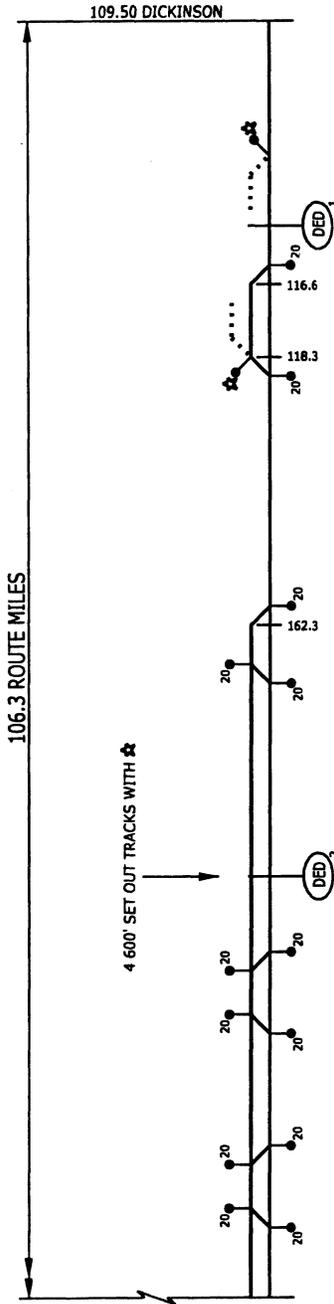
132# RELAY RAIL

DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED

AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

DE1

AE1



OTP REBUTTAL

SHEET 2 OF 2

BNSF SUPP EVIDENCE

DISTRICT:

DICKINSON

FROM: GLENDIVE

TO: DICKINSON

MP: 215.83

MP: 109.50 NOT TO SCALE

LEGEND:

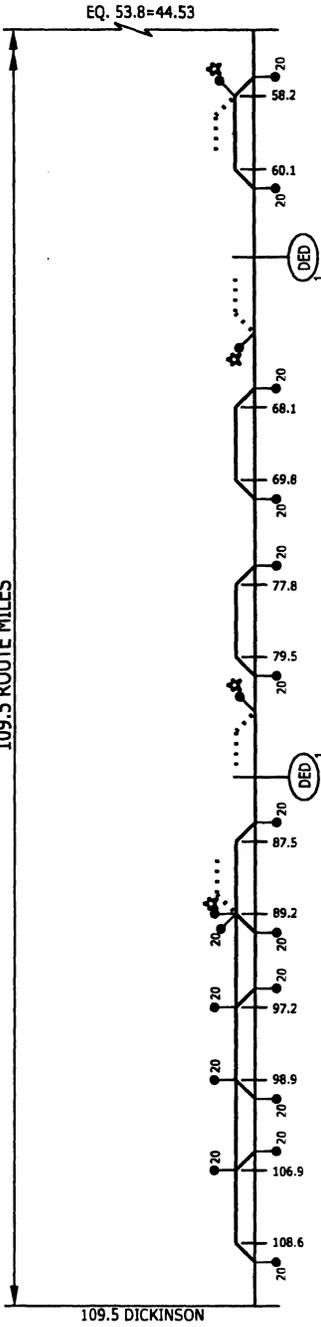
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT
- STURROULTYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- H - HINGED DERAIL
- W - WHEEL STOP
- C - COMPROMISE JOINT



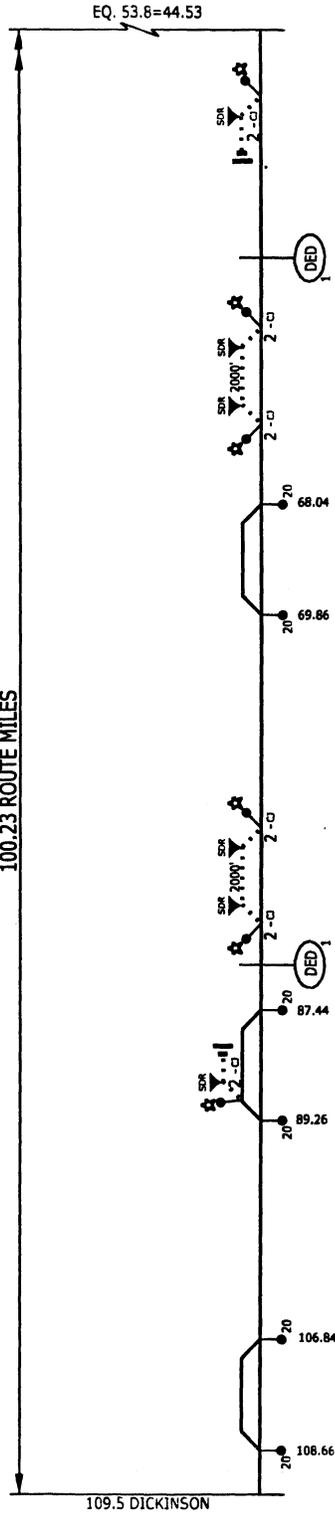
109.5 ROUTE MILES



NOTE: OTP ERRATA EXHIBIT III-B-1 PAGE 20
 OMITTED DOUBLE TRACK BETWEEN
 106.9-98.9 AND 97.2-89.2.

OTP REBUTTAL

100.23 ROUTE MILES



BNSF SUPP EVIDENCE

DISTRICT:

DICKINSON

FROM: DICKINSON

TO: MANDAN

MP: 109.5

MP: 0.0

NOT TO SCALE

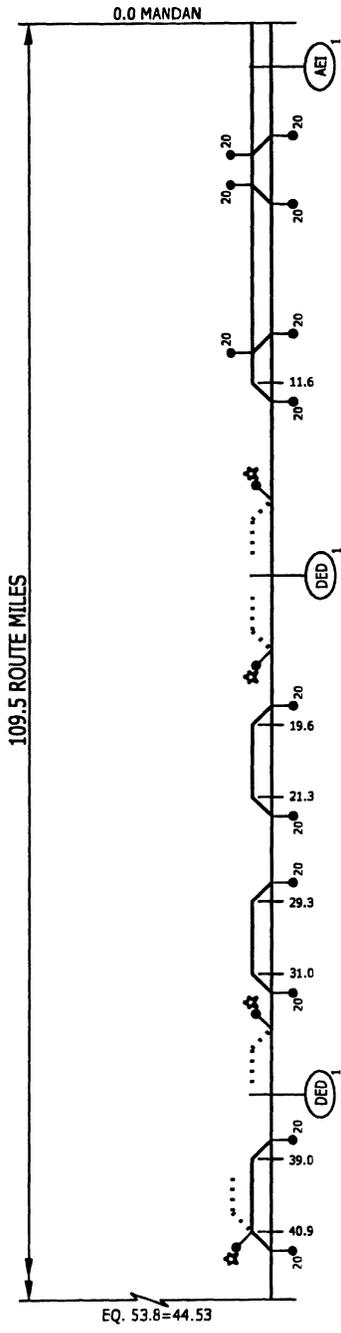
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

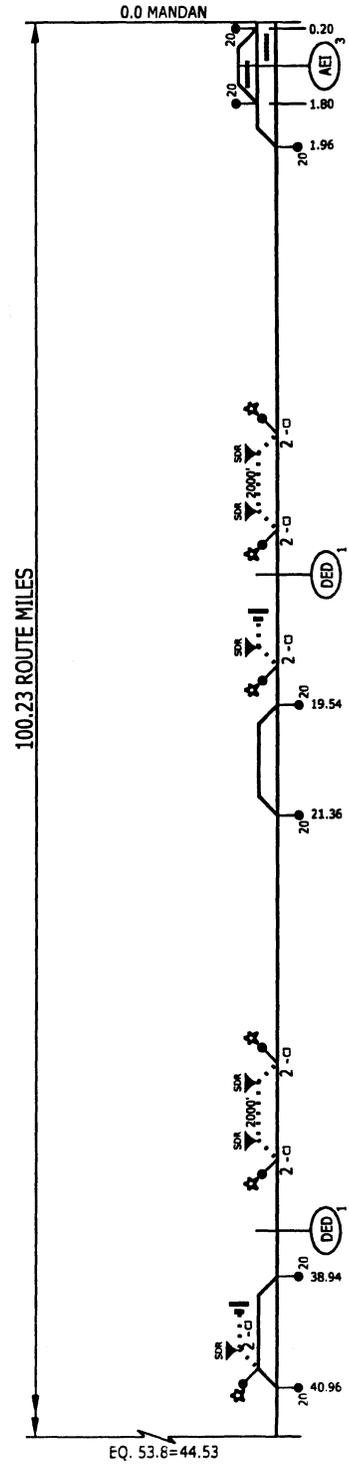
- DEFECTIVE EQUIPMENT DETECTOR
NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION
SCANNER NUMBER OF TRACKS COVERED

- TURNOUT
- STURMOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT

SHEET 1 OF 2



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

DICKINSON

FROM: DICKINSON

TO: MANDAN

MP: 109.5

MP: 0.0

NOT TO SCALE

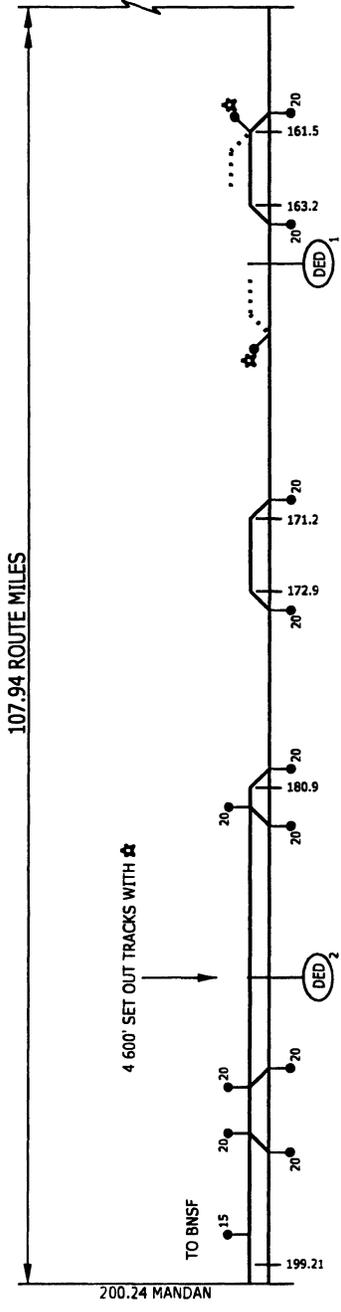


SHEET 2 OF 2

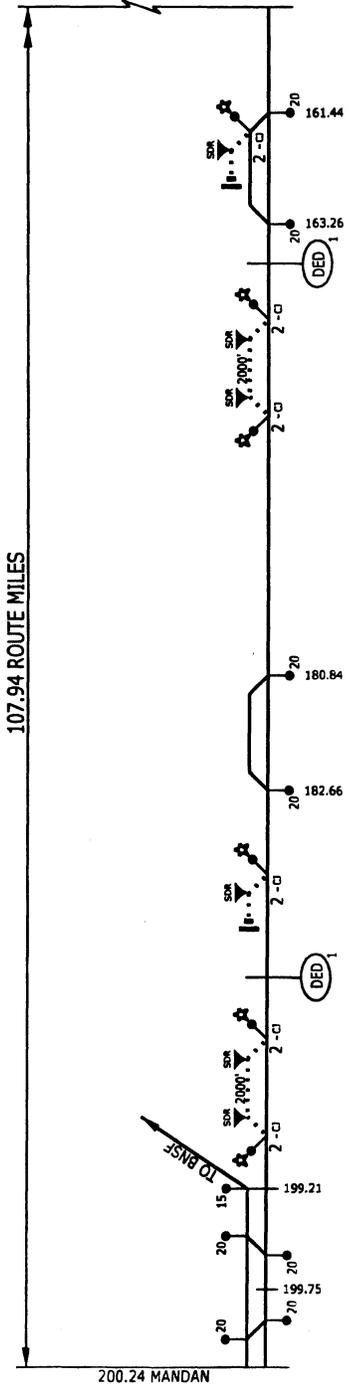
LEGEND:

136# RAIL	TURNOUT
132# RAIL	TURNOUT TYPES
132# RELAY RAIL	20 - #20 ELECTRIC
FUEL RACKS	15 - #15 ELECTRIC
DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED	▲ - #15 HAND-THROWN
AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED	★ - #11 HAND-THROWN
	OTHER TRACK MATERIAL
	▲ SWITCH POINT DERAIL
	▲ HINGED DERAIL
	▲ WHEEL STOP
	□ COMPROMISE JOINT

SHEET 1 OF 2



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

JAMESTOWN

FROM: MANDAN

TO: JAMESTOWN

MP: 200.24

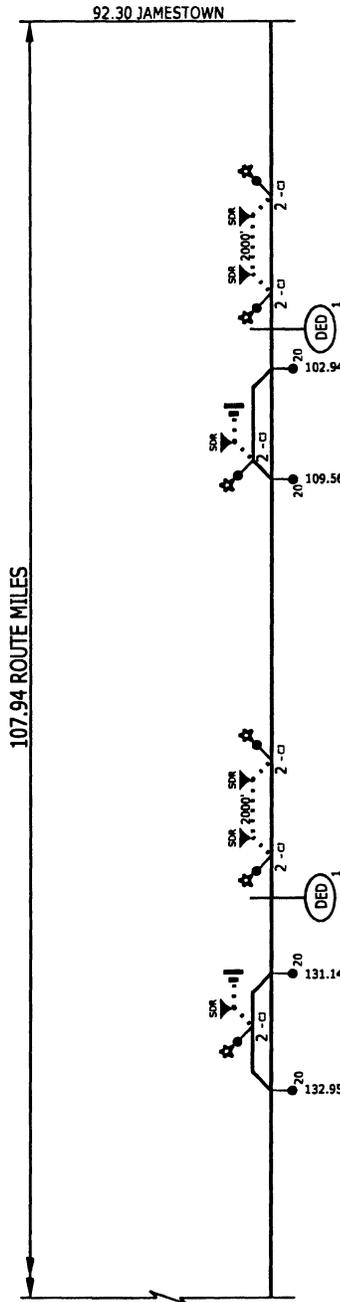
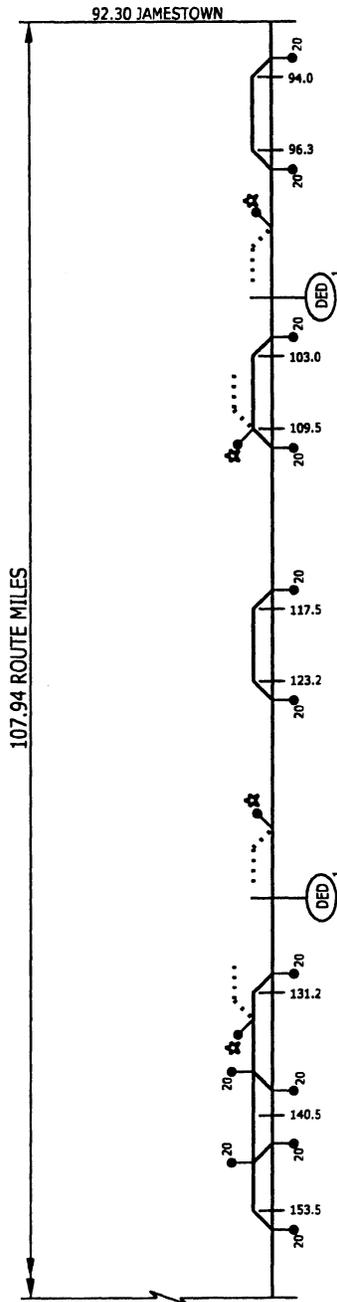
MP: 92.30

NOT TO SCALE

LEGEND:

- TURNOUT
 - TURNOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - ★ - #15 HAND-THROWN
 - ▲ - #11 HAND-THROWN
 - OTHER TRACK MATERIAL
 - SW - SWITCH POINT DERAIL
 - DR - HINGED DERAIL
 - W - WHEEL STOP
 - C - COMPROMISE JOINT
-
- 136# RAIL
 - 132# RAIL
 - 132# RELAY RAIL
-
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
 - AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED





OTP REBUTTAL

BNSF SUPP EVIDENCE

DISTRICT:

JAMESTOWN

FROM: MANDAN

TO: JAMESTOWN

MP: 200.24

MP: 92.30

NOT TO SCALE

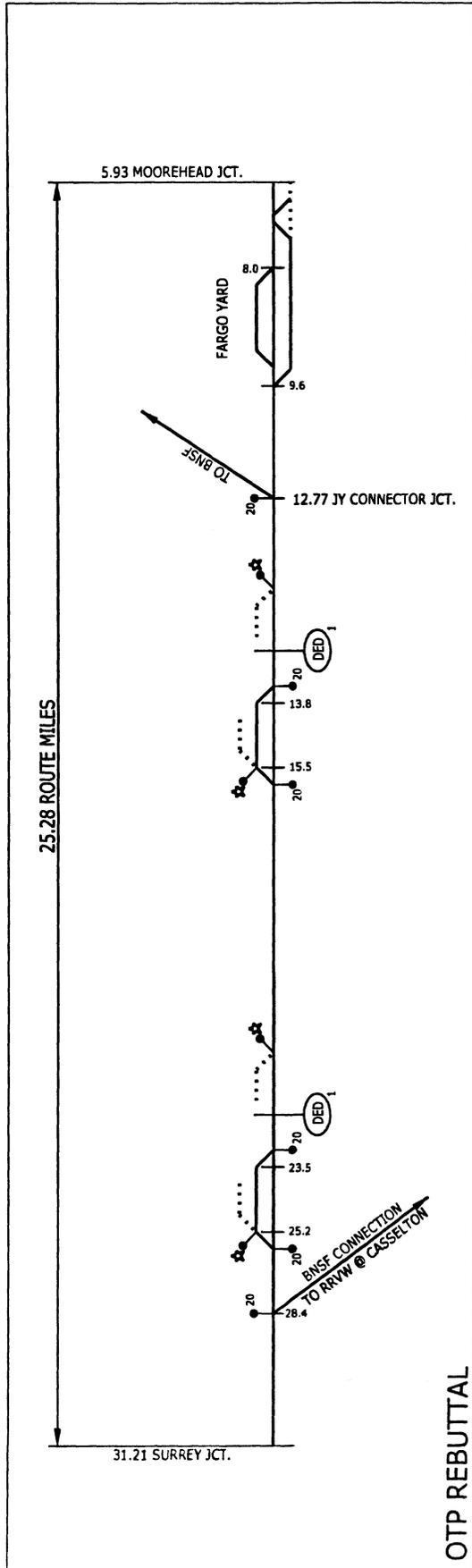
LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL

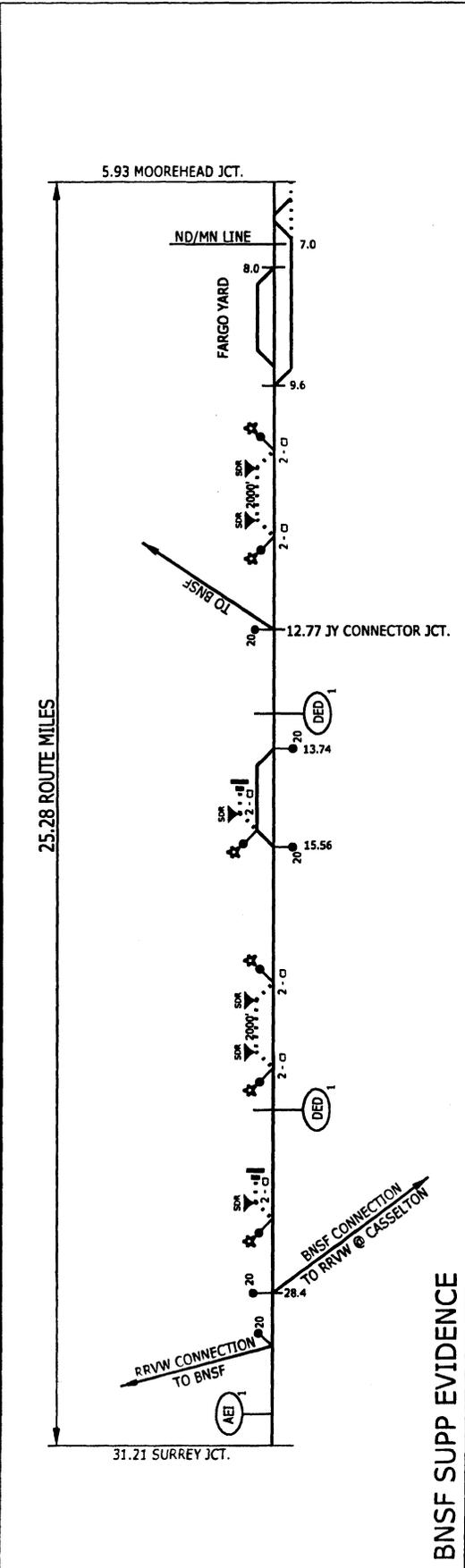
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

- TURNOUT
- TURNOUT TYPES
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT

SHEET 2 OF 2



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

KO

FROM: SURREY JCT.

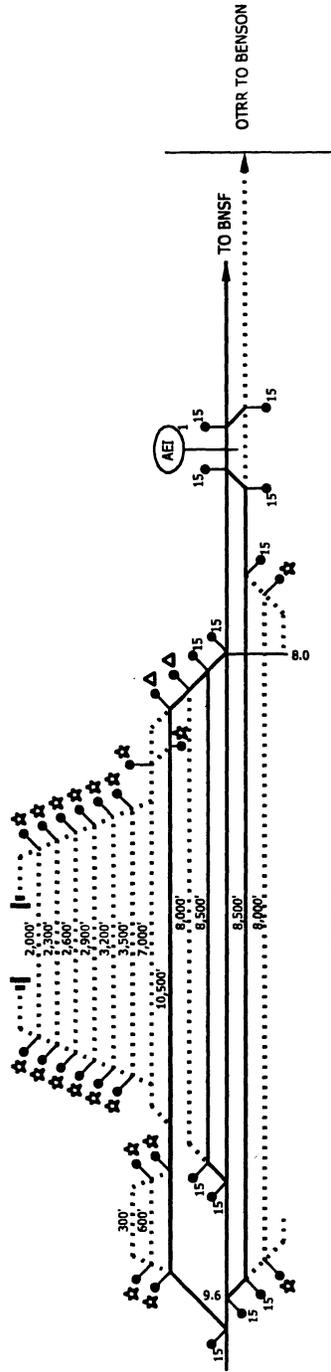
TO: MOORHEAD JCT.

MP: 31.21

MP: 5.93

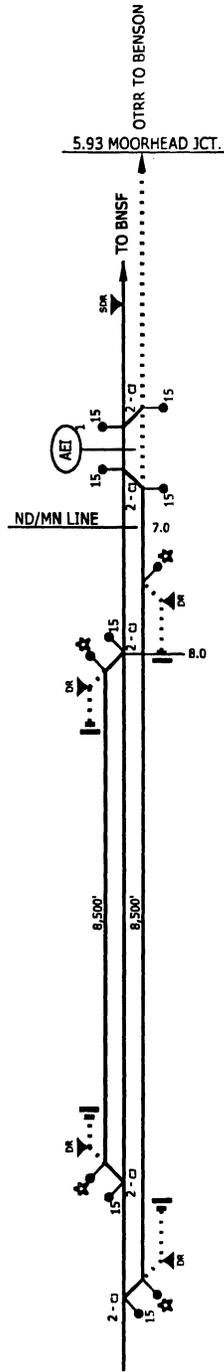


NOT TO SCALE



FARGO YARD

OTP REBUTTAL



FARGO YARD

BNSF SUPP EVIDENCE

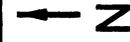
DISTRICT:

KO

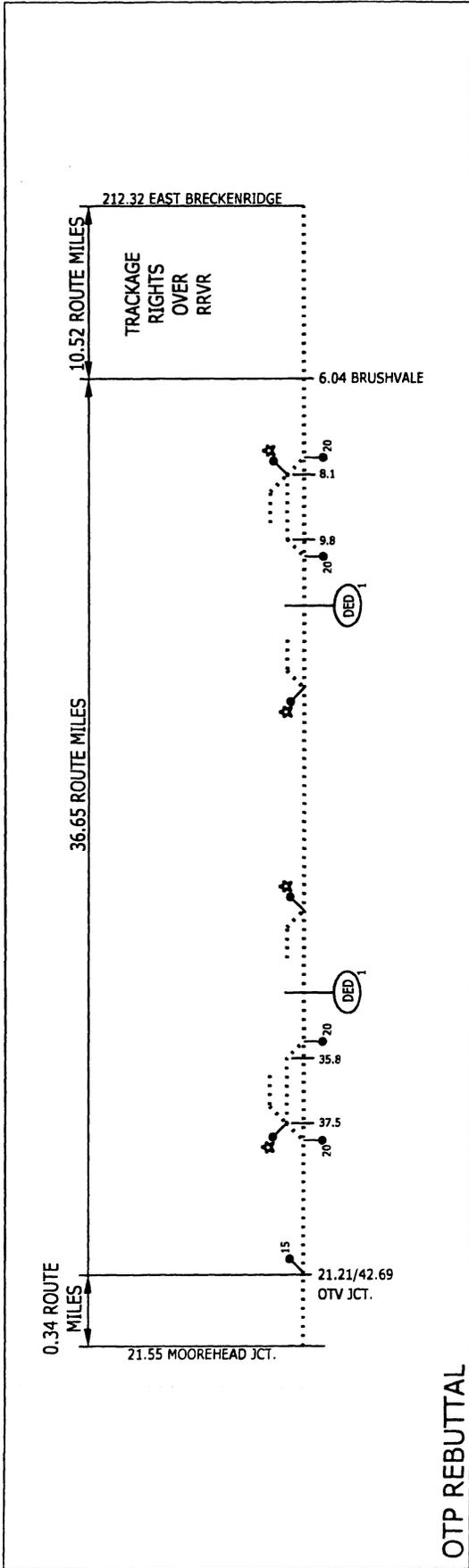
FARGO YARD

LEGEND:

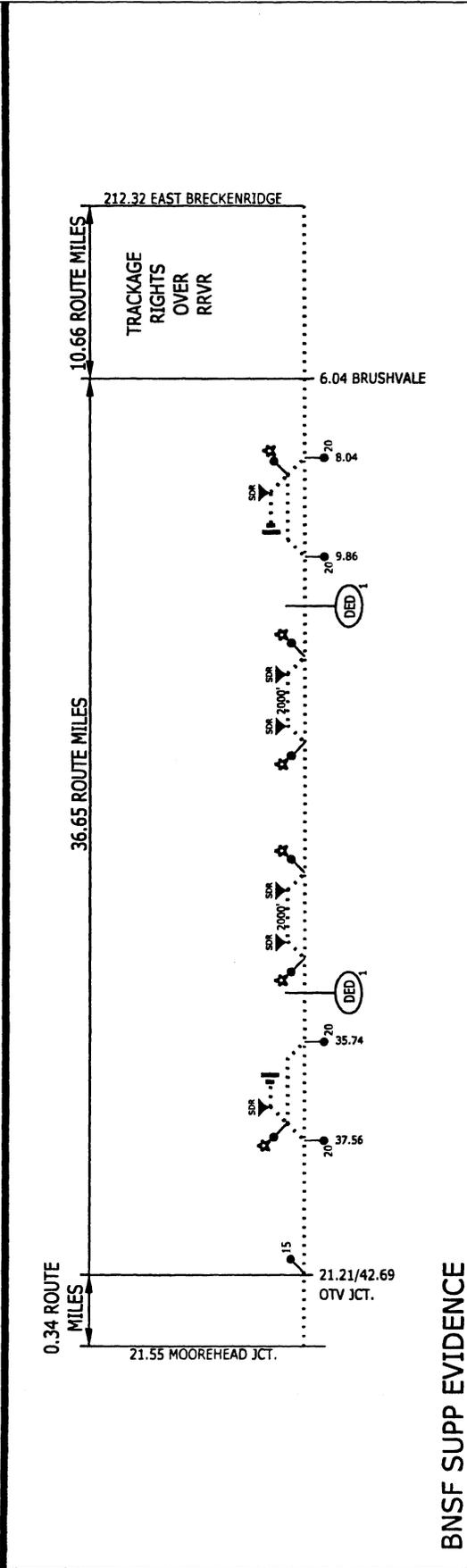
- TURNOUT TYPES
 - 20 - #20 ELECTRIC
 - 15 - #15 ELECTRIC
 - ▲ - #15 HAND-THROWN
 - ★ - #11 HAND-THROWN
 - OTHER TRACK MATERIALS
 - SW - SWITCH POINT DERAIL
 - DK - HINGED DERAIL
 - W - WHEEL STOP
 - - COMPROMISE JOINT
-
- 136# RAIL
 - 132# RAIL
 - 132# RELAY RAIL
-
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
 - AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED
-
- (DED) 1
 - (AET) 1



NOT TO SCALE



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

PROSPER/MOORHEAD

FROM: MOORHEAD JCT.

TO: EAST BRECKENRIDGE

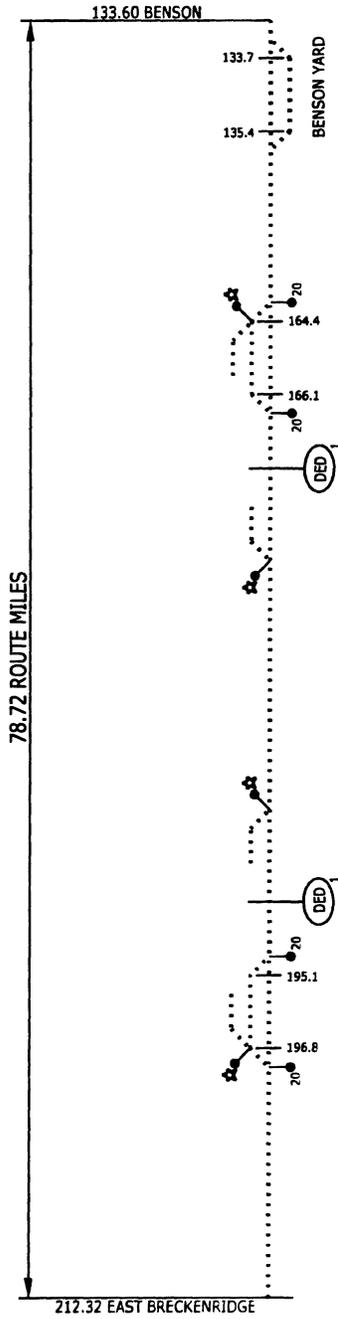
MP: 21.55

MP: 212.32

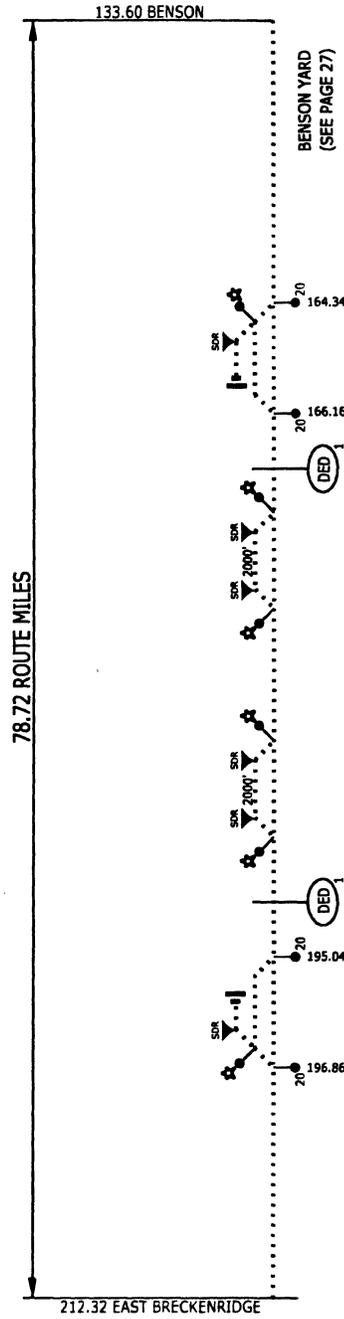
NOT TO SCALE

LEGEND:

- TURNOUT
- TURNOUTS
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- DK - HINGED DERAIL
- W - WHEEL STOP
- C - COMPROMISE JOINT
- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT IDENTIFICATION NUMBER OF TRACKS COVERED (DED)
- AUTOMATIC EQUIPMENT IDENTIFICATION NUMBER OF TRACKS COVERED (AET)



OTP REBUTTAL



BNSF SUPP EVIDENCE

DISTRICT:

MORRIS

FROM: EAST BRECKENRIDGE

MP: 212.32

TO: BENSON (APPLETON JCT.)

MP: 133.60

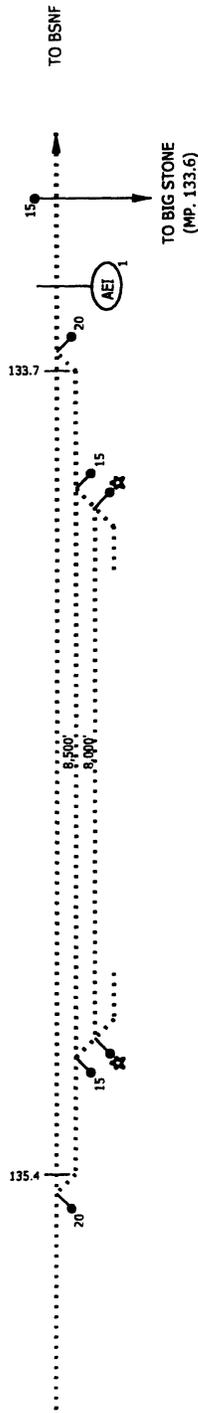
NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- TURNOUT
- TURNOUTS
- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- Δ - #15 HAND-THROWN
- ★ - #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SW - SWITCH POINT DERAIL
- SW - SWITCH POINT DERAIL
- HW - HINGED DERAIL
- W - WHEEL STOP
- C - COMPROMISE JOINT
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

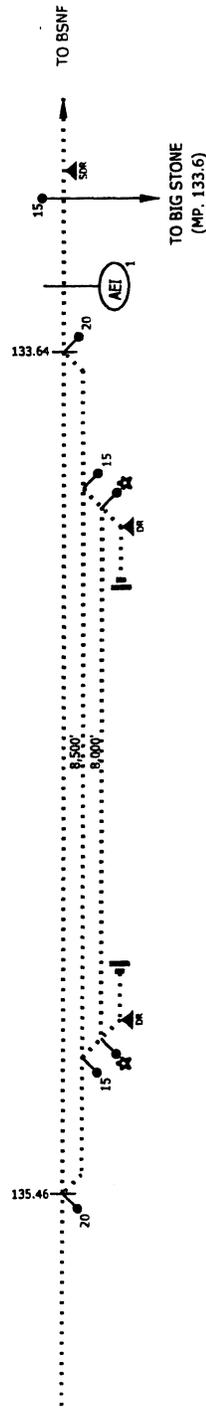


BENSON YARD



OTP REBUTTAL

BENSON YARD



BNSF SUPP EVIDENCE

DISTRICT:

MORRIS

BENSON YARD



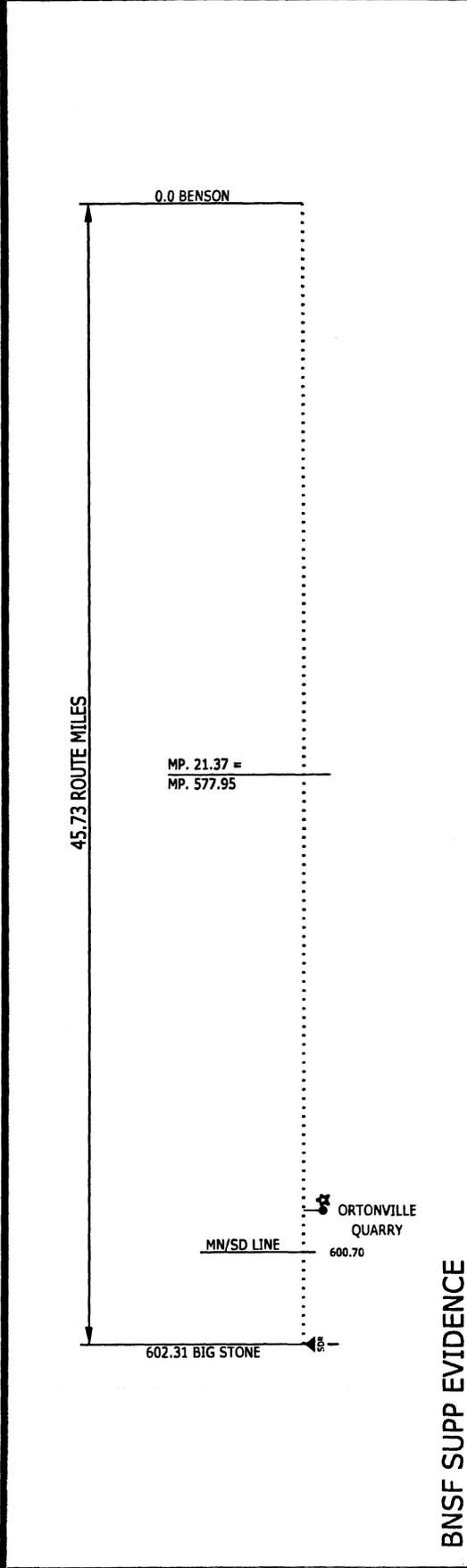
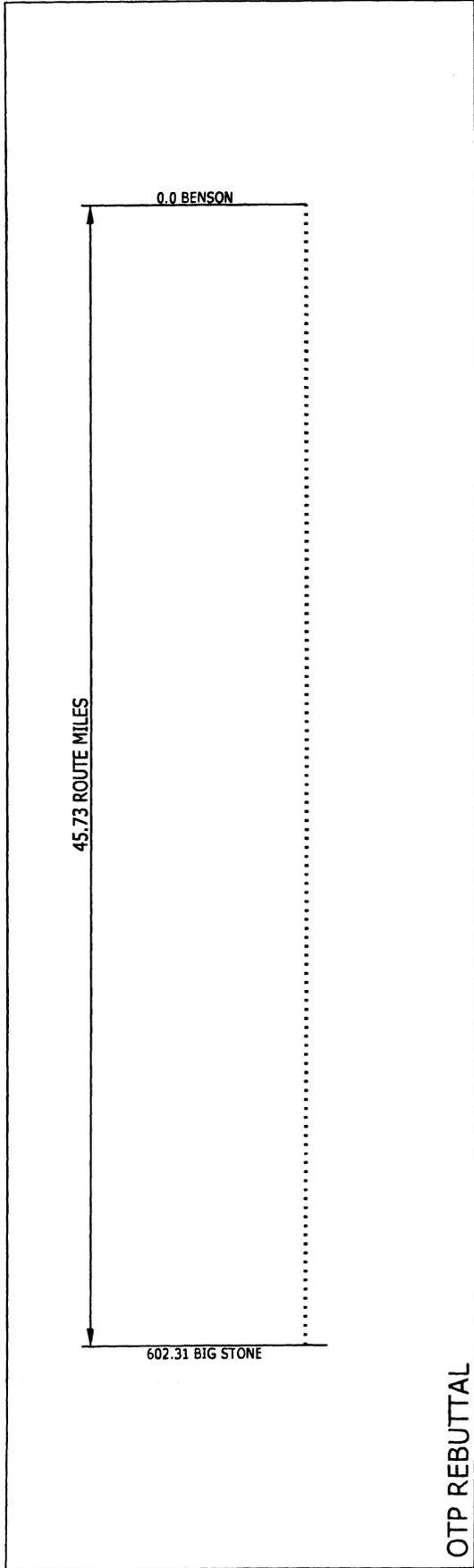
NOT TO SCALE

LEGEND:

136# RAIL
132# RAIL
132# RELAY RAIL

DEFECTIVE EQUIPMENT DETECTOR
NUMBER OF TRACKS COVERED
AUTOMATIC EQUIPMENT IDENTIFICATION
SCANNER NUMBER OF TRACKS COVERED

TURNOUTS
20 - #20 ELECTRIC
15 - #15 ELECTRIC
#15 HAND-THROWN
#11 HAND-THROWN
OTHER TRACK MATERIAL
SWITCH POINT DERAIL
HINGED DERAIL
WHEEL STOP
COMPROMISE JOINT



DISTRICT: APPLETON

FROM: BENSON

TO: BIG STONE

MP: 0.0/577.95

MP: 21.37/602.31 NOT TO SCALE

LEGEND:

- 136# RAIL
- 132# RAIL
- 132# RELAY RAIL
- DEFECTIVE EQUIPMENT DETECTOR NUMBER OF TRACKS COVERED
- AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER NUMBER OF TRACKS COVERED

TURNOUT TYPES

- 20 - #20 ELECTRIC
- 15 - #15 ELECTRIC
- #15 HAND-THROWN
- #11 HAND-THROWN
- OTHER TRACK MATERIAL
- SWITCH POINT DERAIL
- HINGED DERAIL
- WHEEL STOP
- COMPROMISE JOINT

↑ N

REDACTED

III.F: Road Property
Investment

Supplemental Exhibit III.F-1

REDACTED

REDACTED

III.H: Results of SAC
Analysis

Supplemental Exhibit III.H-1

REDACTED