Appendix C: Baltimore Development Corporation – The Economic Impact of the North Avenue Rising Proposed Infrastructure Improvements

The Economic Impact of the North Avenue Rising Proposed Infrastructure Improvements

Introduction

The City of Baltimore Department of Transportation (Baltimore City DOT), in partnership with the Maryland Department of Transportation (MDOT) and Maryland Transportation Administration (MTA) requests Transportation Investment Generating Economic Recovery FY 2016 (TIGER FY 2016) grant funding. These funds will complete the funding package that will restore functionality to enhance a vital commercial corridor connecting East and West sectors of Baltimore City. This infrastructure is critically necessary to connect major Universities and job centers while simultaneously reducing commuter time frames, creating opportunities for local residents to be able to buy needed good and services and stimulating additional residential and commercial investment within these neighborhoods. These improvements and their costs are summarized in the table below.

Total Estimated Construction Costs Associated with North Avenue Rising Development Plan

	FY18	FY19	FY20	Total
Total	**$1,715,000**	**$10,085,750**	**$15,529,250**	**$27,330,000**
Westside Streetscape	$0	$2,225,000	$6,675,000	**$8,900,000**
Penn/North Metro Station Overhaul	$0	$983,000	$3,932,000	**$4,915,000**
Dedicated Lanes	$0	$2,793,750	$931,250	**$3,725,000**
Bus Transit Passenger Facilities & Amenities	$1,105,000	$663,000	$442,000	**$2,210,000**
Roadway Repaving	$0	$1,521,000	$1,859,000	**$3,380,000**
Transit Signal Priority (TSP) Infrastructure	$490,000	$980,000	$490,000	**$1,960,000**
Penn/North Intersection Reconstruction	$0	$800,000	$1,200,000	**$2,000,000**
Bikeshare Infrastructure	$120,000	$120,000	$0	**$240,000**

Source: Baltimore City Department of Transportation, Baltimore Development Corporation

The Baltimore City DOT asked the Baltimore Development Corporation (BDC)[1] to prepare an analysis of the economic impacts of the expenditures for these transportation improvements.

Based on these construction costs, the construction of these improvements will have the following impacts on Baltimore City:

- The $27.3 million in construction spending will increase economic activity in the City by $39.1 million and create an average of 66 jobs over the four year period, earning a total of $15.9 million in salaries and wages.
- State, local, and federal tax revenues will increase by $3.9 million over the multi-year construction period.

[1] The Baltimore Development Corporation (BDC) is a 501(c)(3) corporation contracted with the City of Baltimore to provide economic development services. With a mission to retain and expand existing employers and attract new ones, the BDC works collaboratively within City government, and with private partners, to deliver services to help businesses grow.

Economic Impact Assumptions

This economic impact analysis utilized the IMPLAN V3[2] input-output model for Baltimore City. The IMPLAN model for Baltimore City allows estimates of the economic impacts that are likely to occur in the Baltimore City economy in response to a change in exogenous final demand (i.e. a change in demand related to outside capital, investment, government spending, or exports).

For the analysis of the economic impacts associated with the construction of these infrastructure improvements, the input to this analysis was the construction budget for each project per each year of construction.

It is important to note that all impacts identified correspond only to the period where construction is occurring. Impacts occurring after the completion of these infrastructure improvements are not identified and would contribute to a greater overall economic, employment, and fiscal impact on Baltimore City.

The Economic, Employment, and Fiscal Impacts of the North Avenue Rising Infrastructure Improvements on Baltimore City

There are $27.3 million in construction expenditures associated with the improvements occurring from FY2018 to FY2020. These expenditures will increase economic activity in Baltimore City by more than the simple amount of construction dollars spent as a result of the multiplier effects estimated by the IMPLAN Model. Multiplier effects occur as the spending associated with a project are earned and, in turn, re-spent by other workers and businesses in successive rounds of earning and spending. Each of these successive rounds of spending are lower than the preceding round as an increasing portion of each round is spent outside of the local economy. There are two types of multiplier effects: indirect effects resulting from the purchase of goods and services as inputs to the direct activity; and induced effects resulting from the increase in local earnings resulting from the jobs created as a result of the direct and indirect effects.

As presented in the tables below, when the multiplier effects of this construction spending are included, the $27.3 million in local construction expenditures increase total economic activity in the City by $39.1 million as a result of $6.6 million in indirect effects, from local construction related purchases, and $5.2 million in induced effects, as a result of the jobs and income created.

The infrastructure improvements will create about 41 construction jobs over the 3-year period, with an additional 25 jobs created by the indirect and induced effects for a total employment count of 66 jobs created over the period. There is a 3-year total of $15.9 million in wages and salaries associated with these 66 jobs.

The estimate also models total federal, state, and local tax revenues created by a project. These improvements will increase federal tax revenues by $2.7 million and state and local tax revenues

[2] The IMPLAN model was originally developed by a joint collaboration between the U.S. Forest Service and the University of Minnesota. IMPLAN is one of the most widely used models in economic impact analysis. The IMPLAN model can be used to estimate the impact of an economic activity based on either its employment or revenues/expenditures.

by $1.1 million. It is important to note that these impact figures are the aggregate impacts over the entire multi-year construction period, aggregating the proportionate annual yields.

Economic Impacts of Construction Expenditures
(Jobs and 2016$)

Direct Impact	**$27,330,000**
Economic Output	$39,091,108
Employment[1]	66
Employee Compensation	$15,884,507
Average Employee Compensation per Job	$719,300
Fiscal Impact	$3,864,498

[1] Average number of jobs created per year during construction of improvements.
Source: IMPLAN

The impacts associated per fiscal year are presented in the table below.

Economic Impacts of North Avenue RisingConstruction Expenditures per Fiscal Year
(Jobs and 2016$)

Fiscal Year 2018

	Direct	Indirect	Induced	Total
Output	$1,715,000	$359,867	$342,705	$2,417,572
Employment	9	2	2	13
Employee Compensation	$771,649	$149,376	$133,302	$1,054,328

Fiscal Year 2019

	Direct	Indirect	Induced	Total
Output	$10,085,750	$2,468,746	$1,951,011	$14,505,507
Employment	47	15	13	75
Employee Compensation	$4,224,884	$992,238	$758,915	$5,976,036

Fiscal Year 2020

	Direct	Indirect	Induced	Total
Output	$15,529,250	$3,770,271	$2,868,509	$22,168,029
Employment	68	23	20	111
Employee Compensation	$6,288,860	$1,449,546	$1,115,737	$8,854,143

Source: IMPLAN

The aggregated employment impact over the four fiscal years, by sector, is presented below. The greatest number of jobs created annually will be in the construction sector (41 jobs). The other sectors creating jobs as a result of the infrastructure improvements include: retail trade (6 jobs annually), health care and social assistance (3 jobs annually), and professional, scientific, and technical services (3 jobs annually).

Average Annual Employment Impact of the North Avenue Rising Development Improvements by Sector

	Direct	Indirect	Induced	Total
Total	41	13	12	66
Natural Resources	0	0	0	0
Mining	0	0	0	0
Utilities	0	0	0	0
Construction	41	0	0	41
Manufacturing	0	0	0	1
Wholesale Trade	0	1	0	1
Retail Trade	0	5	1	6
Transportation and Warehousing	0	1	0	1
Information	0	0	0	0
Finance and Insurance	0	1	1	1
Real Estate and Rental and Leasing	0	1	0	1
Professional, Scientific, and Technical Services	0	2	0	3
Management of Companies and Enterprises	0	0	0	0
Administrative and Waste Services	0	1	1	2
Educational Services	0	0	1	1
Health Care and Social Assistance	0	0	3	3
Arts, Entertainment, and Recreation	0	0	0	0
Accommodation and Food Services	0	0	2	2
Other Services	0	1	1	2
Government	0	0	0	0

Source: IMPLAN

The fiscal impact relating to the direct, indirect, and induced impacts per fiscal year are presented below. These impacts result from both the construction expenditures, the purchase of goods and services as inputs to the construction activity, and the increase in local earnings resulting from the jobs created. The taxes collected include: sales; property; income; corporate; motor vehicles; and other taxes and fees.

The total fiscal impact of the infrastructure improvements will return a total of $3.9 million in tax revenue. Of this amount, the project will return a total of slightly more than $1.1 million in new tax revenue to Baltimore City and the State of Maryland.

Fiscal Impacts from North Avenue Rising Improvements by Fiscal Year

	FY18	FY19	FY20	Total
Total	**$255,111**	**$1,440,132**	**$2,169,255**	**$3,864,498**
State and Local	$74,258	$415,457	$636,102	$1,125,817
Federal	$180,853	$1,024,675	$1,533,153	$2,738,681

Source: IMPLAN