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January 23, 2017

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

Re: Docket No. NOR 42142, Consumers Energy Company v. CSX Transportation, Inc.

Dear Ms. Brown:

Enclosed for filing in the referenced docket on behalf of Complainant Consumers Energy Company ("Consumers") please find the following:

1. The unbound original and twenty-five (25) copies of the Highly Confidential Version of Consumers' Opening Supplemental Evidence, consisting of one volume. Please note that some Exhibits contain color images.

2. The unbound original and twenty-five (25) copies of the Public Version of Consumers' Opening Supplemental Evidence, also consisting of one volume (including Exhibits which contain color images).

3. One hard drive containing electronic copies of the Highly Confidential Version of the Evidence, as well as the workpapers supporting Consumers' Opening Supplemental Evidence (all of which are submitted in electronic form) and the Verified Statement of David Maughan. The electronic workpapers are designated as Highly Confidential under the Protective Order entered by the Board in this proceeding.

Please note that certain of the electronic workpapers on the hard drives include Security Sensitive Information ("SSI"). The SSI information is appropriately identified in accordance with the Department of Transportation's SSI Order 2011-06-FRA-01. In addition, in accordance with SSI handling guidelines, the hard drive is password protected. Please contact Daniel Jaffe of Slover & Loftus LLP at 202.454.4420 for the password.

Kindly date stamp the extra copies of this cover letter and the enclosed pleading and return them to the bearer of this letter. Thank you for your attention to this matter.

Sincerely,

Kelvin J. Dowd
An Attorney for Complainant
Consumers Energy Company

KJD:lad
Enclosures
cc: Counsel for Defendant CSX Transportation, Inc.

PUBLIC VERSION

BEFORE THE
SURFACE TRANSPORTATION BOARD

CONSUMERS ENERGY COMPANY Complainant, v. CSX TRANSPORTATION, INC. Defendant.	)	Docket No. NOR 42142

OPENING SUPPLEMENTAL EVIDENCE OF COMPLAINANT

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Dated: January 23, 2017

TABLE OF CONTENTS

ACRONYMS

The following acronyms are used:

AAR	Association of American Railroads
AEI	Automatic Equipment Identifier
AEO	2015 Annual Energy Outlook Update Forecast
AII-LF	All-Inclusive Less Fuel Index, published by AAR
AMTO	Assistant Manager of Train Operations
ATC	Average Total Cost
ATF	Across-the-Fence
BNSF	BNSF Railway Company
BRC	Belt Railway Company of Chicago
CAPM	Capital Asset Pricing Model
CERR	Consumers Energy Railroad
CMM	Coal Marketing Module
CMP	Constrained Market Pricing
CN	Canadian National Railway
COC	Cost of Capital
COD	Cost of Debt
COE	Cost of Equity
CP	Canadian Pacific Railway
CSXIT	CSX Intermodal Terminals, Inc.
CSXT	Defendant CSX Transportation, Inc.
CTC	Centralized Traffic Control
CWR	Continuous Welded Rail
DCF	Discounted Cash Flow
DOT	Department of Transportation
DP	Distributed Power Configuration
DTL	Direct To Locomotive
EIA	Energy Information Administration
EPA	Environmental Protection Agency
ERM	Environmental Resources Management
FAS-PAS	Fail-Safe Audible Signal—Power Activated Switch
FED	Failed/Dragging Equipment Detector
FRA	Federal Railroad Administration
GAAP	Generally Accepted Accounting Principles
GTM	Gross Ton-Mile
GWR	Gross Weight on Rail
HDF	On-Highway Diesel Fuel Index
IHB	Indiana Harbor Belt Railroad
MERC	Midwest Energy Resources Company
MGT	Million Gross Tons

MISO	Mid-Continent Independent System Operator
MLO	Manager of Locomotive Operations
MMM	Maximum Markup Methodology
MOW	Maintenance of Way
MRP	Market Risk Premium
MSDCF	Multi-Stage Discounted Cash Flow
MSRR	Michigan Shore Railroad
MTO	Manager of Train Operations
NS	Norfolk Southern Railway Company
PPI	Producer Price Index
PRB	Powder River Basin
PTC	Positive Train Control
RCAF-A	Rail Cost Adjustment Factor, adjusted for productivity
RCAF-U	Rail Cost Adjustment Factor, unadjusted for productivity
ROI	Return On Net Investment
ROW	Right of Way
R/VC	Revenue-to-Variable Cost
RSIA	Rail Safety and Improvement Act of 2008
RTC	Rail Traffic Controller Model
S&P	Standard & Poor's
SAC	Stand-Alone Cost
SARR	Stand-Alone Railroad
STEO	Short-Term Energy Outlook
T&E	Train & Engine
UP	Union Pacific Railroad Company
URCS	Uniform Railroad Costing System
WCTL	Western Coal Traffic League

CASE GLOSSARY

The following short form case citations are used:

AEPCO 2002	*Ariz. Elec. Power Coop., Inc. v. BNSF Ry. & Union Pacific R.R.*, Docket No. 42058 (STB served Aug. 20, 2002)
AEPCO 2011	*Ariz. Elec. Power Coop., Inc. v. BNSF Ry. & Union Pacific R.R.*, STB Docket No. 42113 (STB served Nov. 22, 2011)
AEP Texas	*AEP Tex. N. Co. v. BNSF Ry.*, Docket No. 41191 (Sub-No. 1) (STB served Sept. 10, 2007)
APS	*Ariz. Pub. Serv. Co. and Pacificorp. v. The Atchison, Topeka & Santa Fe Ry.*, 2 S.T.B. 367 (1997)
Cargill	*Cargill, Inc. v. BNSF Railway*, STB Docket No. 42120 (STB served Aug. 12, 2013)
Coal Rate Guidelines or *Guidelines*	*Coal Rate Guidelines, Nationwide*, 1 I.C.C.2d 520 (1985), *aff'd sub nom. Consolidated Rail Corp. v. United States*, 812 F.2d 1444 (3d Cir. 1987)
Coal Trading	*Coal Trading Corp. v. The Baltimore & Ohio R.R.*, 6 I.C.C.2d 361 (1990)
CP&L	*Carolina Power & Light Co. v. Norfolk S. Ry.*, 7 S.T.B. 235 (2003)
Duke/CSXT	*Duke Energy Corp. v. CSX Transp. Inc.*, 7 S.T.B. 402 (2004)
Duke/NS	*Duke Energy Corp. v. Norfolk S. Ry.*, 7 S.T.B. 89 (2003)
DuPont/NS	*E.I. DuPont De Numours and Co. v. Norfolk S. Ry.*, Docket No. 42125 (STB served March 24, 2014, updated Oct. 3, 2014)
Ex Parte No. 664	*Petition of the Western Coal Traffic League to Institute a Rulemaking Proceeding to Abolish the Use of the Multi-Stage Discounted Cash Flow Model In Determining the Railroad Industry's Cost of Equity Capital*, Ex Parte No. 664 (Sub-No. 2) (pending)

Ex Parte No. 715	*Rate Regulation Reforms*, Ex Parte No. 715 (STB served July 18, 2013)
Ex Parte No. 722	*Railroad Revenue Adequacy*, Ex Parte No. 722 (pending)
FMC	*FMC Wyo. Corp. v. Union Pac. R.R.*, 4 S.T.B. 699 (2000)
IPA	*Intermountain Power Agency v. Union Pac. R.R.*, STB Docket No. 42136 (Complaint filed May 30, 2012)
KCP&L	*Kansas City Power & Light Co. v. Union Pac. R.R.*, STB Docket No. 42095 (STB served May 19, 2008)
Major Issues	*Major Issues in Rail Rate Cases*, Ex Parte No. 657 (Sub-No. 1) (STB served Oct. 30, 2006)
M&G	*M&G Polymers USA, LLC v. CSX Transp., Inc.*, NOR 42123 (STB served Sept. 27, 2012, updated Dec. 7, 2012)
Nevada Power II	*Bituminous Coal - Hiawatha, Utah to Moapa, Nevada,* 10 I.C.C.2d 259 (1994)
OG&E	*Oklahoma Gas & Electric Co. v. Union Pac. R.R.*, Docket No. 42111 (STB served July 24, 2009)
Otter Tail	*Otter Tail Power Co. v. BNSF Ry.*, Docket No. 42071 (STB served Jan. 27, 2006)
Sunbelt	*Sunbelt Chlor Alkali Partnership v. Norfolk S. Ry.*, Docket No. 42130 (STB served June 20, 2014)
TMPA	*Texas Mun. Power Agency v. Burlington N. and Santa Fe Ry.*, 6 S.T.B. 573 (2003)
TPI	*Total Petrochemicals & Refining USA, Inc. v. CSX Transp., Inc.*, Docket No. 42121 (Complaint filed May 3, 2010)
WFA I	*Western Fuels Ass'n, Inc. & Basin Electric Power Coop. v. BNSF Ry.*, STB Docket No. 42088 (STB served Sept. 10, 2007)
WFA II	*Western Fuels Ass'n, Inc. & Basin Electric Power Coop. v. BNSF Ry.*, Docket No. 42088 (STB served Feb. 18, 2009)

WPL	*Wisconsin Power & Light Co. v. Union Pac. R.R.*, 5 S.T.B. 955 (2001)
WTU	*West Tex. Utils. Co. v. Burlington N. R.R.*, 1 S.T.B. 638 (1996), *aff'd sub nom. Burlington N. R.R. v. STB*, 114 F.3d 206 (D.C. Cir. 1997)
Xcel I	*Public Service Co. of Colorado d/b/a Xcel Energy v. Burlington N. & Santa Fe Ry.*, 7 S.T.B. 589 (2004)
Xcel II	*Public Serv. Co. of Colorado d/b/a Xcel Energy v. Burlington N. & Santa Fe Ry.*, Docket No. 42057 (STB served Jan. 19, 2005)

Counsel Summary

BEFORE THE
SURFACE TRANSPORTATION BOARD

CONSUMERS ENERGY COMPANY	)	
Complainant,	)	
v.	)	**Docket No. NOR 42142**
CSX TRANSPORTATION, INC.	)	
Defendant.	)	

OPENING SUPPLEMENTAL EVIDENCE OF COMPLAINANT

This is the Opening Supplemental Evidence of Complainant, Consumers Energy Company ("Consumers"), in support of its Complaint seeking the prescription of just and reasonable rates for the rail transportation of coal from and after January 1, 2015 by Defendant, CSX Transportation, Inc. ("CSXT"), from rail interchanges in the vicinity of Chicago, IL to Consumers' J.H. Campbell Generating Station near West Olive, MI. This submission is made in compliance with the Decision served by the Board in this proceeding on December 9, 2016 ("*December 9 Decision*").

INTRODUCTION

Pursuant to procedural orders dated July 15, 2015 and April 20, 2016, Consumers and CSXT filed three (3) rounds of evidence and argument in this case under the Board's *Coal Rate Guidelines* and relevant interpretive decisions, with Consumers submitting Opening Evidence on November 2, 2015, CSXT filing Reply Evidence on March 7, 2016, and Consumers closing with its Rebuttal Evidence on May 20, 2016. The parties also each submitted Final Briefs, on June 24, 2016.

Applying the well-defined principles of "traffic grouping" that have been developed in prior proceedings under the *Guidelines*, Consumers' Opening Evidence presented a traffic group for the hypothetical CERR[1] that emphasized, *inter alia*, operational efficiency and cost considerations, by limiting carload merchandise traffic to that which would move over the CERR in intact trains (with no on-SARR intermediate switching), and did not include any toxic-by-inhalation ("TIH") shipments.[2] Consumers accomplished this by reviewing the operations of all trains carrying merchandise shipments contained in the CSXT traffic database produced in discovery, as identified by Train Profile ID number, and removing the individual trains that the data showed as having undergone switching, or contained carloads of TIH commodities.[3] On Reply, CSXT challenged Consumers' merchandise traffic selection, but did not offer an

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[1] Acronyms used in this Opening Supplemental Evidence have the same meanings as those used in Consumers' May 20, 2016 Rebuttal Evidence and June 24, 2016 Brief.

[2] *See, e.g., December 9 Decision* at 17.

[3] *See* Part III-A, *infra*.

alternative merchandise traffic group for the CERR.[4] In its Rebuttal Evidence, Consumers defended its methodology based on the "broad flexibility" afforded complainants under the *Coal Rate Guidelines,*[5] and the principles of SAC theory that underlie the grouping concept.[6] No adjustments were made to the CERR merchandise traffic, as CSXT had not proposed any alternatives for consideration.

In the *December 9 Decision*, the Board addressed the merchandise traffic issue *sua sponte*, and did not agree that Consumers' selection methodology was endorsed by SAC grouping principles and prior precedents.[7] The Board decided that "once a SARR elects to serve a certain subset of traffic – by customer, commodity, route, service type or some combination thereof – the SARR must serve all of that subset of traffic consistently and without regard to how it is tendered."[8] Since CSXT had not provided an alternative evidentiary presentation, the Board directed Consumers to submit corrective, supplemental evidence regarding the CERR's carload merchandise traffic, as well as "evidence on those issues directly affected by its modification of its traffic group...."[9]

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[4] CSXT's Reply traffic group removed selected trains and traffic from Consumers' Opening traffic group, but it accepted Consumers' Opening traffic group as its starting point.

[5] *Coal Rate Guidelines*, 1 I.C.C. 2d at 543.

[6] *See* Consumers' Rebuttal at III-A-4-13.

[7] *December 9 Decision* at 19.

[8] *Id.*

[9] *Id.* at 20.

Subsequent to the filing of Consumers' Rebuttal Evidence and Final Brief in this proceeding, the Board issued a decision in an unrelated case[10] wherein it departed from a long line of precedential decisions and ruled that a hypothetical SARR invariably would incur equity flotation costs as part of its cost of capital.[11] Since Consumers, relying on prior precedent, had presented evidence of capital costs for its CERR that did not include equity flotation expenses, and the record in this proceeding had closed before the Board's *Sunbelt* ruling, Consumers petitioned for leave to supplement this record on a limited basis, to present evidence of the equity flotation cost that an entity like the CERR could be expected to experience, assuming that such a cost necessarily would be incurred.[12] In the *December 9 Decision*, the Board granted Consumers leave to submit this evidence.

In this Opening Supplemental Evidence, Consumers presents modifications to the CERR merchandise traffic group that meet the standard articulated in the *December 9 Decision*, adjustments to various elements of stand-alone costs for the CERR that flow directly from the traffic changes, supplemental evidence respecting the proper estimation of equity flotation costs for the CERR, and updated calculations of the maximum reasonable rates for CSXT coal service to Campbell under the *Guidelines'* SAC Constraint. Consumers respectfully submits that the Board's ruling on the

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[10] *Sunbelt Chlor Alkali P'ship v. Norfolk S. Ry. Co.*, NOR 42130 (STB served June 30, 2016).

[11] *See December 9 Decision* at 23.

[12] *Complainant's Petition for Leave to File Supplemental Evidence of Equity Flotation Costs*, July 14, 2016 at 2-3.

merchandise traffic group is in error, and unfairly restricts the "broad flexibility" that Consumers is entitled to under the *Guidelines*. Likewise, Consumers disagrees that the Board's new rule requiring the inclusion of equity flotation costs is logical or consistent with agency precedent. Nevertheless, Consumers has complied with the Board's directives in this Opening Supplemental Evidence. Consumers' traffic group modifications result in the removal of 897 trains from CERR service during the 2014 base year, 210 trains from the CERR during the First Quarter of 2015, and 24 trains during the peak period, with commensurate modifications of the CERR's traffic volumes, revenues, operating statistics, operating expenses and road property investment. Its evidence concerning equity flotation costs demonstrates that at most, the CERR would incur a 0.95% cost to raise the necessary equity through a private placement. Finally, Consumers' Opening Supplemental Evidence shows that from the First Quarter of 2015 through the First Quarter of 2016, the adjusted maximum lawful rates for CSXT service to Campbell are as follows:

Quarter	Maximum Rate Per Ton
1Q2015	$10.38
2Q2016	$10.49
3Q2015	$10.45
4Q2015	$10.27
1Q2016	$11.78

Commencing with the Second Quarter of 2016 and extending through December 31, 2024, the lawful maximum rates for the subject service are the *lesser* of

(1) the rate equivalents to the R/VC ratios set forth below, or (2) the Revenue Adequacy maximum rate.[13]

Year	Maximum R/VC Ratio
2016	429.8%
2017	315.4%
2018	330.9%
2019	333.1%
2020	306.9%
2021	303.5%
2022	284.1%
2023	286.5%
2024	255.7%

The Board's final decision in this case should grant Consumers the prescriptive relief summarized above, and order CSXT to pay Consumers reparations based on the difference between the charges paid to CSXT under its Tariff CSXT-13952 for coal shipments to Campbell from January 1, 2015 through the date of CSXT's compliance with the Board's order, and the amounts that would have been paid if CSXT had charged the prescribed rates, together with applicable interest.

PRELIMINARY STATEMENT

In addition to its directives concerning supplemental evidence, the *December 9 Decision* included substantive rulings in response to a motion to strike parts of Consumers' Rebuttal Evidence that had been filed by CSXT on June 24, 2016, well

[13] As shown in Consumers' Rebuttal Evidence and summarized in its Brief (at 3, 51-54), the Revenue Adequacy maximum rate for any quarter is { } per ton, adjusted by the net increase (if any) in the RCAF-A from the First Quarter of 2015 to the subject quarter.

beyond the 20-day period prescribed for such submissions by 49 C.F.R. Part 1104.13(a). Consumers objected to Board consideration of CSXT's motion, and the Board agreed that the 20-day rule applied to the motion. *Id.* at 2. The Board nevertheless accepted the motion for consideration, opining that "Consumers has not claimed that the delay in filing the motion has caused any prejudice...." *Id.*

Consumers respectfully submits that it should not have been required to show prejudice resulting from the non-enforcement of the Board's procedural rules. The prejudice was self-evident merely from the Board's consideration of CSXT's motion, which effectively subjected Consumers to adverse regulatory action that the prevailing rule would have precluded,[14] and was confirmed by the Board's decision to *grant* certain of CSXT's requests. While the Board rulings in CSXT's favor will not alter the inevitable evidentiary conclusions that CSXT possesses market dominance over coal transportation to the Campbell Station, and that the challenged rates are unreasonably high under the *Coal Rate Guidelines*,[15] in accepting CSXT's out-of-time pleading the

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[14] *See Burlington N. & Santa Fe Ry. Co. v. Surface Transp. Bd.*, 403 F.3d 771, 776 (D.C. Cir. 2005) (the "injury is obvious" when a party shielded from Board action by a prior rule is exposed to it when that rule is lifted, even before the outcome is known).

[15] Among the arguments made by CSXT in its motion that were rejected by the Board was the carrier's challenge to Consumers' Rebuttal Evidence concerning public funding for the Calumet Sag and Chicago Sanitary Channel Bridges. *December 9 Decision* at 15. While CSXT's request to strike Consumers' evidence was denied, the Board granted CSXT a limited opportunity to respond to it. *Id.* at 16. Consumers reserves the right to address any submission that CSXT might make in this regard, in its Rebuttal Supplemental Evidence.

Board clearly prejudiced Consumers by electing not to consider certain evidence and arguments presented by Consumers in support of its prayer for rate relief.

SUMMARY

Consumers' Opening Supplemental Evidence pursuant to the *December 9 Decision* addresses three (3) major topics. First, Consumers explains the modifications to the CERR merchandise traffic group that address the concerns raised by the Board, and the impact of those changes on aspects of the CERR's hypothetical operations that are "directly affected by [the] modification...,"[16] including traffic volumes, revenues, operating costs and road property investment for the CERR. This evidence is sponsored by Consumers' expert witnesses Thomas D. Crowley, Timothy D. Crowley, Daniel L. Fapp, Brian A. Despard and Robert D. Mulholland of L.E. Peabody & Associates, Inc.; John W. McLaughlin and Walter H. Schuchmann of R.L. Banks Associates; and Harvey H. Stone of Stone Consulting, Inc., all of whose qualifications were included in Consumers' Opening Evidence in this proceeding.

Second, Consumers presents evidence of the actual equity flotation costs that the CERR likely would experience as part of its overall capital costs, assuming *arguendo* that the Board's June 30, 2016 *Sunbelt* decision is correct, and that the inclusion of a separate cost associated with the raising of necessary equity is consistent with agency precedent under the *Coal Rate Guidelines*. This evidence is supported by the accompanying Verified Statement of David Maughan, Managing Director of

[16] *December 9 Decision* at 20. As confirmed *infra*, unaffected issues are not addressed and unaffected CERR costs have not been changed.

Navigant Consulting, Inc., and the Supervisory Principal of Navigant Capital Advisors, LLC. Mr. Maughan's qualifications are described in the accompanying e-workpaper "EFC-MaughanBioExhibitA.pdf."

Third, Consumers provides a recalculation of SAC for the CERR and the resulting maximum reasonable rates for CSXT coal transportation to Campbell, taking into account the CERR traffic, revenue, operating cost, road property investment and capital cost adjustments noted above. This evidence likewise is sponsored by Consumers' expert witness Thomas Crowley.

Consistent with the Board's July 15, 2015 Order in this proceeding governing the presentation of evidence, Consumers' Opening Supplemental Evidence is organized under Parts III-A (Traffic Group), III-B (Stand-Alone Railroad System), III-C (Operating Plan), III-D (Operating Expenses), III-F (Road Property Investment), III-G (Discounted Cash Flow) and III-H (Results of SAC Analysis).

CONCLUSION

Upon consideration of the full record in this proceeding, including this Opening Supplemental Evidence, the Board should issue a decision finding that CSXT possesses market dominance under 49 U.S.C. §10707 over the transportation to which the challenged rates apply, and that those rates exceed a maximum reasonable level in violation of 49 U.S.C. §10707(d). Pursuant to 49 U.S.C. §§10704 and 11704, CSXT should be ordered to establish and maintain rates for coal transportation service to Campbell at levels no higher than those shown in Tables III-H-3 through III-H-5, *infra*, for each of the years 2015 through 2024, and to pay Consumers reparations equal to the difference between freight charges calculated in accordance with such rates, and the charges actually paid by Consumers on all shipments moving under Tariff CSXT-13952 from January 1, 2015 through the effective date of the prescription order, together with applicable interest.

Respectfully submitted,

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Dated: January 23, 2017

CERTIFICATE OF SERVICE

I hereby certify that this 23rd day of January, 2017, I caused copies of the Opening Supplemental Evidence of Complainant Consumers Energy Company to be served by hand upon counsel for Defendant CSX Transportation, Inc. as follows:

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Raymond A. Atkins, Esq.
Matthew J. Warren, Esq.
Hanna M. Chouest, Esq.
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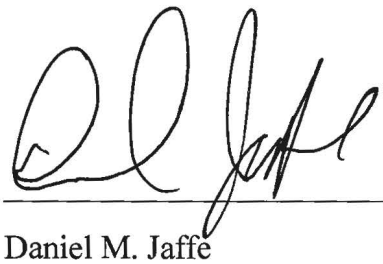

Daniel M. Jaffe

III-A Stand-Alone
Traffic Group

BEFORE THE
SURFACE TRANSPORTATION BOARD

CONSUMERS ENERGY COMPANY	)	
	)	
Complainant,	)	
	)	
v.	)	**Docket No. NOR 42142**
	)	
CSX TRANSPORTATION, INC.	)	
	)	
Defendant.	)	
	)	

PART III

STAND-ALONE COST

III. A. STAND-ALONE TRAFFIC GROUP

The *December 9 Decision* instructed Consumers to modify the carload merchandise portion of the CERR traffic group, in order to address Consumers' exclusion from the group of 2,196 trains that moved during the base year over CSXT lines replicated by the CERR. According to the Board, Consumers' exclusion of these trains, while it *included* other carload merchandise trains that moved over the same route in the same type of service (in the interest of operational efficiency), was inconsistent with the *Coal Rate Guidelines*' grouping principles.[17] While the Board stated that it was applying those principles as they have been developed through precedent, some of the claims made by CSXT in its Reply Evidence that were referenced in the *December 9 Decision* depart

[17] *December 9 Decision* at 19.

radically from the governing standards, and unjustifiably would restrict complainants' grouping flexibility to a far greater degree than the Board's expressed concerns with respect to the CERR's carload merchandise traffic could warrant. Before describing the traffic adjustments made by Consumers in response to the *December 9 Decision*, therefore, it is appropriate to summarize certain key concepts.

First, it is clear that under the *Guidelines*, the focus of grouping is *traffic*, not individual shippers. *See TMPA*, 6 S.T.B. at 586 ("[t]he traffic group includes the complainant's traffic (the issue traffic) and other traffic designated by the complainant (the nonissue traffic)."); *West Tex. Utils. Co.*, 1 S.T.B. at 657 ("the complaining shipper can select any subset of available traffic to determine the least cost at which that subset of traffic could be served independently of other traffic."). *See also, AEPCO 2011* at 4, 16; *Coal Rate Guidelines*, 1 I.C.C. 2d at 544. In cases under the SAC Constraint, complainants proffer and the Board evaluates "traffic groups," not "shipper groups," and nothing in the *December 9 Decision* legitimately can be read as altering this rule.

Second, it has never been required of SAC complainants that they demonstrate an ability to attract customers to join and remain in the designated traffic group. In this case, the CERR is presumed to operate as a replacement for CSXT, not a competitor,[18] and Consumers is entitled to select any traffic from CSXT's existing traffic base so long as it is shown that the CERR can provide comparable service.[19] The CERR is a purely hypothetical entity that by design does not necessarily mimic CSXT in every

[18] *Nevada Power II*, 10 I.C.C. 2d at 267.

[19] *TMPA*, 6 S.T.B. at 591.

respect,[20] and is not obligated to prove that it could successfully negotiate commitments from those shippers whose traffic comprises the selected group. Indeed, the CERR is not bound by the terms of existing contracts between CSXT and those shippers, to the extent that those terms would limit Consumers' selection options or foreclose the inclusion of certain traffic.[21]

Third, from the time of the *Guidelines'* adoption it has been clear that SAC complainants are entitled to select traffic that will maximize a SARR's profitability.[22] *Duke/NS*, 8 S.T.B. at 98 n.11 (a complainant can select a traffic group designed to "maximize revenues while minimizing costs"); *CP&L*, 7 S.T.B. at 245; *PSCo/Xcel*, 7 S.T.B. at 598; *FMC*, 4 S.T.B. at 722 n. 52. As the Board's predecessor ruled in 1981:

> The parties will have broad flexibility to develop the least costly, most efficient plant. That plant should be designed to minimize construction (or acquisition) and operating costs *and/or maximize the carriage of profitable traffic.... Generally, a stand-alone railroad would attempt to fully utilize plant capacity, adding other profitable traffic in order to reduce the average cost of operation.*

1 I.C.C. 2d at 543 (emphasis supplied). In this case, Consumers plainly had the right to assemble a traffic group that maximized the "profitability" of the CERR.

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[20] *See AEPCO 2011* at 10-11.

[21] *TMPA*, 6 S.T.B. at 590-91.

[22] The *December 9 Decision* expresses a concern with SAC complainants submitting traffic groups "composed of only the most profitable trains...." *Id.* at 19. Presumably, the Board was referring to the selective inclusion of trains from a defined traffic subset or class of service, not the overall development of a traffic group.

Finally, there is nothing unique, unusual, or inconsistent with the *Guidelines* about Consumers developing a traffic group based upon trains moving over the portions of CSXT's existing system that are replicated by the CERR.[23] Board precedent clearly supports the development of a SARR's operating plan based upon a selected group of trains,[24] and as noted *infra*, when CSXT produced its traffic data in this case in response to Consumers' discovery requests, the carrier advised Consumers { }[25]

Consumers' train and traffic selection procedures were thoroughly documented in its Opening and Rebuttal workpapers,[26] and were consistent with the traffic selection procedures that were accepted by the Board without objection in previous cases.[27] Likewise, in this case, while CSXT criticized Consumers for including or excluding

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[23] *Cf., December 9 Decision* at 17 (referencing CSXT's claim that Consumers had improperly "selected a group of merchandise trains" for inclusion in the CERR traffic group).

[24] *See, e.g. Duke/CSXT,* 7 S.T.B. at 413; *CP&L*, 7 S.T.B. at 245.

[25] Consumers' Opening at III-A-3 n.6 (citing e-workpaper "CSXT 7-1-2015 Traffic Letter.pdf.").

[26] Consumers' Opening e-workpapers "Consumers Train List Development - Technical Document.docx," "Figure III-C-(Train List Development).xlsx," "CERR BASE YEAR TRAIN LIST DEVELOPMENT vF.xlsx" at tab "NOTES," "SARR Road train Route Evaluation.xlsx" at tab "NOTES"; Consumers' Rebuttal e-workpaper "CERR BASE YEAR TRAIN LIST DEVELOPMENT vF Rebuttal.xlsx" at tab "NOTES."

[27] In *AEPCO 2011*, for example, the Board noted with approval that "AEPCO developed the ANR traffic group utilizing a combination of data sources . . . [including and listing first] BNSF's and UP's historic revenue, car movement, and train event records." *See* AEPCO Opening (filed Jan. 25, 2010) at III-A-4; *AEPCO 2011* at 17 (Board accepted traffic group and in reference to AEPCO's calculation of base-year volumes stated that "although complex, AEPCO's approach is logical, transparent, and fully supported.").

certain trains based on a variety of alleged grounds, [28] it did not take issue with Consumers' overall approach of selecting traffic based upon CSXT's train event data, and replicated the process in its own Reply Evidence.[29] In short, the use of railroad train event data to assemble a SARR traffic group is a standard and accepted option under the *Guidelines.*

1. Adjusted CERR Traffic Group

The central thesis of the *December 9 Decision* with respect to the CERR traffic group selection was the finding that "once a SARR elects to serve a certain subset of traffic – by customer, commodity, *route, service type, or some combination thereof* – the SARR must serve all of that subset of traffic consistently and without regard to how it is tendered."[30] Consumers was directed to revise its merchandise traffic group "pursuant to the above standard...."[31] As described below, Consumers' original train data-based traffic selection process identified CERR traffic by route and service type. Adjustments made pursuant to the Board's directive focus on the same subsets.

a. CERR Traffic Selection

The first three (3) steps in the Consumers traffic selection process were conducted in the SQL Server environment, using the waybill, car event, and train event databases and supporting documentation that CSXT provided in discovery. First,

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[28] *See, e.g.,* CSXT Reply Narrative at III-A-6-10.

[29] *Id.* at III-A-11-12.

[30] *December 9 Decision* at 19 (emphasis supplied).

[31] *Id.* at 20.

Consumers compiled a list of car events for all waybilled traffic potentially traversing the CERR, and developed a table that contained the locations where the car event data showed that cars were handled. This table also identified the specific trains that were reported to have moved each car, by Train Profile ID and Train Suffix (calendar date).[32]

Next, Consumers identified from the train event data the historical trains that moved over any portion of the CERR route during the base year.[33] When CSXT produced its traffic data during the discovery phase of this proceeding, {

}[34] The key identifier for each service type included in the {

}

Third, Consumers combined the historical train routing information captured in the second step with the historical car events compiled in the first step. The train event data was supplemented with car event data using a series of conflict resolution processing loops that compared the two files and developed a single output table.[35]

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[32] *See* Consumers' Opening at III-C-44-50. *See also* e-workpapers "Consumers Train List Development - Technical Document.docx," at Section I., "Train List Development - Step 0 - Sequence Events.sql," and "Train List Development - Step 1 - Consist From Car Events.sql."

[33] *See* Consumers' Opening at III-C-50-53. *See also*, Consumers' e-workpapers "Consumers Train List Development - Technical Document.docx," at Section II.A, and "Train List Development - Step 2 - Train Events With Consist.sql."

[34] *See* note 25, *supra*.

[35] *See* Consumers' Opening at III-C-53-55. *See also*, Consumers' e-workpapers "Consumers Train List Development - Technical Document.docx," at Section II.B through D, and "Train List Development - Step 2 - Train Events With Consist.sql."

Consumers applied a filter that identified all trains that reported two consecutive events on the CERR network. Consumers did not include any traffic that fell outside of this routing subset, based on train data reported by CSXT.[36] After the SQL Server programming module was completed, the output files were exported to MS Access for further review.[37]

The MS Access output tables were exported to MS Excel for further evaluation.[38] The Excel table that was the starting point for the final phase of the selection process contained all CSXT trains that moved over any portion of the CERR network, regardless of the length of the route segment that the trains traversed. This list of all potential CERR trains contained 39,680 trains.[39] This is where Consumers' train-by-train screening process began.

The first screen applied to the train list identified all foreign and passenger trains, which resulted in the removal of { }.[40] The second screen identified all

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[36] *See* Consumers' Opening at III-C-55. *See also* Consumers' e-workpapers "Consumers Train List Development - Technical Document.docx," at Section II. D. 2) a).

[37] *See* Consumers' e-workpapers "Train List Development - Step 4 - Create Final Tables.sql," "Consumers Train List Data Index V10.xlsx," and "Consumers Train List Data01 V10 20150820.mdb."

[38] *See* Consumers' e-workpapers "CERR BASE YEAR TRAIN LIST DEVELOPMENT vF.xlsx" at tab "aSARR_BASE_TRAINS_TRI_SUM_2014."

[39] *See* Exhibit III-A-1 at Column (2). *See also*, Consumers' Opening at III-C-55.

[40] *See* Exhibit III-A-1 at Column (3). *See also*, Consumers' Opening at III-C-55.

light engine moves, which resulted in the removal of { } additional trains.[41] The third screen identified all yard and local trains, which led to the removal of { } yard trains[42] and the segregation of { } local trains into a separate list for further analysis.[43] Consumers ultimately included { } of those local trains, which were shown to have moved coal to West Olive for Consumers' account (or returned empty).[44]

After the first three screens were applied, the train list included all revenue-generating CSXT line-haul trains (unit trains, intermodal trains, auto trains, merchandise unit trains, and merchandise carload trains) that traversed any segment of the CERR route in the base year. This list consisted of 24,715 trains.[45]

The fourth screen was based on a detailed manual review of the route reported in the train event data for each of the aforementioned 24,715 trains. This was a multi-step process that was documented in detail in Consumers' Opening and Rebuttal workpapers. The evaluation required review of each train's reported route over the CERR. As a result of this review, trains were grouped into three (3) preliminary

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[41] *See* Exhibit III-A-1 at Column (3). *See also*, Consumers' Opening at III-C-55.

[42] *See* Exhibit III-A-1 at Column (5), lines 5, 8, 9, 32, 34 35. *See also*, Consumers' Opening at III-C-55.

[43] *See* Exhibit III-A-1 at Column (5), lines 15, 20, 30 37.

[44] *See* Exhibit III-A-1 at Column (12), line 15.

[45] *See* Exhibit III-A-1 at line 43, Column (2) minus the sum of Columns (3) through (5). *See also*, Consumers' Opening at III-C-55.

categories: (1) 18,712 trains were flagged with "include"; (2) 890 trains were flagged with "train by train": and (3) 5,113 trains[46] were flagged with "exclude."

The fifth screen was based on a review of the operations of the individual trains flagged with "train by train" in the preceding step. This group of trains moved between Curtis, IN and Clearing Yard over one (1) of two (2) routes. Some trains moved over the southern CERR segment between Curtis and the Blue Island IHB connection (and over the IHB to and from Clearing Yard), while others moved over the northern (trackage rights) segment between Curtis and 71st Street (and beyond on the BRC to and from Clearing Yard.) Consumers determined that the trains moving over the southern route could be interchanged between the CERR and the residual CSXT at Curtis and the Blue Island IHB interchange. Therefore, this group of 253 "train by train" trains was re-flagged with "include." Consumers also determined that the trains moving on the northern route could not be interchanged between the CERR and the residual CSXT at the 71st Street turnout due to the track configuration. As a result, this group of 637 "train by train" trains[47] was reflagged with "exclude." At the end of this step, 18,965 trains (24,715 – 5,113 – 637) were preliminarily flagged with "include."[48] CSXT accepted and incorporated this operations-based train-by-train traffic selection procedure in its own Reply Evidence.

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[46] *See* Exhibit III-A-1 at Column (6). *See also,* Consumers' Opening at III-C-56.

[47] See Exhibit III-A-1 at Column (7). *See also*, Consumers' Opening at III-C-56.

[48] *See* Exhibit III-A-1 at line 43, Column (2) minus the sum of Columns (3) through (7). *See also*, Consumers' Opening at III-C-56.

The next phase of analysis required further evaluation of the operating parameters of individual trains. Here, three (3) additional screens were applied to the 18,965 trains preliminarily flagged as "include." The first additional screen identified expedited and premium intermodal trains moving over the CERR between Curtis (on the east) and Dolton, Calumet Park, or the Blue Island IHB connection (on the west). To be conservative, Consumers determined that it would exclude this group of 6,491 trains due to the time-sensitive nature of the shipments moving on them.[49] CSXT accepted and incorporated this procedure in its own Reply Evidence.

The second additional screen identified 2,123 carload merchandise trains moving over the CERR between Curtis (on the east) and Barr Yard (on the west).[50] Consumers determined that it would exclude this group of trains, in part because the traffic data produced by CSXT did not provide sufficient detail for Consumers to determine the historical yard handling activities within and around Barr Yard.[51] The third screen identified an additional 73 carload merchandise trains moving TIH shipments over

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[49] *See* Exhibit III-A-1 at Column (8). *See also*, Consumers' Opening at III-C-57.

[50] *See* Exhibit III-A-1 at Column (9). *See also*, Consumers' Opening at III-C-57.

[51] *See* Consumers' e-workpaper "Yard Matrix_Consumers Open.xlsx" at tab "Matrix" cell O5, showing 14,594 annual crew starts in Barr and Clearing Yards combined. *Compare* Consumers' e-workpaper "Yard Shipments by Train OnSARR Events.xlsx" at tab "Symbol Summary" cells Q3 and R3, showing that only 2,843 annual yard trains with reported events in Barr Yard and 1,059 annual yard trains with reported events in Clearing Yard in the event data provided in discovery by CSXT.

the CERR, which Consumers chose to exclude.[52] These 2,196 (2,123 + 73) excluded trains, which comprised fewer than all of the trains in the same service types (as identified by CSXT's Train Profile IDs), are the subject of the Merchandise Traffic portion of the *December 9 Decision.*

Exhibit III-A-1 shows, by category of trains, the number of individual exclusions made by Consumers through its screening process. Out of a total of 29,396 exclusions made by Consumers, all but 2,196 (about 7.5%) were accepted by CSXT.[53] These trains are the focus of the merchandise traffic group adjustments described below.

b. Exclude 897 Base Year, 210 1Q15 and 24 Peak Period Trains

After analysis, Consumers determined that the most efficient way to comply with the *December 9 Decision* would be to modify the CERR traffic by removing the remaining trains from the service types (as organized by Train Profile IDs) where Consumers' screening procedure previously had excluded trains that appeared to require Barr Yard switching or contained TIH shipments. To perform this adjustment, Consumers returned to the seventh and eighth screening steps, as described *supra.*

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[52] *See* Exhibit III-A-1 at Column (10). Although this screen identified 283 trains moving TIH shipments, 210 of them had already been flagged for removal due to Barr Yard car handling requirements. *See also*, Consumers' Opening at III-C-57.

[53] In fact, CSXT (improperly) excluded 573 additional trains moving between Calumet Park and Curtis from the traffic group because it claimed (incorrectly) that these trains – including select carload merchandise trains – failed to meet a transit time standard. *See* CSXT Reply Narrative at III-A-12-15. *See also,* CSXT e-workpaper "CERR Base Year Trains.xlsx" at tab "Trains" cell AI4.

The seventh screen identified 2,123 merchandise carload trains requiring switching at Barr Yard, and the eighth screen identified 73 additional merchandise carload trains moving TIH shipments. These { } Consumers then identified all of the other trains in its base year train list that moved under those { } Train Profile IDs. As a result, Consumers flagged and removed an additional 894 trains from its base year train list for this Opening Supplemental Evidence. There also were three (3) base year trains moving under another Train Profile ID { } that corresponded to a single { } train that Consumers had removed from its First Quarter 2015 train list as a result of applying its seventh and eighth screens. Consumers removed these trains from the CERR traffic group as well.[54]

In total, Consumers removed 897 carload merchandise trains from its base year (2014) train list (and removed the associated traffic from its base year traffic group) in response to the Board's order. Consumers also removed 210 carload merchandise trains from its 1Q15 train list (and removed the associated traffic from its 1Q15 traffic group). Exhibit III-A-2 identifies the carload merchandise trains that Consumers removed from the CERR traffic group as part of this Opening Supplemental Evidence.

[54] In developing its Opening Supplemental traffic data, Consumers identified a misalignment of data in its rebuttal SQL Server table "aCarWaybillsOnSarr_2014." This data misalignment impacted 2,906 out of 338, 274 carloads (0.86 percent), and resulted in these records being assigned incorrect traffic characteristics, including on- and off-SARR miles. Consumers has corrected the misalignment in its Opening Supplemental traffic and revenue identification. *See* Consumers' Supplemental e-workpaper "2014 - 1Q 2015 Car Waybills_Supplemental.xlsx," tab "2014 Carload," Columns (B) and (C).

There were 24 trains in the peak period of the peak year that moved under the aforedescribed { } Train IDs. Those 24 trains likewise were removed from the peak train list.

2. Adjusted CERR Traffic Volumes

In order to identify the specific CERR traffic volume adjustments to be made pursuant to the *December 9 Decision*, Consumers employed the same carload traffic volume procedures described in its Opening and Rebuttal Evidence, using a revised train list that did not include the 897 base year (2014) and 210 First Quarter 2015 trains described *supra*.[55] These procedures involved identifying the specific carload shipments moving on the revised number of trains over the CERR system, then forecasting the future carload volumes associated with the reduced traffic group.

Consumers' Rebuttal Evidence identified {

}.[56] The removal of the base year 2014 and 1Q 2015 trains identified in Section 1, above, results in the 2014

[55] Because all of the removed trains are merchandise trains, CERR intermodal traffic (and revenues) are not impacted. Therefore, Consumers continues to utilize the container traffic and revenue forecasts presented in its Rebuttal Evidence in this Opening Supplemental Evidence.

[56] *See* Consumers' Rebuttal e-workpaper "2014 – 1Q 2015 Car And Container Waybills_Rebuttal.xlsx," tab "2014 Carload," cell BC14768, and tab "2015 Carload," cell BC4295.

carload traffic volumes declining to { } carloads, and 1Q 2015 traffic volumes declining to { } carloads.[57]

The revised base year 2014 and 1Q 2015 carload traffic then was used to develop the Opening Supplemental volume forecast. Consumers relied upon the same traffic forecast procedures used in its Rebuttal Evidence to develop its volume forecast for this Supplemental Evidence.[58] Table III-A-1 below compares Consumers' Rebuttal and Opening Supplemental CERR traffic forecasts.

[57] *See* Consumers' Supplemental e-workpaper "2014 – 1Q 2015 Car And Container Waybills_Supplemental.xlsx," tab "2014 Carload," cell BC 4946, and tab "2015 Carload," cell BC 1624.

[58] Because it is outside the scope of the *December 9 Decision*, Consumers did not update any of the indexes or forecasts used in its Rebuttal Evidence in this Opening Supplemental Evidence.

TABLE III-A-1
CERR Rebuttal and Supplemental Traffic Volume Forecasts

Year	Rebuttal Volume Forecast 1/	Supplemental Volume Forecast 2/	Difference 3/
(1)	(2)	(3)	(4)
1. 2015	788,755	758,805	(29,950)
2. 2016	792,552	762,010	(30,542)
3. 2017	871,010	839,925	(31,085)
4. 2018	898,316	867,109	(31,207)
5. 2019	934,829	902,976	(31,853)
6. 2020	983,528	951,131	(32,397)
7. 2021	1,031,243	998,282	(32,961)
8. 2022	1,086,120	1,052,569	(33,551)
9. 2023	1,139,398	1,105,231	(34,167)
10. 2024	1,205,765	1,170,953	(34,812)
11. Totals	9,731,516	9,408,991	(322,525)

1/ "Summary of CERR Traffic Volumes and Revenues_Rebuttal.xlsx," tab "Summary," Column (M).
2/ "Summary of CERR Traffic Volumes and Revenues_Supplemental.xlsx," tab "Summary," Column (M).
3/ Column (3) – Column (2).

As shown in Table III-A-1, removal of the 897 base year 2014 and 210 1Q 2015 trains identified in Section 1 results in an aggregate reduction in total CERR traffic volumes of 322,525 carloads over the 10-year forecast period.

3. Adjusted CERR Revenues

To develop the Opening Supplemental CERR carload revenue forecast, Consumers applied the procedures described in its Rebuttal Evidence to the Opening Supplemental traffic volumes and associated base revenues. Additionally, Consumers adjusted the Average Total Cost ("ATC") division percentages to reflect the adjusted carload traffic group. This was necessary because, as Consumers explained in its Opening Evidence, limitations in the CSXT waybill, car movement and train data produced in discovery resulted in gaps in actual movement characteristics data. To address the missing data, Consumers developed proxy values based on other traffic in the CERR group.[59] Changing the traffic group for purposes of this Opening Supplemental Evidence also changes the proxy values used in the ATC divisions calculations, and thus, the final CERR revenues.

Table III-A-2 below compares Consumers' Rebuttal and Supplemental CERR revenue forecasts.

[59] *See* Consumers' Opening at III-A-14-18.

TABLE III-A-2
CERR Rebuttal and Supplemental Revenue Forecasts

Year	Rebuttal Revenue Forecast 1/	Supplemental Revenue Forecast 2/	Difference 3/
(1)	(2)	(3)	(4)
1. 2015	$139,628,736	$136,504,338	($3,124,398)
2. 2016	$121,592,139	$118,690,165	($2,901,974)
3. 2017	$155,739,878	$152,653,854	($3,086,024)
4. 2018	$156,446,662	$153,251,152	($3,195,510)
5. 2019	$161,400,726	$158,047,079	($3,353,647)
6. 2020	$176,952,127	$173,440,366	($3,511,761)
7. 2021	$183,545,475	$179,867,338	($3,678,137)
8. 2022	$197,592,151	$193,734,521	($3,857,630)
9. 2023	$198,740,607	$194,698,444	($4,042,163)
10. 2024	$219,400,189	$215,159,182	($4,241,007
11. Totals	$1,711,038,691	$1,676,046,438	($34,992,253)

1/ "Summary of CERR Traffic Volumes and Revenues_Rebuttal.xlsx," tab "Summary," Column (N).
2/ "Summary of CERR Traffic Volumes and Revenues_Supplemental.xlsx," tab "Summary," Column (N).
3/ Column (3) – Column (2).

Removing the 897 base year 2014 trains and 210 1Q2015 trains described in Section 1 results in an aggregate reduction in CERR revenues of approximately $35 million over the 10-year forecast period.

III-B Stand-Alone
Railroad System

III. B. STAND-ALONE RAILROAD SYSTEM

2. Track Miles and Weight of Track

In compliance with the *December 9 Decision,* in this Opening Supplemental Evidence Consumers has revised its traffic group by removing 897 base year 2014 and 210 1Q2015 carload merchandise trains. The change in the CERR traffic group prompted Consumers to perform another RTC Model simulation as described in Part III-C. Upon review of the revised Model, Consumers' experts determined that one yard track in the Barr Yard was no longer required, thereby reducing total constructed yard track by 2.22 miles. Table III-B-1 reflects this revision.

TABLE III-B-1
CERR CONSTRUCTED TRACK MILES

	Miles
Main line track – Single first main track[1/]	169.25
– Other main track[2/]	41.38
Total main line track	210.03
Interchange Tracks	10.66
Setout tracks and helper tracks	2.00
Yard tracks[3/]	9.07
Total track miles	**231.76**

[1/] Single first main track miles equal total constructed route miles, including the lead track to the Consumers Plant and the Dolton Interchange track. This also includes 8.13 route miles of the BRC and the Buffington Connection.
[2/] Equals total miles for constructed second main tracks/passing sidings, including the BRC segment.
[3/] Includes all tracks in the Barr Yard.

Source: Consumers' Op. Supp. e-workpaper "2015 Ballast & subballast Worksheet_Supplemental.xlsx," tab "Rail Type By Subdivision," column R.

3. Yards

b. Miles and Weight of Yard Track

As described *supra*, Consumers has removed one 2.22 mile-long yard track. The relevant track is identified in Exhibit III-B-1.

4. Other

d. RTC Model Simulation of CERR Configuration

Consumers' updated RTC Model simulations are addressed in Part III-C.

III. C. STAND-ALONE RAILROAD OPERATING PLAN

The CERR's Opening Supplemental operating plan does not depart from the plan that Consumers submitted in its Rebuttal evidence. The only changes that Consumers has made in this phase stem directly from the removal of 897 base year 2014, and 210 1Q2015 carload merchandise trains from the CERR traffic group. This change resulted in a corresponding adjustment to the peak-year train count and, in turn, the number of trains entered into the RTC Model during the peak period tested by the model. Consequently, as explained below, Consumers removed 24 trains from its RTC Model train list and reran the model. The peak period did not change.

1. General Parameters

b. Track and Yard Facilities

Based on an analysis of Consumers' Supplemental Opening RTC Model[1] results, Consumers has determined that removal of carload merchandise trains from the CERR traffic group described in Part III-A, *supra*, eliminated the need for a fourth yard track in the Barr Yard. As noted in Part III-B, Exhibit III-B-1 and Part III-F, this track and its associated costs were removed from the CERR.

[1] *See* Consumers' Op. Supp. e-workpaper "CERR Supplemental.zip."

c. Trains and Equipment

ii. Locomotives

(a) Road Locomotives

On Rebuttal, Consumers determined that the CERR required 15 road locomotives to transport the trains moving in the first year of CERR operations. This figure included the application of a spare margin and a peaking factor.[2] Due to the reduction in the number of trains transported by the CERR, and based on Consumers' revised RTC Model run, the CERR requires 13 road locomotives, which includes the application of the same spare margin that Consumers utilized on Rebuttal, and an updated peaking factor.[3]

2. Service Efficiency and Capacity

c. Peak Week Train List Final Development Process

Consumers identified the peak period trains that corresponded to the 897 base year 2014, and 210 1Q2015 carload merchandise trains that were removed from the CERR traffic group, and removed them from the peak period train list.[4]

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[2] *See* e-workpaper "CERR Operating Statistics _Rebuttal.xlsx," tab "Summary," cell K41.

[3] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Statistics_Supplemental.xlsx," tab "Summary," cell K41.

[4] *See* Consumers' Op. Supp. e-workpapers "Leaders Seeds 10-14 Crosswalk - w RTC Symbol Lookup - Supplemental Update.xlsx" at tab "Leaders & Seeds 10-14 CROSS" column V; "Peak Unit Merch Trains v5 20151009 w Peak LE Consist and Growth Trains w delayv4 Supplemental.xlsx" at tab "Peak Week Base Year Unit Merch" rows 264-284 and 292-294; and "CERR BASE

e. Results of the RTC Model Simulation

In this Opening Supplemental evidence, Consumers' transit times have decreased or stayed essentially the same as in its Rebuttal RTC Model simulation, except for two O-D pairs where transit times increased slightly.[5] Regardless, as shown in Table III-C-1 below, the CERR's transit times for crossover traffic remain superior to historical CSXT transit times.

YEAR TRAIN LIST DEVELOPMENT vF Supplemental.xlsx" at tab "Cerr Peak Trains" rows 263-283 and 291-293. There were no corresponding growth trains.

[5] *See* Consumers' Op. Supp. e-workpaper "5.1 Transit Times Comparison Hist vs RTC vs REPLY vs REBUTTAL vs Supplemental.xlsx," tab "Train Trainsit REPLY & REBUT REV."

TABLE III-C-1 COMPARISON OF TRAIN TRANSIT TIMES					
On-SARR Station	**Off-SARR Station**	**Historical Peak Period Trains (HH:MM:SS)**	**CSXT REPLY RTC (HH:MM:SS)**	**CERR REBUTTAL RTC (HH:MM:SS)**	**CERR SUPPLEMENTAL OPENING RTC (HH:MM:SS)**
22ND ST-71ST ST, IL	CURTIS, IN	{ }	3:22:00	3:05:35	2:55:42
CALUMET PARK CP, IL	CURTIS, IN	{ }		0:57:45	0:57:50
CHICAGO 59TH ST, IL	CURTIS, IN	{ }	2:17:00	2:26:46	2:26:31
CHICAGO 59TH ST, IL	DOLTON, IL	{ }	1:46:00	2:04:34	2:04:02
CHICAGO - BARR, IL	CURTIS, IN	{ }	1:48:00	1:41:54	1:42:13
CURTIS, IN	22ND ST, IL	{ }	3:19:00	3:21:16	3:14:56
CURTIS, IN	BRIGHTON PARK		2:38:00	2:51:41	2:39:39
CURTIS, IN	OGDEN JCT.		4:02:00	4:03:57	4:33:41
CURTIS, IN	BLUE ISL IHB CONN, IL	{ }	2:50:00	3:05:43	3:30:44
CURTIS, IN	CALUMET PARK CP, IL	{ }		0:59:40	0:58:07
CURTIS, IN	CHICAGO 59TH ST, IL	{ }	2:52:00	2:46:00	2:45:38
CURTIS, IN	CHICAGO - BARR, IL	{ }		1:45:07	1:43:23
CURTIS, IN	DOLTON, IL	{ }	1:36:00	1:30:29	1:29:40
DOLTON, IL (South)	OGDEN JCT.	{ }	3:26:00	3:38:24	3:38:24
DOLTON, IL (South)	CHICAGO 59TH ST, IL	{ }	1:51:00	2:01:07	1:53:52
DOLTON, IL (East)	CURTIS, IN	{ }	1:34:00	1:36:28	1:37:07
DOLTON, IL (South)	CURTIS, IN		1:41:00	1:48:31	1:42:49

Thus, the CERR continues to meet the operational needs the customers in its modified traffic group.

III. D. OPERATING EXPENSES

Consumers' Opening Supplemental operating expense evidence is focused only on those areas where changes were made from the operating expenses reported in Consumers' Rebuttal evidence. Consumers is utilizing the same organizational scheme for its discussion, but omits various sections where no changes in expenses occurred.

Consumers' Opening Supplemental costs reflect minor adjustments to its Rebuttal costs. These changes occurred as a result of the removal of 897 base year 2014 trains and 210 1Q2015 carload merchandise trains, as described in Part III-A, *supra*, the minor changes to the infrastructure described in Part III-B, *supra*, and the revisions to the RTC Model described in Part III-C, *supra*. Consumers' calculation of the Opening Supplemental annual operating expenses for 2015, in the CERR's first year of operations, are shown in Table III-D-1 below.

TABLE III-D-1 CERR 2015 OPERATING EXPENSES ($ Millions)			
	Rebuttal	**Opening Supplemental**	**Difference (Rebuttal v. Opening Supplemental)**
Locomotive Lease	{ }	{ }	{ }
Locomotive Maintenance	{ }	{ }	{ }
Locomotive Operations	{ }	{ }	{ }
Railcar Lease	$5.1	$5.0	-$0.1
Materials & Supply Operating	$0.6	$0.6	-$0.0
Train, Engine and Yard Personnel	$7.2	$6.4	-$0.8
Non-Train Operating Personnel	$5.1	$5.1	---
General & Administrative	$7.0	$7.0	-$0.0
Loss & Damage	{ }	{ }	{ }
Ad Valorem Tax	$2.0	$2.0	-$0.0
Maintenance-of-Way	$8.8	$8.8	-$0.0
Insurance	$2.1	$2.0	-$0.1
Startup and Training	$2.7	$2.5	-$0.2
Joint Facilities	$1.8	$1.7	-$0.1
Intermodal Lift	{ }	{ }	---
Total*	**$56.8**	**$54.7**	**-$2.1**

Source: Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer."

1. Locomotives

The removal of carload merchandise trains from the base year traffic group and the RTC Model simulation period impacts the locomotive hours derived from the RTC Model, as well as the locomotive peaking factor, which is noted in Part III-C, *supra*. With these revisions and applying the same spare margin used in Consumers' Rebuttal Evidence, the CERR requires 13 ES44AC road

locomotives, two fewer than were included in the Rebuttal Evidence.[1] Consumers did not revise its count of yard (1) and helper (2) locomotives.

a. Locomotive Leasing

The change in the count of road locomotives resulted in a change to the annual lease amounts for all locomotives of -${ }. As such, the total locomotive lease expense is { } for 2015.[2]

b. Maintenance

Consumers continues to use its Rebuttal maintenance cost per locomotive for the ES44AC and SD40 models. The change in the count of road locomotives from 15 to 13 necessarily reduced the annual maintenance by ${ }.[3]

c. Locomotive Servicing

ii. Fuel Consumption

Consumers adjusted the total fuel consumption calculation to reflect the revised statistics produced by the RTC model.[4]

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[1] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Statistics_Supplemental.xlsx," cell K41.

[2] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell D6.

[3] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I8.

[4] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "Summary," cell D97.

iii. Sanding and Other Functions

Consumers updated the locomotive servicing costs to reflect the revised train counts and the revised RTC Model results.[5]

2. Railcars

Car leasing, maintenance and private allowance costs from Consumers' Rebuttal Evidence were updated to reflect the revised car requirements and private allowance payments resulting from the removal of certain carload merchandise trains and the revised RTC results.[6] This update in railcar expenses includes the correction made to railcar statistics described in Part III-A, *supra*.

3. Operating Personnel

a. Operating

ii. Train/Switch Crew Personnel

Consumers updated its train and switch personnel count to reflect the revised statistics from the updated RTC Model analysis. The CERR's crew requirements are 47, six fewer than the figure of 53 included in the Rebuttal

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[5] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "Summary," cell D113.

[6] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "Summary," cell D143.

Evidence.[7] As a result, total T&E crew wages as well as T&E crew overnight and taxi costs were reduced.[8]

vi. CERR Operating Materials & Supplies

The reduction in road locomotives and T&E crews resulted in minor reductions in end of train device expenses and crew safety equipment expenses, respectively.[9]

b. General and Administrative

v. Other

(b) Other Out-sourced Functions

Out-sourcing expenses decreased slightly due to the removal of 897 base year 2014 trains and 210 1Q2015 carload merchandise trains. Payroll expenses also decreased with the reduction in T&E personnel. Outsourced legal expenses decreased because the calculation for this expense relies on revenues, which were reduced commensurate with the adjustment to the CERR traffic volumes described in Part III-A, *supra*.[10]

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[7] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "Summary," cell D7.

[8] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I4.

[9] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I14.

[10] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "Summary," cell I20.

(c) Start-Up and Training Costs

The reduction in T&E employees resulted in a reduction in start-up and training costs as well.[11]

4. Maintenance-of-Way

The removal of 897 base year 2014 trains and 210 1Q2015 carload merchandise trains resulted in a reduction in gross tons travelling over various segments. The reduced gross tons, which are used to calculate rail grinding expenses, translated into in a reduction in maintenance of way expenses in the amount of $2,702.[12]

5. Joint Facilities

The removal of 897 base year 2014 trains and 210 1Q2015 carload merchandise trains resulted in a reduction in the use of joint facilities. Specifically, the joint facilities costs were reduced for {

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[11] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I36.

[12] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I34.

6. Loss and Damage

The removal of 897 base year 2014 trains and 210 1Q2015 carload merchandise trains resulted in a reduction in loss and damage expenses.[13]

7. Insurance

The reduction in the CERR's total operating expenses caused a corresponding reduction in insurance costs, which are derived using an insurance ratio of 3.75% of operating expenses.[14]

8. Ad Valorem Tax

The calculation of Illinois State ad valorem taxes is based on total CERR revenues and operating expenses. With reductions to both revenues and operating expenses in this Opening Supplemental Evidence, CERR ad valorem taxes decline slightly.[15]

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[13] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I22. The change in loss and damage was *di minimis* such that it did not alter Table III-D-1, *supra.*

[14] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I32.

[15] *See* Consumers' Op. Supp. e-workpaper "CERR Operating Expense_Supplemental.xlsx," tab "DCF Transfer," cell I16.

III-F Road Property Investment

III. F. ROAD PROPERTY INVESTMENT

As explained in Part III-A, Consumers has revised its merchandise traffic group by removing 897 base year 2014 and 210 1Q2015 carload merchandise trains. As addressed in Parts III-B and pursuant to the RTC Model run results described in Part III-C, Consumers determined that the revised traffic group and associated capacity requirements made a 2.22-mile yard track in the CERR's Barr Yard unnecessary. Therefore, it was removed from the CERR system.[1]

The removal of the 2.22-mile yard track and related facilities (*e.g.*, lighting, drainage, and fueling pads) results in minor adjustments to the CERR's road property investment costs. Specifically, Consumers' expert witnesses updated roadbed preparation (III-F-2),[2] track construction (III-F-3),[3] and buildings and facilities (III-F-7)[4] investment costs. Consumers also updated mobilization

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[1] *See* Exhibit III-B-1.

[2] Consumers' Op. Supp. e-workpapers "CERR Grading_Supplemental.xlsm" and "CERR Route Miles Grading_Supplemental.xlsx."

[3] Consumers' Op. Supp. e-workpapers "2015 Ballast & subballast Worksheet_Supplemental.xlsx," "2015 OTM Worksheet_Supplemental.xlsx," "Rail Worksheet_Supplemental.xls," and "Track Quantities-2015_Supplemental.xls."

[4] Consumers' Op. Supp. e-workpapers "2015 Building Sites_Supplemental.xlsx" and "2015 Buildings_Supplmental.xlsx."

(III-F-9),[5] engineering (III-F-10),[6] and contingency[7] (III-F-11) additives based on the revisions to the other investment categories.[8]

In updating the Opening Supplemental road property investment electronic workpapers, Consumers' experts determined that certain Rebuttal e-workpapers contained minor technical calculation errors. Consumers has corrected these items in this Opening Supplemental Evidence.[9]

Consumers' Opening Supplemental road property investment costs are shown in Table III-F-1.

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[5] Consumers' Op. Supp. e-workpaper "III – F TOTAL Supplemental.xlsx," tab "CERR TOTALS," Cell F88.

[6] Consumers' Op. Supp. e-workpaper "III – F TOTAL Supplemental.xlsx," tab "CERR TOTALS," Cell F91.

[7] Consumers' Op. Supp. e-workpaper "III – F TOTAL Supplemental.xlsx," tab "CERR TOTALS," Cell F95.

[8] All changes made in the Opening Supplemental III-F evidence discussed above can be found in Consumers' Op. Supp. e-workpaper "Investment Cost Changes in Supplemental.docx."

[9] *See* Consumers' Op. Supp. e-workpaper "2015 OTM Worksheet_Supplemental.xlsx" and "Track Quantities-2015_Supplemental.xls."

TABLE III-F-1

CERR Road Property Investment Costs

(millions)

	Item	Consumers Rebuttal[/1]	Consumers Op. Supplemental[/2]	Difference
1.	Land	$120.63	$120.63	$0.00
2.	Roadbed Preparation	$36.77	$36.73	$0.04
3.	Track	$209.16	$208.59	$0.57
4.	Tunnels	$0.00	$0.00	$0.00
5.	Bridges	$72.48	$72.48	$0.00
6.	Signals and Communications	$41.97	$41.97	$0.00
7.	Buildings and Facilities	$12.38	$11.85	$0.53
8.	Public Improvements	$3.38	$3.38	$0.00
9.	Subtotal	$496.78	$495.63	$1.15
10.	Mobilization	$10.16	$10.13	$0.03
11.	Engineering	$37.61	$37.50	$0.11
12.	Contingencies	$42.39	$42.26	$0.13
13.	**Total Road Property Investment Costs**	**$586.95**	**$585.52**	**$1.43**

[/1] Consumers' Rebuttal e-workpaper "III-F- TOTAL Rebuttal.xlsx"
[/2] Consumers' Op. Supp. e-workpaper "III-F TOTAL Supplemental.xlsx"

III-G Discounted Cash Flow

III. G. DISCOUNTED CASH FLOW ANALYSIS

In this Part, Consumers addresses the equity flotation cost issue described in the *December 9 Decision*.

1. Cost of Capital

a. A Separate Equity Flotation Cost for the CERR is Unwarranted

Consumers' position remains that the capital costs for the CERR should not include any adjustment or additive to reflect the flotation costs of equity. The Board's approach to capital costs under the *Guidelines* effectively requires a complainant's SARR to use the same capital structure and cost of equity that the Board determines represents the average for the domestic Class I railroad industry.[1] The Board's recent decisions in *Sunbelt* and *Total* requiring the SARR to incorporate an additional flotation cost that is not otherwise part of that industry average place the SARR at a disadvantage relative to the incumbent, forcing the SARR to incur costs that the incumbent does not. This treatment constitutes an entry barrier that is impermissible under stand-alone cost theory and the theory of contestable markets:

> To simulate the competitive price that would result if the market for rail service were contestable, the costs and other limitations associated with entry barriers must be omitted from the SAC analysis. This removes any advantages the existing railroad would have over a

[1] *See, e.g., AEPCO* at 137 (rejecting shipper efforts to use only the CAPM-based cost of equity for 2008).

> new entrant that create the existing railroad's monopoly power.[2]

In requiring the SARRs in *Sunbelt* and *Total* to incorporate an explicit flotation cost, the Board purported to base its deviation from long-standing precedent on the premise that a SARR would still need to raise equity capital in the "real world," and could not do so for free.[3] The Board has allowed that separate incorporation of a flotation cost would not be needed, and thus would be inappropriate, if the industry average reflected flotation costs.[4] However, the Board has not provided an adequate explanation for its apparent conclusion that because there have been no recent equity issuances by Class I railroads, a flotation cost is no longer implicit in the industry average cost of equity capital. Consumers respectfully submits that agency precedent is to the contrary.

The Board's statutory predecessor, the Interstate Commerce Commission ("ICC"), recognized that a flotation cost was implicit in the cost of equity, even when no railroad in the composite sample actually issued any equity during the period under review. The agency explained its reasoning:

> We agree with NITL and CPL that flotation costs should not be considered if new equity has not been issued. We disagree with the argument that a perpetual flotation cost adjustment is necessary whether or not stock has been issued. As we have explained previously, in the years after flotation costs are incurred, the impact of those costs (and all other

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[2] *Total* at 18 (citation omitted); *see also West Texas Utils.*, 1 S.T.B. at 670.

[3] *See Total* at 217.

[4] *See Sunbelt* (STB served June 30, 2016), at 20.

> previously incurred costs) on investor requirements will be reflected in the cost of equity capital for those years, determined on the basis of an unadjusted DCF formula. This is so because the unadjusted DCF formula estimates the cost of equity capital on the basis of current stock prices and current investor return expectations. Because any impact of previously incurred flotation costs would be reflected in current stock prices and current investor return expectations, so too would such impact be reflected in the cost of equity capital for those years determined on the basis of an unadjusted DCF formula.[5]

While the Board now calculates the industry cost of equity by averaging the results of its Capital Asset Pricing Model ("CAPM") and its multi-stage DCF model ("MSDCF"), the ICC's logic remains fully applicable. CAPM, like the MSDCF, also reflects current stock prices and current investor return expectations, and the CAPM thus also reflects the "impact of previously incurred flotation costs." The Board has not provided any meaningful explanation for why its new approach does not constitute a double-count of the flotation cost of equity, first to the extent it is implied in the current stock price and existing cost of capital, and a second time in the explicit flotation additive to the SARR's cost of capital.

b. The Board's Recent Decisions Overstate the Costs That They Aim to Represent

The double-count problem described above is exacerbated by the manner in which the Board recently has calculated the flotation cost adjustment, which results in a larger adjustment than would be recognized if a railroad

[5] *Railroad Cost of Capital--1985*, 3 I.C.C.2d 625, 635-36 (1987).

included in the composite sample actually made a public offering in the year under review.[6]

The cost of capital as determined by the ICC starting in 1978[7] incorporated an explicit equity flotation cost additive in the two years in which a railroad included in the composite sample for the industry made a public issuance. *Railroad Cost of Capital--1983*, 1 I.C.C.2d 643 (1984); *Railroad Cost of Capital--1991*, 8 I.C.C.2d 402, 414-15 (1992). However, the ICC included a flotation cost adjustment only for the particular carrier that had publicly issued shares (CSXT in 1983, and BN in 1991), and not for the other carriers. The ICC explained this principle in its 1983 determination:

> [F]lotation costs should only be applied to CSX's share of the composite equity capital. In the past we have not included a flotation cost for equity since stock has not been issued for years by any of the composite railroads under study. The fact that one of the roads in the study group issued stock should not call for inclusion of a flotation cost for all the other railroads.

1 I.C.C.2d at 655.

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[6] The Board's approach also fails to account for the likelihood that a SARR would respond to an increase in its cost of equity resulting from the inclusion of the flotation costs by reducing its equity and increasing its debt. When a given input becomes more expensive, a least-cost, most-efficient entity would respond by using less of it.

[7] *Adequacy of R.R. Revenue (1978 Determination)*, 361 I.C.C. 79 (1978).

The resulting additive to the industry cost of capital to reflect CSX's issuance of equity in 1982 was 0.37%. 1 I.C.C.2d at 655. A portion of that flotation additive reflected how the issuance diluted the existing equity holders. "[T]he existing shareholders experience a dilution of earnings per share, and a corresponding downward pressure on the price per share."[8] Since the SARR is a start-up, without existing shareholders or earnings, dilution does not apply, which would reduce the equivalent flotation cost even further.[9]

The ICC reiterated the foregoing principle in its 1991 determination:

> Thus, AAR concludes that a 3.87% flotation cost occurred for the Burlington Northern stock sale. This flotation cost factor, when applied to Burlington Northern's market share of the railroad composite equates to a weighted flotation cost of 0.37%.

8 I.C.C.2d at 415.

The Board's approach to determining flotation costs in *Sunbelt* and *Total* imposes an adjustment that is a substantial multiple of the additive that would result if the objective is to reflect the average of the actual flotation costs that CSXT or any other single railroad has incurred over time, including during the SARR's construction period. CSXT accounted for only 19.21% of the equity market value of the composite sample in 2013, the first year of the CERR's construction period. Accordingly, if CSXT actually had incurred a 6% flotation

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[8] 1 I.C.C.2d at 655 (footnote omitted).

[9] Additional stock issuances are the reverse of stock buybacks. The ICC's insistence on recognizing how issuances reduce earnings per share cannot be reconciled with the Board's subsequent unwillingness to recognize how buybacks increase earnings per share.

cost in that year, the impact on the overall industry cost of capital would have been only 1.15% (6% x 19.21% = 1.15%), and that would have been only for a single year. The approach approved by the Board in *Sunbelt* and *Total* effectively assumes that every railroad included in the composite sample issues new equity during each year of the construction period. Such an assumption is unrealistic and without precedent, and serves to artificially increase the SARR's costs not only in absolute terms, but also relative to the incumbent's, which likewise is inconsistent with SAC theory. "[I]ncluding a cost not incurred by the incumbent carrier constitutes a barrier to entry."[10]

If the Board wanted to include an adjustment that more accurately reflects the manner in which the Class I railroads actually incur flotation costs, the adjustment would recognize that the Class I railroads included in the composite sample have issued shares only twice in the 37 years that the Board or the ICC has calculated a current cost of equity, and that in nearly all those years there have been at least four carriers included in the composite sample. Accordingly, an appropriate adjustment would be to multiply the equity flotation cost otherwise deemed appropriate first by 2/37 (or 5.4%, representing the ratio of the years in which there was a public issuance by any railroad included in the composite sample to the total number of years considered), and then by 1/4 (or 25%, representing a conservative estimate of the ratio of the number of railroads making the public issuance to the usual minimum number of railroads included in the

[10] *Wis. Power & Light v. Union P. R.R.*, 5 S.T.B. 955, 1025 (2001).

composite sample). Accordingly, for example, if 6% was deemed to be the appropriate equity flotation cost for a SARR issuance (which it should not be, for reasons presented *infra*), then the appropriate adjustment would be 6% x 5.4% x 25%, or 0.08%.

In short, the approach to flotation costs that the Board approved in *Sunbelt* and *Total* vastly overstates the equity flotation costs that CSXT and other Class I railroads actually have incurred over time, even assuming that an explicit flotation cost adjustment is needed or appropriate. In compliance with the *December 9 Decision*, however, Consumers will presume for the balance of this Part III.G that the Board's intent is to accurately identify the flotation cost that the CERR would incur if it were required to pay someone to raise its equity.

c. The CERR's Equity Flotation Cost Should Be Based on a Private Placement

One of the fundamental tenets of stand-alone cost theory is that the SARR is allowed to take advantage of all productive means available to the incumbent. To do otherwise would impose an impermissible entry barrier on the SARR. At the same time, the SARR also is allowed to take advantage of alternative means of production, so long as they are feasible. To do otherwise prevents the SARR from serving its role as a least-cost, optimally-efficient replacement for the incumbent, and allows the incumbent to burden its captive customers with avoidable inefficiencies and rates that are not needed to cover its

appropriate costs. *See, e.g., WFA/Basin I* at 8, *TMPA*, 6 S.T.B. at 586; *FMC*, 4 S.T.B. at 721.

Towards that end, "[t]remendous flexibility is permitted in the design of the SARR,"[11] as "the complainant can propose a hypothetical SARR that would change *all* these features of the real world operation, so long as the alternative service would itself be feasible and supported."[12] Specifically, the SARR "may choose the lowest feasible cost for *each* category of expense."[13] Accordingly, if it is feasible and less costly for the CERR to raise its equity capital through a private placement instead of a public stock offering (IPO), the CERR would be fully entitled and expected to do so. As Consumers noted in its Rebuttal Evidence, all indicators point to the preferability of a private placement as the method for raising the CERR's necessary equity.[14]

In *Total*, the shipper assumed that the SARR would raise its equity capital through a less costly private placement instead of an IPO, but the Board found that the shipper "provided no support for its argument that such a scenario would be possible" or "a feasible method of raising the amount of capital necessary," and "[m]ore importantly … failed to provide evidence (1) that such an arrangement would involve no equity flotation fee, or (2) as to what the proper equity flotation fee would be if the sale of equity were to proceed through private

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[11] *AEPCO* at 10.

[12] *Id.* at 13 (emphasis added).

[13] *Id.* at 46 (emphasis added).

[14] Consumers' Rebuttal at III-G-6-12.

placement."[15] Herein, Consumers provides clear evidence that a private placement for the CERR is feasible, and would be accomplished at a cost of less than 1%.

As part of this Supplemental Evidence, Consumers is submitting the Verified Statement of David Maughan ("Maughan VS"). Mr. Maughan is an investment banker with more than forty years of experience in both IPOs and private placements. He is the Managing Director and Supervisory Principal, and serves as the leader, of Navigant Capital Advisors, LLC ("NCA"). NCA is a broker-deal that is wholly owned by Navigant Consulting, Inc. ("Navigant"), where Mr. Maughan also serves as a Managing Director.

Mr. Maughan explains in his Statement that a private placement is an appropriate and entirely feasible means for the CERR to obtain its equity capital, while an IPO is not. As a start-up with no plans for expansion, the profile of the CERR is not a typical fit for an IPO, which is more complex, more costly, and presents regulatory hurdles that are not associated with a private placement. Moreover, the strong, long-term cashflow generated by the SARR would be viewed very favorably by investors such as pension funds and universities, which regularly invest in long-term equities that are not publicly-traded in order to secure returns to match their long-term financial commitments. A private placement thus provides a match between the appropriate investors and the appropriate investment.[16]

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[15] *Total* at 218.

[16] Maughan VS at 2, 5-11.

As Mr. Maughan attests, the target investors, meaning the funds that have been willing to invest in railroads and similar businesses, can be identified by an investment banker without calling on the assistance of a public trading desk, thus avoiding a major aspect of the cost associated with an IPO. Additionally, the investment banker would be engaged in matching a readily discernable universe of investors with an investment, rather than in a traditional underwriting of the transaction, which obviates another potential cost. In short, the private placement is a substantially more efficient means for raising the equity capital needed by an entity such as the CERR.[17]

In a private placement, the investors typically invest through limited partnerships and other vehicles that do not involve a public offering or public registration, but rely instead upon the use of a seasoned general partner or other manager. The general partner/manager is compensated by the investors themselves, rather than the company seeking the investment. Additionally, the presence of such general partners limits the compensation/flotation costs that the investment banker can obtain.[18]

As Mr. Maughan notes, one of the minority equity investors in the CERR would be expected to be Consumers itself. In a "real world" private placement, principal beneficiaries of the project tend to participate, and are generally expected to do so by outside investors, through direct investments and/or

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[17] *Id.* at 10, 12-13, 15-17.

[18] *Id.* at 12, 16.

off-take commitments, reducing somewhat the amount of equity that must be raised from outside investors. Agency precedent supports reliance on costs "tailored more precisely to the capital sources that would be available to the SAC system," so long as they are supported by competent evidence.[19] As the Board's new requirement to account for flotation costs has been justified by purported "real world" conditions,[20] fairness as well as principles of contestable market theory dictate that the CERR have access to the lowest cost option for raising equity that would be available in the real world. As Mr. Maughan demonstrates, that is a private placement where Consumers takes a conservative, 10% participation share.[21]

Mr. Maughan shows that the flotation cost for the CERR private placement would be less than 1% (0.95%) of the proceeds, consisting of:

(a) 1% on the approximately $396 million that would be raised from regular outside investors ($3.96 million);

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[19] *Ark. Power & Light Co. v. Burlington N. R.R.*, 3 I.C.C.2d 757, 776 (1987).

[20] *Sunbelt* (STB served June 30, 2016), at 29.

[21] Maughan VS at 13-14, 18. As Mr. Maughan notes, the $44 million (10%) capital contribution is well within Consumers' means, and easily meets its internal and regulatory investment criteria. Under the discounted cash flow analysis, Consumers will receive the same return (reflecting the industry cost of equity) as other CERR equity holders, and Consumers' participation does not reduce the CERR's underlying cost of capital.

(b) 0% on the approximately 10% of the equity, or $44 million, that Consumers would contribute as a major off-taker of the SARR;[22] and

(c) an additional $200,000 to cover a retainer of $50,000 to be spread over four quarters to cover the efforts of the investment banker and his staff for the work before receiving the $3.96 million success fee.

The $4.16 million total equates to 0.95% of the total of an estimated $440 million in CERR equity.[23] The reasonableness of Mr. Maughan's estimate also is confirmed by reference to the "Lehman formula," an often-used industry benchmarking tool. This formula provides a $100,000 premium, relative to a flat 1%, on the first $4 million of proceeds, and 1% on all amounts above that threshold.[24] For the CERR with 10% participation by Consumers, the Lehman formula (with the $200,000 retainer noted above) produces a flotation cost of $4.26 million, or 0.97%.

Significantly, as Mr. Maughan explains, the $4.16 million total fee provides compensation to the banker that is substantially greater than the investment banker would net from a 6% flotation cost for an IPO, as posited by CSXT. He explains that 60% of the IPO gross fee would go to the sales desk of the investment banker and/or to third party investment banks to assemble the retail

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[22] Mr. Maughan explains that no fee or commission would attach to the sponsor's portion of the participation. Maughan VS at 13-14, 20.

[23] To the extent that the CERR's equity investment exceeds $440 million, the flotation cost percentage could decrease, because the retainer represents a fixed amount.

[24] The Lehman formula consists of 5% on the first $1 million, 4% on the second $1 million, 3% on the third $1 million, 2% on the fourth $1 million, and 1% on all amounts above $4 million. Maughan VS at 19.

buyers. Another 20% would go to the underwriters. As a result, only 15-20% would be left for the lead and co-managers, of which the lead manager would receive only half. So, of the $26.4 million (6% of $440 million) that constitutes the total flotation cost for the CSXT-envisioned IPO, the investment banker would receive only about $2.64 million (50% praecipium on the 20% share that represents the management fee that is split between the lead manager and co-managers). The investment banker's compensation under the private placement is nearly 60% greater than that under the IPO.[25]

The private placement thus aligns the interests of the project, the investors, and the investment banker in an efficient and feasible manner. The project obtains its needed equity investment at a lower fee, the investors obtain an attractive return and cashflow for the long-term, and the investment banker receives substantially greater compensation than with an IPO.[26] As a "least cost" and optimally efficient firm, the CERR is entitled to the beneficial use of a private place to raise its equity capital.

d. CSXT's 6% Flotation Cost is Unwarranted

As Consumers showed in its Rebuttal Evidence, CSXT's made-for-litigation estimate of 6% as an equity flotation fee for the CERR is without any meaningful support.[27]

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[25] Maughan VS at 15-17, 19-20.

[26] *Id.* at 1-2, 12-13, 20.

[27] Consumers' Rebuttal at III-G-3-5.

In the first place, the 6% flotation cost that CSXT proposes is nearly triple the 2.1% that the Board adopted in *Sunbelt*, ostensibly based on the Facebook IPO. Significantly, however, even the 2.1% approved in *Sunbelt* is unreasonable, as the correct flotation cost for the Facebook IPO figure is 1.1%, as CSXT itself calculated and presented in its Reply Evidence.[28] CSXT's figure is also triple the 2% that CSXT itself successfully proposed in *Total*.[29]

Second, CSXT based its 6% figure on a simple average of various IPOs of $100 million or more taken over the past decade. CSXT Reply at III-G-3-4. CSXT made no apparent effort to consider the details of those individual IPOs. For example, CSXT sorts the IPOs by industry (*id.* at 3), but none of those listed is identified as a railroad or transportation company.[30] As Consumers' witness

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[28] CSXT Reply Exhibit III-G-1 (p. 1, line 2). In its reply evidence in *Sunbelt*, NS claimed Facebook's net proceeds were $3.8 billion, relying on Facebook's 10-Q filing for the second quarter of 2012. NS Reply at III-G-4 & n.5. In fact, the 10-Q specifies net proceeds of $6.8 billion, presumably rounded down from $6.84 billion (180 million shares at $38 per share). *See* Facebook, Inc.'s 10-Q at 8, https://www.sec.gov/Archives/edgar/data/1326801/000119312512325997/d371464d10q.htm, included as e-workpaper "EFC-FB10Q2Q2012.pdf".

[29] *Total* at 217.

[30] CSXT also makes no mention of the flotation costs that it incurred for its issuance in 2001 of zero coupon bonds that were convertible into common stock. A copy of the final Supplement to the Prospectus, available at https://www.sec.gov/Archives/edgar/data/277948/000091664101501399/0000916641-01-501399.txt, is included as e-workpaper "EFC-CSX2001ProsSupp.pdf". As shown on page 2 of the Supplement, the underwriting discounts and commissions were $8.03 million and the total price to the public was $401.38 million (with the underwriters having an option to purchase an additional 15% to cover overallotments), yielding a flotation cost percentage of 2%. While the bonds ultimately were redeemed before conversion, the issuance offers another indicator of the upper bound on the flotation costs that any SARR replicating portions of the CSXT system would experience to obtain its equity.

David Maughan explains, flotation costs that apply to any specific IPO are a function of a wide variety of individual factors, including the nature of the business, its expectations regarding expansion and profitability at the time of the issuance, the age of the firm, and the timing of the use of IPO proceeds.[31] CSXT's approach fails to account for any of these, and relies solely on simple averages, broad industry classifications (for which there is no counterpart for a railroad), and general size.

CSXT's attempt to justify a flotation cost by equating the equity that the CERR would need to raise with the equity raised in the identified IPOs suffers from an additional false equivalency. In most cases, an IPO does not include all of a company's equity or total shares, but only a portion of those shares, and often a modest one, as shares that are already owned often are subject to lockup restrictions. In the case of Facebook, for example, its May 2012 IPO covered 180 million Class A shares, while as of July 25, 2012, Facebook had 674.6 million Class A shares outstanding, and an additional 1.47 billion Class B shares that had superior voting rights.[32] The IPO thus covered less than 27% of Facebook's Class A shares and none of the Class B shares. However, the additional shares that were not part of the IPO became available to trade as various lockups following the IPO

[31] Maughan VS at 7-8.

[32] *See, e.g.*, http://www.valuewalk.com/2014/05/facebook-inc-fb-ceo-zuckerberg-class-b-stock-to-class-a/, included as e-workpaper "EFC-FBStockClass.pdf".

ended.[33] A key benefit of an IPO as an equity raising strategy is that the public offering gives the founders, early investors, and key employees of the company the opportunity to monetize their investments following expiration of the lockup period.

Two consequences follow. First, the CERR's absence of any founders, early investors, or key employees that will be seeking to cashout on any investment or ownership stake eliminates one of the major reasons for pursuing an IPO. Even if the IPO option were otherwise feasible for the CERR, the CERR would have no incentive to incur the additional expense associated with an IPO, as opposed to a private placement.

Second, focusing on the initial or notional value of the IPO for purposes of determining a flotation cost percentage presents an incomplete and misleading analysis of the benefits conferred by the IPO, and how that value would translate for a SARR. A company may be very willing to pay, and investment banks may be able to obtain, a 6% flotation fee for an IPO that covers only a quarter of the company's shares because of the benefits that the IPO provides for the marketability and liquidity of shares that are not included in the IPO. If an IPO covers 25% of a firm's shares, for example, a 6% flotation cost effectively becomes only 1.5% flotation cost when applied to the full equity of the company. If the Facebook IPO is used as a proxy for a SARR's flotation cost, as

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[33] *See, e.g.*, https://www.bloomberg.com/news/articles/2012-08-22/explaining-facebooks-epically-complex-stock-lockup, included as e-workpaper "EFC-FBLockup.pdf".

the Board did in *Sunbelt*, the 1.1% flotation fee for 27% of the company would equate to a flotation fee of 0.3% for the SARR's entire equity requirement (1.1% ÷ (1/0.27) = 0.30%).

e. Summary

What appears to the Board's emerging policy towards flotation costs for a SARR, and CSXT's efforts to exploit that policy, are both substantially flawed. There are sound arguments for why there should be no flotation cost additive for the CERR at all. The Board has not meaningfully or adequately addressed prior precedent that an explicit flotation cost additive should not be included unless there was an actual issuance in the relevant years, and only then for the particular carrier that had the issuance. To the extent the Board's concern is that there was not an actual issuance in the relevant years (meaning those years in which the SARR's construction occurs), an approach more consistent with that precedent would be to average the posited flotation costs over the years in which the current cost of equity has been calculated.

If the Board is determined to approve an explicit flotation additive for the CERR that does not apply to CSXT or the industry-average over Consumers' objection, that fee should be no more than 0.945% based on a private placement. A private placement is entirely feasible for the CERR, and is far more appropriate than an IPO, which is not feasible at all. A private placement would avoid costly regulatory and other barriers for an IPO, secure the equity financing needed by the SARR, constitute the appropriate vehicle for reaching the investors

that would have an appropriate interest in and motivation for acquiring the SARR's equity, and provide the investment banker that matches those investors with the CERR with nearly 60% greater compensation than the banker would net from an IPO.

III-H Results of SAC Analysis

III. H. RESULTS OF SAC ANALYSIS

1. Results of SAC DCF Analysis

Consumers has modified its DCF model to accommodate the traffic, revenue and cost adjustments made by Consumers in this Opening Supplemental Evidence and discussed in Parts III-A through III-G, *supra*. These modifications are described below.

k. Summary of SAC

Consumers' Opening Supplemental calculation of total SAC for the CERR is presented in Table L of Opening Supplemental Exhibit III-H-1[1] and compared with CSXT's Reply values in Table III-H-1 below.

[1] *See* Consumers Op. Supp. e-workpaper "Exhibit III-H-1_Supplemental.xlsm," tab "Netting."

Table III-H-1
Summary of CSXT Reply and Consumers Opening
Supplemental SAC Results for the CERR
($ in millions)

	CSXT Reply[1/]			Consumers Opening Supplemental[2/]		
Year	SAC	SARR Revenue	Over-Payments (Shortfall)	SAC	SARR Revenue	Overpayments (Shortfall)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
2015	$165.1	$109.4	($55.7)	$111.6	$136.5	$24.9
2016	$159.1	$92.5	($66.5)	$105.7	$118.7	$12.9
2017	$166.6	$109.5	($57.1)	$115.0	$152.7	$37.7
2018	$171.8	$105.3	($66.5)	$119.1	$153.3	$34.1
2019	$178.9	$109.6	($69.3)	$124.1	$158.0	$33.9
2020	$186.7	$118.9	($67.8)	$130.8	$173.4	$42.6
2021	$193.5	$120.6	($72.9)	$136.2	$179.9	$43.6
2022	$202.1	$128.9	($73.2)	$142.5	$193.7	$51.3
2023	$209.0	$124.8	($84.2)	$146.5	$194.7	$48.2
2024	$218.5	$138.0	($80.5)	$153.7	$215.2	$61.4

1/ *See* CSXT Reply at III-H-13.
2/ *See* Consumers' Op. Supp. e-workpaper "Exhibit III-H-1_Supplemental.xlsm," tab "Summary."

As shown in Table III-H-1, the CERR revenues exceed the stand-alone costs in each year of the study period. Under the *Guidelines'* SAC Constraint, where stand-alone revenues are shown to exceed costs, rates for the members of the traffic group must be adjusted to bring revenues and SAC into equilibrium.

4. Maximum Reasonable Rates

The SAC analysis summarized in Parts III-A through III-G, *supra,* and displayed in Opening Supplemental Exhibit III-H-1, demonstrates that over the 10-year DCF period, the revenues generated by the CERR exceed its total capital and operating costs. Table III-H-2 below shows the measure of excess revenue over SAC in each year of the applicable DCF period (2015 through 2024).

Table III-H-2
Summary of Consumers Opening Supplemental DCF Results for the CERR
January 1, 2015 to December 31, 2024

Year	Annual Stand-Alone Requirement	Stand-Alone Revenues	Over-Payments (Shortfall)	PV Difference	Cumulative PV Difference
(1)	(2)	(3)	(4)	(5)	(6)
2015	$111,572,776	$136,504,338	$24,931,562	$23,809,496	$23,809,496
2016	$105,744,926	$118,690,165	$12,945,239	$11,101,595	$34,911,091
2017	$114,991,555	$152,653,854	$37,662,299	$29,154,059	$64,065,149
2018	$119,147,759	$153,251,152	$34,103,393	$23,829,046	$87,894,196
2019	$124,127,523	$158,047,079	$33,919,556	$21,393,217	$109,287,413
2020	$130,822,610	$173,440,366	$42,617,756	$24,262,380	$133,549,793
2021	$136,223,784	$179,867,338	$43,643,555	$22,427,446	$155,977,239
2022	$142,460,375	$193,734,521	$51,274,146	$23,783,459	$179,760,698
2023	$146,522,161	$194,698,444	$48,176,283	$20,170,968	$199,931,666
2024	$153,739,190	$215,159,182	$61,419,992	$23,212,402	$223,144,068

Source: Consumers' Op. Supp. e-workpaper "Exhibit III-H-1_Supplemental.xlsm," tab "Netting."

Application of the Board's Maximum Markup Methodology yields the following maximum R/VC ratios for the rates that CSXT can charge to transport Consumers' Campbell coal traffic for each year of the DCF model.

Table III-H-3
Opening Supplemental MMM Results

Year	Maximum R/VC Ratios
(1)	(2)
2015	364.1%
2016	429.8%
2017	315.4%
2018	330.9%
2019	333.1%
2020	306.9%
2021	303.5%
2022	284.1%
2023	286.5%
2024	255.7%

Source: Opening Supplemental Exhibit III-H-2

As indicated in Table III-H-3, the maximum R/VC ratios range from 255.7 percent to 429.8 percent over the 10-year DCF period.

As applied to the unadjusted Phase III URCS variable costs for the issue movements, the following MMM maximum reasonable rates apply to the transportation of coal by CSXT to Campbell from the Chicago interchange at 1Q15 wage and price levels.

Table III-H-4
CONSUMERS' MMM RATES PER TON – 1Q15

CSXT Origin	Car Type	MMM Rate Per Ton 1Q15
(1)	(2)	(3)
1. Chicago, IL	Gondola	$10.38
2. Chicago, IL	Hopper	$10.23

Source: Consumers' Op. Supp. e-workpaper "1Q15 to 1Q16 MMM Rates_Supplemental.xlsx," tab "Rates," cells D28 and E28.

The maximum lawful rates for the transportation of coal from the origin covered by Tariff CSXT-13952, Amendment 1, equals the greater of the jurisdictional threshold or the MMM maximum rates. Table III-H-5 compares CSXT's rates to Consumers Campbell plant to the jurisdictional threshold and the MMM maximum. The issue rates are greater than both the jurisdictional threshold and the MMM rates.

Table III-H-5
MAXIMUM RATE SUMMARY FOR 1Q15 TO 1Q16

Quarter	CSXT Rate Level (Including fuel surcharge)	Jurisdictional Threshold per Ton	MMM Rate Per Ton	Maximum Rate Per Ton[1/]
(1)	(2)	(3)	(4)	(5)
Gondola				
1. 1Q 2015	$14.95	$5.13	$10.38	$10.38
2. 2Q 2015	$14.95	$5.20	$10.52	$10.52
3. 3Q 2015	$14.95	$5.17	$10.45	$10.45
4. 4Q 2015	$15.07	$5.09	$10.31	$10.31
5. 1Q 2016	$15.33	$4.93	$11.78	$11.78
Hopper				
10. 1Q 2015	$14.95	$5.06	$10.23	$10.23
11. 2Q 2015	$14.95	$5.13	$10.38	$10.38
12. 3Q 2015	$14.95	$5.09	$10.31	$10.31
13. 4Q 2015	$15.07	$5.02	$10.16	$10.16
14. 1Q 2016	$15.33	$4.88	$11.65	$11.65

[1/] The Maximum Rate Per Ton equals the greater of the Jurisdictional Threshold (Column (3)) or MMM Rate (Column (4)) per ton.

Source: Consumers' Op. Supp. e-workpaper "1Q15 to 1Q16 MMM Rates_Supplemental.xlsx," tab "Rates."

5. Reparations

CSXT owes Consumers the difference between the rates paid by Consumers for Campbell coal service from and after January 1, 2015, and the lawful maximum level. These principal reparations payments will increase until CSXT reduces the rates to the maximum reasonable level(s). Consumers also is entitled to interest on all principal reparations amounts, calculated from the date that the first unlawful charge was paid at the rate assessed under Tariff CSXT-

13952, and otherwise in accordance with the Board's regulations at 49 C.F.R. Part 1141.1, *et seq.*, and its ruling in *Ex Parte No. 715* at 35-36 and 41.

Part V Witness Qualifications

PART V

WITNESS VERIFICATIONS

This Part contains the Verifications of Consumers' witnesses who are sponsoring evidence on behalf of Consumers Energy Company as part of the Opening Supplemental Evidence. All of the witnesses' Statements of Qualifications appear in Part V of Consumers' Opening Evidence.

VERIFICATION

I, Thomas D. Crowley, verify under penalty of perjury that I am the same Thomas D. Crowley whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read the Opening Supplemental Evidence relating to the SARR traffic selection and revenue in Part III-A as well as Part III-G and III-H that I am co-sponsoring with Witness Daniel L. Fapp, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Thomas D. Crowley

Executed on January 23, 2017

VERIFICATION

I, Timothy D. Crowley, verify under penalty of perjury that I am the same Timothy D. Crowley whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have coordinated the workpaper production of all electronic files in accordance with the Surface Transportation Board's ("STB") March 12, 2001 decision in Ex Parte No. 347 (Sub-No.3), *General Procedures for Presenting Evidence in Stand-Alone Cost Rate Cases* and the STB's July 10, 2015 decision in NOR 42142 *Consumers Energy Co. vs. CSXT* for the format of evidence to be presented, that I have read the Opening Supplemental Evidence related to roadbed preparation/earthworks of the road property investment cost of the SARR in Part III-F that I am sponsoring, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Timothy D. Crowley

Executed on January 23, 2017

VERIFICATION

I, Brian A. Despard, verify under penalty of perjury that I am the same Brian A. Despard whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read the Opening Supplemental Evidence relating to the development of operating expenses in Part III-D that I am sponsoring, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Brian A. Despard

Executed on January 23, 2017

VERIFICATION

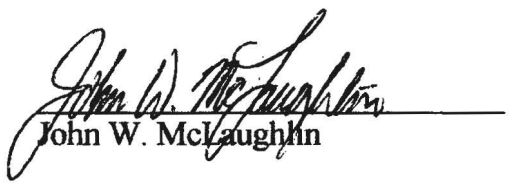
I, Daniel L. Fapp, verify under penalty of perjury that I am the same Daniel L. Fapp whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read the Opening Supplemental Evidence relating to the SARR traffic selection and revenue in Part III-A as well as Part III-G and Part III-H that I am co-sponsoring with Witness Thomas D. Crowley, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Daniel L. Fapp

Executed on January 23, 2017

VERIFICATION

I, John W. McLaughlin, verify under penalty of perjury that I am the same John W. McLaughlin whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read the evidence related to train speeds and locomotives per train from the RTC Model simulation of the CERR's operations in Part III-C that I am sponsoring and that I have read the evidence related to the simulation and validation of the CERR's infrastructure and operating plan, as well as development of certain operating statistics discussed in Part III-C and Part III-D that I am co-sponsoring; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



John W. McLaughlin

Executed on January 18, 2017

VERIFICATION

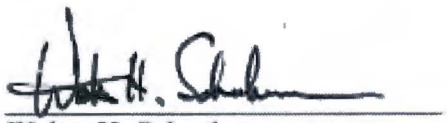
I, Robert D. Mulholland, verify under penalty of perjury that I am the same Robert D. Mulholland whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read the Opening Supplemental Evidence relating to the development of the base year and peak period train lists in Part III-C that I am sponsoring, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Robert D. Mulholland

Executed on January 23, 2017

VERIFICATION

I, Walter H. Schuchmann, verify under penalty of perjury that I am the same Walter H. Schuchmann whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read Part III-C of the Opening Supplemental Evidence related to the simulation and validation of the CERR's infrastructure and operating plan, as well as development of certain operating statistics that I am co-sponsoring; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.



Walter H. Schuchmann

Executed on January 23, 2017

VERIFICATION

I, Harvey H. Stone, verify under penalty of perjury that I am the same Harvey H. Stone whose Statement of Qualifications appears in Part V of the Narrative portion of Consumers Energy Company Opening Evidence in this proceeding; that I have read Part III-B regarding the CERR system's configuration and facilities and Part III-F regarding SARR construction costs of the Opening Supplemental Evidence that I am co-sponsoring; that I know the contents thereof; and that the same are true and correct. Further, I certify that I am qualified and authorized to file this statement.

Harvey H. Stone

Executed on January 19, 2017

Verified Statement of

David Maughan
Navigant Consulting, Inc.
685 Third Avenue, 14th Floor
New York, NY 10017

In the Matter of

CONSUMERS ENERGY COMPANY
v.
CSX TRANSPORTATION, INC.

January 23, 2017

INTRODUCTION

I have been retained by counsel on behalf of Consumers Energy Company ("Consumers") to provide expert witness testimony in its railroad coal rate case at the Surface Transportation Board ("Board") against CSX Transportation, Inc. ("CSXT") regarding the transaction fees, otherwise known as equity flotation costs, that the hypothetical stand-alone railroad ("SARR") designed to serve Consumers' J.H. Campbell Generating Station would need to pay in order to raise equity from the capital markets.

I am a Managing Director of Navigant Consulting, Inc. ("Navigant"). Navigant is a specialized global expert services firm offering a wide range of financial management services, investigation services, litigation support services, and business management consulting services, as well as software programs for use in database management, analysis, and benchmarking. In addition, I am the Managing Director and Supervisory Principal and serve as the leader of Navigant Capital Advisors, LLC ("NCA"), Navigant's wholly-owned broker-dealer. More information about my background is provided later in this Statement.

In this Statement, I will address the following:

1. My background and qualifications to support the conclusions and analysis in this Statement;
2. An explanation why CSXT's claim that an initial public offering ("IPO") is the only or preferred approach for the SARR to raise equity capital is unfounded;
3. An explanation why the most appropriate and only logical way for the SARR to raise equity capital is a private offering to a limited number of sophisticated investors, where Consumers itself likely would acquire a minority equity stake;
4. The fee structure and fees for the SARR to raise equity capital under such a private offering; and
5. My conclusion that the SARR would incur equity flotation costs corresponding to a mergers and acquisitions ("M&A") fee consisting of a retainer of $50,000 per calendar quarter spread over four quarters ($200,000.00), plus a success fee of $3.96 million, amounting to a total of $4.16 million to raise $440 million in equity, which corresponds to an equity flotation cost of 0.95%.

I wish to emphasize that my analysis and conclusions do not rest solely upon stand-alone cost theory. I have instead approached the SARR's equity flotation costs from my perspective and experience as a pragmatic investment banker. Investment banking is a competitive business. A new company seeking to raise equity capital can turn to a number of investment banks, and even alternatives that are not technically investment banks. Those investment bankers (and their alternatives) do and will compete for the opportunity to provide their services and/or capital.

As part of that competition, it will become apparent, as I explain below, that an IPO is not the only potential vehicle for raising equity capital. In fact, an IPO presents a poor fit for raising the SARR's equity. A private placement is the far superior and appropriate vehicle for raising that equity, as it meets and aligns the interests of the SARR, the equity investors who will want to invest in the SARR, and the investment banker that brings the SARR and its equity investors together. An M&A-type fee of 0.95% will provide the investment banker arranging the private placement with attractive compensation, more so than with an IPO, where even a flotation cost as high as 6% would be allocated among a number of participants, leaving the principal investment banker with less than under a private placement.

Obviously, some businesses do undertake IPOs and pay equity flotation costs higher than 0.95%. Those situations typically involve businesses that already have established operations and/or out-sized growth prospects, as in the technology and life sciences industries. Such firms also want the opportunity to be able to sell additional equity, either from the firm itself or earlier participants (founders, venture capitalists, early employees, etc.), at a later time and at higher prices. In contrast, the SARR is a new startup, does not have outsized growth prospects, and seeks to raise capital to fund its described operations and generate its considerable cash flow, without plans for massive expansion or a later offering of equity capital if its operations should prove successful. The SARR is an attractive investment for the private investors that typically invest in similar railroad offerings.

1. My Background

I am a career investment banker with 42 years of experience in the industry. I practiced for my first 10 years in Canada and Japan, and for the last 32 years in the USA, as noted in my biographical statement attached as Exhibit A.[1] I have always been a traditional corporate finance professional, i.e., developing and working with clients that are interested in raising capital and in M&A buy-side (advising buyers on target screening and selection) and sell-side (aiding the target in the sale of itself) advisory roles. I have transacted a broad range of private placements and public offerings. Since January 2015, I have led NCA's investment banking operation. I hold Series 7, 79, 63, and 24 FINRA licenses.

During my long career, I have encountered and participated in most every type of equity capital raise, both domestic and international, including private and public, project-related, block trades, PIPEs (private investment in public equity), rights offerings, At-The-Market offerings, convertible securities, and warrants.[2] Before joining NCA, I was an independent investment banker, which required me to perform extensive work with private companies seeking to expand their businesses by raising capital in the private capital markets. I am extremely familiar with how companies build their businesses through private capital raises, and furthermore, with what it takes to become a public company and the fees and costs associated with becoming a public company through an IPO.

I have been involved in a number of aspects of project finance, including the first challenge to the off-take agreement supporting the $1 billion private placement for the Churchill Falls Hydro-Electric project (5.4 GW of electricity) in 1975, and a more recent assignment where I acted as the capital markets advisor to

[1] The statement is included as e-workpaper "EFC-MaughanBioExhibitA.pdf".

[2] A PowerPoint, http://www.mcguirewoods.com/media/docs/2010/SEC%20June%202010%20Viola.pdf, included as e-workpaper "EFC-RegisteredDirectOfferings.pdf", provides an overview of the differences between some of these investment vehicles.

the Melford International Terminal, a de novo container port project (with a rail connection) in Nova Scotia looking to raise $350 million[3].

As a lead and a co-manager working at investment banks such as Morgan Stanley, Flagstone Securities and Sterne Agee, I have had a great deal of experience with pricing and closing IPOs as well as different kinds of private placements.

[3] This project is described at http://www.capebretonpost.com/News/Local/2016-07-08/article-4582266/Melford-inks-deal-with-terminal-operator/1, included as e-workpaper "EFC-Melford.pdf".

2. CSXT'S FLAWED ASSUMPTION THAT THE SARR WOULD RAISE EQUITY THROUGH AN IPO

I disagree with CSXT's assertion that the capital raise for the SARR would be an IPO with equity flotation costs of as much as 6.0%[4]. In the first place, the level of flotation costs for an IPO varies substantially based on individual factors. CSXT's own Reply Exhibit III-G-1 shows a wide variation. For example, IPO No. 23, for American Water Works, shows a 3% flotation cost, and No. 45, for Platform Specialty Products Corporation, shows a 2.39% flotation cost. Taking a simple average without considering any of the individual factors in a particular IPO, as CSXT did (CSXT Reply at III-G-3-4), is a poor means for estimating the flotation costs that the SARR might experience.

The more important point is that, in my experience and judgment, the capital raise for the SARR would not be an IPO. As discussed in this section, the SARR does not fit the profile of companies that are situated to overcome the market and regulatory hurdles needed to execute an IPO.

- **Threshold Requirements:** Typically, IPOs are for seasoned companies that are looking to grow already established, existing businesses. Utilizing the same S&P Capital IQ database as CSXT and Mr. Tobias (described in CSXT Reply at III-G-3 n.5), I could only find one "pre-revenue" operating company that had moved forward with an IPO in the past 10 years[5], and even this company did not resemble a SARR, with a presumed customer base and guaranteed cash flows.
- **Attributes:** IPO companies usually have comparable attributes as to the sector they operate in, the company's size and its business plan, historic and prospective growth, and its revenues and profitability. Obvious allowances are made for high technology and life sciences companies that are often losing money, mostly due to their prospects for accelerated growth and large profits

[4] CSXT Reply at III-G-4. CSXT's evidence on equity flotation costs is sponsored by Glenn Tobias of FTI. However, Mr. Tobias knows that an IPO would not be the SARR's only or best option. His experience at BNP Paribas would have given him exposure to US IPOs and private placements, and his experience at Global Crossing would have given him an appreciation of an infrastructure company that raised a private placement to commence the build-out of its fiber optic network, well before it issued an IPO.

[5] S&P Capital IQ, Transactions Screen: IPO, US, Closed, Gross Proceeds Greater Than $100M, 10 Years: Cadomin Capital Corporation (2007), included as e-workpaper "EFC-CapitalIQScreen.pdf". Cadomin entered liquidation in 2012. http://www.prnewswire.com/news-releases/cadomin-capital-corporation-announces-impending-delisting-from-the-nex-169370986.html (copy included as e-workpaper "EFC-Cadomin.pdf").

down the road. The SARR has no plans to expand its footprint and become a larger company over time. It is a 'pre-revenue' company during the 30 month construction period; once operational it would have steady earnings but have very little 'upside'.

- **Investment Merits:** The investment merits of an IPO for a de novo SARR are a contradiction. Typically, major railroad stocks are owned by investors who want steady dividend income (US railroad stocks on average yield 1-3% in dividend payments[6]). The SARR will lack the established track record that makes railroad stocks so attractive to the general public in the real world, which would be a challenge as an IPO, as the usual investor base for a mature railroad equity would not be interested in the construction and development risk for the SARR. At the same time, however, the SARR represents a durable revenue stream and guaranteed return on invested capital, which make it a strong candidate for a non-public equity raise, especially with those investors described later in this Statement.
- **Size and Timing of Use of IPO Proceeds:** The SARR's capital needs present an awkward trade-off between over-sizing an IPO and having to invest the excess proceeds in low yielding instruments during the construction period, or under-sizing an IPO and requiring additional issuances:
    - Raising the entire ultimate equity requirement of $440 million at the outset requires explaining - and calculating into the returns profile – the amount of unused proceeds that would sit idly in a low-yielding bank account or Treasury securities while capital is dispensed for development and construction of the new railroad over the 30-month construction period.
    - Alternatively, sizing the IPO to address only immediate capital requirements requires investors or the SARR to shoulder the risk of subscribing to a smaller IPO that would require a further issuance(s) once the first batch of proceeds has been mostly deployed.

[6] S& P Capital IQ, Company Screen: Railroad (Primary), US, Market Capitalization Greater Than $8 billion, Weighted Average Dividend Yield, included as e-workpaper "EFC-CapitalIQRRscreen.pdf".

- **Market Conditions:** The market for IPOs comes and goes (Exhibit B)[7]. It can be very fickle and very narrow, with quarterly issuance statistics varying tremendously from one period to the next. It is a challenge to catch a good IPO issuance window, especially for an industry sector that is less well-known (which might help explain why only two US railroad companies have gone public in the past 10 years[8]). As a railroad, a SARR would contrast with sectors such as technology companies (e.g., Facebook or Visa) or life sciences offerings which tend to dominate the IPO calendar.
- **Dead Deal Costs can make an IPO cost prohibitive:** Someone, typically the "sponsor", has to come out-of-pocket for the front-end expenses for an IPO. These expenses include lawyers, accountants, printers, road shows and SEC filing fees. In my experience these expenses can run $500,000 or more for the IPO sponsor and $100,000-200,000 of out-of-pockets for the investment banker. If the deal does not close, the sponsor and banker are out-of-pocket for the dead deal costs - another obstacle for any company considering an IPO path which would steer the company toward available alternatives.

In addition to the market factors cited above, the Securities and Exchange Commission's ("SEC") policies and review procedures serve as a further challenge for IPOs of new companies, which the SARR would aim to avoid.

- **Risk:** The SEC does not actually approve registration statements, but it does "declare them effective" after discussions among the SEC, counsels, and the Registrant. The SEC is decidedly

[7] Exhibit B consists of two charts taken from page 3 of an Ernst & Young publication, EY Global IPO Trends 2016 Q1, available at http://www.ey.com/Publication/vwLUAssets/EY_Global_IPO_Trends_2016_1Q/$FILE/EY-Global-IPO-Trends-2016-Q1.pdf, included as e-workpaper "EFC-EYGlobalIPOTrends1Q16.pdf".

[8] S& P Capital IQ, Transaction Screening: IPO, US, Railroad Transportation of Freight, 10 Years: (Excluding Non-Railroad), included as e-workpaper "EFC-CapitalIQRRIPO.pdf".

indisposed towards declaring effective a company like a new startup without any record, particularly as many investors believe the declaration carries the SEC's imprimatur.[9]

- **Disclosure:** The disclosure requirements for an SEC registration are lengthy and sensitive, especially for a forward-looking startup. The SEC tries to protect investors, and two of the hallmarks of that protection are transparency and disclosure. Counsels and investment bankers would be hard-pressed to fit the profile of a SARR into the strict standards that the SEC would require.
- **Exceptions:** The SEC has allowed 'blank check' or 'blind pool' IPOs in some very limited situations under Rule 419, but these are not applicable to the SARR:
    - **SPACs:** SPAC is an acronym for 'special purpose acquisition companies' that offer stock in an IPO with the intent of using the proceeds over an 18-24 month period for a single acquisition of a company, subject to the later affirmative vote of approximately 80% of the shareholders. That vote, at some point down the road, assures investors (and the SEC) that there will be full disclosure of the target being bought. The SARR is not a SPAC.
    - **Mortgage REITs:** Some start-ups have gone directly to an IPO because they can use the proceeds within a matter of days for the acquisition of highly liquid US Government Agency securities such as Fannie Mae, Freddie Mac and Ginnie Mae bonds, some of which may already be warehoused by a third party. The SARR is not a REIT, and it is not investing in readily tradeable assets.
- **Rule 144A offerings:** These offerings can be sold to Qualified Institutional Buyers ("QIBs") and the shares can be registered after a six month holding period, creating the equivalent of an IPO. The issuer has to go through the same expense, risk, and disclosure process as for a regular IPO.

[9] The SEC has recently adopted an exception for crowdfunding and the like for startups, but the SARR's equity needs far exceed the limits for this exception. *See* https://www.sec.gov/news/pressrelease/2015-249.html, included as e-workpaper "EFC-SECcrowdfunding.pdf".

In sum, a specialized entity such as a SARR, with a 30-month construction period to get to a positive revenue stream, a lack of expansion plans and limited equity upside, would not fit the profile of the type of company that would be able to execute the IPO process as a means to raise equity. Those same SARR attributes, however, make it an excellent candidate for the less costly, less complex, and less regulated alternative of a private equity placement.

3. A "PRIVATE PLACEMENT" IS THE LOGICAL AND APPROPRIATE MEANS FOR THE SARR TO RAISE ITS EQUITY.

Given the factors enumerated above, in my opinion, the most logical and effective way to finance the SARR is through a private securities transaction. This is the case for several reasons:

- **The private market is diverse in its investment strategies**: Some very large 'multi-strategy' funds and single-purpose funds have raised capital for large, long-term, capital-intensive projects such as infrastructure and transportation. This asset class is attractive for the Limited Partners ("LPs") who invest in these funds, such as pension plans and college endowments, which crave long-lived assets with ongoing cash flow distributions that match the investors' long-term liabilities and commitments.
- **The private market has also attracted capital for investments in railroads:** Most investment bankers have access to the private placement data from Capital IQ (a subsidiary of Standard & Poor's), the firm that provided the IPO data that CSXT and Mr. Tobias utilized. This data is widely used in the investment banking industry because it informs bankers on nearly everything about private placements that have taken place.

  I used the Capital IQ private placement database to search for funds that have invested in railroads. This small number of investors that have previously invested in railroads is important because it is usually easier to engage a private capital source when it has a familiarity with and demonstrated interest in investing in the asset class instead of trying to educate a new investor from scratch. Please see Exhibit C for a list of the major private equity investors in infrastructure and railroads over the past ten years.[10]

[10] See also e-workpaper "EFC-CapitalIQInfRRD.pdf".

- **The private market has abundant funds to invest:** The amount of equity and debt capital that has been amassed by private investment firms is enormous, with the total yearly supply of private placement capital rising from $59 billion in 2014 to $61 billion in 2015[11].

How the private placement process kicks-off: Major infrastructure projects do not arise in a vacuum. At the beginning of a capital raise for a project such as a SARR, a "sponsor" will promote the project because of a perceived need. The sponsor is usually someone who has a strong rationale and financial motivation for building the SARR. This "development" type of work is long and involved, requiring skill sets in planning, engineering, regulation, zoning, permitting, off-take, finance, construction, insurance and bonding, and supply chain etc.

Matching the right investment banker with the right project can be challenging. It is best, even mandatory, that the banker is extremely familiar with the asset class - in this case, long-dated assets and infrastructure, transportation and railroads - and with the investors who are dedicated to the area.

[11] EY. (2016). *EY Private Placement Market Investor Survey, March 2016*. Ernst & Young, LLP, at 1, available at http://www.ey.com/Publication/vwLUAssets/ey-private-placement-market-survey-2016/$FILE/ey-private-placement-market-survey-2016.pdf, and included as e-workpaper "EFC-EYPrivatePlacementSurvey.pdf".

4. FEE STRUCTURE FOR THE BANKER – MORE IN LINE WITH AN M&A FEE GIVEN THE NATURE OF THE UNDERTAKING:

Several types of considerations factor into the fee structure for the banker:

- **Striking a balance between retainers and success fees**: Bankers understand that they must defer receiving most of their compensation until closing to align their interests with the sponsor/client's overriding desire for success. While they also know that the opportunity cost of professional time is important in a project financing assignment that can extend over several quarters, the client will go only so far in agreeing to retainers. Sponsors are often small developers with limited resources to pay banking retainers.
- **Investors:** As cited above, the railroad industry has attracted a small group of well-funded investors which would be the logical starting point to secure interest in a new equity placement.
- **Challenge to the Fee:** No matter what fee arrangement a banker might initially agree to with the sponsor, in reality the lead investor or investors will have the final say. The reason is that a private equity investor is typically a limited partnership or similar entity led by a savvy general partner ("GP") who has a network to source deal flow. The funds for the GP come from limited partners ("LPs") and are typically raised with a "2 and 20" structure. This is shorthand for the LPs paying the GP a 2% annual management fee on committed funds and a 20% success fee on the fund's overall gains above certain thresholds. In my experience, the ultimate investors have the final say on the fees to be paid to the investment banker, and they will withhold their investment until a satisfactory fee arrangement is (re)negotiated. Charge too much and the banker just invites a nasty re-negotiation of his fee arrangement, with the client's deal held hostage. The investor will demand that only a limited amount of capital is paid out up front to bankers. The GP will stress that they are fiduciaries on behalf of their LP investors (pension plans, etc.) that view the GP fund manager as the investment talent. As a result, the banker does not get what he may have initially agreed to with the sponsor.
- **Size of Deal:** Larger deal sizes command smaller percentage fees. Most banks undertaking an assignment of this nature would execute it without using a "'sales desk" that requires a share of the compensation. The investment bankers are reaching out directly to a limited set of potential

investors who are undoubtedly well-known to the banker. This private investor contact base is the life-blood of any investment banker in project finance. A multi-million dollar potential fee is well worth the effort of an investment banker, especially as the fees are retained in the corporate finance department and not shared with a sales desk as in an IPO (as discussed in more detail later in this Statement).

Some equity contributions typically do not yield a fee for the banker.

- **The Sponsor**: In this case, it would be unrealistic to assume that the SARR would be sponsored by some generic third party. If the project accrues to the benefit of a particular sponsor, then that sponsor would be expected to co-invest. More realistically, Consumers – a major off-taker of the SARR - would be viewed as a prime mover behind getting the SARR built and as such it would be expected to provide a minimum volume commitment, or co-invest, or both. The equity investment from Consumers would reduce the amount of capital to be raised by the investment banker from third party private placement investors. There is ample precedent for a resource company to invest in its supply chain. Examples include the American Electric Power (AEP) investment in Cook Coal Terminal which serves AEP as well as third-party customers[12], Superior Midwest Energy Terminal, operated by Midwest Energy Resource Company, a subsidiary of DTE, which serves both Detroit Edison and third-parties[13], the former Crystal River Coal Procurement operation of Progress Energy (now part of Duke Energy) and its subsidiary, Progress Fuels Corporation[14], and AEP's purchase of part of Progress Energy's water carrier operations[15]. Utility

[12] See, e.g., https://www.up.com/customers/coal/ports-docks/cook/index.htm, included as e-workpaper "EFC-CookTerminal.pdf".

[13] See, e.g., https://www.up.com/customers/coal/ports-docks/superior/index.htm, included as e-workpaper "EFC-Superior.pdf" and https://www.newlook.dteenergy.com/wps/wcm/connect/dte-web/dte-pages/merc/services-provided , included as e-workpaper "EFC-MERC.pdf".

[14] See, e.g., Direct Testimony of Albert W. Pitcher on behalf of Progress Energy Florida before the Florida Public Service Commission in Docket No. 031057-EI, included as e-workpaper "EFC-Progress.pdf", at 4-5, describing Progress's investment in one-third ownership in International Marine Terminals, 65% ownership in Dixie Carriers, and later full ownership of MEMCO Barge Lines, as alternatives to purchasing such services.

[15] AEP acquired MEMCO Barge Lines in 2001, and then sold along with other water carrier operations to American Commercial Lines (once part of CSXT) in 2015. See

investment in elements of its fuel supply chain in order to provide savings or increase reliability and control is thus a well-established practice. Under the circumstances, it would be reasonable to expect the sponsor to invest at least 10% of the total equity, thereby reducing the amount of equity to be raised by the banker from $440 million to $396 million. The banker would never be paid a fee on the sponsor's investment.

- Consumers has a capital expenditures program that has averaged $1.75 billion on an annual basis[16]. Consumers has an authorized return on equity of 10.30% from the Michigan Public Service Commission based on a capital structure with only 37.3% equity[17], so an investment in the SARR at a target 12.35% IRR for equity, based on an 82.17% equity capital structure[18], should be an investment of which its regulator and shareholders would approve, particularly if the effect is to lower its coal transportation costs.
- **Others:** In my experience in project finance, others with an interest in the project may shoulder some of the project costs (not including others who would be viewed as part of the debt structure - such a rolling stock lessors). These others could include additional off-takers, suppliers such as rail manufacturers, etc. Again, the banker does not get paid a fee on these other participants' contribution. In this Statement, I conservatively assume that Consumers would be the only non-investor participant.

No discussion of the appropriate private placement fee would be complete without a review of banker motivation and self-interest:

In the case of an IPO of $440 million, the fee structure is easily identifiable, although the sample size is small. There have really only been two domestic railroad IPOs between $100 million and $500 million in

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https://www.aep.com/newsroom/newsreleases/?id=1921, included as e-workpaper "EFC-AEPRiverOperations.pdf".

[16] S&P Capital IQ, Company Screen: Consumers, included as e-workpaper "EFC-CapitalIQConsumers.pdf".

[17] Order of the Michigan Public Service Commission in Case No. U-17735 (Consumers' rate case), November 19, 2015, at 49.

[18] Consumers Rebuttal Exhibit III-H-1, Table A, p. 1.

the past 10 years. Both were portfolio companies of Fortress Investment Group, and both included **operating** railroads[19] (not start-ups).

It is extremely important to understand what an IPO fee is comprised of, so that it can be contrasted with the fee for a private placement:

- First, in a large investment bank participating in an IPO, the corporate finance professional in the investment banking department is the one who has developed the relationship with the client, landed the coveted assignment, promoted the research and trading coverage his firm will bring to the stock, done all the underwriting of the company, prepared all the documentation including the 100-200 page prospectus, and brought the whole opportunity to fruition. Notwithstanding this substantial activity, only a modest portion of the total equity flotation costs for the IPO actually accrues to the bonus pool of the corporate finance professional.
- The external and internal division of the gross fee on a broadly-distributed IPO is as follows:
  - ✓ In general, 60% of the total IPO gross fee is a "sales concession" that goes to the investment bank's own sales desk or to third party investment banks that are in the "selling group". Investors in public stock offerings (e.g., Fidelity, Wellington, T. Rowe Price) can only buy liquid public offerings, and the relationship with those investors resides with the institutional sales desk, not the banker. The selling group and distribution can be vast because the driving force behind an IPO is liquidity and broad ownership, and the sales desk earns its fee by working with a large number of institutional and retail investors;
  - ✓ In general, 15-20% of the total IPO fee goes to the underwriters (those firms that take risk by committing to purchase the stock for resale), and to meet issuance expenses for the approximate 10-20 members of the underwriting group in the syndicate (including potential losses on managing the short position);

[19] S&P Capital IQ, Transaction Screening: IPO, US, Railroad Transportation of Freight, 10 Years, included as e-workpaper "EFC-CapitalIQRRIPO.pdf", discussed at 8 n.8.

- ✓ 15-20% of the fee goes to the lead and co-managers identified on the cover of the prospectus. The co-managers are there because the IPO company wants to acknowledge the relationship, and they are needed to provide after-market trading support and research to enhance liquidity in the stock's after-market trading.

- In an IPO of the SARR's size of $440 million, the corporate finance person who owns the client relationship - and who developed and brought the deal into his firm - is sharing the total gross fee with at least three other co-managers (see Exhibit D for average number of managers on equivalent size IPOs[20]), and his sales desk or third party sales desks. (In my experience, the underwriting fees contribute very little if anything to the investment banks' profitability on the transaction due to the large number of participants in the underwriting group and the offsetting expenses on the deal.) The lead manager will negotiate a praecipium resulting in the lead taking half of the assumed 20% management fee. So, the following calculation shows how much of the total flotation costs, assumed here to be 6% (amounting to $26.4 million) on a $440 million size deal would constitute the "yield to banker", i.e., the corporate finance professional's bonus pool:
  - ✓ $440 million deal size x 6% gross fee x 20% total management fee x 50% praecipium to the lead manager = $2,640,000 net fee to bonus pool.
- The point of reviewing the external fee sharing and internal allocations on IPOs is to demonstrate that what is left for the corporate finance person in his annual bonus pool is a small fraction of the total gross spread. A corporate finance professional would be highly motivated to take on a large private placement - or an M&A mandate - with a substantially lower total fee than an equivalent IPO (assuming an IPO even would be appropriate for a SARR, which is not the case), because the net contribution to his bonus is likely substantially better in the private/M&A deal. It is worth repeating that the corporate finance professional will know all the private investors or buyers, if for no other reason than he is trying to pitch them ideas on a continuous basis to continue their relationship.

[20] Exhibit D presents data from Capital IQ on the number of managers (book runners) on IPOs exceeding $360 million in the past ten years and is included as e-workpaper "EFC-CapitalIQIPOManagers.pdf".

- In a private placement for the SARR, it is unlikely that the banker would undertake a broad-based distribution or outreach to investors. Rather, the banker would focus on the highest value investors identified in Exhibit C. Any diligent sponsor would make sure, before hiring him, that his banker would have a warm call into these investors or have transacted with them in recent times. Indeed, given the market constructs I described above relating to a small group of railroad investors, the right fee is more akin to an M&A fee that is typical for a 'sale' or transfer of control of substantially all of an enterprise. In the case of the SARR, the "new" money would "own" almost all of the project just like in an M&A assignment. Realistically, there would be either a single investor or a small club of investors led by a recognized lead investor who takes the largest portion of the placement.

5. CONCLUSION: AN M&A-TYPE PRIVATE PLACEMENT FEE OF 0.95%

First, I will reiterate that one has to remove an IPO as a proxy for the SARR's flotation costs for all the reasons cited above.

The question we are left with is what the appropriate fee should be for a private placement for a SARR. There are no set fee schedules for private placements or M&A transactions on Wall Street. Bankers (and investors) compare notes among each other to monitor the competition. In a competitive environment, the client will attempt to play one banker off against the other and obtain the best deal consistent with the banker's being able to convince the client that he has the buy-side relationships to get the deal done. Retainers will be discussed and sometimes disguised as break-up fees, and at the end of the day the fee will be agreed to, subject to the reality that the investors will ultimately not invest in a private placement if the fees appear excessive.

By the time the transaction has arrived at the banker's doorstep, the amount to be raised has already been reduced by the contributions from the sponsor and others. I have explained that the outside investor(s) will expect that Consumers contribute at least 10% of the total requirement, or $44 million on a total equity investment of $440 million, thereby reducing the amount of equity to be raised to $396 million.

Assuming a $396 million transaction size as described above, a deal of this nature would attract interest from the very largest investment banks to the smaller boutiques, especially those with expertise and experience in infrastructure finance and railroads. If the banker is experienced, the time to process the assignment can be managed to a very low limit. The banker keeps this low by knowing the right parties to approach and by quickly getting out to them. If he gets an indication of interest, then it does not take much incremental effort to reel in the investor.

The team required for an execution of this sort is very small, usually a senior banker with the buy-side relationships who can architect the transaction and the disclosure document, and one or two mid-level analytical staff to do the pro forma financial calculations and write the Confidential Information

Memorandum. This Memorandum is usually prepared without external counsel for the banker, which is not necessary. Private placements and M&A engagements usually have a residual period or "tail" where the banker is protected on his compensation for a future period of time for parties he has contacted. This represents an option that is only as good as his ability to get out to parties early and quickly. He is highly motivated to get the preparatory work done quickly and efficiently, and get out to market and see what happens during the term of the engagement and the tail period.

In the case of the SARR, the transaction is essentially a hybrid between a private placement and an M&A transaction since so many of the financial players are well known as railroad investors. A client could rightly argue that an M&A fee would be appropriate. Measures for M&A fees are known in public transactions where a merger proxy is filed, but are unknown if the parties are private. The one acknowledged benchmark is the so-called Lehman formula,[21] referenced in various academic literature:

- 5% on the first $1 million of consideration, plus
- 4% on the second million dollars, plus
- 3% on the third million dollars, plus
- 2% on the fourth million dollars, plus
- 1% on any consideration over $4 million.

The Lehman formula generates a maximum premium of $140,000, or $100,000 more than a straight 1% fee, all on the first $4 million. In practice, these Lehman levels are discounted for large-sized transactions, and the market has adopted flat rates on larger transaction sizes. In my experience, on a $396 million transaction, an M&A fee of a flat 1%, or $3.96 million would be a reasonable and likely outcome, and in line with the results of application of the Lehman formula (approximately 1.025%, representing $4.06 million divided by $396 million) adjusted for the size of the deal. Since you will end up with one investor – or a lead with a small club of co-investors (which the lead likely finds on his own) – it would be hard to support anything more than this level of compensation. With the dynamics of the deal

[21] For example, DePamphilis Donald. (2015) Mergers, Acquisitions, and Other Restructuring Activities. Academic Press, p 178.

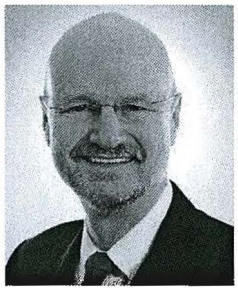
solving for securing the single investor for the lead, the size of the deal becomes less relevant and the banker and the client focus on the $3.96 million payday – and what will be acceptable to the investor. A $3.96 million fee is over 50% greater than the bonus pool allocation to a lead manager in an IPO from my earlier illustration, and several fold larger for a co-manager. It should also be possible for the banker to negotiate reasonable retainer payments, which could aggregate $50,000 per quarter for four quarters to reflect the long preparation and sales cycle for an M&A undertaking. A reasonable retainer arrangement plus a $3.96 million success fee would likely get any bank interested, including my firm, NCA. Fees are usually paid as funds are drawn down.

The SARR is a very specialized issuer – the experienced banker will know the landscape of potential investors, and one can count on the investors renegotiating the fee down to an M&A level.

Since the banker knows the sector, this is NOT a broad-based solicitation of myriad private investors. You would waste your time and energy with extraneous investors, and are better off to focus on the two dozen large infrastructure and railroad investors known to any banker with a Capital IQ subscription.

To summarize, my opinion is that the flotation costs for a private placement for $440 million of equity for the SARR is best estimated at $4.16 million, consisting of (a) $3.96 million or 1% on the $396 million that would be provided by outside investors, (b) 0% on the $44 million (or 10%) of the equity that would be provided by Consumers as a participating sponsor, and (c) an additional $200,000 for the retainer for four calendar quarters for the investor banker. The $4.16 million equates to 0.95% on the full $440 million equity.

Exhibit A: Professional Biography



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Professional History

Navigant Capital Advisors, LLC

First Liberties Financial

Sterne Agee

Flagstone Securities

BMO Nesbitt Burns

KPMG BayMark

Kidder Peabody

Drexel Burnham Lambert

Morgan Stanley

Education

M.B.A., University of Western Ontario

B.A., Bishop's University

Professional Certifications

FINRA Series 7, 79, 24 and 63

David Maughan

David Maughan is a Managing Director and Supervisory Principal with Navigant Capital Advisors, LLC the broker-dealer subsidiary of Navigant Consulting, Inc. (NYSE: NCI). Mr. Maughan is a dual national Canada/US and is based out of Navigant's New York office. Mr. Maughan has provided specialty financial advisory services to operating and financial companies for more than 40 years.

During that time, he has worked with major companies and in entrepreneurial environments in the U.S., Canada, and Japan.

Professional Experience:

Mr. Maughan has executed private placement transactions in equity and debt, and enjoys robust relationships with a large cross section of private equity and hedge fund investors. He has executed assignments and established investment banking practices in healthcare, real estate, technology, energy and financial services, including:

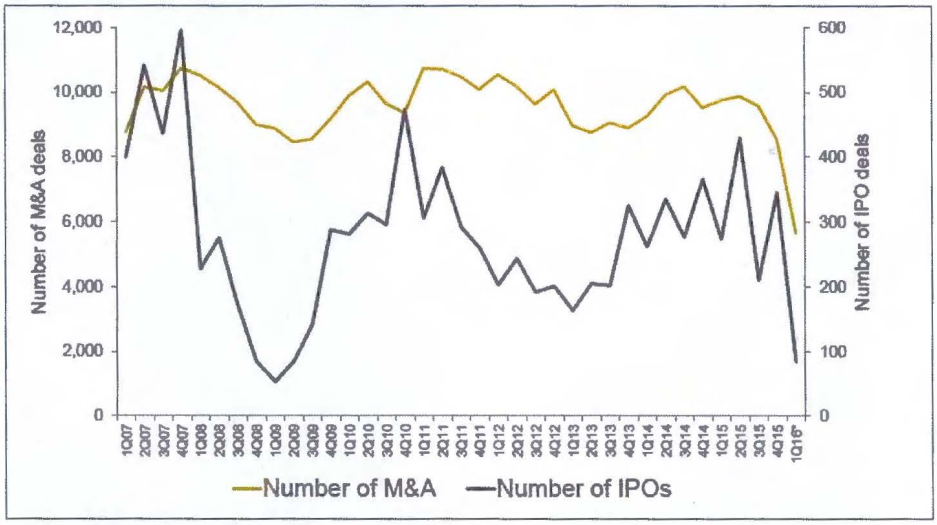
- ✓ M&A advisory for buy-side and sell-side acquisitions, mergers, and joint ventures
- ✓ Fairness opinions
- ✓ Private equity and debt for government issuers, NGOs, companies, and de novos
- ✓ Healthcare providers, technology, and life sciences
- ✓ Structured finance offerings
- ✓ Asset sales and loan sales
- ✓ Restructuring of distressed companies in the U.S., Canada, and Japan.

Goal:

Navigant Capital Advisors aspires to be a trusted advisor to our clients, which include: corporations, financial institutions, financial sponsors, governments and public authorities and boards of directors and special committees. Our consultants are at the front end of Navigant's client franchise, and our broker/dealer strives to provide best-in-class advice and execution. We are focused on providing our clients access to the capital markets which enables our clients to achieve their strategic goals.

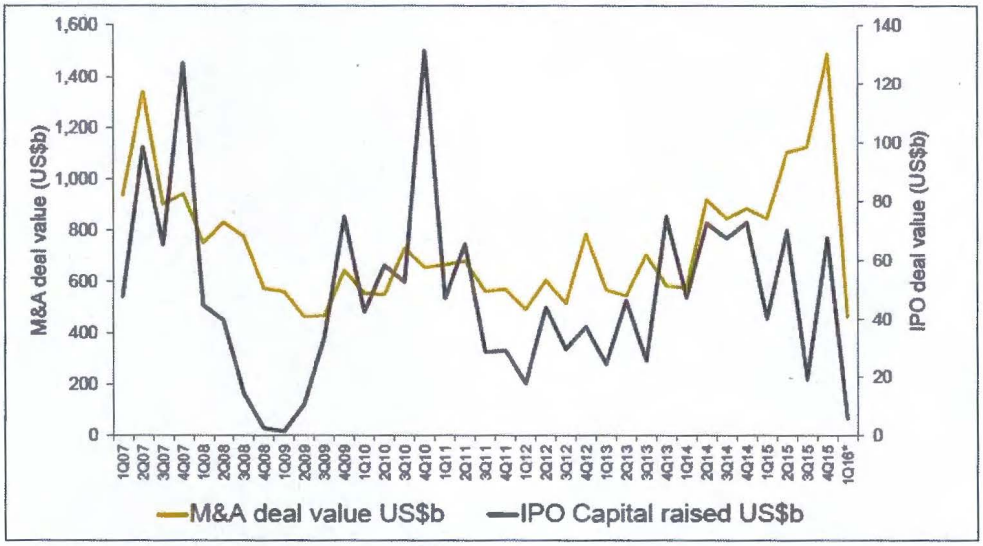
Exhibit B: IPO Market Fluctuations

Global IPO and M&A by deal numbers



Note: 1Q16 M&A activity is based on announced M&A deals from January and February 2016, and 1Q16 IPO activity is based on priced IPOs from January and February 2016.

Global IPO and M&A by deal value



Note: 1Q16 M&A activity is based on announced M&A deals from January and February 2016, and 1Q16 IPO activity is based on priced IPOs from January and February 2016.

Source: EY. (2016). *EY Global IPO Trends Q1 2016.* EYGM Limited, available at http://www.ey.com/Publication/vwLUAssets/EY_Global_IPO_Trends_2016_1Q/$FILE/EY-Global-IPO-Trends-2016-Q1.pdf, included as e-workpaper "EFC-EYGlobalIPOTrends1Q16.pdf".

Exhibit C: Private Equity Investors in Private Placements Related to Infrastructure and Railroads

S&P
Capital IQ

Capital IQ Transaction Screening Report > Infrastructure & Railroad Private Placements> Past 10 Years

Most Active Buyers/Investors by Number of Transactions		Most Active Buyers/Investors by Total Transaction Size	
Company Name	Number Of Transactions	Company Name	Total Transaction Size ($mm)
International Finance Corporation	16	Tortoise Capital Advisors L.L.C.	4,506.0
Tortoise Capital Advisors L.L.C.	15	Goldman Sachs Group, Merchant Banking Division	3,910.97
Tortoise Energy Infrastructure Corporation (NYSE:TYG)	14	Kayne Anderson MLP Investment Company (NYSE:KYN)	3,800.95
KA Fund Advisors, LLC	11	KA Fund Advisors, LLC	3,800.95
Kayne Anderson MLP Investment Company (NYSE:KYN)	11	Tortoise Energy Infrastructure Corporation (NYSE:TYG)	3,511.95
Tortoise Energy Capital Corp.	10	Stonepeak Infrastructure Partners	2,844.05
IDFC Private Equity	9	Tortoise Energy Capital Corp.	2,823.95
3i Group plc (LSE:III)	8	Kayne Anderson Capital Advisors, L.P.	2,442.95
IL&FS Investment Managers Limited (BSE:511208)	8	SEAS-NVE a.m.b.a.	2,395.97
The Carlyle Group LP (NasdaqGS:CG)	8	The ATP Group	2,395.97

Source: CapitalIQ Database; e-workpaper "EFC-CapitalIQInfRR.pdf".

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Total Bookrunner Count	
Low	1.0
First Quartile	3.0
Median	4.0
Average	4.5
Third Quartile	6.0
High	15.0

Announced Date	Issuer Ticker	Issuer Name	Offer Size (M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
08/08/2012	CONE US	CyrusOne Inc	361	IPO,Primary Share Offering,Emerging Growth Company	Trading	19	51.63	171.7368469	51.235	Morgan Stanley, Bank of America Merrill Lynch, Deutsche Bank, Barclays	Morgan Stanley	4
03/10/2014	VIRT US	Virtu Financial Inc	361	IPO,Primary Share Offering,PE Backed,Emerging Growth Company	Trading	19	16.71	-12.05263138	16.77	Evercore Partners Inc, UBS, Credit Suisse, Citi, Sandler O'Neill & Partners, BMO Capital Markets, Goldman Sachs, JP Morgan	Goldman Sachs	8
01/13/2011	AGRO US	Adecoagro SA	361	IPO,Primary Share Offering,Secondary Share Offering	Trading	11	10.19	-7.363636494	10.12	Banco Itau BBA, Credit Suisse, Morgan Stanley	Credit Suisse	3
01/05/2011	SDT US	SandRidge Mississippian Trust	362	IPO,Primary Share Offering	Trading	21	1.84	-91.23809814	1.729	Morgan Stanley, Raymond James & Associates	Raymond James & Associates	2
05/11/2015	AXON US	Axovant Sciences Ltd	362	IPO,Primary Share Offering,Emerging Growth Company	Trading	15	15.34	2.266666651	15.12	Jefferies, Evercore Partners Inc, RBC Capital Markets	Jefferies	3
04/12/2012	NDP US	Tortoise Energy Independence F	363	IPO,Primary Share Offering	Trading	25	15.55	-37.79999924	15.47	UBS, Bank of America Merrill Lynch, Wells Fargo	UBS	3
06/05/2013	ATHL US	Athlon Energy Inc	363	IPO,Primary Share Offering,Secondary Share Offering,SPAC,PE Backed,PE Exit	Trading	20				Wells Fargo, UBS, Bank of America Merrill Lynch, Goldman Sachs, Citi	Citi	5
04/03/2014	PBFX US	PBF Logistics LP	364	IPO,Primary Share Offering,Emerging Growth Company	Trading	23	21.5	-6.521739006	21.5957	Barclays, UBS, Citi, Credit Suisse, Deutsche Bank, Morgan Stanley, Wells Fargo	Barclays	7

Source: CapitalIQ Database; e-workpaper "EFC-CapitalIQIPOManagers.pdf".

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
12/22/2006	1224790D US	NASDAQ Premium Income & Growth	364	IPO,Primary Share Offering	Trading	20				Bank of America Merrill Lynch		1
06/15/2014	W US	Wayfair Inc	367	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,Emerging Growth Company	Trading	29	38.8	33.79310226	36.1	Goldman Sachs, Citi, Bank of America Merrill Lynch	Goldman Sachs	3
05/13/2013	CSTM US	Constellium NV	367	IPO,Primary Share Offering,Secondary Share Offering	Trading	15	5.81	-61.26666641	5.88	Lazard Ltd, JP Morgan, Societe Generale, HSBC, Citi, UBS, BNP Paribas, Morgan Stanley, Credit Suisse, Barclays, Deutsche Bank, Goldman Sachs	Goldman Sachs	12
12/16/2011	WHZT US	Whiting USA Trust II	368	IPO,Secondary Share Offering	Trading	20	0.73	-96.34999847	0.7	Raymond James & Associates, Morgan Stanley	Raymond James & Associates	2
07/15/2014	SNC US	State National Cos Inc	368	IPO,Secondary Share Offering,Best Efforts,PE Backed,PE Exit,Emerging Growth Company	Trading	11.58	10.86	-9.348911285	10.765	FBR Capital Markets Corp		1
11/05/2009	PRI US	Primerica Inc	368	IPO,Secondary Share Offering,PE Backed	Trading	15	54.41	262.7333374	55.26	Citi		1
01/06/2012	ROYT US	Pacific Coast Oil Trust	370	IPO,Secondary Share Offering	Trading	20	1.7	-91.5	1.6952	Citi, Barclays, Bank of America Merrill Lynch, JP Morgan, UBS, Wells Fargo	Barclays	6
06/04/2015	BLVDU US	Boulevard Acquisition Corp II	370	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	10.1	1	10.06	Citi		1
07/17/2015	GRSHU US	Gores Holdings Inc	375	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	11.49	14.89999962	11.5	Deutsche Bank		1
05/01/2007	LULU US	lululemon athletica inc	377	IPO,Primary Share Offering,Secondary Share Offering	Trading	18	77.74	763.7777771	78.2	Goldman Sachs, Bank of America Merrill Lynch	Goldman Sachs	2
09/14/2010	EDF US	Stone Harbor Emerging Markets	378	IPO,Primary Share Offering	Trading	25	16.05	-35.79999924	16.12	UBS, Citi, Morgan Stanley, Wells Fargo, Bank of America Merrill Lynch	Wells Fargo	5
01/03/2014	FTAI US	Fortress Transportation & Infr	378	IPO,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	17	11.75	-30.88235283	11.8	Bank of America Merrill Lynch, Barclays, Citi, Deutsche Bank, UBS	Citi	5
08/30/2013	AMC US	AMC Entertainment Holdings Inc	379	IPO,Primary Share Offering	Trading	18	28.87	60.38888931	28.85	Credit Suisse, Barclays, Citi, Bank of America Merrill Lynch	Citi	4
07/07/2011	CHKR US	Chesapeake Granite Wash Trust	380	IPO,Primary Share Offering	Trading	19	2.2	-88.42105103	2.171	Wells Fargo, Goldman Sachs, Deutsche Bank, Raymond James & Associates, Morgan Stanley	Morgan Stanley	5
06/17/2011	OAK US	Oaktree Capital Group LLC	380	IPO,Primary Share Offering,Secondary Share Offering,PE Backed	Trading	43	44.89	4.395349026	44.885	JP Morgan, Deutsche Bank, Credit Suisse, Bank of America Merrill Lynch, Morgan Stanley, Goldman Sachs	Goldman Sachs	6
05/28/2010	PGEM US	Ply Gem Holdings Inc	381	IPO,Primary Share Offering,PE Backed	Trading	21	14.8	-29.52380943	14.9	Credit Suisse, Deutsche Bank, Goldman Sachs, UBS, JP Morgan	JP Morgan	5
11/01/2012	APAM US	Artisan Partners Asset Managem	381	IPO,Primary Share Offering,Emerging Growth Company	Trading	30	28.21	-5.966666698	27.76	Goldman Sachs, Citi	Citi	2
06/14/2013	MEP US	Midcoast Energy Partners LP	383	IPO,Primary Share Offering	Trading	18	7.49	-58.38888931	7.45	Wells Fargo, UBS, Morgan Stanley, JP Morgan, Goldman Sachs, Deutsche Bank, Credit Suisse, Citi, Barclays, Bank of America Merrill Lynch	Bank of America Merrill Lynch	10
05/09/2013	SFM US	Sprouts Farmers Market Inc	383	IPO,Primary Share Offering,Secondary Share Offering,PE Backed	Trading	18	22.43	24.61111069	22.17	Goldman Sachs, Credit Suisse, Bank of America Merrill Lynch	Goldman Sachs	3
03/30/2011	CJESQ US	C&J Energy Services Ltd	384	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	29	0.309	-98.93448639	0.31	JP Morgan, Goldman Sachs, Citi	Goldman Sachs	3
10/17/2007	NPD US	China Nepstar Chain Drugstore	384	IPO,Primary Share Offering,PE Backed	Trading	16.2	2.55		2.55	Goldman Sachs, Bank of America Merrill Lynch	Goldman Sachs	2
07/14/2010	IHD US	Voya Emerging Markets High Inc	385	IPO,Primary Share Offering	Trading	20	7.94	-60.29999924	7.9401	Wells Fargo, Ameriprise Financial Inc, UBS, Morgan Stanley, Citi, Bank of America Merrill Lynch	Morgan Stanley	6

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer to Date	Last Price	Managers	Last Lead Bookrunner	Bookrunner Count
09/16/2013	ESNT US	Essent Group Ltd	385	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,PE Backed,Emerging Growth Company	Trading	17	26.28	54.58823395	25.92	JP Morgan, Goldman Sachs, Barclays, Credit Suisse	Goldman Sachs	4
01/04/2006	CFX US	Colfax Corp	388	IPO,Primary Share Offering,Secondary Share Offering	Trading	18	30.33	68.5	30.65	Bank of America Merrill Lynch, Barclays, UBS	Bank of America Merrill Lynch	3
12/13/2011	TUMI US	Tumi Holdings Inc	389	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	18	26.74		26.74	Goldman Sachs, Credit Suisse, JP Morgan	Goldman Sachs	3
03/11/2010	CBOE US	CBOE Holdings Inc	390	IPO,Primary Share Offering,Secondary Share Offering	Trading	29	68.3	135.5172424	68.24	Goldman Sachs, Citi, Citadel Investment Group LLC, UBS, JP Morgan, Barclays, Bank of America Merrill Lynch	Goldman Sachs	7
06/07/2012	WWAV US	WhiteWave Foods Co/The	391	IPO,Primary Share Offering	Trading	17	55.72	227.7647095	55.615	JP Morgan, Credit Suisse, Bank of America Merrill Lynch	JP Morgan	3
09/16/2009	JLS US	Nuveen Mortgage Opportunity Te	395	IPO,Primary Share Offering	Trading	25	23.74	-5.039999962	23.708	Wells Fargo	Wells Fargo	1
11/13/2007	IDE US	Voya Infrastructure Industrial	396	IPO,Primary Share Offering	Trading	20	12.52	-37.40000153	12.5	Citi, Morgan Stanley, Bank of America Merrill Lynch, UBS, Wells Fargo, Ameriprise Financial Inc	Citi	6
09/19/2013	VLP US	Valero Energy Partners LP	397	IPO,Primary Share Offering,Emerging Growth Company	Trading	23	40.68	76.86956787	40.9	Wells Fargo, RBC Capital Markets, Citi, JP Morgan, Barclays	JP Morgan	5
06/06/2013	VLRS US	Controladora Vuela Cia de Avia	398	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,Dual Listing,Emerging Growth Company	Trading	12	18.72	56	18.82	Morgan Stanley, UBS, Deutsche Bank	Deutsche Bank	3
01/17/2007	CEL US	Cellcom Israel Ltd	400	IPO,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	20	7.04	-65.90000153	7.04	Goldman Sachs, Citi, Deutsche Bank	Goldman Sachs	3
05/22/2014	FMSA US	Fairmount Santrol Holdings Inc	400	IPO,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	16	7.74	-52.0625	7.74	RBC Capital Markets, KeyBanc Capital Markets, JP Morgan, Jefferies, Goldman Sachs, Barclays, Wells Fargo, Morgan Stanley	Morgan Stanley	8
11/30/2007	IRDMU US	Iridium Communications Inc	400	IPO,Primary Share Offering	Trading	10				Bank of America Merrill Lynch		1
12/08/2011	BWG US	Legg Mason BW Global Income Co	400	IPO,Primary Share Offering	Trading	20	13.65	-31.75	13.85	Bank of America Merrill Lynch, Citi, Morgan Stanley, Ameriprise Financial Inc, UBS	Bank of America Merrill Lynch	5
05/18/2012	I US	Intelsat SA	400	IPO,Primary Share Offering,PE Backed	Trading	18	2.59	-85.22222137	2.59	UBS, Deutsche Bank, Nomura, Credit Suisse, Barclays, Bank of America Merrill Lynch, JP Morgan, Goldman Sachs, Morgan Stanley	Goldman Sachs	9
06/20/2016	CPAAU US	Conyers Park Acquisition Corp	403	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	10.33	2.799999952	10.33	Deutsche Bank, Goldman Sachs	Deutsche Bank	2
10/09/2009	PEB US	Pebblebrook Hotel Trust	403	IPO,Primary Share Offering	Trading	20	30.72	55.95000076	30.72	Bank of America Merrill Lynch, Raymond James & Associates, Wells Fargo	Bank of America Merrill Lynch	3
06/30/2005	BARE US	Bare Escentuals Inc	405	IPO,Primary Share Offering	Trading	22				Goldman Sachs		1
09/09/2013	PEGI US	Pattern Energy Group Inc	405	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,Emerging Growth Company	Trading	22	23.63	12.590909	23.63	RBC Capital Markets, BMO Capital Markets, Morgan Stanley, Bank of America Merrill Lynch	BMO Capital Markets	4
01/27/2011	LNKD US	LinkedIn Corp	405	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	45	191.9	326.1333333	191.9	Morgan Stanley, Bank of America Merrill Lynch, JP Morgan	Morgan Stanley	3
11/16/2006	NGLS US	Targa Resources Partners LP	406	IPO,Primary Share Offering	Trading	21				Goldman Sachs, UBS, Citi, Bank of America Merrill Lynch	Citi	4
05/14/2010	CCG US	Campus Crest Communities Inc	407	IPO,Primary Share Offering	Trading	12.5				Raymond James & Associates, Citi, Goldman Sachs, Barclays, RBC Capital Markets	Raymond James & Associates	5
07/19/2006	GNT US	GAMCO Natural Resources Gold &	410	IPO,Primary Share Offering	Trading	20	8.18	-60.34999847	8.18	Citi, Morgan Stanley, Bank of America Merrill Lynch	Morgan Stanley	3
08/16/2013	OMF US	OneMain Holdings Inc	411	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	17	29.8	80.05882263	29.8	Allen & Co, Barclays, Citi, Credit Suisse, Bank of America Merrill Lynch	Bank of America Merrill Lynch	5

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size (M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
05/01/2007	VM US	Virgin Mobile USA Inc	413	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	15				Lehman Brothers, JP Morgan, Bank of America Merrill Lynch	Lehman Brothers	3
02/22/2010	NKA US	Niska Gas Storage Partners LLC	413	IPO,Primary Share Offering,PE Backed	Trading	20.5	4.21		4.21	Morgan Stanley, Goldman Sachs, Barclays, Citi, Credit Suisse, RBC Capital Markets, UBS	Goldman Sachs	7
04/16/2010	MCP US	Molycorp Inc	413	IPO,Primary Share Offering,PE Backed,PE Exit	Trading	14						1
03/19/2007	AII/U US	Boise Inc	414	IPO,Primary Share Offering	Trading	10				Lazard Ltd		1
03/27/2007	AMV/U US	B. Riley Financial Inc	414	IPO,Primary Share Offering	Trading	10				Citi		1
07/26/2007	ROICU US	Retail Opportunity Investments	414	IPO,Primary Share Offering	Trading	10				Bank of America Merrill Lynch		1
09/28/2010	GNC US	GNC Holdings Inc	414	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	16	19.48	25.3125	19.48	JP Morgan, Goldman Sachs, Deutsche Bank, Morgan Stanley	Goldman Sachs	4
09/09/2010	TRGP US	Targa Resources Corp	414	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	22	41.96	91.27272797	41.96	Bank of America Merrill Lynch, Deutsche Bank, Citi, Morgan Stanley, Barclays	Barclays	5
10/24/2006	IRR US	Voya Natural Resources Equity	415	IPO,Primary Share Offering	Trading	20	6.17	-69.25	6.17	Citi		1
10/05/2009	SYA US	Symetra Financial Corp	420	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	12				Barclays, Goldman Sachs, JP Morgan, Bank of America Merrill Lynch	Bank of America Merrill Lynch	4
03/10/2015	CAFD US	8Point3 Energy Partners LP	420	IPO,Primary Share Offering,Emerging Growth Company	Trading	21	16.47	-19.8571434	16.47	Goldman Sachs, Citi, Deutsche Bank, JP Morgan, Credit Agricole CIB	Goldman Sachs	5
07/23/2010	HYI US	Western Asset High Yield Defin	420	IPO,Primary Share Offering	Trading	20	15.07	-25.10000038	15.07	Wells Fargo, Bank of America Merrill Lynch, Morgan Stanley, Citi	Bank of America Merrill Lynch	4
09/12/2008	EM US	Change Healthcare Holdings Inc	422	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	15.5				Goldman Sachs, Morgan Stanley, UBS, Barclays	Morgan Stanley	4
03/28/2014	DM US	Dominion Midstream Partners LP	423	IPO,Primary Share Offering,Emerging Growth Company	Trading	21	25.33	21.04761887	25.33	Citi, Barclays, JP Morgan, Bank of America Merrill Lynch, Goldman Sachs, UBS, Morgan Stanley	Barclays	7
06/19/2014	VTTI US	VTTI Energy Partners LP	423	IPO,Secondary Share Offering	Trading	21	18.61	-1.380952358	18.61	Wells Fargo, Deutsche Bank, Credit Suisse, Bank of America Merrill Lynch, Citi, JP Morgan	Citi	6
12/27/2006	GDL US	GDL Fund/The	425	IPO,Primary Share Offering	Trading	20	9.907	-50.54949951	9.907	Bank of America Merrill Lynch	Bank of America Merrill Lynch	1
10/02/2009	WSTC US	West Corp	425	IPO,Primary Share Offering,PE Backed	Trading	20	23.71	17.35000038	23.71	Morgan Stanley, Goldman Sachs, Bank of America Merrill Lynch, Barclays, Citi, Deutsche Bank, Wells Fargo	Goldman Sachs	7
03/19/2015	BSM US	Black Stone Minerals LP	428	IPO,Primary Share Offering,Emerging Growth Company	Trading	19	16.44	-12.26315784	16.44	Barclays, Bank of America Merrill Lynch, Credit Suisse, Citi, Wells Fargo	Barclays	5
01/21/2014	PRTY US	Party City Holdco Inc	428	IPO,Primary Share Offering,PE Backed	Trading	17	17.99	5.529411793	17.99	Bank of America Merrill Lynch, Goldman Sachs, Credit Suisse, Morgan Stanley, Barclays, Deutsche Bank, JP Morgan	Goldman Sachs	7
06/06/2006	AONEQ US	B456 Systems Inc	428	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	13.5				Goldman Sachs, Morgan Stanley	Morgan Stanley	2
05/06/2007	DSPU US	SP Acquisition Holdings Inc	433	IPO,Primary Share Offering,SPAC	Trading	10				UBS, Ladenburg Thalmann & Co	UBS	2

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Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
06/26/2007	HEK/U US	Nuverra Environmental Solution	433	IPO,Primary Share Offering	Trading	8				Credit Suisse		1
03/27/2013	PSXP US	Phillips 66 Partners LP	434	IPO,Primary Share Offering,Emerging Growth Company	Trading	23	48.81	127.4347839	48.81	RBC Capital Markets, Citi, Deutsche Bank, Credit Suisse, Barclays, Bank of America Merrill Lynch, JP Morgan, Morgan Stanley	JP Morgan	8
11/05/2012	WGP US	Western Gas Equity Partners LP	435	IPO,Primary Share Offering,Emerging Growth Company	Trading	22	36.5	65.45454407	36.5	Morgan Stanley, Deutsche Bank, Barclays, Citi	Barclays	4
09/01/2011	FET US	Forum Energy Technologies Inc	436	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	20	17.2	-14.60000038	17.2	Deutsche Bank, Citi, Credit Suisse, Bank of America Merrill Lynch, JP Morgan	JP Morgan	5
06/05/2007	CVI US	CVR Energy Inc	437	IPO,Primary Share Offering	Trading	19	13.65	-25.94736852	13.65	Goldman Sachs, Deutsche Bank	Goldman Sachs	2
07/02/2012	MPLX US	MPLX LP	438	IPO,Primary Share Offering,Emerging Growth Company	Trading	22	33.04	50	33.04	Bank of America Merrill Lynch, Morgan Stanley, UBS, Citi, JP Morgan	UBS	5
10/18/2013	FPL US	First Trust New Opportunities	440	IPO	Trading	20	13.58	-31.85000038	13.58	Ameriprise Financial Inc, Oppenheimer & Co, Morgan Stanley	Morgan Stanley	3
07/17/2006	NMX US	NYMEX Holdings Inc	441	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	59				JP Morgan, Bank of America Merrill Lynch	JP Morgan	2
03/08/2006	CLR US	Continental Resources Inc/OK	443	IPO,Primary Share Offering,Secondary Share Offering	Trading	15	45.11	509.7333374	45.11	Bank of America Merrill Lynch, JP Morgan	JP Morgan	2
06/23/2014	RIGP US	Transocean Partners LLC	443	IPO,Secondary Share Offering,Emerging Growth Company	Trading	22	12.95	-39.81818008	12.95	Wells Fargo, JP Morgan, Citi, Morgan Stanley, Barclays	Morgan Stanley	5
08/25/2014	CNNX US	Cone Midstream Partners LP	443	IPO,Primary Share Offering,Emerging Growth Company	Trading	22	17.13	-21.90909004	17.13	RBC Capital Markets, Credit Suisse, Morgan Stanley, Goldman Sachs, Robert W Baird & Co, Deutsche Bank, Barclays, JP Morgan, Citi, Bank of America Merrill Lynch, Wells Fargo	Wells Fargo	11
10/06/2010	JMF US	Nuveen Energy MLP Total Return	443	IPO,Primary Share Offering	Trading	20	12.36	-38.45000076	12.36	Nuveen Investments Inc, Bank of America Merrill Lynch, Wells Fargo, Citi, Morgan Stanley	Bank of America Merrill Lynch	5
08/14/2009	DOLE US	Dole Food Co Inc	446	IPO,Primary Share Offering	Trading	12.5				Goldman Sachs, Bank of America Merrill Lynch, Deutsche Bank, Wells Fargo	Goldman Sachs	4
11/12/2013	RSPP US	RSP Permian Inc	449	IPO,Primary Share Offering,Secondary Share Offering,Emerging Growth Company	Trading	19.5	38.19	101.5364598	38.19	UBS, RBC Capital Markets, Raymond James & Associates, Tudor Pickering Holt & Co LLC, JP Morgan, Barclays	Barclays	6
04/11/2015	APFH US	AdvancePierre Foods Holdings I	449	IPO,Primary Share Offering,Secondary Share Offering	Trading	21	24.95	18.80952454	24.95	Credit Suisse, Barclays, Morgan Stanley, Goldman Sachs, BMO Capital Markets, Deutsche Bank	Barclays	6
07/19/2007	URX/U US	United Refining Energy Corp	450	IPO,Primary Share Offering,SPAC	Trading	10				Maxim Group LLC, Deutsche Bank	Deutsche Bank	2
08/13/2015	PACEU US	Pace Holdings Corp	450	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	10.1	1	10.1	Deutsche Bank, Citi	Deutsche Bank	2
09/25/2014	BST US	Blackrock Science & Technology	450	IPO,Primary Share Offering	Trading	20	17.87	-11.19999981	17.87	Bank of America Merrill Lynch, Citi, Oppenheimer & Co, RBC Capital Markets, UBS, Wells Fargo, Morgan Stanley	Morgan Stanley	7
10/25/2012	DFP US	Flaherty & Crumrine Dynamic Pr	450	IPO,Primary Share Offering	Trading	25	24.89	-0.680000007	24.89	Wells Fargo, Raymond James & Associates, Stifel	Wells Fargo	3
11/27/2012	BOI US	Brookfield Mortgage Opportunit	454	IPO,Primary Share Offering	Trading	20	15.04	-24.89999962	15.04	UBS, Wells Fargo, Barclays, RBC Capital Markets	Wells Fargo	4
03/22/2013	CDW US	CDW Corp/DE	455	IPO,Primary Share Offering,PE Backed	Trading	17	45.85	164.6470642	45.85	Morgan Stanley, Deutsche Bank, Goldman Sachs, Barclays, JP Morgan	JP Morgan	5
09/19/2006	EVOQ US	EVOQ Properties Inc	456	IPO,Primary Share Offering	Trading	10				UBS, FBR Capital Markets Corp	FBR Capital Markets Corp	2
07/02/2014	ZAYO US	Zayo Group Holdings Inc	458	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit	Trading	19	28.44	49.57894897	28.44	SunTrust Robinson Humphrey, Citi, RBC Capital Markets, Goldman Sachs, Morgan Stanley, Barclays	Morgan Stanley	6
02/12/2007	1369754D US	RSC Holdings Inc	458	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	22				Lehman Brothers, Morgan Stanley, Deutsche Bank	Deutsche Bank	3

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Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
06/30/2006	FSLR US	First Solar Inc	459	IPO,Primary Share Offering,Secondary Share Offering	Trading	20	41.66	119.0500031	41.66	Morgan Stanley, Credit Suisse	Credit Suisse	2
08/12/2009	CLD US	Cloud Peak Energy Inc	459	IPO,Primary Share Offering	Trading	15	3.54	-75.40000153	3.54	RBC Capital Markets, Credit Suisse, Morgan Stanley	Credit Suisse	3
12/18/2014	SUM US	Summit Materials Inc	460	IPO,Primary Share Offering,PE Backed,Emerging Growth Company	Trading	18	20.26	15.37166691	20.26	Goldman Sachs, Citi, Bank of America Merrill Lynch, Deutsche Bank, Barclays, RBC Capital Markets	Citi	6
10/16/2015	MTCH US	Match Group Inc	460	IPO,Primary Share Offering,Emerging Growth Company	Trading	12	16.5	35.41666794	16.5	BNP Paribas, BMO Capital Markets, Barclays, Deutsche Bank, Bank of America Merrill Lynch, JP Morgan, Allen & Co	JP Morgan	7
04/23/2007	INB US	Cohen & Steers Global Income B	466	IPO,Primary Share Offering	Trading	20	9.21	-54.04999924	9.21	Bank of America Merrill Lynch		1
05/20/2014	NEP US	NextEra Energy Partners LP	467	IPO,Primary Share Offering,Emerging Growth Company	Trading	25	30.37	19.68000031	30.37	Morgan Stanley, Goldman Sachs, Bank of America Merrill Lynch	Bank of America Merrill Lynch	3
06/07/2011	CTF US	Nuveen Long/Short Commodity To	470	IPO,Primary Share Offering	Trading	25	14.31	-42.75999832	14.31	Bank of America Merrill Lynch, Morgan Stanley, UBS, Citi	Bank of America Merrill Lynch	4
03/23/2012	BERY US	Berry Plastics Group Inc	471	IPO,Primary Share Offering,PE Backed	Trading	16	40.81	159.75	40.81	Robert W Baird & Co, Goldman Sachs, Deutsche Bank, Credit Suisse, Barclays, Bank of America Merrill Lynch, Citi	Bank of America Merrill Lynch	7
12/20/2013	MIK US	Michaels Cos Inc/The	472	IPO,Primary Share Offering,Secondary Share Offering,PE Backed	Trading	17	24.98	46.29411697	24.98	Wells Fargo, Morgan Stanley, Bank of America Merrill Lynch, Credit Suisse, Deutsche Bank, Barclays, JP Morgan, Goldman Sachs	JP Morgan	8
11/06/2014	RMP US	Rice Midstream Partners LP	474	IPO,Primary Share Offering,Emerging Growth Company	Trading	16.5	20.93	31.939394	20.93	RBC Capital Markets, Goldman Sachs, Wells Fargo, Citi, Barclays	Barclays	5
09/02/2010	KMF US	Kayne Anderson Midstream/Energ	475	IPO,Primary Share Offering	Trading	25	14.16	-43.24000168	14.16	Bank of America Merrill Lynch, Citi, Morgan Stanley, UBS, Wells Fargo	UBS	5
04/16/2010	NXPI US	NXP Semiconductors NV	476	IPO,Primary Share Offering,VC Backed,PE Backed	Trading	14	86.37	513.7142944	86.37	Goldman Sachs, Morgan Stanley, Credit Suisse, Bank of America Merrill Lynch, Barclays	Credit Suisse	5
01/12/2012	MRC US	MRC Global Inc	477	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	21	14.75	-30.52380943	14.75	Goldman Sachs, Barclays	Goldman Sachs	2
02/01/2013	MIE US	Cohen & Steers MLP Income and	480	IPO,Primary Share Offering	Trading	20	10.43	-47.95000076	10.43	Bank of America Merrill Lynch, RBC Capital Markets, Deutsche Bank, BB&T	Bank of America Merrill Lynch	4
05/04/2014	TVPT US	Travelport Worldwide Ltd	480	IPO,Primary Share Offering,VC Backed,PE Backed	Trading	16	13.62	-15.625	13.62	Morgan Stanley, UBS, Credit Suisse, Deutsche Bank	Morgan Stanley	4
02/12/2007	SLH US	Solera Holdings Inc	483	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	16				Goldman Sachs, JP Morgan	Goldman Sachs	2
05/09/2013	QEPM US	QEP Midstream Partners LP	483	IPO,Primary Share Offering,Emerging Growth Company	Trading	21				JP Morgan, Deutsche Bank, Citi, Wells Fargo, Morgan Stanley	Wells Fargo	5
05/11/2007	LDKYQ US	LDK Solar Co Ltd	486	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	27	0.027	N/A	0.027	UBS, Morgan Stanley	Morgan Stanley	2
05/04/2011	DNKN US	Dunkin' Brands Group Inc	486	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	19	46.57	144.4736786	46.57	Goldman Sachs, Bank of America Merrill Lynch, Morgan Stanley, JP Morgan, Barclays	JP Morgan	5
08/12/2015	PSTG US	Pure Storage Inc	489	IPO,Primary Share Offering,VC Backed,Emerging Growth Company	Trading	17	13.55	-22.41176414	13.55	Morgan Stanley, Goldman Sachs, Allen & Co, Barclays, Bank of America Merrill Lynch	Morgan Stanley	5
05/25/2011	RXN US	Rexnord Corp	490	IPO,Primary Share Offering,PE Backed	Trading	18	21.07	18.05555534	21.07	Goldman Sachs, Bank of America Merrill Lynch, Credit Suisse, Deutsche Bank, Barclays	Bank of America Merrill Lynch	5
05/19/2014	GPRO US	GoPro Inc	491	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit,Emerging Growth Company	Trading	24	14.54	-40.45833206	14.54	JP Morgan, Barclays, Citi	JP Morgan	3

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
09/12/2007	FLY US	Fly Leasing Ltd	494	IPO,Primary Share Offering	Trading	23	11.77	-48.43478394	11.77	Citi, Bank of America Merrill Lynch, Morgan Stanley, Credit Suisse	Morgan Stanley	4
06/07/2013	NYLD/A US	NRG Yield Inc	495	IPO,Primary Share Offering,Emerging Growth Company	Trading	22	16.69	56.27272797	16.69	Bank of America Merrill Lynch, Citi, Goldman Sachs	Bank of America Merrill Lynch	3
02/18/2014	KING US	King Digital Entertainment Plc	500	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit,Emerging Growth Company	Trading	22.5				RBC Capital Markets, Deutsche Bank, Barclays, Bank of America Merrill Lynch, JP Morgan, Credit Suisse	JP Morgan	6
04/26/2007	GTATQ US	GT Advanced Technologies Inc	500	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	15.5				UBS, Credit Suisse	Credit Suisse	2
01/27/2015	SRACU US	Silver Run Acquisition Corp	500	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	13.05	29	13.05	Deutsche Bank, Citi, Goldman Sachs	Deutsche Bank	3
06/13/2015	EAGLU US	Double Eagle Acquisition Corp	500	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	10.04	0.100000002	10.04	Bank of America Merrill Lynch, Deutsche Bank	Deutsche Bank	2
12/27/2011	USAG US	United States Agriculture Inde	500	IPO,Primary Share Offering,Best Efforts	Trading	0	19.1601		19.1601	Bank of America Merrill Lynch		1
05/09/2014	NXEOU US	Nexeo Solutions Inc	500	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	8.58	-0.407999992	8.58	Bank of America Merrill Lynch, Deutsche Bank	Deutsche Bank	2
11/10/2011	SRC US	Spirit Realty Capital Inc	500	IPO,Primary Share Offering,PE Backed	Trading	15	13.22	66.35253143	13.22	Morgan Stanley, Macquarie, UBS, Deutsche Bank, RBC Capital Markets	Morgan Stanley	5
10/24/2006	FOF US	Cohen & Steers Closed-End Oppo	501	IPO,Primary Share Offering	Trading	20	11.99	-40.09999847	11.99	Bank of America Merrill Lynch		1
12/23/2014	BKFS US	Black Knight Financial Service	507	IPO,Primary Share Offering,PE Backed	Trading	24.5	39.26	61.02040863	39.26	SunTrust Robinson Humphrey, Deutsche Bank, Credit Suisse, Citi, Goldman Sachs, Wells Fargo, JP Morgan, Bank of America Merrill Lynch	JP Morgan	8
01/29/2007	NIE US	Allianz/GI Equity & Convertible	508	IPO,Primary Share Offering	Trading	25	19.08	-23.95999908	19.08	Citi	Citi	1
05/10/2007	OWW US	Orbitz Worldwide Inc	510	IPO,Primary Share Offering	Trading	15				Morgan Stanley, Lehman Brothers, JP Morgan, Goldman Sachs	Morgan Stanley	4
08/17/2007	CIM US	Chimera Investment Corp	511	IPO,Primary Share Offering	Trading	15	16.53	-78.10666656	16.53	Bank of America Merrill Lynch, Credit Suisse, Deutsche Bank	Bank of America Merrill Lynch	3
02/16/2010	WPZ US	Williams Partners LP	513	IPO,Primary Share Offering,Secondary Share Offering	Trading	21	36.32	85.86709595	36.32	UBS, Wells Fargo, Morgan Stanley, Goldman Sachs, Credit Suisse, Citi, Barclays, Bank of America Merrill Lynch	UBS	8
07/15/2011	NCLH US	Norwegian Cruise Line Holdings	514	IPO,Primary Share Offering,PE Backed	Trading	19	37.91	125.1052628	37.91	JP Morgan, Goldman Sachs, Deutsche Bank, Citi, UBS, Barclays	UBS	6
06/04/2010	LPLA US	LPL Financial Holdings Inc	517	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	30	26.62	-11.23333359	26.62	JP Morgan, Bank of America Merrill Lynch, Goldman Sachs, Morgan Stanley	Goldman Sachs	4
04/11/2014	DSE US	Duff & Phelps Select Energy ML	517	IPO,Primary Share Offering	Trading	20	8.06	-58.65000153	8.06	Wells Fargo, Morgan Stanley	Morgan Stanley	2

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04/15/2011	VHS US	Vanguard Health Systems Inc	518	IPO,Primary Share Offering,PE Backed	Trading	18				JP Morgan, Deutsche Bank, Citi, Bank of America Merrill Lynch, Barclays	Bank of America Merrill Lynch	5
06/09/2014	GDDY US	GoDaddy Inc	520	IPO,Primary Share Offering,VC Backed,PE Backed	Trading	20	33.46	66.65000153	33.46	Barclays, Citi, Deutsche Bank, JP Morgan, RBC Capital Markets, Morgan Stanley	Morgan Stanley	6
12/04/2006	EIG US	Employers Holdings Inc	523	IPO,Primary Share Offering	Trading	17	28.54	68.47058368	28.54	Morgan Stanley		1
02/18/2010	NBB US	Nuveen Build America Bond Fund	527	IPO,Primary Share Offering	Trading	20	22.95	14.64999952	22.95	Ameriprise Financial Inc, Citi, Morgan Stanley, Nuveen Investments Inc, Raymond James & Associates, Wells Fargo, Bank of America Merrill Lynch	Bank of America Merrill Lynch	7
08/02/2006	GLG/U US	GLG Partners Inc	528	IPO,Primary Share Offering	Trading	10				Citi		1
12/19/2014	HIFR US	InfraREIT Inc	529	IPO,Primary Share Offering,PE Backed,Emerging Growth Company	Trading	23	17.45	-24.17391396	17.45	Bank of America Merrill Lynch, Citi, RBC Capital Markets, Morgan Stanley	Bank of America Merrill Lynch	4
05/25/2011	DLPH US	Delphi Automotive PLC	530	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	22	65.57	198.5454559	65.57	Morgan Stanley, Citi, Barclays, Deutsche Banli, Bank of America Merrill Lynch, Goldman Sachs, JP Morgan	Goldman Sachs	7
11/09/2015	TEAM US	Atlassian Corp PLC	531	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,Emerging Growth Company	Trading	21	30.66	45.19047546	30.66	Goldman Sachs, Morgan Stanley, Allen & Co, Jefferies, UBS	Goldman Sachs	5
04/26/2007	DPO US	Dow 30 Enhanced Premium & Inco	535	IPO,Primary Share Offering	Trading	20				Bank of America Merrill Lynch		1
02/01/2007	CNK US	Cinemark Holdings Inc	537	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	19	37.71	100.1052628	37.71	Lehman Brothers, Credit Suisse, Bank of America Merrill Lynch, Morgan Stanley	Lehman Brothers	4
04/06/2011	EMO US	ClearBridge Energy MLP Opportu	540	IPO,Primary Share Offering	Trading	20	12.91	-34.90000153	12.91	Citi, Morgan Stanley, Bank of America Merrill Lynch	Morgan Stanley	3
04/14/2006	KBR US	KBR Inc	544	IPO,Primary Share Offering	Trading	17	15.64	-8.705882072	15.64	UBS, Credit Suisse, Goldman Sachs	Credit Suisse	3
05/16/2012	MMD US	MainStay DefinedTerm Municipal	550	IPO,Primary Share Offering	Trading	20	20.54	2.650000095	20.54	Raymond James & Associates, Citi, Morgan Stanley, Wells Fargo, Bank of America Merrill Lynch	Bank of America Merrill Lynch	5
06/14/2007	TOH/U US	Resolute Energy Corp	552	IPO,Primary Share Offering	Trading	10				Citi		1
07/12/2007	TCW/U US	Triplecrown Acquisition Corp	552	IPO,Primary Share Offering,SPAC	Trading	10				Citi	Citi	1
07/08/2016	FHB US	First Hawaiian Inc	558	IPO,Secondary Share Offering,Emerging Growth Company	Trading	23	24.41	6.86956501	24.41	BNP Paribas, Goldman Sachs, Bank of America Merrill Lynch, Morgan Stanley, Citi, UBS, Deutsche Bank, Barclays, Credit Suisse, JP Morgan	Goldman Sachs	10
03/21/2011	APO US	Apollo Global Management LLC	565	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	19	18.65	-3.15789485	18.65	Goldman Sachs, JP Morgan, Bank of America Merrill Lynch, Citi, Credit Suisse, Deutsche Bank, UBS	Goldman Sachs	7
05/11/2007	G US	Genpact Ltd	568	IPO,Primary Share Offering,Secondary Share Offering	Trading	14	24.01	71.5	24.01	Morgan Stanley, Citi, JP Morgan	Morgan Stanley	3
02/02/2011	RLJ US	RLJ Lodging Trust	569	IPO,Primary Share Offering	Trading	18	23.56	32.22222137	23.56	Barclays, Wells Fargo, Bank of America Merrill Lynch	Bank of America Merrill Lynch	3

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05/03/2012	JPI US	Nuveen Preferred & Income Term	575	IPO,Primary Share Offering	Trading	25	24.65	-1.320000052	24.85	Wells Fargo, UBS, Nuveen Investments Inc	Wells Fargo	3
07/09/2010	PSLV US	Sprott Physical Silver Trust	575	IPO,Primary Share Offering	Trading	10	7.67	-23.79999924	7.67	Morgan Stanley, RBC Capital Markets	Morgan Stanley	2
05/31/2007	EPB US	El Paso Pipeline Partners LP	575	IPO,Primary Share Offering	Trading	20				Citi, Goldman Sachs, UBS, Lehman Brothers	Lehman Brothers	4
11/26/2013	ENBL US	Enable Midstream Partners LP	575	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	20	13	-33.84999847	13	Morgan Stanley, Wells Fargo, UBS, JP Morgan, Goldman Sachs, Deutsche Bank, Citi, Barclays	Morgan Stanley	8
11/10/2011	VNTV US	Vantiv Inc	575	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	17	54.95	221.4117584	54.95	JP Morgan, Credit Suisse, Morgan Stanley, Deutsche Bank, Goldman Sachs	JP Morgan	5
02/06/2013	EVTC US	EVERTEC Inc	576	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	20	17.4	-13.30000019	17.4	JP Morgan, Goldman Sachs, Deutsche Bank, Morgan Stanley, Bank of America Merrill Lynch, Credit Suisse, UBS	Goldman Sachs	7
09/29/2014	TERP US	TerraForm Power Inc	577	IPO,Primary Share Offering,Emerging Growth Company	Trading	25	11.94	-50.88000107	11.94	Goldman Sachs, Barclays, Citi, JP Morgan, Macquarie	Goldman Sachs	5
10/13/2015	RRR US	Red Rock Resorts Inc	579	IPO,Primary Share Offering,Secondary Share Offering	Trading	19.5	22.74	17.58974266	22.74	Deutsche Bank, Macquarie, Citi, Wells Fargo, Goldman Sachs, Bank of America Merrill Lynch, JP Morgan	Deutsche Bank	7
05/11/2015	THW US	Tekla World Healthcare Fund	580	IPO,Primary Share Offering	Trading	20	15.29	-23.39999962	15.29	Morgan Stanley, Wells Fargo, Bank of America Merrill Lynch, UBS, Ameriprise Financial Inc	Wells Fargo	5
09/29/2014	STOR US	STORE Capital Corp	585	IPO,Primary Share Offering,Emerging Growth Company	Trading	18.5	29.96	59.7297287	29.96	Morgan Stanley, Credit Suisse, Goldman Sachs	Goldman Sachs	3
05/21/2011	PDH US	PetroLogistics LP	595	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	17				Morgan Stanley, Citi, UBS	Morgan Stanley	3
12/19/2006	CLWR US	Clearwire Corp	600	IPO,Primary Share Offering	Trading	25				Morgan Stanley, JP Morgan, Bank of America Merrill Lynch	Bank of America Merrill Lynch	3
11/02/2006	AER US	AerCap Holdings NV	600	IPO,Primary Share Offering,Secondary Share Offering	Trading	23	38.22	64.17391205	38.22	Goldman Sachs, Morgan Stanley, Lehman Brothers, Bank of America Merrill Lynch	Morgan Stanley	4
03/14/2014	CCD US	Calamos Dynamic Convertible &	609	IPO,Primary Share Offering	Trading	25	19.15	-23.95999908	19.15	Wells Fargo, Bank of America Merrill Lynch, Ameriprise Financial Inc, RBC Capital Markets	Wells Fargo	4
11/16/2011	0006024D US	Prudential Short Term High Yie	610	IPO,Primary Share Offering	Trading	20				Bank of America Merrill Lynch, Citi, Morgan Stanley, Wells Fargo, Raymond James & Associates	Morgan Stanley	5
11/14/2011	PBF US	PBF Energy Inc	613	IPO,Primary Share Offering,PE Backed	Trading	26	22.42	-11.53846169	22.42	Deutsche Bank, Credit Suisse, Citi, Morgan Stanley	Citi	4
06/24/2014	VWR US	VWR Corp	617	IPO,Primary Share Offering	Trading	21	30.34	44.66666794	30.34	William Blair & Co LLC, Jefferies, Citi, Deutsche Bank, Barclays, Bank of America Merrill Lynch, JP Morgan, Goldman Sachs	Bank of America Merrill Lynch	8
05/25/2011	PER US	SandRidge Permian Trust	621	IPO,Primary Share Offering	Trading	18	3.01	-83.5	3.01	Wells Fargo, RBC Capital Markets, Raymond James & Associates, Morgan Stanley	Morgan Stanley	4
01/14/2011	KOS US	Kosmos Energy Ltd	621	IPO,Primary Share Offering,PE Backed	Trading	18	5.41	-69.22222137	5.41	Citi, Barclays, Credit Suisse	Citi	3
06/02/2013	COMM US	CommScope Holding Co Inc	625	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	15	28.82	89.73332977	28.82	Wells Fargo, RBC Capital Markets, Morgan Stanley, Jefferies, Goldman Sachs, Credit Suisse, Barclays, Bank of America Merrill Lynch, JP Morgan, Deutsche Bank	JP Morgan	10

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01/05/2012	SDR US	SandRidge Mississippian Trust	628	IPO,Primary Share Offering	Trading	21	1.73	-91.95237732	1.73	Morgan Stanley, Raymond James & Associates, Bank of America Merrill Lynch, Citi, RBC Capital Markets	Morgan Stanley	5
09/21/2012	NID US	Nuveen Intermediate Duration M	630	IPO,Primary Share Offering	Trading	15	14.25	-5.866666794	14.25	Nuveen Investments Inc, Citi, Wells Fargo, UBS, Morgan Stanley, Bank of America Merrill Lynch	Morgan Stanley	6
04/13/2007	AGC US	Advent Claymore Convertible Se	635	IPO,Primary Share Offering	Trading	20	5.76	-71.30000305	5.76	Bank of America Merrill Lynch		1
06/27/2013	OUT US	Outfront Media Inc	644	IPO,Primary Share Offering	Trading	26	22.23	-10.55239964	22.23	Wells Fargo, Deutsche Bank, Citi, JP Morgan, Bank of America Merrill Lynch, Goldman Sachs, Morgan Stanley	Goldman Sachs	7
07/16/2010	FSD US	First Trust High Income Long/S	645	IPO,Primary Share Offering	Trading	20	15.32	-23.35000038	15.32	Citi, Morgan Stanley, Bank of America Merrill Lynch, Wells Fargo	Wells Fargo	4
09/13/2010	AAT US	American Assets Trust Inc	648	IPO,Primary Share Offering	Trading	20.5	45.75	121.31707	45.75	Wells Fargo, Bank of America Merrill Lynch, Morgan Stanley	Bank of America Merrill Lynch	3
07/22/2013	STAY US	Extended Stay America Inc	650	IPO,Primary Share Offering,PE Backed	Trading	20	13.92	-29.10000038	13.92	Macquarie, Morgan Stanley, Barclays, Bank of America Merrill Lynch, Citi, Deutsche Bank, JP Morgan, Goldman Sachs	Deutsche Bank	8
11/25/2009	ST US	Sensata Technologies Holding N	654	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	18	38.05	111.5	38.05	JP Morgan, Bank of America Merrill Lynch, Goldman Sachs, Morgan Stanley, Barclays	Morgan Stanley	5
06/24/2010	SMT US	SMART Technologies Inc	660	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	17	4.48	-97.37059021	4.48	Credit Suisse, Bank of America Merrill Lynch, RBC Capital Markets, Deutsche Bank, Morgan Stanley	Morgan Stanley	5
12/19/2012	PF US	Pinnacle Foods Inc	667	IPO,Primary Share Offering,PE Backed	Trading	20	49.34	146.6499939	49.34	UBS, Morgan Stanley, Goldman Sachs, Credit Suisse, Barclays, Bank of America Merrill Lynch	Barclays	6
09/06/2011	CG US	Carlyle Group LP/The	671	IPO,Primary Share Offering	Trading	22	16.79	-23.31618199	16.79	Sandler O'Neill & Partners, Industrial & Comm Bank of China, Bank of America Merrill Lynch, Barclays, Deutsche Bank, Goldman Sachs, Morgan Stanley, UBS, Credit Suisse, Citi, JP Morgan	JP Morgan	11
05/07/2015	GLBL US	TerraForm Global Inc	675	IPO,Primary Share Offering,Emerging Growth Company	Trading	15	3.65	-76.26667023	3.65	Goldman Sachs, Deutsche Bank, Bank of America Merrill Lynch, Morgan Stanley, Citi, Barclays, JP Morgan	JP Morgan	7
03/04/2010	OAS US	Oasis Petroleum Inc	676	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	14	8.9	-36.3571434	8.9	Morgan Stanley, UBS	Morgan Stanley	2
12/30/2014	INOV US	Inovalon Holdings Inc	685	IPO,Primary Share Offering,Emerging Growth Company	Trading	27	14.5	-46.44444275	14.5	Goldman Sachs, Citi, Morgan Stanley, Bank of America Merrill Lynch, UBS	Goldman Sachs	5
04/21/2015	CFCOU US	CF Corp	690	IPO,Primary Share Offering,SPAC,Emerging Growth Company	Trading	10	10	0	10	Bank of America Merrill Lynch, Citi, Credit Suisse	Citi	3
08/04/2006	OB US	OneBeacon Insurance Group Ltd	690	IPO,Secondary Share Offering	Trading	25	13.63	-44.72000122	13.63	Lehman Brothers		1
10/01/2012	CVRR US	CVR Refining LP	690	IPO,Primary Share Offering,Emerging Growth Company	Trading	25	6.04	-74.68000031	6.04	Barclays, Citi, UBS, Jefferies, Credit Suisse	Credit Suisse	5
03/16/2011	ALSN US	Allison Transmission Holdings	690	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	23	28.18	23.30434799	28.18	Goldman Sachs, Morgan Stanley, Credit Suisse, Bank of America Merrill Lynch, JP Morgan, Citi	Bank of America Merrill Lynch	6
03/15/2012	ISD US	Prudential Short Duration High	699	IPO	Trading	20	15.85	-20.70000076	15.85	Bank of America Merrill Lynch, Citi, Raymond James & Associates, Wells Fargo, Morgan Stanley	Morgan Stanley	5

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03/24/2014	SERV US	ServiceMaster Global Holdings	702	IPO,Primary Share Offering,PE Backed	Trading	17	37.47	120.9411774	37.47	Credit Suisse, JP Morgan, Goldman Sachs, Morgan Stanley, Natixis, Bank of America Merrill Lynch, Jefferies, RBC Capital Markets	JP Morgan	8
09/04/2013	EPE US	EP Energy Corp	704	IPO,Primary Share Offering	Trading	20	4.22	-77.94999695	4.22	JP Morgan, Credit Suisse, Citi, Goldman Sachs, Morgan Stanley, Deutsche Bank, UBS, Wells Fargo, RBC Capital Markets, BMO Capital Markets	Credit Suisse	10
02/12/2015	EQGP US	EQT GP Holdings LP	714	IPO,Primary Share Offering,Secondary Share Offering	Trading	27	24.56	-5.555555344	24.56	Wells Fargo, RBC Capital Markets, JP Morgan, Deutsche Bank, Credit Suisse, Citi, Bank of America Merrill Lynch, Goldman Sachs, Barclays	Barclays	9
09/05/2014	KRNY US	Kearny Financial Corp/MD	718	IPO,Primary Share Offering,Best Efforts,Bank Conv.	Trading	10	13.24	30.60000038	13.24	Sandler O'Neill & Partners		1
02/12/2008	ART US	Artio Global Investors Inc	719	IPO,Primary Share Offering	Trading	26				Goldman Sachs	Goldman Sachs	1
06/08/2015	PTHN US	Patheon NV	719	IPO,Primary Share Offering,Secondary Share Offering	Trading	21	25.58	20.23809433	25.58	Credit Suisse, Evercore Partners Inc, Jefferies, Morgan Stanley, UBS, Wells Fargo, JP Morgan	JP Morgan	7
09/20/2013	CQH US	Cheniere Energy Partners LP Ho	720	IPO,Primary Share Offering,Emerging Growth Company	Trading	20	20.12	3.150000095	20.12	RBC Capital Markets, Credit Suisse, Goldman Sachs, Morgan Stanley	Goldman Sachs	4
11/30/2012	BIT US	BlackRock Multi-Sector Income	720	IPO,Primary Share Offering	Trading	20	17.13	-14.5	17.13	Bank of America Merrill Lynch, UBS, Morgan Stanley, Wells Fargo, Citi	Bank of America Merrill Lynch	5
01/21/2014	SABR US	Sabre Corp	721	IPO,Primary Share Offering,PE Backed	Trading	15	26.65	66.4375	26.65	Deutsche Bank, Bank of America Merrill Lynch, Morgan Stanley, Goldman Sachs	Morgan Stanley	4
12/05/2012	TMHC US	Taylor Morrison Home Corp	723	IPO,Primary Share Offering,PE Backed	Trading	22	17.33	-21.04545403	17.33	Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan, Zelman Partners LLC	Credit Suisse	6
05/02/2012	LDP US	Cohen & Steers Limited Duratio	723	IPO,Primary Share Offering	Trading	25	25.4	0.519999981	25.4	Citi, Morgan Stanley, Bank of America Merrill Lynch	Bank of America Merrill Lynch	3
11/09/2006	FIG US	Fortress Investment Group LLC	729	IPO,Primary Share Offering	Trading	18.5	5.03	-73.24324036	5.03	Lehman Brothers, Goldman Sachs, Deutsche Bank, Citi, Bank of America Merrill Lynch	Goldman Sachs	5
09/30/2012	WDAY US	Workday Inc	733	IPO,Primary Share Offering,VC Backed,Emerging Growth Company	Trading	28	83.05	196.0714264	83.05	Morgan Stanley, Goldman Sachs, Allen & Co, JP Morgan	Morgan Stanley	4
03/16/2011	DPG US	Duff & Phelps Global Utility I	735	IPO,Primary Share Offering	Trading	20	17.15	-14.59999981	17.15	Wells Fargo, Citi, Morgan Stanley, UBS, Ameriprise Financial Inc	Wells Fargo	5
09/09/2007	DFT US	DuPont Fabros Technology Inc	737	IPO,Primary Share Offering	Trading	21	46.78	119.7142858	46.78	UBS, Lehman Brothers	Lehman Brothers	2
11/27/2006	GLS US	Genesis Lease Ltd	737	IPO,Primary Share Offering	Trading	23				Citi, JP Morgan	Citi	2
08/21/2008	1373183D US	Avago Technologies Ltd	745	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	15				Morgan Stanley, Citi, Deutsche Bank, Barclays	Deutsche Bank	4
02/10/2014	LQ US	La Quinta Holdings Inc	748	IPO,Primary Share Offering,PE Backed,Emerging Growth Company	Trading	17	11.51	-31.05882353	11.51	Wells Fargo, Goldman Sachs, Deutsche Bank, Credit Suisse, Citi, Bank of America Merrill Lynch, JP Morgan, Morgan Stanley	JP Morgan	8
11/26/2010	CPER US	United States Copper Index Fun	750	IPO,Primary Share Offering,Best Efforts	Trading	0	14.2092		14.2092			1
05/10/2013	FI US	Frank's International NV	759	IPO,Primary Share Offering	Trading	22	12.59	-42.90909195	12.59	UBS, Goldman Sachs, Morgan Stanley, Citi, Simmons & Co International, Barclays, Credit Suisse	Barclays	7
04/13/2012	CTR US	ClearBridge Energy MLP Total R	762	IPO,Primary Share Offering	Trading	20	12.85	-35.15000153	12.85	Morgan Stanley, Bank of America Merrill Lynch, Citi, Wells Fargo, Ameriprise Financial Inc	Morgan Stanley	5
03/31/2015	TRU US	TransUnion	764	IPO,Primary Share Offering,PE Backed	Trading	22.5	33.02	46.55555725	33.02	Bank of America Merrill Lynch, JP Morgan, Goldman Sachs, Deutsche Bank, RBC Capital Markets, Wells Fargo, Credit Suisse	Goldman Sachs	7
04/04/2014	THQ US	Tekla Healthcare Opportunities	770	IPO,Primary Share Offering	Trading	20	17.85	-10.75	17.85	Morgan Stanley, Wells Fargo, Raymond James & Associates, Ameriprise Financial Inc, UBS	Wells Fargo	5

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Last Lead Bookrunner	Bookrunner Count
06/10/2015	BUFF US	Blue Buffalo Pet Products Inc	778	IPO,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	20	26.53	31.85000038	26.53	Citi, JP Morgan, Barclays, Deutsche Bank, Morgan Stanley	JP Morgan	5
02/23/2007	JGT US	Nuveen Diversified Currency Op	800	IPO,Primary Share Offering	Trading	20				Wells Fargo		1
10/11/2007	FYRU US	Sapphire Industrials Corp	800	IPO,Primary Share Offering,SPAC	Trading	10				Citi		1
09/26/2006	BCF US	BlackRock Real Asset Equity Tr	803	IPO,Primary Share Offering	Trading	15				Bank of America Merrill Lynch, Wells Fargo, Citi, UBS, AG Edwards & Sons LLC	Wells Fargo	5
06/02/2011	GRPN US	Groupon Inc	805	IPO,Primary Share Offering,VC Backed,PE Backed	Trading	20	5.86	-70.69999695	5.86	William Blair & Co LLC, Wells Fargo, JP Morgan, Deutsche Bank, Citi, Barclays, Bank of America Merrill Lynch, Allen & Co, Credit Suisse, Goldman Sachs, Morgan Stanley	Morgan Stanley	11
12/27/2012	SEAS US	SeaWorld Entertainment Inc	807	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	27	12.98	-51.25925827	12.98	Wells Fargo, Barclays, Bank of America Merrill Lynch, Citi, Goldman Sachs, JP Morgan	Goldman Sachs	6
03/08/2007	ACM US	AECOM	808	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	20	34.71	77.15000153	34.71	Morgan Stanley, Bank of America Merrill Lynch, UBS	Morgan Stanley	3
06/04/2013	AMH US	American Homes 4 Rent	812	IPO,Primary Share Offering,PE Backed,Emerging Growth Company	Trading	16	22.62	42.75	22.62	Goldman Sachs, Wells Fargo, Bank of America Merrill Lynch, JP Morgan, FBR Capital Markets Corp, Citi, Credit Suisse, Jefferies, Morgan Stanley, Raymond James & Associates	Goldman Sachs	10
07/24/2012	GHY US	Prudential Global Short Durati	816	IPO,Primary Share Offering	Trading	20	15.25	-23.85000038	15.25	Bank of America Merrill Lynch, Morgan Stanley, Wells Fargo, Citi	Bank of America Merrill Lynch	4
05/02/2014	ECR US	Eclipse Resources Corp	818	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	27	3.33	-87.1111145	3.33	RBC Capital Markets, KeyBanc Capital Markets, Deutsche Bank, BMO Capital Markets, Barclays, Citi, Morgan Stanley, Goldman Sachs	Citi	8
08/20/2009	DG US	Dollar General Corp	824	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	21	92.04	342.8095093	92.04	Kohlberg Kravis Roberts & Co, Goldman Sachs, Citi, Bank of America Merrill Lynch, JP Morgan	Citi	5
06/21/2013	GMZ US	Goldman Sachs MLP Income Oppor	826	IPO,Primary Share Offering	Trading	20	9.66	-51.45000076	9.66	Goldman Sachs, Morgan Stanley, Bank of America Merrill Lynch, Citi	Morgan Stanley	4
09/15/2008	MJN US	Mead Johnson Nutrition Co	828	IPO,Primary Share Offering	Trading	24	88.61	266.2083435	88.61	JP Morgan, Credit Suisse, Citi, Morgan Stanley, Bank of America Merrill Lynch	Citi	5
03/29/2007	1236053D US	EnergySolutions Inc	829	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	23				JP Morgan, Morgan Stanley, Credit Suisse	Credit Suisse	3
04/01/2014	ABY US	Atlantica Yield plc	829	IPO,Primary Share Offering,Secondary Share Offering,Emerging Growth Company	Trading	29	20.21	-30.55172348	20.21	Bank of America Merrill Lynch, Citi, Banco Santander, HSBC, RBC Capital Markets, Canaccord Genuity	Citi	6
08/17/2012	FEI US	First Trust MLP and Energy Inc	830	IPO,Primary Share Offering	Trading	20	15.71	-21.10000038	15.71	Morgan Stanley, Citi, RBC Capital Markets, Oppenheimer & Co	Morgan Stanley	4
09/09/2013	ARMK US	Aramark	834	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	20	35.75	78.80000305	35.75	JP Morgan, Goldman Sachs, Wells Fargo, RBC Capital Markets, Barclays, Bank of America Merrill Lynch, Morgan Stanley, Credit Suisse	Goldman Sachs	8
05/07/2015	FIT US	Fitbit Inc	841	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,Emerging Growth Company	Trading	20	15.65	-21.54999924	15.65	Morgan Stanley, Deutsche Bank, Bank of America Merrill Lynch, Barclays, SunTrust Robinson Humphrey	Morgan Stanley	5
06/22/2007	SDOCQ US	SandRidge Energy Inc	842	IPO,Primary Share Offering	Trading	25	0.0094	N/A	0.0094	Goldman Sachs, Lehman Brothers, Bank of America Merrill Lynch	Lehman Brothers	3

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Announced Date	Issuer Ticker	Issuer Name	Offer Size (M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
04/15/2011	RENN US	Renren Inc	855	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,PE Backed	Trading	14	1.93	-87.07142639	1.93	Morgan Stanley, Deutsche Bank, Credit Suisse, Jefferies, Bank of America Merrill Lynch	Bank of America Merrill Lynch	5
07/22/2010	SWFT US	Swift Transportation Co	873	IPO,Primary Share Offering	Trading	11	19.16	76.90908813	19.16	Citi, UBS, Deutsche Bank, Morgan Stanley, Wells Fargo, Bank of America Merrill Lynch	Morgan Stanley	6
09/25/2013	PINC US	Premier Inc	874	IPO,Primary Share Offering,Emerging Growth Company	Trading	27	33.12	22.9629631	33.12	JP Morgan, Bank of America Merrill Lynch, Wells Fargo	JP Morgan	3
10/13/2006	NCMI US	National CineMedia Inc	882	IPO,Primary Share Offering	Trading	21	15.32	-24.19047546	15.32	Credit Suisse, Morgan Stanley, Lehman Brothers, JP Morgan	Credit Suisse	4
02/11/2011	FSL US	Freescale Semiconductor Ltd	883	IPO,Primary Share Offering,PE Backed	Trading	18				JP Morgan, Credit Suisse, Barclays, Citi, Deutsche Bank	Citi	5
04/12/2007	CHW US	Calamos Global Dynamic Income	885	IPO,Primary Share Offering	Trading	15	7.38	-51.13333511	7.38	Wells Fargo, Citi	Wells Fargo	2
06/27/2014	UNVR US	Univar Inc	886	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	22	18.53	-14.27272701	18.53	Morgan Stanley, JP Morgan, Jefferies, Credit Suisse, Barclays, Bank of America Merrill Lynch, Deutsche Bank, Goldman Sachs	Deutsche Bank	8
04/06/2012	BGB US	Blackstone / GSO Strategic Cre	892	IPO,Primary Share Offering	Trading	20	14.92	-25.35000038	14.92	Bank of America Merrill Lynch, Morgan Stanley, UBS, Citi, Wells Fargo	Morgan Stanley	5
06/10/2015	LN US	LINE Corp	895	IPO,Primary Share Offering,Dual Listing	Trading	32.84	42.14	21.80267906	42.14	Goldman Sachs, JP Morgan, Morgan Stanley, Nomura	Morgan Stanley	4
02/23/2007	BFD US	BlackRock Global Equity Income	898	IPO,Primary Share Offering	Trading	20				Bank of America Merrill Lynch	Bank of America Merrill Lynch	1
01/16/2007	EOD US	Wells Fargo Global Dividend Op	900	IPO,Primary Share Offering	Trading	20	6	-70.09999847	6	Wells Fargo	Wells Fargo	1
10/29/2010	BKU US	BankUnited Inc	900	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	27	30.22	12.11111069	30.22	Bank of America Merrill Lynch, Morgan Stanley, Deutsche Bank, Goldman Sachs	Morgan Stanley	4
11/01/2007	TUXU US	Trian Acquisition I Corp	920	IPO,Primary Share Offering,SPAC	Trading	10				Bank of America Merrill Lynch, Deutsche Bank	Deutsche Bank	2
01/14/2011	AL US	Air Lease Corp	923	IPO,Primary Share Offering,PE Backed,PE Exit	Trading	26.5	27.68	6.905660152	27.68	Barclays, Credit Suisse, FBR Capital Markets Corp, RBC Capital Markets, Wells Fargo, JP Morgan	JP Morgan	6
06/05/2009	STWD US	Starwood Property Trust Inc	932	IPO,Primary Share Offering	Trading	20	22.42	38.34948349	22.42	Bank of America Merrill Lynch, Deutsche Bank, Citi	Bank of America Merrill Lynch	3
04/04/2014	MRD US	Memorial Resource Development	935	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	19	14.51	-20.05263138	14.51	Wells Fargo, RBC Capital Markets, Raymond James & Associates, Goldman Sachs, BMO Capital Markets, Bank of America Merrill Lynch, Barclays, Citi	Citi	8
07/18/2013	BRX US	Brixmor Property Group Inc	949	IPO,Primary Share Offering,PE Backed	Trading	20	27.99	40.09999847	27.99	UBS, RBC Capital Markets, Deutsche Bank, Barclays, Bank of America Merrill Lynch, Wells Fargo, JP Morgan, Citi	Bank of America Merrill Lynch	8
09/04/2009	CIE US	Cobalt International Energy In	958	IPO,Primary Share Offering,PE Backed	Trading	13.5	0.9183	-92.8874054	0.9183	JP Morgan, Credit Suisse, Goldman Sachs	Credit Suisse	3
07/23/2015	RACE US	Ferrari NV	982	IPO,Secondary Share Offering	Trading	52	47.46	-8.75	47.46	UBS, Bank of America Merrill Lynch, Allen & Co, Banco Santander, BNP Paribas, JP Morgan, Mediobanca	UBS	7

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Announced Date	Issuer Ticker	Issuer Name	Offer Size ($)	Offer Type	Offer stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner count
07/01/2011	ZNGA US	Zynga Inc	1,000	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,PE Backed	Trading	10	2.75	-71.80000305	2.75	Morgan Stanley, Goldman Sachs, Bank of America Merrill Lynch, Barclays, JP Morgan	Morgan Stanley	5
09/30/2013	06765670 US	Resource Real Estate Opportuni	1,000	IPO,Primary Share Offering,Best Efforts,Emerging Growth Company	Trading	0						1
08/27/2014	LC US	LendingClub Corp	1,001	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed	Trading	15	4.79	-68.06666565	4.79	Morgan Stanley, Goldman Sachs, Credit Suisse, Citi	Morgan Stanley	4
01/24/2014	CTLT US	Catalent Inc	1,002	IPO,Primary Share Offering,PE Backed	Trading	20.5	25.19	22.5853653	25.19	Bank of America Merrill Lynch, Deutsche Bank, Goldman Sachs, Jefferies, JP Morgan, Morgan Stanley	Morgan Stanley	6
10/12/2007	GA US	Giant Interactive Group Inc	1,020	IPO,Primary Share Offering,Secondary Share Offering,PE Backed	Trading	15.5				UBS, Bank of America Merrill Lynch	Bank of America Merrill Lynch	2
09/15/2006	DHG US	Deutsche High Income Opportuni	1,020	IPO,Primary Share Offering	Trading	20	14.09	-64.92500305	14.09	Morgan Stanley		1
06/19/2014	MBLY US	Mobileye NV	1,023	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,Emerging Growth Company	Trading	25	46.5	87.87999725	46.5	Goldman Sachs, Morgan Stanley, Deutsche Bank, Barclays, Citi	Goldman Sachs	5
06/17/2007	LIA/U US	Liberty Acquisition Holdings C	1,035	IPO,Primary Share Offering,Secondary Share Offering,SPAC	Trading	10				Citi		1
06/25/2007	CZZ US	Cosan Ltd	1,035	IPO,Primary Share Offering,Dual Listing	Trading	10.5	6.59	-37.80952454	6.59	Morgan Stanley, Credit Suisse, Goldman Sachs	Credit Suisse	3
09/03/2009	GAME US	Shanda Games Ltd	1,044	IPO,Primary Share Offering,Secondary Share Offering	Trading	12.5				Goldman Sachs, JP Morgan	Goldman Sachs	2
12/16/2013	RICE US	Rice Energy Inc	1,050	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	21	24.58	19.66666603	24.58	RBC Capital Markets, BMO Capital Markets, Wells Fargo, Goldman Sachs, Citi, Barclays	Barclays	6
06/18/2014	SHLX US	Shell Midstream Partners LP	1,058	IPO,Primary Share Offering,Emerging Growth Company	Trading	23	31.04	37	31.04	Citi, Barclays, Morgan Stanley, UBS	Barclays	4
06/09/2006	WCRX US	Warner Chilcott PLC	1,059	IPO,Primary Share Offering	Trading	15				Credit Suisse, JP Morgan, Morgan Stanley, Goldman Sachs	Goldman Sachs	4
04/11/2014	PE US	Parsley Energy Inc	1,064	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,Emerging Growth Company	Trading	18.5	32.68	76.10810852	32.68	Goldman Sachs, JP Morgan, Wells Fargo, Credit Suisse	Credit Suisse	4
07/27/2007	TLCR US	Talecris Biotherapeutics Hold	1,064	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	19				Morgan Stanley, Goldman Sachs, Citi, JP Morgan	Morgan Stanley	4
02/13/2012	ESRT US	Empire State Realty Trust Inc	1,069	IPO,Primary Share Offering	Trading	13	20.81	59.84615326	20.81	Bank of America Merrill Lynch, Goldman Sachs	Goldman Sachs	2
06/10/2010	BBN US	BlackRock Taxable Municipal Bo	1,083	IPO,Primary Share Offering	Trading	20	25.35	26.20000076	25.35	Bank of America Merrill Lynch, Wells Fargo, Citi, UBS, Morgan Stanley, Ameriprise Financial Inc	Wells Fargo	6
12/02/2011	KORS US	Michael Kors Holdings Ltd	1,086	IPO,Secondary Share Offering	Trading	20	50.11	151.3500061	50.11	Goldman Sachs, JP Morgan, Morgan Stanley	Morgan Stanley	3

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02/15/2013	Q US	Quintiles Transnational Holdin	1,089	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	40	76.48	91.40000153	76.48	Deutsche Bank, Bank of America Merrill Lynch, Wells Fargo, Goldman Sachs, Citi, Morgan Stanley, JP Morgan, Barclays	Morgan Stanley	8
08/05/2009	H US	Hyatt Hotels Corp	1,093	IPO,Secondary Share Offering,VC Backed,PE Backed,PE Exit	Trading	25	52.9	111.8000031	52.9	Goldman Sachs		1
04/26/2007	VMW US	VMware Inc	1,101	IPO,Primary Share Offering	Trading	29	71.53	145.1379242	71.53	Deutsche Bank, Bank of America Merrill Lynch, Credit Suisse, Lehman Brothers, JP Morgan, Citi	Citi	6
04/12/2013	HDS US	HD Supply Holdings Inc	1,101	IPO,Primary Share Offering,PE Backed	Trading	18	35.67	97.77777863	35.67	Wells Fargo, UBS, Morgan Stanley, Goldman Sachs, Deutsche Bank, Citi, Credit Suisse, Bank of America Merrill Lynch, JP Morgan, Barclays	Bank of America Merrill Lynch	10
12/20/2007	IPI US	Intrepid Potash Inc	1,104	IPO,Primary Share Offering	Trading	32	1.36	-95.8125	1.36	Bank of America Merrill Lynch, Morgan Stanley, Goldman Sachs	Goldman Sachs	3
06/13/2013	EVHC US	Envision Healthcare Holdings I	1,111	IPO,Primary Share Offering,PE Backed	Trading	23	22.11	-2.782608747	22.11	UBS, RBC Capital Markets, Morgan Stanley, Deutsche Bank, Credit Suisse, Citi, Goldman Sachs, Barclays, Bank of America Merrill Lynch	Goldman Sachs	9
09/20/2014	AXTA US	Axalta Coating Systems Ltd	1,121	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	19.5	28.19	44.9743576	28.19	Morgan Stanley, Credit Suisse, Barclays, Bank of America Merrill Lynch, JP Morgan, Deutsche Bank, Citi, Goldman Sachs	Citi	8
03/02/2012	PDI US	Pimco Dynamic Income Fund	1,125	IPO,Primary Share Offering	Trading	25	28.57	15.39999952	28.57	UBS, Bank of America Merrill Lynch, Citi, Morgan Stanley, Wells Fargo	Morgan Stanley	5
04/23/2010	NTG US	Tortoise MLP Fund Inc	1,135	IPO,Primary Share Offering	Trading	25	19.17	-23.84000015	19.17	Wells Fargo, UBS, Morgan Stanley, Citi	Morgan Stanley	4
06/29/2012	COTY US	Coty Inc	1,140	IPO,Secondary Share Offering,PE Backed,PE Exit	Trading	17.5	27.65	60.05714417	27.65	Wells Fargo, Deutsche Bank, Barclays, Morgan Stanley, Bank of America Merrill Lynch, JP Morgan	Bank of America Merrill Lynch	6
02/06/2014	AM US	Antero Midstream Partners LP	1,150	IPO,Primary Share Offering,Emerging Growth Company	Trading	25	25.15	1.919999957	25.15	Citi, Credit Suisse, JP Morgan, Morgan Stanley, Wells Fargo, Barclays	Barclays	6
07/02/2007	OZM US	Och-Ziff Capital Management Gr	1,152	IPO,Primary Share Offering	Trading	32	3.56	-88.8125	3.56	JP Morgan, Deutsche Bank, Citi, Morgan Stanley, Bank of America Merrill Lynch, Lehman Brothers, Goldman Sachs	Goldman Sachs	7
11/19/2012	NML US	Neuberger Berman MLP Income Fu	1,155	IPO,Primary Share Offering	Trading	20	8.59	-57.09999847	8.59	Ameriprise Advisor Services Inc, Wells Fargo, Citi, Morgan Stanley	Wells Fargo	4
02/09/2016	USFD US	US Foods Holding Corp	1,175	IPO,Primary Share Offering,PE Backed	Trading	23	24.22	2.826086998	24.22	Kohlberg Kravis Roberts & Co, Wells Fargo, Deutsche Bank, Credit Suisse, Citi, Bank of America Merrill Lynch, JP Morgan, Morgan Stanley, Goldman Sachs	Goldman Sachs	9
11/27/2006	IBKR US	Interactive Brokers Group Inc	1,200	IPO,Primary Share Offering,Best Efforts	Trading	30.01	35.48	19.32689095	35.48	HSBC, WR Hambrecht + Co LLC	WR Hambrecht + Co LLC	2
02/22/2013	CBA US	ClearBridge American Energy ML	1,208	IPO,Primary Share Offering	Trading	20	8.73	-56.34999847	8.73	Citi, Morgan Stanley, Bank of America Merrill Lynch	Bank of America Merrill Lynch	3
03/22/2016	MGP US	MGM Growth Properties LLC	1,208	IPO,Primary Share Offering,Emerging Growth Company	Trading	21	26.34	26.76190567	26.34	Deutsche Bank, Citi, Barclays, Evercore Partners Inc, Bank of America Merrill Lynch, Morgan Stanley, JP Morgan	Bank of America Merrill Lynch	7
09/29/2014	CPPL US	Columbia Pipeline Partners LP	1,238	IPO,Primary Share Offering	Trading	23	13.67	-40.04347992	13.67	Wells Fargo, Morgan Stanley, JP Morgan, Goldman Sachs, Bank of America Merrill Lynch, Barclays, Citi	Barclays	7
06/08/2012	RLGY US	Realogy Holdings Corp	1,242	IPO,Primary Share Offering,PE Backed	Trading	27	27.05	0.074074075	27.05	Credit Suisse, Barclays, Goldman Sachs, JP Morgan	Goldman Sachs	4
04/13/2010	CEM US	ClearBridge Energy MLP Fund In	1,268	IPO,Primary Share Offering	Trading	20	15.85	-20.5	15.85	Bank of America Merrill Lynch, Citi, Morgan Stanley, Ameriprise Financial Inc	Citi	4
06/25/2012	LNCOQ US	LinnCo LLC	1,270	IPO,Primary Share Offering	Trading	36.5	0.0515	N/A	0.0515	UBS, Raymond James & Associates, Credit Suisse, Bank of America Merrill Lynch, Wells Fargo, RBC Capital Markets, Citi, Barclays	Barclays	8
09/01/2005	LDOS US	Leidos Holdings Inc	1,294	IPO,Primary Share Offering	Trading	15	47.53	15.65321445	47.53	Morgan Stanley, JP Morgan	Morgan Stanley	2
12/13/2006	BTZ US	BlackRock Credit Allocation In	1,294	IPO,Primary Share Offering	Trading	25	13.33	-46.91999817	13.33	Bank of America Merrill Lynch		1
12/01/2006	MPEL US	Melco Crown Entertainment Ltd	1,316	IPO,Primary Share Offering	Trading	19	14.52	-24.94736862	14.52	Credit Suisse, Citi, UBS	Credit Suisse	3
01/04/2007	TMUS US	T-Mobile US Inc	1,323	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	23	47.64	3.5	47.64	JP Morgan, Bank of America Merrill Lynch, Morgan Stanley	JP Morgan	3
07/14/2006	HRI US	Herc Holdings Inc	1,324	IPO,Primary Share Offering,PE Backed	Trading	15	32.98	143.8666667	32.98	JP Morgan, Goldman Sachs, Bank of America Merrill Lynch, Lehman Brothers	Goldman Sachs	4

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08/27/2007	AWK US	American Water Works Co Inc	1,358	IPO,Primary Share Offering,Secondary Share Offering	Trading	21.5	77.74	261.1627808	77.74	Goldman Sachs, Bank of America Merrill Lynch, Citi	Goldman Sachs	3
02/24/2015	TEGP US	Tallgrass Energy GP LP	1,384	IPO,Primary Share Offering,Emerging Growth Company	Trading	29	24.44	-12.44827557	24.44	Wells Fargo, RBC Capital Markets, Morgan Stanley, Deutsche Bank, Credit Suisse, Barclays, Bank of America Merrill Lynch, Citi, Goldman Sachs	Citi	9
03/21/2007	EDD US	Morgan Stanley Emerging Market	1,395	IPO,Primary Share Offering	Trading	20	8.3	-58.54999924	8.3	Morgan Stanley		1
07/20/2007	ETJ US	Eaton Vance Risk-Managed Diver	1,404	IPO,Primary Share Offering	Trading	20	9.78	-51.04999924	9.78	Citi		1
04/28/2011	YNDX US	Yandex NV	1,435	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	25	22.39	-12.43999958	22.39	Deutsche Bank, Morgan Stanley, Goldman Sachs	Morgan Stanley	3
03/25/2011	ARCO US	Arcos Dorados Holdings Inc	1,437	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	17	5.65	-66	5.65	JP Morgan, Morgan Stanley, Bank of America Merrill Lynch, Banco Itau BBA, Citi	Bank of America Merrill Lynch	5
11/09/2012	VOYA US	Voya Financial Inc	1,462	IPO,Primary Share Offering,Secondary Share Offering	Trading	19.5	27.7	43.64102564	27.7	JP Morgan, Deutsche Bank, Credit Suisse, Bank of America Merrill Lynch, Citi, Morgan Stanley, Goldman Sachs	Morgan Stanley	7
05/05/2014	INFO US	IHS Markit Ltd	1,476	IPO,Secondary Share Offering,PE Backed,PE Exit,Emerging Growth Company	Trading	24	35.03	46.29166794	35.03	RBS, Bank of America Merrill Lynch, Barclays, BNP Paribas, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JP Morgan, Morgan Stanley, UBS, Jefferies, RBC Capital Markets, TD Securities		15
06/26/2007	VTA US	Invesco Dynamic Credit Opportu	1,480	IPO,Primary Share Offering	Trading	20	11.51	-42.29999924	11.51	Morgan Stanley, UBS	UBS	2
07/09/2014	GER US	Goldman Sachs MLP Energy and R	1,485	IPO,Primary Share Offering	Trading	20	7.25	-63.45000076	7.25	Bank of America Merrill Lynch	Bank of America Merrill Lynch	1
01/02/2014	IMS US	IMS Health Holdings Inc	1,495	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit,Government Exit	Trading	20	29.59	48	29.59	Wells Fargo, Deutsche Bank, Barclays, Bank of America Merrill Lynch, JP Morgan, Morgan Stanley, Goldman Sachs	JP Morgan	7
02/04/2013	FPF US	First Trust Intermediate Durat	1,518	IPO,Primary Share Offering	Trading	25	23.61	-5.239999771	23.61	Morgan Stanley, Citi, Bank of America Merrill Lynch, RBC Capital Markets, Oppenheimer & Co	Morgan Stanley	5
06/16/2006	DEI US	Douglas Emmett Inc	1,594	IPO,Primary Share Offering	Trading	21	37.67	79	37.67	Citi, Lehman Brothers, Bank of America Merrill Lynch	Lehman Brothers	3
06/30/2006	SPR US	Spirit AeroSystems Holdings In	1,647	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	26	43.88	68.65384674	43.88	Credit Suisse, Morgan Stanley, Goldman Sachs	Credit Suisse	3
07/26/2012	BTT US	BlackRock Municipal 2030 Targe	1,783	IPO,Primary Share Offering	Trading	25	24.22	-2.720000029	24.22	Bank of America Merrill Lynch, UBS, Morgan Stanley, Citi, Wells Fargo, RBC Capital Markets, Ameriprise Financial Inc, Stifel	UBS	8
06/13/2013	AR US	Antero Resources Corp	1,892	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,Emerging Growth Company	Trading	44	27.14	-36.56818008	27.14	Wells Fargo, Jefferies, Credit Suisse, JP Morgan, Citi, Barclays	Barclays	6
06/03/2010	9876549D US	Nielsen NV	1,889	IPO,Primary Share Offering,PE Backed,PE Exit	Trading	23				Citi, Goldman Sachs, Deutsche Bank, Credit Suisse, JP Morgan, Morgan Stanley	JP Morgan	6
01/22/2013	0698575D US	ARC Realty Finance Trust Inc	2,000	IPO,Primary Share Offering,Best Efforts,Emerging Growth Company	Trading	25				Realty Capital Securities LLC		1
08/13/2013	PDRG US	Phillips Edison Grocery Center	2,000	IPO,Primary Share Offering,Best Efforts,Emerging Growth Company	Trading	0				Realty Capital Securities LLC		1
01/30/2014	JD US	JD.com Inc	2,047	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit	Trading	19	22.37	17.63157845	22.37	Jefferies, China Renaissance Partners, Barclays, Allen & Co, UBS, Bank of America Merrill Lynch	Bank of America Merrill Lynch	6
07/03/2013	SC US	Santander Consumer USA Holding	2,070	IPO,Secondary Share Offering	Trading	24	11.27	-51.625	11.27	JP Morgan, Citi, Wells Fargo, UBS, Credit Suisse, BMO Capital Markets, RBC Capital Markets, Morgan Stanley, Goldman Sachs, Barclays, Banco Santander, Bank of America Merrill Lynch, Deutsche Bank	Citi	13
09/12/2013	TWTR US	Twitter Inc	2,093	IPO,Primary Share Offering,VC Backed,PE Backed,Emerging Growth Company	Trading	26	18.68	-30	18.68	Goldman Sachs, Morgan Stanley, JP Morgan, Bank of America Merrill Lynch, Deutsche Bank	Goldman Sachs	5
02/16/2007	AWP US	Alpine Global Premier Properti	2,110	IPO,Primary Share Offering	Trading	20	5.69	-70.97817993	5.69	Bank of America Merrill Lynch		1

Exhibit D: Average Managers on IPO of $360M+ Over Past 10 Years

Announced Date	Issuer Ticker	Issuer Name	Offer Size ($M)	Offer Type	Offer Stage	Offer Price	Last Close	Offer To Date	Last Price	Managers	Left Lead Bookrunner	Bookrunner Count
04/25/2007	BGY US	BlackRock International Growth	2,126	IPO,Primary Share Offering	Trading	20	5.92	-70.59999847	5.92	Wells Fargo		1
06/12/2008	VRSK US	Verisk Analytics Inc	2,156	IPO,Secondary Share Offering	Trading	22	81.73	270.5	81.73	Bank of America Merrill Lynch, Morgan Stanley	Morgan Stanley	2
01/15/2013	DSL US	DoubleLine Income Solutions Fu	2,300	IPO,Primary Share Offering	Trading	25	19.06	-23.84000015	19.06	Bank of America Merrill Lynch, Citi, Morgan Stanley, Wells Fargo, UBS	UBS	5
06/13/2012	ZTS US	Zoetis Inc	2,574	IPO,Secondary Share Offering	Trading	26	50.93	95.38461304	50.93	JP Morgan, Jefferies, Guggenheim Capital, Goldman Sachs, Deutsche Bank, Credit Suisse, Citi, Barclays, Morgan Stanley, Bank of America Merrill Lynch	JP Morgan	10
07/30/2014	PGRE US	Paramount Group Inc	2,636	IPO,Primary Share Offering,Emerging Growth Company	Trading	17.5	17.64	0.685714304	17.64	Deutsche Bank, Morgan Stanley, Wells Fargo, Bank of America Merrill Lynch	Bank of America Merrill Lynch	4
09/12/2013	HLT US	Hilton Worldwide Holdings Inc	2,705	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	20	23.68	19.10000038	23.68	Wells Fargo, JP Morgan, Morgan Stanley, Bank of America Merrill Lynch, Deutsche Bank, Goldman Sachs	Deutsche Bank	6
07/20/2015	FDC US	First Data Corp	2,817	IPO,Primary Share Offering,PE Backed	Trading	16	13.11	-18.125	13.11	Kohlberg Kravis Roberts & Co, Barclays, Goldman Sachs, Mizuho Financial, HSBC, Credit Suisse, PNC Financial Services Group Inc, SunTrust Robinson Humphrey, Wells Fargo, Deutsche Bank, Morgan Stanley, Citi, Bank of America Merrill Lynch	Citi	13
10/24/2006	ETY US	Eaton Vance Tax-Managed Divers	2,860	IPO,Primary Share Offering	Trading	20	10.72	-46.5	10.72	Wells Fargo		1
07/29/2013	PAGP US	Plains GP Holdings LP	2,912	IPO,Primary Share Offering,PE Backed	Trading	22	11.2	-49	11.2	Barclays, Goldman Sachs, JP Morgan, Citi, Bank of America Merrill Lynch, UBS, Wells Fargo	Barclays	7
09/31/2007	MFGLQ US	MF Global Holdings Ltd	2,921	IPO,Primary Share Offering,Secondary Share Offering	Trading	30				Citi, JP Morgan, Lehman Brothers, Bank of America Merrill Lynch, UBS	Citi	5
03/13/2014	SYF US	Synchrony Financial	2,955	IPO,Primary Share Offering	Trading	23	27.88	21.91304398	27.88	Goldman Sachs, JP Morgan, Citi, Morgan Stanley, Bank of America Merrill Lynch, Barclays, Credit Suisse, Deutsche Bank	Goldman Sachs	8
11/23/2010	KMI US	Kinder Morgan Inc/DE	3,294	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	30	20.45	-30.73333359	20.45	Goldman Sachs, Barclays	Goldman Sachs	2
10/04/2012	PCI US	PIMCO Dynamic Credit and Morg	3,430	IPO,Primary Share Offering	Trading	25	19.81	-20.07999992	19.81	Wells Fargo, Citi, UBS, Morgan Stanley	UBS	4
05/12/2014	CFG US	Citizens Financial Group Inc	3,462	IPO,Secondary Share Offering,Government Exit	Trading	21.5	23.49	9.069766998	23.49	RBS, Morgan Stanley, Goldman Sachs, Wells Fargo, Deutsche Bank, Citi, Barclays, JP Morgan	Morgan Stanley	8
11/13/2006	ADD US	Alpine Total Dynamic Dividend	3,716	IPO,Primary Share Offering	Trading	20	7.69	-80.94999695	7.69	Wells Fargo		1
12/22/2010	HCA US	HCA Holdings Inc	4,354	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	30	76.14	154.1666718	76.14	Citi, JP Morgan, Bank of America Merrill Lynch, Barclays, Credit Suisse, Deutsche Bank, Goldman Sachs, Morgan Stanley, Wells Fargo	Bank of America Merrill Lynch	9
03/22/2007	BX US	Blackstone Group LP/The	4,753	IPO,Primary Share Offering	Trading	31	27.89	-9.149773598	27.89	Citi, Morgan Stanley, Credit Suisse, Lehman Brothers, Bank of America Merrill Lynch, Deutsche Bank	Morgan Stanley	6
01/19/2007	EXG US	Eaton Vance Tax-Managed Global	6,034	IPO,Primary Share Offering	Trading	20	8.88	-55.70000076	8.88	Wells Fargo		1
02/01/2012	FB US	Facebook Inc	16,007	IPO,Primary Share Offering,Secondary Share Offering,VC Backed,VC Exit,PE Backed,PE Exit	Trading	38	125.06	229.6315765	125.06	Goldman Sachs, Morgan Stanley, JP Morgan, Bank of America Merrill Lynch, Barclays, Citi, Credit Suisse, Deutsche Bank, Allen & Co	Morgan Stanley	9
06/16/2010	GM US	General Motors Co	18,149	IPO,Secondary Share Offering,Government Exit	Trading	33	31.07	-5.424242496	31.07	RBC Capital Markets, Goldman Sachs, Deutsche Bank, Credit Suisse, Citi, Barclays, Bank of America Merrill Lynch, Morgan Stanley, JP Morgan	Morgan Stanley	9
11/09/2007	V US	Visa Inc	19,650	IPO,Primary Share Offering	Trading	44	80.06	626.8181763	80.06	Goldman Sachs, JP Morgan, UBS, Bank of America Merrill Lynch, Wells Fargo, Citi, HSBC	JP Morgan	7
05/06/2014	BABA US	Alibaba Group Holding Ltd	25,032	IPO,Primary Share Offering,Secondary Share Offering,PE Backed,PE Exit	Trading	68	85.24	25	85.24	Credit Suisse, Deutsche Bank, Goldman Sachs, JP Morgan, Morgan Stanley, Citi	Credit Suisse	6

VERIFICATION

I, David Maughan, verify under penalty of perjury that I have read the foregoing Verified Statement, that I know the contents thereof, and that the same are true and correct. Further, I certify that I am qualified and authorized to file this Verified Statement.

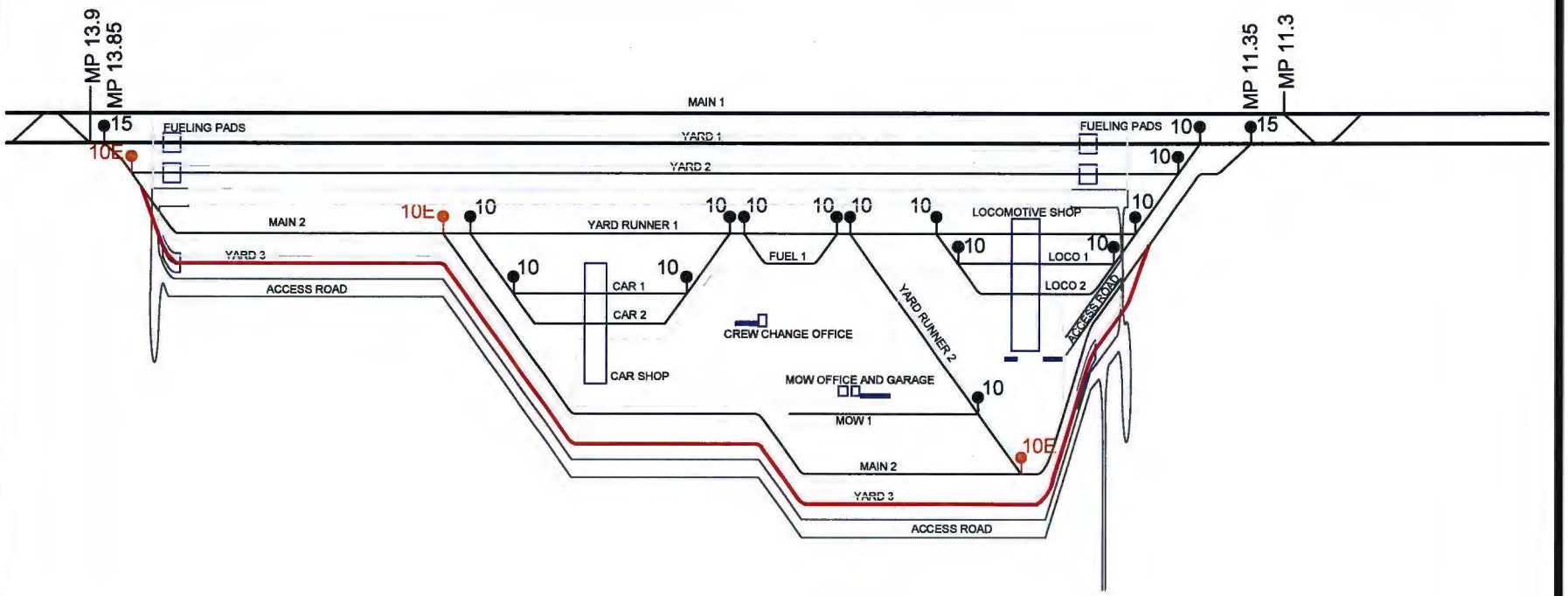
David Maughan

Executed January 19, 2017

Exhibits

EXHIBIT III-A-1
REDACTED

EXHIBIT III-A-2
REDACTED



WELDS, DERAILS, WHEELSTOPS AND MP SIGNS PER SUBDIVISION	
DESCRIPTION	**COUNT**
COMP. WELDS	4
DERAILS	2
WHEEL STOPS	1
MP SIGN 1	0
MP SIGN 2	0
MP SIGN 3	0

TURNOUTS, FED & AEI COUNTS PER SUBDIVISION	
DESCRIPTION	**COUNT**
#10H TURNOUTS	14
#10E TURNOUTS	2
#15E TURNOUTS	2
FED	0
AEI	0
CROSSOVER	0
DIAMOND	0

YARD 3 TRACK REMOVED

SUBDIVISION: **BARR YARD**

FROM: MP: **13.9**

TO: MP: **11.3**

DATE: **1/19/17**

NOT TO SCALE

LEGEND:

- 136# STANDARD CWR
- 115# CWR

= DIAMOND CROSSING

20 = TURNOUT TYPE*

FED (1) FAILED EQUIPMENT DETECTOR WITH NUMBER OF TRACKS COVERED
HB = HOT BEARING DETECTOR
DE OR DED= DRAGGING EQUIPMENT DETECTOR
HW= HOT WHEEL DETECTOR

AEI (1) AUTOMATIC EQUIPMENT IDENTIFICATION SCANNER WITH NUMBER OF TRACKS COVERED

* TURNOUT TYPES
20 - #20 ELECTRIC
15E- #15 ELECTRIC
15- #15 HAND-THROWN
10S- #10 SPRING
10- #10 HAND-THROWN
10E- #10 ELECTRIC

EXHIBIT: **III-B-1**

TABLE A: CERR ANNUAL COST OF CAPITAL

Year	Industry Cost of Capital	Industry Cost of Debt 1/	Industry Cost of Preferred Equity 2/	Industry Cost of Equity 3/	CERR's Cost of Debt	CERR's Cost of Preferred Equity	CERR's Cost of Equity	Debt as a Percent of Total Investment	Preferred Equity as a Percent of Total Investment	Equity as a Percent of Total Investment	Composite Cost of Capital	1 + Cost of Capital	STB Prescribed Debt as a % of Capital 4/	STB Preferred Equity as a % of Capital 4/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2012	11.12%	3.29%	0.00%	13.40%	3.29%	0.00%	13.40%	22.56%	0.000%	77.44%	11.12%	1.1112	22.560%	0.000%
2013	11.32%	3.68%	3.87%	12.96%	3.68%	3.87%	12.96%	17.69%	0.004%	82.31%	11.32%	1.1132	17.690%	0.004%
2014	10.65%	3.58%	3.69%	12.06%	3.58%	3.69%	12.06%	16.66%	0.004%	83.34%	10.65%	1.1065	16.660%	0.004%
2015	9.61%	3.55%	3.68	10.96%	3.60%	3.37%	10.96%	17.82%	0.004%	82.17%	9.65%	1.0965	18.16%	0.000%
2016					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2017					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2018					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2019					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2020					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2021					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2022					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2023					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		
2024					3.60%	3.37%	12.35%	17.82%	0.004%	82.17%	10.79%	1.1079		

1/ Cost of railroad industry debt from the STB Decisions in Ex Parte No. 558 (Sub-No. 16), *Railroad Cost of Capital - 2012*, decided August 30, 2013, Ex Parte No. 558 (Sub-No. 17), *Railroad Cost of Capital - 2013,* decided July 31, 2014 and Ex Parte No. 558 (Sub-No. 18), *Railroad Cost of Capital - 2014*, decided August 7, 2015.

2/ Cost of preferred equity from the STB Decisions Ex Parte No. 558 (Sub-No. 17), *Railroad Cost of Capital - 2013,* decided July 31, 2014 and Ex Parte No. 558 (Sub-No. 18), *Railroad Cost of Capital - 2014*, decided August 7, 2015. There was no railroad preferred equity issued in 2012.

3/ Cost of railroad common equity from the STB Decisions in Ex Parte No. 558 (Sub-No. 16), *Railroad Cost of Capital - 2012*, decided August 30, 2013, Ex Parte No. 558 (Sub-No. 17), *Railroad Cost of Capital - 2013,* decided July 31, 2014 and Ex Parte No. 558 (Sub-No. 18), *Railroad Cost of Capital - 2014*, decided August 7, 2015.

4/ Railroad average capital structure from the STB Decisions in Ex Parte No. 558 (Sub-No. 16), *Railroad Cost of Capital - 2012*, decided August 30, 2013, Ex Parte No. 558 (Sub-No. 17), *Railroad Cost of Capital - 2013,* decided July 31, 2014 and Ex Parte No. 558 (Sub-No. 18), *Railroad Cost of Capital - 2014*, decided August 7, 2015.

TABLE B: CERR INFLATION INDEXES

Period	Land 1/	Hybrid RCAF 2/	MWS Excluding Fuel 3/	Materials & Supplies 4/	Wages & Supplements 5/
(1)	(2)	(3)	(4)	(5)	(6)
3Q 2012	100.0		477.5	346.6	503.3
4Q 2012	101.9		475.6	340.7	502.4
1Q 2013	104.5		477.1	339.0	504.6
2Q 2013	109.1		471.1	334.0	498.4
3Q 2013	113.2		478.0	340.8	505.2
4Q 2013	116.7		477.6	332.4	506.8
1Q 2014	119.8		483.7	337.7	513.0
2Q 2014	125.1		489.7	348.8	517.7
3Q 2014	128.7		494.1	349.1	523.0
4Q 2014	132.4		496.9	358.9	524.2
1Q 2015	136.7	100.0	506.7	338.8	541.1
2Q 2015	141.0	93.0	509.4	336.6	544.9
3Q 2015	143.8	87.6	507.6	332.7	543.5
4Q 2015	146.2	91.1	509.6	338.9	544.6
1Q 2016	147.9	91.3	507.5	325.8	545.1
2Q 2016	149.5	88.7	506.2	325.8	543.5
3Q 2016	151.2	91.5	509.3	327.8	546.7
4Q 2016	152.9	92.9	513.2	333.0	550.0
1Q 2017	154.6	93.2	518.4	333.3	556.6
2Q 2017	156.4	94.5	522.4	337.0	560.5
3Q 2017	158.1	96.1	527.5	343.1	565.0
4Q 2017	159.9	96.8	531.3	344.4	569.5
1Q 2018	161.7	97.7	536.3	348.2	574.6
2Q 2018	163.5	98.7	541.2	351.9	579.7
3Q 2018	165.4	99.8	546.2	355.6	584.9
4Q 2018	167.2	100.9	551.2	359.4	590.1
1Q 2019	169.1	102.0	555.9	362.7	595.0
2Q 2019	171.0	103.2	560.6	366.0	600.0
3Q 2019	172.9	104.3	565.4	369.3	605.1
4Q 2019	174.9	105.5	570.2	372.7	610.1
1Q 2020	176.9	106.7	575.0	375.5	615.4
2Q 2020	178.9	107.8	579.9	378.4	620.7
3Q 2020	180.9	109.1	584.8	381.3	626.1
4Q 2020	182.9	110.3	589.8	384.2	631.5
1Q 2021	185.0	111.4	595.2	387.6	637.4
2Q 2021	187.1	112.5	600.7	390.9	643.4
3Q 2021	189.2	113.6	606.3	394.3	649.4
4Q 2021	191.3	114.7	611.9	397.7	655.5
1Q 2022	193.5	115.6	617.2	400.8	661.3
2Q 2022	195.7	116.5	622.6	404.0	667.2
3Q 2022	197.9	117.4	628.0	407.2	673.1
4Q 2022	200.1	118.3	633.5	410.4	679.1
1Q 2023	202.4	119.2	638.8	413.5	685.0
2Q 2023	204.7	120.1	644.2	416.5	690.9
3Q 2023	207.0	121.0	649.6	419.6	696.8
4Q 2023	209.3	121.9	655.1	422.7	702.9
1Q 2024	211.7	122.9	660.6	425.7	708.9
2Q 2024	214.1	123.8	666.1	428.6	715.1
3Q 2024	216.6	124.8	671.6	431.6	721.2
4Q 2024	219.0	125.7	677.2	434.6	727.5
Annual Inflation Rate 6/	5.16%		3.14%	1.93%	3.33%

1/ Used to index Road Property Account 2. Based on historic change in rural land prices as reported by the USDA and urban land prices as reported by the S&P Dow Jones and Moody's/RCA.

2/ Used to index expenses in Table K. Based on the RCAF-U and RCAF-A through 1Q2016 then IHS Economics forecast for remaining periods.

3/ Used to index Road Property Accounts 3, 5, 6, 13, 17, 19, 20, 26, 27, 37, and 39. Based on RCR indices - East Region through 1Q2016 then IHS Economics forecast.

4/ Used to index Road Property Accounts 8, 9, and 11. Based on RCR indexes - East Region through 1Q2016 then IHS Economics forecast for remaining periods.

5/ Used to index Road Property Accounts 1 and 12. Based on RCR indexes - East Region through 1Q2016 then IHS Economics forecast for remaining periods.

6/ 4Q 2014 ÷ 4Q 2024^(1/10)-"1. The Annual Rate is used to develop asset replacement values at the end of asset lives.

TABLE C: CERR PROPERTY INVESTMENT VALUES

Construction of the CERR occurs between July 1, 2012 and January 1, 2015.
Investments are assumed to be in January 1, 2015 dollars.

Property Account	Property Component	Service Life In Years 1/	Investment In 3Q2012 Dollars 2/	Investment In 3Q2013 Dollars 3/	Investment In 3Q2014 Dollars 4/	2012 Investment Value 5/	2013 Investment Value 6/	2014 Investment Value 7/	Total Property Investment 1Q 2015 8/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Engineering	NA	$38,368,438	$38,513,282	$39,870,242	$23,021,063	$15,405,313	$0	$38,426,376
2	Land	NA	$88,240,233	$99,888,654	$113,587,644	$37,817,243	$57,079,231	$0	$94,896,474
3	Grading	69	$44,012,818	$44,058,905	$45,542,897	$0	$44,058,905	$0	$44,058,905
5	Tunnels	76	$0	$0	$0	$0	$0	$0	$0
6	Bridges & Culverts	61	$69,752,014	$69,825,053	$72,176,901	$0	$48,877,537	$21,653,070	$70,530,607
8	Ties	20	$58,071,620	$57,099,850	$58,490,486	$0	$24,471,364	$33,423,135	$57,894,499
9	Rails and OTM	34	$82,405,159	$81,026,192	$82,999,541	$0	$34,725,511	$47,428,309	$82,153,820
11	Ballast	36	$50,255,843	$49,414,863	$50,618,335	$0	$21,177,798	$28,924,763	$50,102,561
12	Labor	31	$45,765,506	$45,938,275	$47,556,844	$0	$19,687,832	$27,175,340	$46,863,172
13	Fences and Roadway Signs	47	$97,882	$97,984	$101,285	$0	$41,993	$57,877	$99,870
16	Stations and Office Buildings	40	$2,280,710	$2,283,098	$2,359,998	$0	$913,239	$1,415,999	$2,329,238
17	Roadway Buildings	37	$1,518,993	$1,520,583	$1,571,799	$0	$608,233	$943,080	$1,551,313
19	Fuel Stations	29	$0	$0	$0	$0	$0	$0	$0
20	Shops and Enginehouses	34	$2,647,607	$2,650,379	$2,739,649	$0	$1,060,152	$1,643,790	$2,703,941
26	Communications Systems	13	$11,461,808	$11,473,810	$11,860,271	$0	$0	$11,860,271	$11,860,271
27	Signals and Interlockers	29	$33,224,587	$33,259,377	$34,379,619	$0	$0	$34,379,619	$34,379,619
39	Public Improvements	44	$12,165,075	$12,177,813	$12,587,987	$0	$5,219,063	$7,193,135	$12,412,198
	Total		$540,268,293	$549,228,119	$576,443,500	$60,838,306	$273,326,172	$216,098,388	$550,262,865

1/ 1 ÷ Depreciation Rate shown in Schedule 332 of CSXT's 2014 Annual Report R-1
2/ January 1, 2015, indexed to 2012 dollars; Investment Exhibit - 1Q2015 x Inflation Index from Table B, 3Q2012 ÷ 1Q2015.
3/ January 1, 2015, indexed to 2013 dollars; Investment Exhibit - 1Q2015 x Inflation Index from Table B, 3Q2013 ÷ 1Q2015.
4/ January 1, 2015, indexed to 2014 dollars; Investment Exhibit - 1Q2015 x Inflation Index from Table B, 3Q2014 ÷ 1Q2015.
5/ Column (4) x Percent constructed in 2012.
6/ Column (5) x Percent constructed in 2013.
7/ Column (6) x Percent constructed in 2014.
8/ Sum of Columns (7) through (9).

TABLE D: INTEREST DURING CONSTRUCTION

Month of Installation	Cost of Funds 1/	Timing of Account 1 Investment 2/	Timing of Account 2 Investment 2/	Timing of Accounts 3, 5 and 6 Investment 2/	Timing of Accounts 8 Through 39 Investment 2/	Total Investment by Month 3/	Interest During Construction 4/	Cost of Debt 5/	Deductible Interest During Construction 6/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Jul-12	0.88%	$3,836,844	$0	$0	$0	$3,836,844	$0	0.27%	$0
Aug-12	0.88%	$3,836,844	$0	$0	$0	$3,836,844	$33,859	0.27%	$2,338
Sep-12	0.88%	$3,836,844	$0	$0	$0	$3,836,844	$68,018	0.27%	$4,697
Oct-12	0.88%	$3,836,844	$12,605,748	$0	$0	$16,442,591	$102,477	0.27%	$7,076
Nov-12	0.88%	$3,836,844	$12,605,748	$0	$0	$16,442,591	$248,484	0.27%	$17,159
Dec-12	0.88%	$3,836,844	$12,605,748	$0	$0	$16,442,591	$395,780	0.27%	$27,330
Jan-13	0.90%	$3,851,328	$14,269,808	$0	$0	$18,121,136	$553,647	0.30%	$32,913
Feb-13	0.90%	$3,851,328	$14,269,808	$0	$0	$18,121,136	$721,255	0.30%	$42,877
Mar-13	0.90%	$3,851,328	$14,269,808	$0	$0	$18,121,136	$890,367	0.30%	$52,931
Apr-13	0.90%	$3,851,328	$14,269,808	$6,294,129	$0	$24,415,265	$1,060,997	0.30%	$63,074
May-13	0.90%	$0	$0	$6,294,129	$0	$6,294,129	$1,289,650	0.30%	$76,667
Jun-13	0.90%	$0	$0	$13,276,635	$0	$13,276,635	$1,357,715	0.30%	$80,714
Jul-13	0.90%	$0	$0	$13,276,635	$17,553,927	$30,830,562	$1,489,060	0.30%	$88,522
Aug-13	0.90%	$0	$0	$13,276,635	$17,553,927	$30,830,562	$1,779,132	0.30%	$105,766
Sep-13	0.90%	$0	$0	$13,276,635	$18,199,333	$31,475,968	$2,071,807	0.30%	$123,165
Oct-13	0.90%	$0	$0	$13,276,635	$18,199,333	$31,475,968	$2,372,902	0.30%	$141,064
Nov-13	0.90%	$0	$0	$6,982,505	$18,199,333	$25,181,838	$2,676,699	0.30%	$159,125
Dec-13	0.90%	$0	$0	$6,982,505	$18,199,333	$25,181,838	$2,926,732	0.30%	$173,989
Jan-14	0.85%	$0	$0	$7,217,690	$18,692,464	$25,910,155	$2,998,965	0.29%	$173,223
Feb-14	0.85%	$0	$0	$7,217,690	$18,692,464	$25,910,155	$3,243,732	0.29%	$187,361
Mar-14	0.85%	$0	$0	$7,217,690	$18,692,464	$25,910,155	$3,490,572	0.29%	$201,619
Apr-14	0.85%	$0	$0	$0	$18,692,464	$18,692,464	$3,739,502	0.29%	$215,997
May-14	0.85%	$0	$0	$0	$18,692,464	$18,692,464	$3,929,429	0.29%	$226,967
Jun-14	0.85%	$0	$0	$0	$34,105,761	$34,105,761	$4,120,964	0.29%	$238,031
Jul-14	0.85%	$0	$0	$0	$33,438,617	$33,438,617	$4,444,622	0.29%	$256,725
Aug-14	0.85%	$0	$0	$0	$33,438,617	$33,438,617	$4,765,372	0.29%	$275,252
Sep-14	0.85%	$0	$0	$0	$0	$0	$5,088,837	0.29%	$293,936
Oct-14	0.85%	$0	$0	$0	$0	$0	$5,131,923	0.29%	$296,425
Nov-14	0.85%	$0	$0	$0	$0	$0	$5,175,374	0.29%	$298,934
Dec-14	0.85%	$0	$0	$0	$0	$0	$5,219,193	0.29%	$301,465
Total		**$38,426,376**	**$94,896,474**	**$114,589,512**	**$302,350,503**	**$550,262,865**	**$71,387,068**		**$4,165,342**

1/ ((1 + Cost of Capital from Table A for the applicable year)^(1/12) - 1) x 100.

2/ Applicable account value from Table C for the applicable investment period.

3/ Sum of Columns (3) through (6).

4/ July 12 equals Column (2) x prior Column (7), all other periods equal Column (2) x ((Sum of Column (7) for all prior periods) + (Sum of Column (8) for all prior periods)).

5/ ((1 + Cost of Debt from Table A for the applicable year)^(1/12) - 1) x 100.

6/ July 12 equals prior Column (7) x Column (9) x Table A, Column (9) for 2012, all other periods equal Column (9) x ((Sum of Column (7) for all prior periods) + (Sum of Column (8) for all prior periods)) x Table A, Column (9) for the applicable year.

TABLE E: CERR INTEREST PAYMENTS FOR ASSETS PURCHASED WITH DEBT CAPTIAL

INTEREST SCHEDULE FOR THE CERR 2012 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP		INTEREST SCHEDULE FOR THE CERR 2013 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP		INTEREST SCHEDULE FOR THE CERR 2014 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP	
1. Total Investment	$60,838,306 1/	1. Total Investment	$273,326,172 1/	1. Total Investment	$216,098,388 1/
2. IDC	$848,619 2/	2. IDC	$19,189,963 2/	2. IDC	$51,348,487 2/
3. Principal	$13,916,570 3/	3. Principal	$51,746,104 3/	3. Principal	$44,556,649 3/
4. Interest	3.29% 4/	4. Interest	3.68% 4/	4. Interest	3.58% 4/
5. Term (Quarters)	80 5/	5. Term (Quarters)	80 5/	5. Term (Quarters)	80 5/
6. Quarterly Coupon	$113,078 6/	6. Quarterly Coupon	$469,632 6/	6. Quarterly Coupon	$393,537 6/

Quarter (1)	Interest 7/ (2)	Quarter (3)	Interest 7/ (4)	Quarter (5)	Interest 7/ (6)
1	$113,078	1	$469,632	1	$393,537
2	$113,078	2	$469,632	2	$393,537
3	$113,078	3	$469,632	3	$393,537
4	$113,078	4	$469,632	4	$393,537
5	$113,078	5	$469,632	5	$393,537
6	$113,078	6	$469,632	6	$393,537
7	$113,078	7	$469,632	7	$393,537
8	$113,078	8	$469,632	8	$393,537
9	$113,078	9	$469,632	9	$393,537
10	$113,078	10	$469,632	10	$393,537
11	$113,078	11	$469,632	11	$393,537
12	$113,078	12	$469,632	12	$393,537
13	$113,078	13	$469,632	13	$393,537
14	$113,078	14	$469,632	14	$393,537
15	$113,078	15	$469,632	15	$393,537
16	$113,078	16	$469,632	16	$393,537
17	$113,078	17	$469,632	17	$393,537
18	$113,078	18	$469,632	18	$393,537
19	$113,078	19	$469,632	19	$393,537
20	$113,078	20	$469,632	20	$393,537
21	$113,078	21	$469,632	21	$393,537
22	$113,078	22	$469,632	22	$393,537
23	$113,078	23	$469,632	23	$393,537
24	$113,078	24	$469,632	24	$393,537
25	$113,078	25	$469,632	25	$393,537
26	$113,078	26	$469,632	26	$393,537
27	$113,078	27	$469,632	27	$393,537
28	$113,078	28	$469,632	28	$393,537
29	$113,078	29	$469,632	29	$393,537
30	$113,078	30	$469,632	30	$393,537
31	$113,078	31	$469,632	31	$393,537
32	$113,078	32	$469,632	32	$393,537
33	$113,078	33	$469,632	33	$393,537
34	$113,078	34	$469,632	34	$393,537
35	$113,078	35	$469,632	35	$393,537
36	$113,078	36	$469,632	36	$393,537
37	$113,078	37	$469,632	37	$393,537
38	$113,078	38	$469,632	38	$393,537
39	$113,078	39	$469,632	39	$393,537
40	$113,078	40	$469,632	40	$393,537
41	$113,078	41	$469,632	41	$393,537
42	$113,078	42	$469,632	42	$393,537
43	$113,078	43	$469,632	43	$393,537
44	$113,078	44	$469,632	44	$393,537
45	$113,078	45	$469,632	45	$393,537
46	$113,078	46	$469,632	46	$393,537
47	$113,078	47	$469,632	47	$393,537
48	$113,078	48	$469,632	48	$393,537
49	$113,078	49	$469,632	49	$393,537
50	$113,078	50	$469,632	50	$393,537
51	$113,078	51	$469,632	51	$393,537
52	$113,078	52	$469,632	52	$393,537
53	$113,078	53	$469,632	53	$393,537
54	$113,078	54	$469,632	54	$393,537

TABLE E: CERR INTEREST PAYMENTS FOR ASSETS PURCHASED WITH DEBT CAPTIAL

INTEREST SCHEDULE FOR THE CERR 2012 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP			INTEREST SCHEDULE FOR THE CERR 2013 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP			INTEREST SCHEDULE FOR THE CERR 2014 ROAD PROPERTY INVESTMENT FOR THE 1Q2015 START-UP		
1. Total Investment	$60,838,306	1/	1. Total Investment	$273,326,172	1/	1. Total Investment	$216,098,388	1/
2. IDC	$848,619	2/	2. IDC	$19,189,963	2/	2. IDC	$51,348,487	2/
3. Principal	$13,916,570	3/	3. Principal	$51,746,104	3/	3. Principal	$44,556,649	3/
4. Interest	3.29%	4/	4. Interest	3.68%	4/	4. Interest	3.58%	4/
5. Term (Quarters)	80	5/	5. Term (Quarters)	80	5/	5. Term (Quarters)	80	5/
6. Quarterly Coupon	$113,078	6/	6. Quarterly Coupon	$469,632	6/	6. Quarterly Coupon	$393,537	6/

Quarter (1)	Interest 7/ (2)	Quarter (3)	Interest 7/ (4)	Quarter (5)	Interest 7/ (6)
55	$113,078	55	$469,632	55	$393,537
56	$113,078	56	$469,632	56	$393,537
57	$113,078	57	$469,632	57	$393,537
58	$113,078	58	$469,632	58	$393,537
59	$113,078	59	$469,632	59	$393,537
60	$113,078	60	$469,632	60	$393,537
61	$113,078	61	$469,632	61	$393,537
62	$113,078	62	$469,632	62	$393,537
63	$113,078	63	$469,632	63	$393,537
64	$113,078	64	$469,632	64	$393,537
65	$113,078	65	$469,632	65	$393,537
66	$113,078	66	$469,632	66	$393,537
67	$113,078	67	$469,632	67	$393,537
68	$113,078	68	$469,632	68	$393,537
69	$113,078	69	$469,632	69	$393,537
70	$113,078	70	$469,632	70	$393,537
71	$113,078	71	$469,632	71	$393,537
72	$113,078	72	$469,632	72	$393,537
73	$113,078	73	$469,632	73	$393,537
74	$113,078	74	$469,632	74	$393,537
75	$113,078	75	$469,632	75	$393,537
76	$113,078	76	$469,632	76	$393,537
77	$113,078	77	$469,632	77	$393,537
78	$113,078	78	$469,632	78	$393,537
79	$113,078	79	$469,632	79	$393,537
80	$113,078	80	$469,632	80	$393,537

1/ From Table D, Column (7) for the applicable year investment.
2/ From Table D, Column (8) for the applicable year investment.
3/ (Total Investment + IDC) x (Proportion of Debt from Table A, Column (9)).
4/ From Table A, Column (6) for the applicable year investment.
5/ Based on Ex Parte No. 657 20-year payment period x 4.
6/ Quarterly coupon payments on Line 3 principal and Line 4 interest rates.
7/ Line 6 coupon payment.

TABLE F: CERR PRESENT VALUE OF REPLACEMENT COST

Property Account (1)	Property Component (2)	Service Life In Years 1/ (3)	Investment 2/ (4)	Salvage 3/ (5)	Replacement Year Asset Net Cost 4/ (6)	Replacement Cost Adjusted To Reflect An Infinite Life 5/ (7)	Present Value Of Replacement Cost Adjusted To Reflect An Infinite Life (2015 Dollars) 6/ (8)
3	Grading	69	$443,217,861	$0	$377,567,385	$381,257,649	$349,483
5	Tunnels	76	0	0	0	0	0
6	Bridges & Culverts	61	554,216,784	0	465,710,400	0	976,151
8	Ties	20	102,172,858	0	80,701,430	107,900,449	13,502,075
9	Rails and OTM	34	189,014,657	13,352,824	138,317,864	153,544,908	4,704,991
11	Ballast	36	119,462,802	0	94,357,926	103,402,010	2,621,726
12	Labor	31	152,475,447	0	120,433,028	138,025,276	6,175,204
13	Fences and Roadway Signs	47	508,619	0	427,394	446,386	3,817
16	Stations and Office Buildings	40	9,429,858	0	7,923,944	8,521,169	154,693
17	Roadway Buildings	37	5,742,624	0	4,825,548	5,274,713	128,446
19	Fuel Stations	29	0	0	0	0	0
20	Shops and Enginehouses	34	9,332,228	0	7,841,905	8,705,200	266,749
26	Communications Systems	13	21,148,250	0	16,703,987	28,655,584	7,663,260
27	Signals and Interlockers	29	101,003,701	3,385,701	77,027,392	89,647,756	4,659,523
39	Public Improvements	44	57,799,873	0	48,569,446	51,216,939	587,454
	Total		$1,765,525,561	$16,738,525	$1,440,407,650	$1,076,598,039	$41,793,571

1/ From Table C, Column (3).

2/ (Table C, Column (10) after allocation of Engineering) x (Table B, 1.0 + Annual Inflation Index)^(Column (3)).

3/ [(Column (4) x Salvage %) - (Table C, Column (10) after allocation of Engineering x Salvage %)] x (1 - Current Federal Tax Rate) + (Table C, Column (10) after allocation of Engineering x Salvage %).

4/ Column (4) - (Present Value of the remaining tax deductions for depreciation, interest expense and the Present Value of any salvage).

5/ Column (6) + [(Column (6) / ((1 + Real Cost of Capital)^Column (3) - 1)].

6/ Column (7) / ((1 + Average Nominal Cost of Capital from Table A Column (2))^Column (3)).

TABLE G PART 1: TAX DEPRECIATION SCHEDULES

Depreciation of Start-up investment for tax purposes using
accounting lives from Modified Accelerated Cost Recovery System (MACRS) 1/

Road Property Account (1)	Road Property Component (2)	Asset Lives Per MACRS 2/ (3)	Total 1Q 2015 Investment (4)	Depreciable Base (5)
1	Engineering	5	$38,426,376	$38,426,376
2	Land	N/A	$94,896,474	$0
3	Grading	50	$44,058,905	$44,058,905
5	Tunnels	50	$0	$0
6	Bridges & Culverts	20	$70,530,607	$70,530,607
8	Ties	7	$57,894,499	$57,894,499
9	Rails and OTM	7	$82,153,820	$82,153,820
11	Ballast	7	$50,102,561	$50,102,561
12	Labor	7	$46,863,172	$46,863,172
13	Fences and Roadway Signs	20	$99,870	$99,870
16	Stations and Office Buildings	20	$2,329,238	$2,329,238
17	Roadway Buildings	20	$1,551,313	$1,551,313
19	Fuel Stations	20	$0	$0
20	Shops and Enginehouses	20	$2,703,941	$2,703,941
26	Communications Systems	7	$11,860,271	$11,860,271
27	Signals and Interlockers	7	$34,379,619	$34,379,619
39	Public Improvements	20	$12,412,198	$12,412,198
	Total		**$550,262,865**	**$455,366,391**

1/ Applicable Depreciation Method: 200 or 150 percent
Declining Balance Switching to Straight Line
Applicable Recovery Periods: 7, 20 and 50 a/ years
Applicable Convention: Mid-quarter(property placed in service in first quarter)

The Depreciation Rates are as follows for the corresponding
Recovery Period and Recovery year:

Year	5-Year	7-Year	20-Year	50-Year a/	
1	20.00%	25.00%	6.56%	2.00%	
2	20.00%	21.43%	7.00%	2.00%	
3	20.00%	15.31%	6.48%	2.00%	
4	20.00%	10.93%	6.00%	2.00%	
5	20.00%	8.75%	5.55%	2.00%	
6		8.74%	5.13%	2.00%	
7		8.75%	4.75%	2.00%	
8		1.09%	4.46%	2.00%	
9			4.46%	2.00%	
10			4.46%	2.00%	
11			4.46%	2.00%	
12			4.46%	2.00%	
13			4.46%	2.00%	
14			4.46%	2.00%	
15			4.46%	2.00%	
16			4.46%	2.00%	
17			4.46%	2.00%	
18			4.46%	2.00%	
19			4.46%	2.00%	19-50
20			4.46%		
21			0.57%		

a/ 50 year property uses the Straight Line Method for all time periods

2/ Bonus Depreciation Per the Tax Relief, Unemployment Compensation Reauthorization, and Job Creation Act of 2010, the American Taxpayer Relief Act of 2012 and the Tax Increase Prevention Act of 2014.

MARCS Lives	Bonus Depreciation - 50%
7	$141,626,971
20	$44,813,584

TABLE G PART 2: TAX DEPRECIATION SCHEDULES

	Amortization - 5 Years			Road Property Depreciation - MACRS 7 Years			Depreciation - MACRS 20 Years			Depreciation - MACRS 50 Years			Total
Year	Unamortized Investment 1/	Rate 2/	Annual Amort. 3/	Undepreciated Investment 4/	Rate 2/	Annual Amount 5/	Undepreciated Investment 6/	Rate 2/	Annual Amount 7/	Unamortized Investment 8/	Rate 2/	Annual Amount 9/	Annual Depreciation 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	$38,426,376	20.00%	$7,685,275	$141,626,971	25.00%	$35,406,743	$44,813,584	6.56%	$2,941,116	$44,058,905	2%	$881,178	$233,354,867
2	$30,741,100	20.00%	$7,685,275	$106,220,229	21.43%	$30,350,660	$41,872,468	7.00%	$3,136,951	$43,177,727	2%	$881,178	$42,054,064
3	$23,055,825	20.00%	$7,685,275	$75,869,569	15.31%	$21,683,089	$38,735,517	6.48%	$2,904,817	$42,296,549	2%	$881,178	$33,154,359
4	$15,370,550	20.00%	$7,685,275	$54,186,479	10.93%	$15,479,828	$35,830,701	6.00%	$2,687,022	$41,415,371	2%	$881,178	$26,733,304
5	$7,685,275	20.00%	$7,685,275	$38,706,651	8.75%	$12,392,360	$33,143,678	5.55%	$2,485,361	$40,534,193	2%	$881,178	$23,444,175
6				$26,314,291	8.74%	$12,378,197	$30,658,317	5.13%	$2,298,937	$39,653,014	2%	$881,178	$15,558,312
7				$13,936,094	8.75%	$12,392,360	$28,359,380	4.75%	$2,126,853	$38,771,836	2%	$881,178	$15,400,391
8				$1,543,734	1.09%	$1,543,734	$26,232,528	4.46%	$1,998,238	$37,890,658	2%	$881,178	$4,423,150
9							$24,234,290	4.46%	$1,998,238	$37,009,480	2%	$881,178	$2,879,416
10					100%		$22,236,052	4.46%	$1,998,238	$36,128,302	2%	$881,178	$2,879,416
11							$20,237,814	4.46%	$1,998,238	$35,247,124	2%	$881,178	$2,879,416
12							$18,239,577	4.46%	$1,998,686	$34,365,946	2%	$881,178	$2,879,864
13							$16,240,891	4.46%	$1,998,238	$33,484,768	2%	$881,178	$2,879,416
14							$14,242,653	4.46%	$1,998,686	$32,603,590	2%	$881,178	$2,879,864
15							$12,243,967	4.46%	$1,998,238	$31,722,412	2%	$881,178	$2,879,416
16							$10,245,730	4.46%	$1,998,686	$30,841,233	2%	$881,178	$2,879,864
17							$8,247,044	4.46%	$1,998,238	$29,960,055	2%	$881,178	$2,879,416
18							$6,248,806	4.46%	$1,998,686	$29,078,877	2%	$881,178	$2,879,864
19							$4,250,120	4.46%	$1,998,238	$28,197,699	2%	$881,178	$2,879,416
20							$2,251,883	4.46%	$1,998,686	$27,316,521	2%	$881,178	$2,879,864
21							$253,197	0.57%	$253,197	$26,435,343	2%	$881,178	$1,134,375
22										$25,554,165	2%	$881,178	$881,178
23								100%		$24,672,987	2%	$881,178	$881,178
24										$23,791,809	2%	$881,178	$881,178
25										$22,910,631	2%	$881,178	$881,178
26										$22,029,452	2%	$881,178	$881,178
27										$21,148,274	2%	$881,178	$881,178
28										$20,267,096	2%	$881,178	$881,178
29										$19,385,918	2%	$881,178	$881,178
30										$18,504,740	2%	$881,178	$881,178
31										$17,623,562	2%	$881,178	$881,178
32										$16,742,384	2%	$881,178	$881,178
33										$15,861,206	2%	$881,178	$881,178
34										$14,980,028	2%	$881,178	$881,178
35										$14,098,850	2%	$881,178	$881,178
36										$13,217,671	2%	$881,178	$881,178
37										$12,336,493	2%	$881,178	$881,178
38										$11,455,315	2%	$881,178	$881,178
39										$10,574,137	2%	$881,178	$881,178
40										$9,692,959	2%	$881,178	$881,178
41										$8,811,781	2%	$881,178	$881,178
42										$7,930,603	2%	$881,178	$881,178
43										$7,049,425	2%	$881,178	$881,178

TABLE G PART 2: TAX DEPRECIATION SCHEDULES

Road Property

	Amortization - 5 Years			Depreciation - MACRS 7 Years			Depreciation - MACRS 20 Years			Depreciation - MACRS 50 Years			Total
Year	Unamortized Investment 1/	Rate 2/	Annual Amort. 3/	Undepreciated Investment 4/	Rate 2/	Annual Amount 5/	Undepreciated Investment 6/	Rate 2/	Annual Amount 7/	Unamortized Investment 8/	Rate 2/	Annual Amount 9/	Annual Depreciation 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
44										$6,168,247	2%	$881,178	$881,178
45										$5,287,069	2%	$881,178	$881,178
46										$4,405,890	2%	$881,178	$881,178
47										$3,524,712	2%	$881,178	$881,178
48										$2,643,534	2%	$881,178	$881,178
49										$1,762,356	2%	$881,178	$881,178
50										$881,178	2%	$881,178	$881,178
											100%		

1/ From Table G Part 1, Column (5), Road Property Accounts 1 minus Table G Part 1
2/ From Table G, Footnote 1/, Page 8.
3/ Column (2), Year 1 x Column (3).
4/ From Table G Part 1, Column (5), Road Property Accounts 8, 9, 11, 12, 26 and 27 minus Table G Part 1, 7-Year Bonus Depreciation.
5/ Column (5), Year 1 x Column (6).
6/ From Table G Part 1, Column (5), Road Property Accounts 6, 13, 16, 17, 19, 20 and 39 minus Table G Part 1, 20-Year Bonus Depreciation.
7/ Column (8), Year 1 x Column (9).
8/ From Table G, Page 8, Column (5), Road Property Accounts 3 and 5.
9/ Column (11), Year 1 x Column (12).
10/ Column (4) + Column (7) + Column (10) + Column (13) plus Page 8, 7 & 20 Year Bonus Depreciation.

TABLE H: CERR AVERAGE ANNUAL INFLATION IN ASSET PRICES

Development of average annual inflation factors for all capital assets

1. 1Q 2015 Land value $94,896,474 1/
2. 1Q 2015 Property asset value accounts 3, 5, 6, 13, 16, 17, 26, 27, 39 and 52 $179,925,963 1/
3. 1Q 2015 Road Property asset value accounts 8, 9, and 11 $190,150,881 1/
4. 1Q 2015 Road Property asset value accounts 1 and 12 $85,289,547 1/

Period	Quarter	Inflation Index For Land 2/	Inflation Index For Line 2 Property Assets 3/	Inflation Index For Line 3 Road Property Assets 4/	Inflation Index For Line 4 Road Property Assets 5/	Land Value 6/	Road Property Value 7/	1Q 2015 Inflation Index 8/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0		1.000	1.000	1.000	1.000	$94,896,474	$455,366,391	1.000
1	1Q 2015	1.032	1.020	0.944	1.032	$97,963,575	$451,015,345	0.998
2	2Q 2015	1.065	1.025	0.938	1.039	$101,046,423	$451,445,688	1.004
3	3Q 2015	1.086	1.022	0.927	1.037	$103,040,339	$448,499,846	1.002
4	4Q 2015	1.104	1.026	0.944	1.039	$104,791,711	$452,687,872	1.013
5	1Q 2016	1.117	1.021	0.908	1.040	$105,967,440	$445,068,234	1.001
6	2Q 2016	1.129	1.019	0.908	1.037	$107,156,727	$444,345,393	1.002
7	3Q 2016	1.142	1.025	0.913	1.043	$108,359,735	$447,011,466	1.009
8	4Q 2016	1.155	1.033	0.928	1.049	$109,576,625	$451,746,206	1.020
9	1Q 2017	1.168	1.043	0.929	1.062	$110,807,564	$454,875,976	1.028
10	2Q 2017	1.181	1.051	0.939	1.069	$112,052,717	$458,895,261	1.038
11	3Q 2017	1.194	1.061	0.956	1.078	$113,312,254	$464,676,204	1.050
12	4Q 2017	1.207	1.069	0.960	1.086	$114,586,346	$467,535,586	1.058
13	1Q 2018	1.221	1.079	0.970	1.096	$115,875,165	$472,174,353	1.069
14	2Q 2018	1.235	1.089	0.981	1.106	$117,178,888	$476,737,946	1.079
15	3Q 2018	1.249	1.099	0.991	1.116	$118,497,692	$481,345,906	1.090
16	4Q 2018	1.263	1.109	1.001	1.126	$119,831,755	$485,998,667	1.101
17	1Q 2019	1.277	1.119	1.011	1.135	$121,181,260	$490,242,130	1.111
18	2Q 2019	1.291	1.128	1.020	1.145	$122,546,392	$494,522,694	1.121
19	3Q 2019	1.306	1.138	1.029	1.154	$123,927,335	$498,840,683	1.132
20	4Q 2019	1.321	1.147	1.038	1.164	$125,324,279	$503,196,426	1.142
21	1Q 2020	1.336	1.157	1.046	1.174	$126,737,414	$507,315,501	1.152
22	2Q 2020	1.351	1.167	1.054	1.184	$128,166,934	$511,468,385	1.162
23	3Q 2020	1.366	1.177	1.062	1.194	$129,613,034	$515,655,357	1.173
24	4Q 2020	1.381	1.187	1.071	1.205	$131,075,912	$519,876,696	1.183
25	1Q 2021	1.397	1.198	1.080	1.216	$132,555,769	$524,571,300	1.194
26	2Q 2021	1.413	1.209	1.089	1.227	$134,052,807	$529,308,350	1.206
27	3Q 2021	1.429	1.220	1.099	1.239	$135,567,232	$534,088,230	1.217
28	4Q 2021	1.445	1.231	1.108	1.250	$137,099,252	$538,911,328	1.229
29	1Q 2022	1.461	1.242	1.117	1.262	$138,649,077	$543,454,861	1.240
30	2Q 2022	1.478	1.253	1.126	1.273	$140,216,920	$548,036,797	1.251
31	3Q 2022	1.494	1.264	1.135	1.284	$141,802,997	$552,657,462	1.262
32	4Q 2022	1.511	1.275	1.144	1.295	$143,407,526	$557,317,184	1.273
33	1Q 2023	1.528	1.286	1.152	1.307	$145,030,729	$561,817,618	1.285
34	2Q 2023	1.546	1.296	1.161	1.318	$146,672,828	$566,354,551	1.296
35	3Q 2023	1.563	1.307	1.169	1.329	$148,334,051	$570,928,281	1.307
36	4Q 2023	1.581	1.318	1.178	1.341	$150,014,627	$575,539,108	1.319
37	1Q 2024	1.599	1.329	1.186	1.352	$151,714,787	$580,057,819	1.330
38	2Q 2024	1.617	1.340	1.194	1.364	$153,434,768	$584,612,326	1.341
39	3Q 2024	1.635	1.352	1.203	1.376	$155,174,807	$589,202,917	1.353
40	4Q 2024	1.654	1.363	1.211	1.388	$156,935,144	$593,829,879	1.364

Annual Average 9/ 3.48%

1/ Table C, Page 3, Column (10).
2/ Previous Column (3) x (1 + Quarterly Inflation Rate Change from Table B).
3/ Previous Column (4) x (1 + Quarterly Inflation Rate Change from Table B).
4/ Previous Column (5) x (1 + Quarterly Inflation Rate Change from Table B).
5/ Previous Column (6) x (1 + Quarterly Inflation Rate Change from Table B).
6/ Line 1 x Column (3) for applicable quarter.
7/ (Line 2 x Column (4) for applicable quarter) + (Line 3 x Column (5) for applicable quarter) + (Line 4 x Column (6) for applicable quarter).
8/ (Column (7) + Column (8)) ÷ (Period 0; (Column (7) + Column (8))).
9/ Annual weighted inflation using the last two quarters, used to calculate real cost of capital.

TABLE I: CERR DISCOUNTED CASH FLOW

Discounted Cash Flow
Present Value of the Cash Flow Discounted at the Cost of Capital in Table A
Inflation In Asset Values From Table H

1. 1Q 2015 Road Property Investment	$550,262,865	1/	Federal Tax Rate	35.0%	
2. Interest During Construction (1Q 2015 Invest.)	$71,387,068	2/			
3. Total 1Q 2015 Investment	$621,649,933	3/	Route Mile Weighted		
4. Present Value Of Replacement Cost for the CERR	$41,793,571	4/	Average State Tax Rate	6.38%	7/
5. [redacted]	[redacted]	5/			
6. Total Cost Recovered From Quarterly Revenue Flow	[redacted]	6/			

Period	Quarter	Quarterly Levelized C Carrying Charge Requirement 8/	Interest on Investment Financed With Debt 9/	Tax Depreciation 10/	Actual Federal Tax Payments 11/	Actual State Tax Payments 12/	Cash Flow 13/	Present Value Cash Flow 14/	Cumulative Present Value 15/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	1Q 2015	$15,066,637	$976,248	$58,338,717	$0	$0	$15,066,637	$14,894,177	$14,894,177
2	2Q 2015	$15,163,056	$976,248	$58,338,717	$0	$0	$15,163,056	$14,648,301	$29,542,478
3	3Q 2015	$15,136,930	$976,248	$58,338,717	$0	$0	$15,136,930	$14,290,213	$43,832,691
4	4Q 2015	$15,299,936	$976,248	$58,338,717	$0	$0	$15,299,936	$14,115,324	$57,948,015
5	1Q 2016	$15,123,084	$976,248	$10,513,516	$0	$0	$15,123,084	$13,616,999	$71,565,014
6	2Q 2016	$15,135,886	$976,248	$10,513,516	$0	$0	$15,135,886	$13,283,976	$84,848,990
7	3Q 2016	$15,242,072	$976,248	$10,513,516	$0	$0	$15,242,072	$13,038,976	$97,887,965
8	4Q 2016	$15,405,413	$976,248	$10,513,516	$0	$0	$15,405,413	$12,845,530	$110,733,496
9	1Q 2017	$15,525,092	$976,248	$8,288,590	$0	$0	$15,525,092	$12,618,046	$123,351,541
10	2Q 2017	$15,669,574	$976,248	$8,288,590	$0	$0	$15,669,574	$12,413,502	$135,765,043
11	3Q 2017	$15,862,799	$976,248	$8,288,590	$0	$0	$15,862,799	$12,248,874	$148,013,917
12	4Q 2017	$15,976,241	$976,248	$8,288,590	$0	$0	$15,976,241	$12,024,587	$160,038,504
13	1Q 2018	$16,138,923	$976,248	$6,683,326	$0	$0	$16,138,923	$11,839,935	$171,878,439
14	2Q 2018	$16,299,951	$976,248	$6,683,326	$0	$0	$16,299,951	$11,655,752	$183,534,191
15	3Q 2018	$16,462,610	$976,248	$6,683,326	$0	$0	$16,462,610	$11,474,451	$195,008,642
16	4Q 2018	$16,626,917	$976,248	$6,683,326	$0	$0	$16,626,917	$11,295,987	$206,304,628
17	1Q 2019	$16,780,415	$976,248	$5,861,044	$0	$0	$16,780,415	$11,112,054	$217,416,683
18	2Q 2019	$16,935,360	$976,248	$5,861,044	$0	$0	$16,935,360	$10,931,137	$228,347,819
19	3Q 2019	$17,091,767	$976,248	$5,861,044	$0	$0	$17,091,767	$10,753,183	$239,101,002
20	4Q 2019	$17,249,648	$976,248	$5,861,044	$0	$0	$17,249,648	$10,578,146	$249,679,148
21	1Q 2020	$17,401,479	$976,248	$3,889,578	$0	$0	$17,401,479	$10,401,469	$260,080,618
22	2Q 2020	$17,554,687	$976,248	$3,889,578	$0	$0	$17,554,687	$10,227,767	$270,308,385
23	3Q 2020	$17,709,286	$976,248	$3,889,578	$0	$0	$17,709,286	$10,056,990	$280,365,375
24	4Q 2020	$17,865,288	$976,248	$3,889,578	$0	$0	$17,865,288	$9,889,087	$290,254,463
25	1Q 2021	$18,034,745	$976,248	$3,850,098	$12,152	$2,366	$18,020,227	$9,722,673	$299,977,135
26	2Q 2021	$18,205,839	$976,248	$3,850,098	$4,384,043	$853,657	$12,968,139	$6,819,967	$306,797,103
27	3Q 2021	$18,378,585	$976,248	$3,850,098	$4,440,646	$864,679	$13,073,260	$6,701,434	$313,498,537
28	4Q 2021	$18,553,000	$976,248	$3,850,098	$4,497,797	$875,807	$13,179,396	$6,585,043	$320,083,579
29	1Q 2022	$18,720,231	$976,248	$1,105,787	$5,451,818	$1,061,573	$12,206,840	$5,944,914	$326,028,493
30	2Q 2022	$18,889,011	$976,248	$1,105,787	$5,507,122	$1,072,342	$12,309,547	$5,843,373	$331,871,866
31	3Q 2022	$19,059,354	$976,248	$1,105,787	$5,562,938	$1,083,210	$12,413,206	$5,743,607	$337,615,472
32	4Q 2022	$19,231,275	$976,248	$1,105,787	$5,619,271	$1,094,179	$12,517,825	$5,645,583	$343,261,056
33	1Q 2023	$19,399,337	$976,248	$719,854	$5,800,798	$1,129,526	$12,469,013	$5,481,397	$348,742,452
34	2Q 2023	$19,568,920	$976,248	$719,854	$5,856,365	$1,140,346	$12,572,209	$5,387,037	$354,129,489
35	3Q 2023	$19,740,037	$976,248	$719,854	$5,912,435	$1,151,264	$12,676,338	$5,294,335	$359,423,825
36	4Q 2023	$19,912,704	$976,248	$719,854	$5,969,013	$1,162,281	$12,781,411	$5,203,261	$364,627,086
37	1Q 2024	$20,083,380	$976,248	$719,854	$6,024,938	$1,173,170	$12,885,272	$5,112,927	$369,740,013
38	2Q 2024	$20,255,582	$976,248	$719,854	$6,081,363	$1,184,157	$12,990,062	$5,024,195	$374,764,208
39	3Q 2024	$20,429,325	$976,248	$719,854	$6,138,293	$1,195,243	$13,095,789	$4,937,034	$379,701,242
40	4Q 2024	$20,604,623	$976,248	$719,854	$6,195,733	$1,206,427	$13,202,463	$4,851,418	$384,552,660
	Future	$1,215,320,944	$57,581,939	$21,051,330	$372,457,110	$72,524,503	$770,339,331	$283,071,258	$667,623,918

1/ From Table C, Column (10) + Repaving and Rail Grinding Capital Costs from [].
2/ From Table D, Column (8).
3/ Line 1 + Line 2.
4/ Table F Column (8).
5/ Investment funded by common equity multiplied by 0.95%.
6/ Line 3 + Line 4 + Line 5.
7/ Michigan, Illinois, and Indiana corporate income tax rates weighted on CERR route miles.
8/ Quarterly carrying costs needed to recover the total investment over 40 quarters after consideration of the applicable interest payments, tax depreciation and tax liability. The Future value is an estimate of a perpetual income stream for the CERR and is calculated by taking the Period 40, Column (3) value and dividing it by the CERR's estimated quarterly Real Cost of Capital.
9/ Table E quaterly sum of Columns (2), (4) and (6).
10/ Table G: Part 2.
11/ Table J: Part 1.
12/ Table J: Part 2.
13/ (Column (3) - Column (6) - Column (7)).
14/ Column (8) discounted by the fourth root of the annual Cost of Capital adjusted to Midquarter dollars from Table A. Cumulative total of Column (9).

TABLE J - PART 1: COMPUTATION OF FEDERAL TAX LIABILITY - TAXABLE INCOME

(Road Property)

Time Period	Taxable Income B/4 NOL's IRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2012	($58,600)	($58,600)	($58,600)	$0	($58,600)	($58,600)	$0	($58,600)	$0	$0
2013	($1,140,806)	($1,140,806)	($1,199,407)	$0	($1,199,407)	($1,199,407)	$0	($1,199,407)	$0	$0
2014	($2,965,935)	($2,965,935)	($4,165,342)	$0	($4,165,342)	($4,165,342)	$0	($4,165,342)	$0	$0
1Q 2015	($44,248,327)	($44,248,327)	($48,413,669)	$0	($48,413,669)	($48,413,669)	$0	($48,413,669)	$0	$0
2Q 2015	($44,151,909)	($44,151,909)	($92,565,578)	$0	($92,565,578)	($92,565,578)	$0	($92,565,578)	$0	$0
3Q 2015	($44,178,034)	($44,178,034)	($136,743,612)	$0	($136,743,612)	($136,743,612)	$0	($136,743,612)	$0	$0
4Q 2015	($44,015,028)	($44,015,028)	($180,758,640)	$0	($180,758,640)	($180,758,640)	$0	($180,758,640)	$0	$0
1Q 2016	$3,633,320	$0	($180,758,640)	$3,633,320	($177,125,320)	($177,125,320)	$0	($177,125,320)	$0	$0
2Q 2016	$3,646,122	$0	($177,125,320)	$3,646,122	($173,479,198)	($173,479,198)	$0	($173,479,198)	$0	$0
3Q 2016	$3,752,308	$0	($173,479,198)	$3,752,308	($169,726,889)	($169,726,889)	$0	($169,726,889)	$0	$0
4Q 2016	$3,915,650	$0	($169,726,889)	$3,915,650	($165,811,239)	($165,811,239)	$0	($165,811,239)	$0	$0
1Q 2017	$6,260,255	$0	($165,811,239)	$6,260,255	($159,550,984)	($159,550,984)	$0	($159,550,984)	$0	$0
2Q 2017	$6,404,737	$0	($159,550,984)	$6,404,737	($153,146,248)	($153,146,248)	$0	($153,146,248)	$0	$0
3Q 2017	$6,597,961	$0	($153,146,248)	$6,597,961	($146,548,286)	($146,548,286)	$0	($146,548,286)	$0	$0
4Q 2017	$6,711,404	$0	($146,548,286)	$6,711,404	($139,836,882)	($139,836,882)	$0	($139,836,882)	$0	$0
1Q 2018	$8,479,349	$0	($139,836,882)	$8,479,349	($131,357,533)	($131,357,533)	$0	($131,357,533)	$0	$0
2Q 2018	$8,640,377	$0	($131,357,533)	$8,640,377	($122,717,156)	($122,717,156)	$0	($122,717,156)	$0	$0
3Q 2018	$8,803,036	$0	($122,717,156)	$8,803,036	($113,914,120)	($113,914,120)	$0	($113,914,120)	$0	$0
4Q 2018	$8,967,343	$0	($113,914,120)	$8,967,343	($104,946,776)	($104,946,776)	$0	($104,946,776)	$0	$0
1Q 2019	$9,943,124	$0	($104,946,776)	$9,943,124	($95,003,652)	($95,003,652)	$0	($95,003,652)	$0	$0
2Q 2019	$10,098,069	$0	($95,003,652)	$10,098,069	($84,905,583)	($84,905,583)	$0	($84,905,583)	$0	$0
3Q 2019	$10,254,475	$0	($84,905,583)	$10,254,475	($74,651,108)	($74,651,108)	$0	($74,651,108)	$0	$0
4Q 2019	$10,412,357	$0	($74,651,108)	$10,412,357	($64,238,751)	($64,238,751)	$0	($64,238,751)	$0	$0
1Q 2020	$12,535,653	$0	($64,238,751)	$12,535,653	($51,703,098)	($51,703,098)	$0	($51,703,098)	$0	$0
2Q 2020	$12,688,861	$0	($51,703,098)	$12,688,861	($39,014,237)	($39,014,237)	$0	($39,014,237)	$0	$0
3Q 2020	$12,843,460	$0	($39,014,237)	$12,843,460	($26,170,777)	($26,170,777)	$0	($26,170,777)	$0	$0
4Q 2020	$12,999,462	$0	($26,170,777)	$12,999,462	($13,171,315)	($13,171,315)	$0	($13,171,315)	$0	$0
1Q 2021	$13,206,034	$0	($13,171,315)	$13,171,315	$0	$0	$0	$0	$34,719	$12,152
2Q 2021	$12,525,837	$0	$0	$0	$0	$0	$0	$0	$12,525,837	$4,384,043
3Q 2021	$12,687,561	$0	$0	$0	$0	$0	$0	$0	$12,687,561	$4,440,646
4Q 2021	$12,850,848	$0	$0	$0	$0	$0	$0	$0	$12,850,848	$4,497,797
1Q 2022	$15,576,623	$0	$0	$0	$0	$0	$0	$0	$15,576,623	$5,451,818
2Q 2022	$15,734,634	$0	$0	$0	$0	$0	$0	$0	$15,734,634	$5,507,122
3Q 2022	$15,894,109	$0	$0	$0	$0	$0	$0	$0	$15,894,109	$5,562,938
4Q 2022	$16,055,061	$0	$0	$0	$0	$0	$0	$0	$16,055,061	$5,619,271
1Q 2023	$16,573,710	$0	$0	$0	$0	$0	$0	$0	$16,573,710	$5,800,798
2Q 2023	$16,732,472	$0	$0	$0	$0	$0	$0	$0	$16,732,472	$5,856,365
3Q 2023	$16,892,672	$0	$0	$0	$0	$0	$0	$0	$16,892,672	$5,912,435
4Q 2023	$17,054,322	$0	$0	$0	$0	$0	$0	$0	$17,054,322	$5,969,013
1Q 2024	$17,214,108	$0	$0	$0	$0	$0	$0	$0	$17,214,108	$6,024,938
2Q 2024	$17,375,323	$0	$0	$0	$0	$0	$0	$0	$17,375,323	$6,081,363
3Q 2024	$17,537,981	$0	$0	$0	$0	$0	$0	$0	$17,537,981	$6,138,293

TABLE J - PART 1: COMPUTATION OF FEDERAL TAX LIABILITY - TAXABLE INCOME

(Road Property)

Time Period	Taxable Income B/4 NOL's IRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
4Q 2024	$17,702,094	$0	$0	$0	$0	$0	$0	$0	$17,702,094	$6,195,733
Future	$1,064,163,172	$0	$0	$0	$0	$0	$0	$0	$1,064,163,172	$372,457,110

1/ Table I Column (3) - Table E Columns (2),(4) & (6) - Table G, Column (14) / 4 - Table J - Part 2, Column (11). Values for 2012 from Table D, Sum of Column (10).
2/ Column (2) if less than zero, otherwise zero.
3/ Cumulative total of Column (2).
4/ If Column (2) is greater than zero, and (Column (2) + Column (4) is less than zero, then Column (2), otherwise Column (4).
5/ Column (4) + Column (5) + Column (8).
6/ Previous period Column (9) + current period Column (3) - current period Column (5).
7/ If previous Column (10) is greater than zero, and previous Column (10) is less than current Column (7), then previous Column (10), otherwise zero.
8/ Column (7) + Column (8).
9/ If Column (2) is greater than zero, then Column (2) - Column (5) - Column (8), otherwise zero.
10/ Column (10) times applicable Federal Statutory Tax Rate.

TABLE J - PART 2: COMPUTATION OF STATE TAX LIABILITY - TAXABLE INCOME

(Road Property)

Time Period	Taxable Income B/4 NOL's IRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2012	($58,600)	($58,600)	($58,600)	$0	($58,600)	($58,600)	$0	($58,600)	$0	$0
2013	($1,140,806)	($1,140,806)	($1,199,407)	$0	($1,199,407)	($1,199,407)	$0	($1,199,407)	$0	$0
2014	($2,965,935)	($2,965,935)	($4,165,342)	$0	($4,165,342)	($4,165,342)	$0	($4,165,342)	$0	$0
1Q 2015	($44,248,327)	($44,248,327)	($48,413,669)	$0	($48,413,669)	($48,413,669)	$0	($48,413,669)	$0	$0
2Q 2015	($44,151,909)	($44,151,909)	($92,565,578)	$0	($92,565,578)	($92,565,578)	$0	($92,565,578)	$0	$0
3Q 2015	($44,178,034)	($44,178,034)	($136,743,612)	$0	($136,743,612)	($136,743,612)	$0	($136,743,612)	$0	$0
4Q 2015	($44,015,028)	($44,015,028)	($180,758,640)	$0	($180,758,640)	($180,758,640)	$0	($180,758,640)	$0	$0
1Q 2016	$3,633,320	$0	($180,758,640)	$3,633,320	($177,125,320)	($177,125,320)	$0	($177,125,320)	$0	$0
2Q 2016	$3,646,122	$0	($177,125,320)	$3,646,122	($173,479,198)	($173,479,198)	$0	($173,479,198)	$0	$0
3Q 2016	$3,752,308	$0	($173,479,198)	$3,752,308	($169,726,889)	($169,726,889)	$0	($169,726,889)	$0	$0
4Q 2016	$3,915,650	$0	($169,726,889)	$3,915,650	($165,811,239)	($165,811,239)	$0	($165,811,239)	$0	$0
1Q 2017	$6,260,255	$0	($165,811,239)	$6,260,255	($159,550,984)	($159,550,984)	$0	($159,550,984)	$0	$0
2Q 2017	$6,404,737	$0	($159,550,984)	$6,404,737	($153,146,248)	($153,146,248)	$0	($153,146,248)	$0	$0
3Q 2017	$6,597,961	$0	($153,146,248)	$6,597,961	($146,548,286)	($146,548,286)	$0	($146,548,286)	$0	$0
4Q 2017	$6,711,404	$0	($146,548,286)	$6,711,404	($139,836,882)	($139,836,882)	$0	($139,836,882)	$0	$0
1Q 2018	$8,479,349	$0	($139,836,882)	$8,479,349	($131,357,533)	($131,357,533)	$0	($131,357,533)	$0	$0
2Q 2018	$8,640,377	$0	($131,357,533)	$8,640,377	($122,717,156)	($122,717,156)	$0	($122,717,156)	$0	$0
3Q 2018	$8,803,036	$0	($122,717,156)	$8,803,036	($113,914,120)	($113,914,120)	$0	($113,914,120)	$0	$0
4Q 2018	$8,967,343	$0	($113,914,120)	$8,967,343	($104,946,776)	($104,946,776)	$0	($104,946,776)	$0	$0
1Q 2019	$9,943,124	$0	($104,946,776)	$9,943,124	($95,003,652)	($95,003,652)	$0	($95,003,652)	$0	$0
2Q 2019	$10,098,069	$0	($95,003,652)	$10,098,069	($84,905,583)	($84,905,583)	$0	($84,905,583)	$0	$0
3Q 2019	$10,254,475	$0	($84,905,583)	$10,254,475	($74,651,108)	($74,651,108)	$0	($74,651,108)	$0	$0
4Q 2019	$10,412,357	$0	($74,651,108)	$10,412,357	($64,238,751)	($64,238,751)	$0	($64,238,751)	$0	$0
1Q 2020	$12,535,653	$0	($64,238,751)	$12,535,653	($51,703,098)	($51,703,098)	$0	($51,703,098)	$0	$0
2Q 2020	$12,688,861	$0	($51,703,098)	$12,688,861	($39,014,237)	($39,014,237)	$0	($39,014,237)	$0	$0
3Q 2020	$12,843,460	$0	($39,014,237)	$12,843,460	($26,170,777)	($26,170,777)	$0	($26,170,777)	$0	$0
4Q 2020	$12,999,462	$0	($26,170,777)	$12,999,462	($13,171,315)	($13,171,315)	$0	($13,171,315)	$0	$0
1Q 2021	$13,208,400	$0	($13,171,315)	$13,171,315	$0	$0	$0	$0	$37,085	$2,366
2Q 2021	$13,379,493	$0	$0	$0	$0	$0	$0	$0	$13,379,493	$853,657
3Q 2021	$13,552,240	$0	$0	$0	$0	$0	$0	$0	$13,552,240	$864,679
4Q 2021	$13,726,655	$0	$0	$0	$0	$0	$0	$0	$13,726,655	$875,807
1Q 2022	$16,638,196	$0	$0	$0	$0	$0	$0	$0	$16,638,196	$1,061,573
2Q 2022	$16,806,976	$0	$0	$0	$0	$0	$0	$0	$16,806,976	$1,072,342
3Q 2022	$16,977,319	$0	$0	$0	$0	$0	$0	$0	$16,977,319	$1,083,210
4Q 2022	$17,149,240	$0	$0	$0	$0	$0	$0	$0	$17,149,240	$1,094,179
1Q 2023	$17,703,236	$0	$0	$0	$0	$0	$0	$0	$17,703,236	$1,129,526
2Q 2023	$17,872,818	$0	$0	$0	$0	$0	$0	$0	$17,872,818	$1,140,346
3Q 2023	$18,043,936	$0	$0	$0	$0	$0	$0	$0	$18,043,936	$1,151,264
4Q 2023	$18,216,602	$0	$0	$0	$0	$0	$0	$0	$18,216,602	$1,162,281
1Q 2024	$18,387,278	$0	$0	$0	$0	$0	$0	$0	$18,387,278	$1,173,170
2Q 2024	$18,559,480	$0	$0	$0	$0	$0	$0	$0	$18,559,480	$1,184,157
3Q 2024	$18,733,224	$0	$0	$0	$0	$0	$0	$0	$18,733,224	$1,195,243

TABLE J - PART 2: COMPUTATION OF STATE TAX LIABILITY - TAXABLE INCOME

(Road Property)

Time Period	Taxable Income B/4 NOL's IRR 1/	Net Operating Losses Generated 2/	NOL's Generated Plus Carryforward 3/	Carryforward Utilized 4/	Carryforward Remaining 5/	Carryback Available 6/	Carryback Utilized 7/	Carryback Remaining 8/	Annual Taxable Income 9/	Annual Tax Liability 10/
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
4Q 2024	$18,908,522	$0	$0	$0	$0	$0	$0	$0	$18,908,522	$1,206,427
Future	$1,136,687,675	$0	$0	$0	$0	$0	$0	$0	$1,136,687,675	$72,524,503

1/ Table I Column (3) - Table E Columns (2),(4) & (6) - Table G, Column (14) ÷ 4 - Table J - Part 2, Column (11). Values for 2012 from Table D, Sum of Column (10).
2/ Column (2) if less than zero, otherwise zero.
3/ Cumulative total of Column (2).
4/ If Column (2) is greater than zero, and (Column (2) + Column (4) is less than zero, then Column (2), otherwise Column (4).
5/ Column (4) + Column (5) + Column (8).
6/ Previous period Column (9) + current period Column (3) - current period Column (5).
7/ If previous Column (10) is greater than zero, and previous Column (10) is less than current Column (7), then previous Column (10), otherwise zero.
8/ Column (7) + Column (8).
9/ If Column (2) is greater than zero, then Column (2) - Column (5) - Column (8), otherwise zero.
10/ Column (10) times applicable route mile weighted State Statutory Tax Rates.

TABLE K - PART 1: CERR OPERATING EXPENSES

Item	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1. Train & Engine Personnel	$6,418,548	$5,729,546	$6,978,117	$6,838,326	$6,847,818	$7,204,619	$7,250,551	$7,515,343	$7,378,273	$7,814,325
2. Locomotive Lease Expense	$1,440,235	$1,285,633	$1,565,795	$1,534,428	$1,536,558	$1,616,619	$1,626,925	$1,686,341	$1,655,584	$1,753,429
3. Locomotive Maintenance Expense	$1,933,500	$1,725,947	$2,102,062	$2,059,952	$2,062,812	$2,170,293	$2,184,129	$2,263,894	$2,222,604	$2,353,958
4. Locomotive Operating Expense	$4,195,042	$3,744,723	$4,560,765	$4,469,401	$4,475,605	$4,708,803	$4,738,823	$4,911,886	$4,822,300	$5,107,295
5. Railcar Lease Expense	$4,953,013	$4,421,329	$5,384,816	$5,276,943	$5,284,269	$5,559,602	$5,595,046	$5,799,378	$5,693,605	$6,030,094
6. Material & Supply Operating	$620,778	$620,778	$620,778	$620,778	$620,778	$620,778	$620,778	$620,778	$620,778	$620,778
7. Ad Valorem Tax	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777	$1,960,777
8. Operating Managers	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703	$5,067,703
9. General & Administration	$7,016,537	$7,142,577	$7,142,577	$7,142,577	$7,142,577	$7,142,577	$7,142,577	$7,142,577	$7,142,577	$7,142,577
10. Loss and Damage	$108,623	$96,962	$118,092	$115,727	$115,887	$121,926	$122,703	$127,184	$124,864	$132,244
11. Trackage Rights	$1,731,726	$1,545,833	$1,882,698	$1,844,982	$1,847,543	$1,943,808	$1,956,201	$2,027,642	$1,990,660	$2,108,307
12. Intermodal Lift Costs	$5,933,928	$5,296,948	$6,451,248	$6,322,012	$6,330,788	$6,660,649	$6,703,112	$6,947,912	$6,821,191	$7,224,320
13. Insurance 3.75%	$1,881,685	$1,778,884	$1,973,738	$1,951,922	$1,953,404	$2,009,087	$2,016,255	$2,057,579	$2,036,187	$2,104,238
14. Maintenance of Way	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274	$8,803,274
15. Total Operating Expenses	$52,065,369	$49,220,916	$54,612,441	$54,008,802	$54,049,792	$55,590,515	$55,788,854	$56,932,268	$56,340,378	$58,223,320
16. Expense Per Quarter	$13,016,342	$12,305,229	$13,653,110	$13,502,200	$13,512,448	$13,897,629	$13,947,214	$14,233,067	$14,085,095	$14,555,830
17. Net-Ton Miles	1,838,385,919	1,641,043,601	1,998,656,335	1,958,617,770	1,961,336,594	2,063,530,703	2,076,686,296	2,152,527,438	2,113,268,141	2,238,161,195

TABLE K - PART 2: CERR OPERATING EXPENSES INDEXED

Period (1)	Quarter (2)	Hybrid Index 1/ (3)	Operating Expense Indexed For Inflation 2/ (4)
1	1Q 2015	100.000	$13,646,475
2	2Q 2015	93.014	$12,737,163
3	3Q 2015	87.621	$12,035,169
4	4Q 2015	91.095	$12,487,410
5	1Q 2016	91.309	$11,235,721
6	2Q 2016	88.728	$10,918,190
7	3Q 2016	91.452	$11,253,378
8	4Q 2016	92.897	$11,431,182
9	1Q 2017	93.157	$12,718,835
10	2Q 2017	94.499	$12,901,987
11	3Q 2017	96.129	$13,124,546
12	4Q 2017	96.773	$13,212,480
13	1Q 2018	97.668	$13,187,306
14	2Q 2018	98.734	$13,331,278
15	3Q 2018	99.812	$13,476,821
16	4Q 2018	100.902	$13,623,954
17	1Q 2019	102.033	$13,787,109
18	2Q 2019	103.161	$13,939,630
19	3Q 2019	104.303	$14,093,839
20	4Q 2019	105.456	$14,249,754
21	1Q 2020	106.655	$14,822,496
22	2Q 2020	107.847	$14,988,238
23	3Q 2020	109.053	$15,155,834
24	4Q 2020	110.273	$15,325,303
25	1Q 2021	111.375	$15,533,675
26	2Q 2021	112.463	$15,685,502
27	3Q 2021	113.563	$15,838,814
28	4Q 2021	114.673	$15,993,624
29	1Q 2022	115.578	$16,450,320
30	2Q 2022	116.463	$16,576,214
31	3Q 2022	117.354	$16,703,071
32	4Q 2022	118.252	$16,830,899
33	1Q 2023	119.169	$16,785,027
34	2Q 2023	120.065	$16,911,235
35	3Q 2023	120.968	$17,038,393
36	4Q 2023	121.877	$17,166,507
37	1Q 2024	122.850	$17,881,879
38	2Q 2024	123.806	$18,020,950
39	3Q 2024	124.769	$18,161,104
40	4Q 2024	125.739	$18,302,347

1/ 1Q15 equals 100.0, all other quarters equal Quarterly Inflation Indexes for the Hybrid Index from Table B.

2/ Quarterly expense from Table K, Page 18, for the applicable time period x Column (3) ÷ 1Q15. Start-up costs have been distributed over the first 12 months in periods 1 - 4.

TABLE L: CERR STAND-ALONE COSTS AND REVENUES

Revenue Requirements to Cover Total Stand-Alone Costs

Period	Quarter	Quarterly Capital Requirement Road Property	Quarterly Operating Expense	Annual Stand-Alone Requirement	Annual Stand-Alone Revenues	Overpayments Or Shortfalls In Revenues	PV Difference	Cumulative PV Difference
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	1Q 2015	$15,066,637	$13,646,475					
2	2Q 2015	$15,163,056	$12,737,163					
3	3Q 2015	$15,136,930	$12,035,169					
4	4Q 2015	$15,299,936	$12,487,410	$111,572,776	$136,504,338	$24,931,562	$23,809,496	$23,809,496
5	1Q 2016	$15,123,084	$11,235,721					
6	2Q 2016	$15,135,886	$10,918,190					
7	3Q 2016	$15,242,072	$11,253,378					
8	4Q 2016	$15,405,413	$11,431,182	$105,744,926	$118,690,165	$12,945,239	$11,101,595	$34,911,091
9	1Q 2017	$15,525,092	$12,718,835					
10	2Q 2017	$15,669,574	$12,901,987					
11	3Q 2017	$15,862,799	$13,124,546					
12	4Q 2017	$15,976,241	$13,212,480	$114,991,555	$152,653,854	$37,662,299	$29,154,059	$64,065,149
13	1Q 2018	$16,138,923	$13,187,306					
14	2Q 2018	$16,299,951	$13,331,278					
15	3Q 2018	$16,462,610	$13,476,821					
16	4Q 2018	$16,626,917	$13,623,954	$119,147,759	$153,251,152	$34,103,393	$23,829,046	$87,894,196
17	1Q 2019	$16,780,415	$13,787,109					
18	2Q 2019	$16,935,360	$13,939,630					
19	3Q 2019	$17,091,767	$14,093,839					
20	4Q 2019	$17,249,648	$14,249,754	$124,127,523	$158,047,079	$33,919,556	$21,393,217	$109,287,413
21	1Q 2020	$17,401,479	$14,822,496					
22	2Q 2020	$17,554,687	$14,988,238					
23	3Q 2020	$17,709,286	$15,155,834					
24	4Q 2020	$17,865,288	$15,325,303	$130,822,610	$173,440,366	$42,617,756	$24,262,380	$133,549,793
25	1Q 2021	$18,034,745	$15,533,675					
26	2Q 2021	$18,205,839	$15,685,502					
27	3Q 2021	$18,378,585	$15,838,814					
28	4Q 2021	$18,553,000	$15,993,624	$136,223,784	$179,867,338	$43,643,555	$22,427,446	$155,977,239
29	1Q 2022	$18,720,231	$16,450,320					
30	2Q 2022	$18,889,011	$16,576,214					
31	3Q 2022	$19,059,354	$16,703,071					
32	4Q 2022	$19,231,275	$16,830,899	$142,460,375	$193,734,521	$51,274,146	$23,783,459	$179,760,698
33	1Q 2023	$19,399,337	$16,785,027					
34	2Q 2023	$19,568,920	$16,911,235					
35	3Q 2023	$19,740,037	$17,038,393					
36	4Q 2023	$19,912,704	$17,166,507	$146,522,161	$194,698,444	$48,176,283	$20,170,968	$199,931,666
37	1Q 2024	$20,083,380	$17,881,879					
38	2Q 2024	$20,255,582	$18,020,950					
39	3Q 2024	$20,429,325	$18,161,104					
40	4Q 2024	$20,604,623	$18,302,347	$153,739,190	$215,159,182	$61,419,992	$23,212,402	$223,144,068

CERR MMM Revenue to Variable Cost Ratios - 2015 to 2024

	Year	MMM Revenue to Variable Cost Ratios
	(1)	(2)
1.	2015	364.1%
2.	2016	429.8%
3.	2017	315.4%
4.	2018	330.9%
5.	2019	333.1%
6.	2020	306.9%
7.	2021	303.5%
8.	2022	284.1%
9.	2023	286.5%
10.	2024	255.7%

Source: e-workpaper "CERR MMM_Supplemental.xlsm," worksheet "Exhibit III-H-2," cells F10 to F19.