

Economic Impacts of NJ TRANSIT's Raritan River Drawbridge Replacement

Submitted to:

NJ TRANSIT

Submitted Date:

May 4, 2020

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Executive Summary

NJ TRANSIT is planning for its Raritan River Drawbridge (River Draw) replacement project, which is one of five independent, though interrelated, capital improvement projects included in the NJ TRANSIT Resilience Program. The program was created in the aftermath of Superstorm Sandy, which caused severe and significant damage in New Jersey in October 2012, with the goal of improving the durability and sustainability of New Jersey's transit system to better withstand future severe weather events.

The River Draw connects 17 New Jersey towns to job centers in North Jersey and New York via the North Jersey Coast Line (NJCL). Additionally, it connects residents of New York and the northern area of the state to the coastal resort towns of New Jersey. During Sandy, the River Draw sustained significant damage that caused interrupted service of the NJCL for multiple weeks. Given its vulnerability to storm surge and age, NJ TRANSIT plans to replace the bridge with a newly constructed bridge directly adjacent to the existing structure.

The replacement of the River Draw will have significant impacts on New Jersey's economy associated with the construction of the project. Upon completion, the ongoing operations and maintenance of the bridge will also create jobs such as bridge operators, and generate economic impact to the local economy. It is estimated that the new bridge will cost the same or less in annual operating cost comparing to the existing structure.

Economic impact estimates are generated using input-output models that translate an initial amount of direct investment and expenditure into the total amount of economic activity that is supported by that direct activity, including multiple waves of spillover impacts generated by spending on goods and services (known as the indirect effect) and spending of labor income by employees (known as the induced effect). These economic impacts are modeled using IMPLAN, an industry-standard input-output modeling software program. **Ultimately, the total economic impact of NJ TRANSIT's replacement of the River Draw is the sum of its own direct footprint from construction and ongoing operations and maintenance upon completion, plus the indirect and induced effects generated by that direct footprint.**

One-Time Impact from Initial Investment in the Raritan River Drawbridge Replacement

The investment in the construction of the River Draw replacement will be a total of \$595.1 million over a four-year period. Of that total, \$580.0 million will have a direct impact on the New Jersey economy through the purchase of goods and services related to the project and wages and salaries associated with its development. **The one-time total economic impact of the project on the New Jersey economy will be \$1.0 billion including the direct, indirect and induced economic impacts, supporting 5,740 jobs and \$352.5 million in earnings (see Figure I).**¹

Figure I: Estimated One-Time Impact of NJ TRANSIT's River Draw Replacement Construction Investment in New Jersey

Impact Type	New Jersey
Direct Output (\$M)	\$580.0
Indirect & Induced Output (\$M)	\$467.2
Total Impact (\$M)	\$1,047.2
Direct Employment (Full Time Equivalent, FTE)	3,260
Indirect & Induced Employment (FTE)	2,480
Total Employment (FTE)	5,740
Earnings Supported (\$M)	\$352.5

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

¹ All economic impact values are represented in 2020 US Dollars.

Annual Impact from Ongoing Operations of the Raritan River Drawbridge

Once complete, it is estimated that the annual operating and maintenance (O&M) expenses associated with the River Draw will be around \$500,000.² This estimate is based on industry standards for normal-age bridges and includes associated employee salaries and benefits. As with the investment in construction of the bridge, these expenditures will generate indirect and induced impacts on the New Jersey economy. **In total, operations and maintenance expenditures will generate approximately \$926,700 in total economic impact in New Jersey each year, supporting 4 FTE employees and \$258,900 in earnings annually (see Figure II).**

Figure II: Estimated Annual Economic Impacts of River Draw Operations upon Completion

Impact Type	New Jersey
Direct Output	\$500,000
Indirect & Induced Output	\$426,700
Total Impact	\$926,700
Direct Employment (FTE)	3
Indirect & Induced Employment (FTE)	1
Total Employment (FTE)	4
Earnings Supported	\$258,900

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

² NJ TRANSIT (2014). Superstorm Sandy FTA Grant Support Document: Raritan River Drawbridge Replacement Project.

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1. Introduction

1.1. Purpose of Report

The New Jersey Transit Corporation (NJ TRANSIT) is a significant economic engine for the state of New Jersey, producing direct and spillover effects on the regional economic activity. As the largest statewide public transit system in the United States, NJ TRANSIT is a major employer, a large-scale purchaser of goods and services, and an investor in the development and maintenance of its facilities and infrastructure. NJ TRANSIT investments and operating expenditures result in economic activity throughout the state of New Jersey.

NJ TRANSIT is planning to replace the Raritan River Drawbridge (River Draw), which connects 17 New Jersey towns to North Jersey and New York via the North Jersey Coast Line (NJCL). This project is a part of the larger NJ TRANSIT Resilience Project, which aims to improve durability and resiliency of NJ TRANSIT's systems and infrastructure and withstand potential damage from severe weather events. This report provides estimates of the direct economic impact of the bridge replacement and the spillover effects throughout the New Jersey economy for the following:

- First, investments in the River Draw replacement will produce substantial upfront direct impacts in the project area, which will generate spillover throughout the regional and state economy.
- Upon completion, the operations and maintenance of the newly constructed River Draw will directly employ New Jersey workers and result in the purchases of goods and services from New Jersey businesses, stimulating ongoing economic activity throughout the economy.

1.2. About NJ TRANSIT's Raritan River Drawbridge Replacement Project

The River Draw connects 17 New Jersey towns to North Jersey and New York job centers via the NJCL. This bridge is 0.5 miles long, crossing the Raritan River and transporting approximately 10,000 passengers each day, as well as 2 million tons of freight each year. The NJCL serves as a critical connection for residents of New Jersey coastal towns to job centers in North Jersey and New York, as well as for residents of New York and North Jersey to the state's coastal resort towns along the coast.³ Figure 1.1 displays the overall project area.

Following Superstorm Sandy, NJ TRANSIT began the NJ TRANSIT Resilience Program, a capital improvements program aimed at strengthening New Jersey's transportation system and making it more durable and reliable, particularly in the event of future major weather events. There are five main projects within the program, each independent but interconnected in its contribution to the goal of system-wide, integrated resiliency for NJ TRANSIT. Immediately following Sandy, the focus of the Resilience Program was repairing storm damage; however, NJ TRANSIT has now been able to shift focus

³ NJ TRANSIT (2014). Superstorm Sandy FTA Grant Support Document: Raritan River Drawbridge Replacement Project.

from immediately necessary repairs to planning for a more robust and sustainable overall transit system for the future, aiming to better serve customers and withstand severe emergency events.

Figure 1.1: River Draw Replacement Site



Source: NJ TRANSIT (2020), Mapbox (2020), Econsult Solutions, Inc. (2020)

The River Draw replacement is one of the Resilience Program's five main projects, as the bridge sustained major damage in 2012 during Superstorm Sandy, contributing to the loss of service on the NJCL for three weeks. Following the storm, NJ TRANSIT assessed the vulnerability of the bridge, as well as the other bridges along the NJCL, and determined that the River Draw alone should be replaced to maximize sustainability and durability in the event of future damaging storm surge. Following Superstorm Sandy, NJ TRANSIT worked on Tiers 1 and 2 of the project, addressing the immediate damage caused by Sandy. Next, Tier 3 will be carried out to replace the bridge to maximize operability and resilience for the future.

It is estimated that disruption of NJCL service could have a daily impact of \$4.2 million on the regional economy.⁴ As outlined in the FTA Grant Support Document completed by NJ TRANSIT for the project, the replacement of the bridge will create economic benefits by reducing potential impacts on economic productivity during major

weather events, by way of reducing loss of mobility and access to jobs for commuters, loss of freight service, and negative impacts to commercial vessels requiring operation of the River Draw.

1.3. Report Methodology

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of activity that it supports, which includes multiple waves of spillover impacts generated by NJ TRANSIT's spending on goods and services as well as spending of labor income by employees. The economic impacts from these expenditures are modeled using IMPLAN, an industry standard input-output model software program. Such models are designed to estimate two sets of spillover impacts from organizational expenditures:

- The **indirect effect**, which measures the multiplier effect from the purchase of goods and services from regional vendors (i.e. supply chain impacts); and

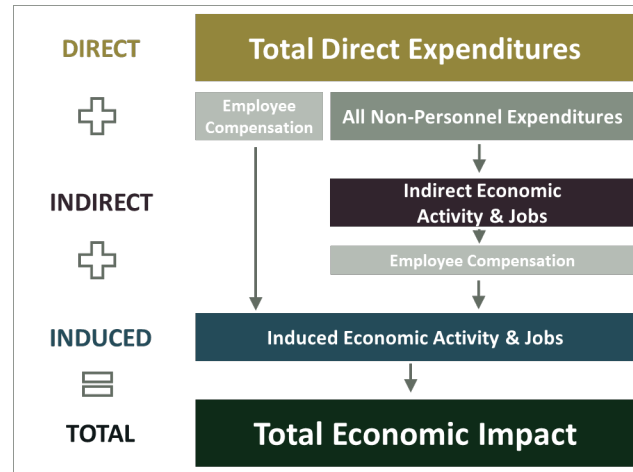
⁴ NJ TRANSIT (2014). Superstorm Sandy FTA Grant Support Document: Raritan River Drawbridge Replacement Project.

- The **induced effect**, which measures the multiplier effect from the spending of labor income by employees within a particular geography (i.e. labor income impacts).

The total economic impact of NJ TRANSIT's River Draw replacement is the sum of its own direct footprint (in terms of project construction and operations upon completion), plus the indirect and induced effects generated by that direct footprint (see Figure 1.2).

This report estimates the economic impacts from construction and operations of the River Draw on the State of New Jersey.

Figure 1.2: Economic Impact Methodology



Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

1.4. Report Outline

The remainder of the report is organized as follows:

- *Section 2. Economic Impacts of Construction* reviews the direct footprint of NJ TRANSIT's construction of the River Draw, as well as the spillover effects associated with construction, including indirect and induced effects. Construction of the bridge will generate significant employment opportunities for New Jersey, which is also described in this section.
- *Section 3. Economic Impacts of Operations and Maintenance* reviews the direct operational footprint of NJ TRANSIT upon completion of the River Draw replacement. As with construction, operational investments and expenditures will produce spillover direct and indirect impacts within the regional economy, as well as generate employment opportunities in New Jersey.
- *Appendix A – Economic Impact Modeling* outlines the methodology used in input-output modeling to estimate economic impacts, as well as employment and earnings supported.

2. Economic Impacts from Construction

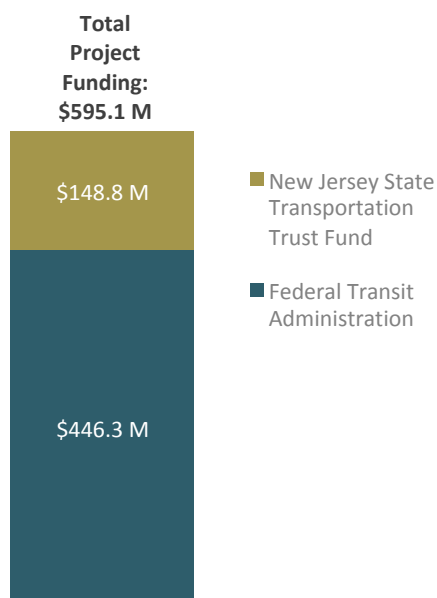
2.1. Overview

This section details the one-time economic impact from the construction of the River Draw replacement. The design and construction of the project is projected to cost a total of \$595.1 million over a four-year period.⁵ **During that period, the direct investments made in construction will generate an estimated \$1.0 billion in economic impact in New Jersey. Further, the activity will support the creation of 5,740 direct, indirect, and induced job-years over the construction period in a variety of sectors.**^{6,7}

2.2. Direct Footprint

The River Draw replacement will be placed just west of the existing bridge, allowing NJ TRANSIT to keep the existing bridge in service and minimize disruption to the NJCL service during the construction period. The new construction will be a vertical lift bridge, built with more durable materials and higher elevation than the existing structure.

Figure 2.1: River Draw Replacement Funding Sources and Amounts



Source: NJ TRANSIT (2014)

Of the total project expenses of \$595.1 million, the Federal Transit Administration (FTA) has awarded NJ TRANSIT a grant to fund 75 percent of the project expenses, or \$446.3 million, through its Emergency Relief Program for resiliency projects following Superstorm Sandy. The remaining funding requirement will be provided by NJ TRANSIT by the State Transportation Trust Fund (TTF). In fact, the required amount for NJ TRANSIT to fund is approximately \$148.72 million, but the organization has committed \$148.75 million, serving as an “overmatch” to fully fund the project’s expenses. (see Figure 2.1).⁸

The total cost of the River Draw replacement includes expenditures for design, material procurement, and construction. Of the total estimated project cost, \$104.1 million is for

⁵ NJ TRANSIT (2014). Superstorm Sandy FTA Grant Support Document: Raritan River Drawbridge Replacement Project. Budget values are expressed in YOE (Year of Expenditure) US Dollars.

⁶ When aggregated over time, employment impacts are expressed in job-years, which reflect the number of individual years of full-time equivalent (FTE) employment, rather than a distinct number of individual employees (since two job years over a two-year period could be fulfilled by the same employee, or alternatively by multiple employees.)

⁷ All economic impact values in this report are represented in 2020 US Dollars.

⁸ NJ TRANSIT (2014). Superstorm Sandy FTA Grant Support Document: Raritan River Drawbridge Replacement Project.

design and project administration costs (i.e., soft costs) and \$491.0 million is associated with capital and construction costs (i.e., hard costs including labor).⁹

Typically, construction projects will incur some expenditures that do not circulate throughout the regional economy in the same way as other direct purchases of goods and services. Examples of such expenses are fees associated with the cost of financing and carrying a project throughout the construction period. Because such fees are paid directly to financial or governmental institutions, the expenditures do not circulate through the economy and create spillover effects in the same way as directly purchasing goods and services from vendors. Because these expenditures have little to no spillover effects in the geography of interest, they are excluded from the input-output model to estimate total economic impacts caused by construction investment. For the River Draw replacement project, there are insurance and bond costs that are both construction-related, which are included in the hard costs, and non-construction related, which are included in the soft costs. The total cost of insurance and bonds for the hard costs of the project is \$9.8 million, while the total associated with the soft costs of the project is \$5.3 million. In total, \$15.1 million in financing costs is excluded from the impact model.¹⁰

In total, the modeled amount from construction investment for the River Draw replacement project is \$580.0 million (see Figure 2.2). This represents a one-time direct impact to the New Jersey economy.

Figure 2.2: Estimated Construction Cost Breakdown for the River Draw Replacement

Activity	Estimated Cost	Modeled Portion	Modeled Cost
Soft Costs (\$M)	\$104.1	95%	\$98.8
Hard Costs (\$M)	\$491.0	98%	\$481.2
Total Estimated Cost (\$M)	\$595.1	97%	\$580.0

Source: NJ TRANSIT (2014), Econsult Solutions, Inc. (2020)

The project budget includes a total of \$154.5 million in labor costs associated with the construction of the project. Based on the total cost of the project, including the cost of labor, the total number of FTEs directly created by the construction of the project is 2,750.¹¹ This implies an annual average of \$56,200 per FTE in employee compensation, including wages and benefits.

The design and administration section of the project budget did not include estimates of costs associated with employee compensation; however, based on the soft cost modeled budget of \$98.8 million, the direct employment supported is approximately 510 FTEs with an average annual employee compensation of \$94,800 per FTE.¹²

⁹ Ibid. This study assumed that all the material and equipment purchased during the construction would happen within the State.

¹⁰ Ibid.

¹¹ IMPLAN (2017)

¹² Ibid.

2.3. Estimated Economic Impact from Construction

In an interconnected economy, direct expenditures give rise to “spillover” impacts throughout the supply chain (in the form of indirect effects) and through the recirculation of labor income (in the form of induced effects). Beyond its direct footprint of \$580.0 million, the construction of the River Draw replacement will produce significant indirect and induced effects throughout the regional economy. The total economic impact of the River Draw construction within New Jersey is the sum of the direct footprint from construction and the indirect and induced effects that result from those direct expenditures.

Over the four-year design and construction period, it is estimated that the construction of the replacement of the existing structure will generate a total economic impact of \$1.0 billion in New Jersey, supporting 5,740 Full Time Equivalent (FTE) job-years and \$352.5 million in earnings (see Figure 2.3).¹³

Figure 2.3: Estimated One-Time Impact of NJ TRANSIT’s River Draw Replacement Construction Investment in New Jersey

Impact Type	Impact Amount
Direct Output (\$M)	\$580.0
Indirect & Induced Output (\$M)	\$467.2
Total Impact (\$M)	\$1,047.2
Direct Employment (FTE)	3,260
Indirect & Induced Employment (FTE)	2,480
Total Employment (FTE)	5,740
Earnings Supported (\$M)	\$352.5

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

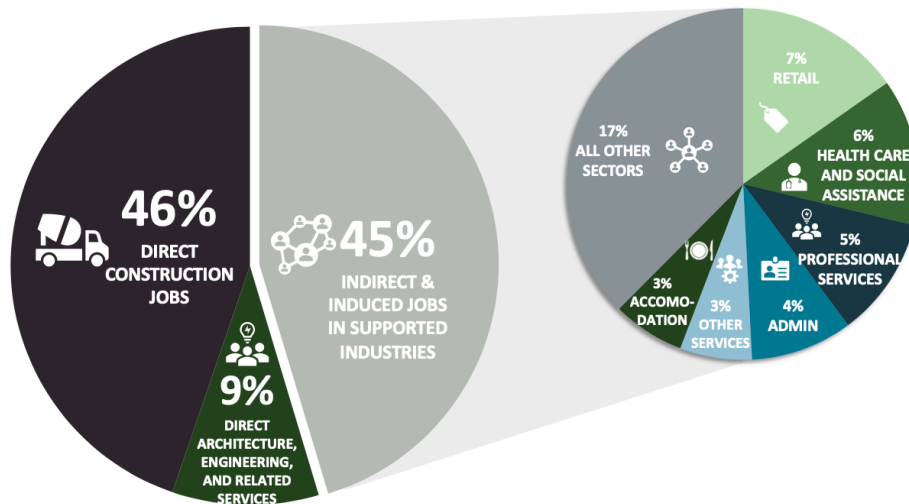
2.4. Estimated Economic and Job Impacts by Industry from Construction

The economic impacts associated with the construction of the new bridge affect a wide range of industries far beyond the design and construction sectors. While the construction industry and architecture, engineering and related services are the largest individual beneficiaries from these investments, other industries including real estate and rental and leasing; professional, scientific, and technical services; health care and associated assistance; finance and insurance; whole sale; retail; and other sectors also see significant benefits from the indirect (supply chain) and induced (labor income) impacts of the capital activity. Figure B.1 in Appendix B shows the detailed breakdown numbers of the economic and FTE impacts by the North American Industry Classification System (NAICS). Figure 2.4 shows the proportion of the total employment impact associated with the design and construction of

¹³ All job estimates throughout the analysis are full-time equivalent (FTE) to the overall total number of jobs supported. When aggregated over time, employment impacts are expressed in “job-years,” which reflect the number of individual years of FTE employment, rather than a distinct number of individual employees (since two job years over a two-year period could be fulfilled by the same employee, or alternatively by multiple employees).

the River Draw replacement project that accrue in and beyond the design and construction industries within the state. In New Jersey, approximately 45 percent of the employment supported by the design and construction is in sectors outside of design and construction.

Figure 2.4: Estimated Job Industry Percentage Breakdown by NAICS from Construction¹⁴



Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

¹⁴ The “All Other Sectors” includes Finance and Insurance (3.0%), Wholesale Trade (2.3%), Real Estate and Rental and Leasing (2.3%), Transportation and Warehousing (2.2%), Manufacturing (1.3%), Educational Services (1.0%), Arts, Entertainment and Recreation (1.0%), Information (0.7%), Construction (0.4%), Management of Companies and Enterprises (0.4%), Public Administration (0.2%), Utilities Mining, Quarrying, and Oil and Gas Extraction (0.1%), and Agriculture, Forestry, Fishing and Hunting (0.1%).

3. Economic Impacts from Operations and Maintenance

3.1. Overview

This section details the economic impact from annual operations and maintenance (O&M) associated with the River Draw replacement. Upon completion, annual operational expenditures for the River Draw are estimated to be \$500,000. **Each year, the direct operating expenditures for the River Draw will generate approximately \$927,000 in economic impact in New Jersey, supporting 4 direct, indirect, and induced FTE jobs and \$259,000 in employee compensation.**

3.2. Direct Footprint

The estimated O&M expenses associated with the River Draw replacement are \$500,000 annually. This estimate was provided by NJ TRANSIT in its submission to the FTA and is based on average O&M costs for “normal-age bridges.”

It is estimated that the O&M expenses will directly support approximately 3 FTEs each year. Of the total expenses, approximately \$126,600 will be attributed to employee compensation, including wages and benefits, for an average annual compensation of \$48,900 per FTE.¹⁵

3.3. Estimated Economic Impact from Operations and Maintenance

Once completed, the annual operations of the River Draw replacement will generate “spillover” effects in the state. These spillover effects are the indirect effect, the multiplier effect from the purchase of goods and services from local vendors, and the induced effect which measures the multiplier effect from the spending of labor income by employees. The total economic impact of NJ TRANSIT’s River Draw operations is the sum of its direct footprint and the indirect and induced effects that occur as a result of this direct spending.

Each year, it is estimated that the operations of the River Draw will generate a total economic impact of \$926,700 in New Jersey, supporting 4 FTE jobs and \$258,900 in earnings (see Figure 3.1).

¹⁵ IMPLAN (2017).

Figure 3.1: Estimated Annual Economic Impacts of River Draw Operations upon Completion

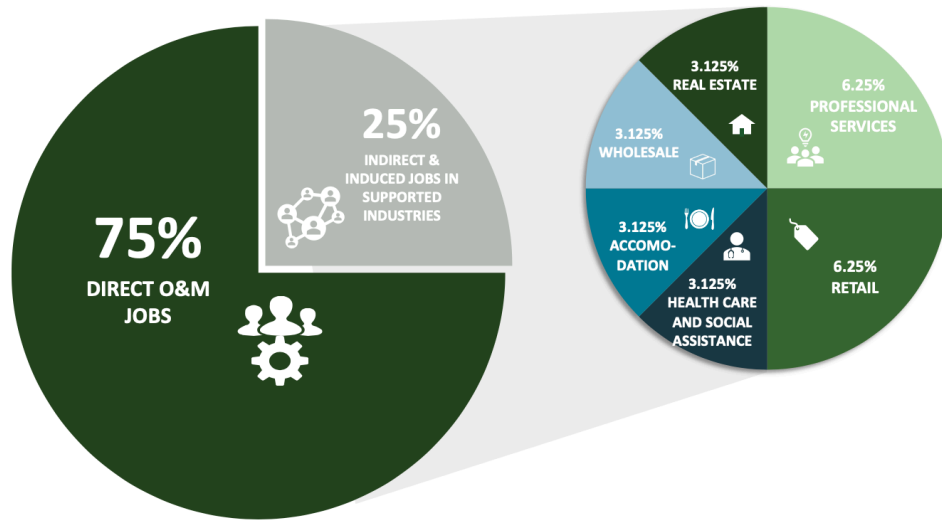
Impact Type	New Jersey
Direct Output	\$500,000
Indirect & Induced Output	\$426,700
Total Impact	\$926,700
Direct Employment (FTE)	3
Indirect & Induced Employment (FTE)	1
Total Employment (FTE)	4
Earnings Supported	\$258,900

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

3.4. Estimated Economic and Job Impacts by Industry from Operations and Maintenance

Upon completion, the new River Draw's day-to-day operations, including the purchase of goods and services and the spending of labor income it generates, will impact a variety of sectors throughout the local and state economy. In addition to the maintenance and repair economic activities in which the direct economic impact and employment will be created, the sectors most impacted by the O&M of the new bridge will likely be real estate and rental and leasing; manufacturing; professional, scientific, and technical services; retail; health care and social assistance; finance and insurance; whole sale; and other sectors; based on the IMPLAN estimates. Figure B.2 in Appendix B shows the detailed breakdown numbers of the economic and FTE impacts from O&M by NAICS. Overall, industries besides maintenance and repair construction receive 46 percent of total economic impact in New Jersey. Figure 3.2 below shows the proportion of the total employment impact associated with the O&M of the River Draw replacement project that accrue in and beyond the maintenance and repair construction industries within the state.

Figure 3.2: Estimated Job Industry Percentage Breakdown by NAICS from O&M



Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

Appendix A – Economic Impact Modeling

Economic impact estimates are generated by utilizing input-output models to translate an initial amount of direct economic activity into the total amount of economic activity that it supports, which includes multiple waves of spillover impacts generated by spending on goods and services and by spending of labor income by employees. This section summarizes the methodologies and tools used to construct, use, and interpret the input-output models needed to estimate this project’s economic impact.

A.1. Input-Output Model Theory

In an inter-connected economy, every dollar spent generates two spillover impacts:

- First, some amount of the proportion of that expenditure that goes to the purchase of goods and services gets circulated back into an economy when those goods and services are purchased from local vendors. This represents what is called the “**indirect effect**,” and reflects the fact that local purchases of goods and services support local vendors, who in turn require additional purchasing with their own set of vendors.
- Second, some amount of the proportion of that expenditure that goes to labor income gets circulated back into an economy when those employees spend some of their earnings on various goods and services. This represents what is called the “**induced effect**,” and reflects the fact that some of those goods and services will be purchased from local vendors, further stimulating a local economy.

The role of input-output models is to determine the linkages across industries in order to model the magnitude and composition of spillover impact to all industries of a dollar spent in any one industry. Thus, the total economic impact is the sum of its own direct economic footprint plus the indirect and induced effects generated by that direct footprint.

A.2. Input-Output Model Mechanics

To model the impacts resulting from the organizational expenditures, Econsult Solutions, Inc. developed a customized economic impact model using the IMPLAN input/output modeling system. IMPLAN represents an industry standard approach to assess the economic and job creation impacts of economic development projects, the creation of new businesses, and public policy changes within its surrounding area.

IMPLAN has developed a social accounting matrix (SAM) that accounts for the flow of commodities through economics. From this matrix, IMPLAN also determines the regional purchase coefficient (RPC), the proportion of local supply that satisfies local demand. These values not only establish the types of goods and services supported by an industry or institution, but also the level in which they are acquired locally. This assessment determines the multiplier basis for the local and regional models created in the IMPLAN modeling system. IMPLAN takes the multipliers and divides them into 536 industry categories in accordance to the North American Industrial Classification System (NAICS) codes.

The IMPLAN modeling system also allows for customization of its inputs which alters multiplier outputs. Where necessary, certain institutions may have different levels of demand for commodities. When this occurs, an “analysis-by-parts” (ABP) approach is taken. This allows the user to model the impacts of direct economic activity related to an institution or industry with greater accuracy. Where inputs are unknown, IMPLAN is able to estimate other inputs based on the level of employment, earnings, or output by an industry or institution.

A.3. Employment and Wages Supported

IMPLAN generates job estimates based on the term “job-years”, or how many jobs will be supported each year. For instance, if a construction project takes two years, and IMPLAN estimates there are 100 employees, or more correctly “job-years” supported, over two years, that represents 50 annual jobs. Additionally, these can be a mix of full and part-time employment. Consequently, job creation could feature more part-time jobs than full-time jobs. To account for this, IMPLAN has a multiplier to convert annual jobs to full-time equivalent jobs.

Income to direct, indirect, and induced jobs is calculated as employee compensation. This includes wage and salary, all benefits (e.g., health, retirement) and payroll taxes (both sides of social security, unemployment taxes, etc.). Therefore, IMPLAN’s measure of income estimates gross pay opposed to just strictly wages.

Appendix B – Breakdown of Economic Impacts by Sectors

Figure B.1: Estimated One-Time Economic Impact and Job Industry Breakdown by NAICS from Construction in New Jersey

Impact Type	NAICS	Total Output (\$M)	Employment (FTE)
Direct Impact	Construction	\$481.2	2,747
	Architectural, engineering, and related services	\$98.8	510
	Real Estate and Rental and Leasing	\$75.8	132
	Professional, Scientific, and Technical Services	\$49.7	300
	Health Care and Social Assistance	\$43.3	346
	Finance and Insurance	\$41.3	170
	Wholesale Trade	\$40.6	134
	Retail Trade	\$39.8	373
	Manufacturing	\$36.1	72
	Transportation and Warehousing	\$23.5	127
Indirect and Induced Impact	Other Services (except Public Administration)	\$22.0	186
	Information	\$21.8	40
	Administrative and Support and Waste Management and Remediation Services	\$21.8	233
	Accommodation and Food Services	\$14.8	182
	Utilities	\$9.3	7
	Management of Companies and Enterprises	\$8.0	24
	Arts, Entertainment, and Recreation	\$5.4	56
	Educational Services	\$5.3	58
	Construction	\$5.0	25
	Public Administration	\$2.1	10
Total Impact	Mining, Quarrying, and Oil and Gas Extraction	\$1.3	5
	Agriculture, Forestry, Fishing and Hunting	\$0.3	4
		\$1,047	5,740

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)

Figure B.2: Estimated Economic Impact and Job Industry Breakdown by NAICS from O&M in New Jersey

Impact Type	NAICS	Total Output	Employment (FTE)
Direct Impact	Maintenance and repair construction of highways, streets, bridges, and tunnels	\$500,000	3.0
	Real Estate and Rental and Leasing	\$60,323	0.1
	Manufacturing	\$52,757	-
	Professional, Scientific, and Technical Services	\$51,750	0.2
	Retail Trade	\$44,324	0.2
	Health Care and Social Assistance	\$34,339	0.1
	Finance and Insurance	\$33,676	-
	Wholesale Trade	\$27,094	0.1
	Other Services (except Public Administration)	\$20,168	-
	Transportation and Warehousing	\$18,821	-
	Information	\$18,186	-
	Administrative and Support and Waste Management and Remediation Services	\$16,454	-
	Accommodation and Food Services	\$11,167	0.1
	Utilities	\$8,332	-
Indirect and Induced Impact	Mining, Quarrying, and Oil and Gas Extraction	\$7,690	-
	Management of Companies and Enterprises	\$5,867	-
	Construction	\$5,014	-
	Arts, Entertainment, and Recreation	\$4,307	-
	Educational Services	\$4,290	-
	Public Administration	\$1,844	-
	Agriculture, Forestry, Fishing and Hunting	\$241	-
Total Impact		\$926,644	4

Source: IMPLAN (2017), Econsult Solutions, Inc. (2020)