



11. ECONOMIC FEASIBILITY

11.1 Economic Impact Modeling - 2020, 2035, 2050

As the Route 440/Routes 1&9T study seeks to identify transportation infrastructure and mobility improvements that will in part support redevelopment and economic growth in the Western Waterfront of Jersey City and divert through trucks away from the study corridor if possible, it was essential to quantify the economic impact of the anticipated redevelopment that would be made possible by the creation of the urban boulevard. This section summarizes the process and findings of an economic impact assessment of the proposed redevelopment of the area around the Route 440/Routes 1&9T corridor in Jersey City in 2020, 2035 and upon full build-out in 2050.

The baseline assumptions of the economic impact analysis are that the Multi-Use Urban Boulevard and Complete Street is constructed in accordance with the recommended Locally Preferred Alternative (LPA) and phasing, the Hudson-Bergen Rail Line is extended from its current terminus at Westside Station across Route 440 to the northern edge of Bayfront by 2020, and that the Western Waterfront is built out in accordance with the anticipated growth areas that are envisioned by the Circulation Element of the Jersey City Master Plan by 2050, at a rate that is consistent with the North Jersey Transportation Planning Authority's (NJTPA's) projected growth rate for Jersey City through 2035. Appendix 11.1 provides further detail on the economic impact methodology and model used. Appendix 11.2 provides detailed information on types of occupations supported by activities in the growth areas along the Route 440/Routes 1&9T corridor.

11.1.1 Economic Impact Terminology and Model

11.1.1.1 Terminology

The assessment estimates the total economic impacts, which are defined to include:

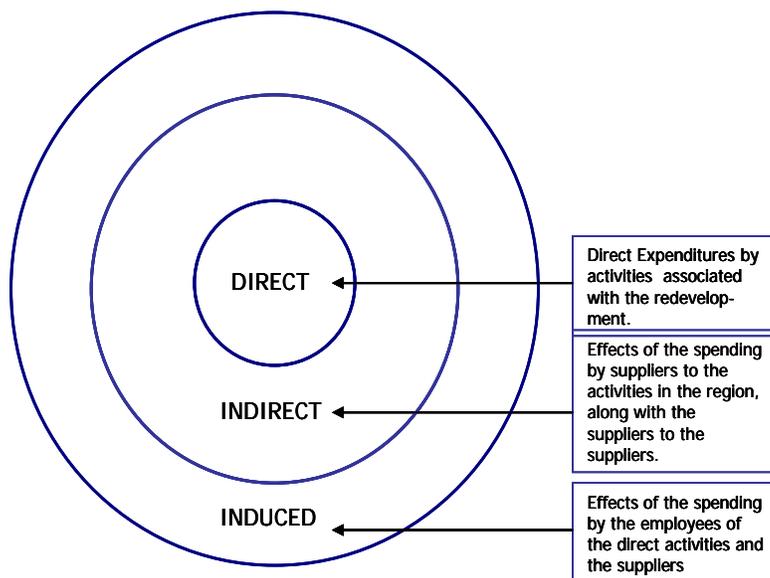
- Direct – the costs related to the proposed redevelopment around Route 440/Routes 1&9T in Jersey City. Direct effects are the focal point of an impact analysis.



- **Indirect** – the purchases of goods and services by suppliers. By definition, the first round of indirect impacts includes the purchase of supplies and services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of indirect impacts. Such purchases continue to ripple through the regional economy.
- **Induced** – the spending (on such items as food, clothing, personal services, other retail items, and vehicles) by households of employees at the site and as well as employees of supporting firms through the wages and salaries they earn due to the proposed development. The economic ripples generated by employee spending are known as the induced effect.

The total economic impact consists of the direct, indirect and induced effects. The total effect, as depicted in Figure 1, illustrates how the expenditures associated with the redevelopment “ripple” through the economy, similar to the rings formed when a stone is dropped into water. The expenditures roll through the economy, starting with the direct expenditures associated with the project.

Figure 11.1: Composition of the Multiplier: The Ripple Effect of Expenditures



Source: A. Strauss-Wieder, Inc.



The economic impacts are measured in terms of:

- Employment effects – full-time equivalent jobs generated, including:
 - Direct employment: jobs on or in support of the ongoing activities in the redevelopment area.
 - Total employment: The total number of jobs (direct, indirect and induced) generated in each of the geographically defined regions.
- Total output/business revenues – generally defined as gross business revenues generated in each of the geographically defined regions.
- Total earnings/personal income effects – defined as wages, salaries, and proprietors' income only. It does not include non-wage compensation (e.g. pensions, insurance, and health benefits); transfer payments (e.g. welfare or social security benefits); or unearned income (e.g. dividends, interest, or rent). Wages are paid to workers at their place of work and spent at the workers' place of residence, which may be outside the region.
- Total local tax effects – defined as revenues collected by sub-state governments. These are collected mainly from property taxes on new worker households and businesses, but also from income, sales, and other major local taxes in some areas.
- Total State tax effects – revenues collected by state governments from personal and corporate income, state property, excise, sales, and other state taxes generated by changes in output or wages or by purchases by visitors to the region.
- Total Federal tax effects – defined as revenues collected by the Federal government from corporate income, personal income, social security, and excise taxes.
- Occupational implications – the economic impact model identifies the employment implications in terms of specific occupations.

11.1.1.2 Model Used

A customized version of the Rutgers University 517-sector RECON input-output model was used to conduct the economic impact assessment. The RECON input-output model expands on the US input-output model and is one of the most detailed models available for undertaking economic impact assessments. Rutgers constantly refines and updates the model, both in terms of the underlying data and programming. This model has also been extensively reviewed



and evaluated in academic forums. Versions of the model have been used in economic impact analyses for more than 30 years. Additional information on the model is provided in Appendix 11.1.

Geographical Areas Analyzed - The RECON model was customized to enable the economic impacts associated with redevelopment scenario to be assessed at two geographical levels (Figure 11.2):

- Hudson County
- The State of New Jersey

The impacts summarized for New Jersey represent the economic value that the State will accrue as a result of the ongoing operation of activities in the Western Waterfront of Jersey City in 2020, 2035 and upon full build-out in 2050. Similarly, the impacts for Hudson County represent the subset of those impacts accruing to the State that occur within the County. The direct job impacts are generally on-site (within the Western Waterfront of Jersey City) and, therefore, are direct economic gains to Jersey City.

Economic Impact Phases - There are two types of economic impact that generally occur:

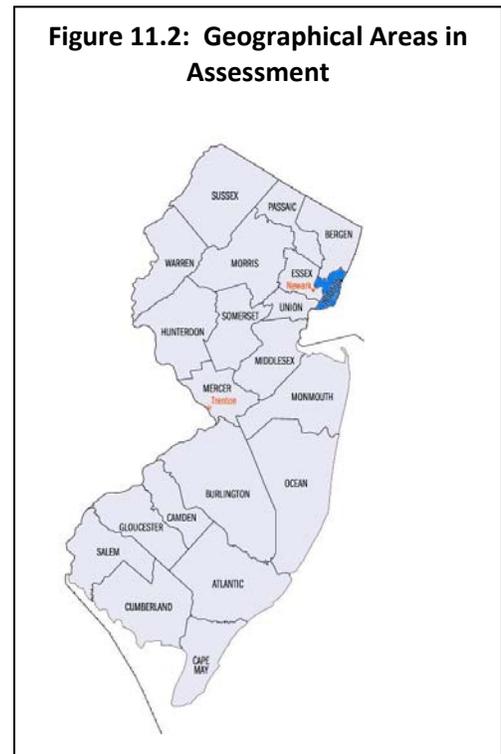


Figure 11.2: Geographical Areas in Assessment

- Ongoing/Sustained Impacts: Once the redevelopment is fully realized, it is anticipated to operate continuously. Accordingly, the impacts associated with the activities in the redevelopment area are ongoing and permanent to the economy, as are the tourism impacts. The economic benefits continue as long as the activities continue.
- Limited-Time Construction/Capital Impacts: These impacts are of limited duration and result from purchasing equipment and services, along with making capital investment. This impact, though important, ceases at the end of the construction and investment phase because the work is completed. The workers and supplying organizations move



onto other assignments. ***Construction and Capital Impacts were not analyzed in this assessment.***

The two streams of economic impacts are independent and cannot be added together.

11.1.2 Economic Impacts Associated With Ongoing Operation of Activities in the Western Waterfront - 2020

Land use changes anticipated to be fully operational in the Western Waterfront by 2020 (Table 11.1) were identified. The scenario was articulated in terms of the net changes in square footages of development types, such as residential, retail and industrial. The forecast and projection process is described in greater detail in Chapter 5.

The growth projections incorporated into the economic model represents net changes in land uses in Jersey City, Hudson County and New Jersey. Some existing industrial and warehouse operations are anticipated to be replaced by other uses. Accordingly, the economic impacts of the 2020 development scenario reflect both loss of warehousing and industrial activity and the value associated with the new land uses. Housing represents the largest component of land development growth in the Western Waterfront, with 4.5 million square feet (sf) of development anticipated.¹ Over 134,000 sf of net new retail activity is anticipated, consisting of a mix of stores and restaurants.²

Nearly 574,000 sf of industrial activity is anticipated to be displaced from the Western Waterfront, along with nearly 280,000 sf of logistics industry space (e.g., warehouses). It has been assumed that one-third of the displaced industrial and logistics industry businesses will relocate elsewhere in Hudson County and that all of the remaining displaced businesses will relocate elsewhere in New Jersey. The changes in housing, office and retail space are assumed to be net new additions to Jersey City, Hudson County and the State; this new space does not represent relocations from elsewhere in New Jersey.

¹ Over 3,800 new housing units are anticipated with an average size of 1,200 sf.

² For the economic impact assessment, it was assumed that 80 percent of the retail sf represents stores and 20 percent represent restaurants.



Table 11.1: Net Changes in Land Uses in the Western Waterfront - 2020

Development Type	Net SF Change in Western Waterfront Redevelopment Area	Net SF Change in Hudson County	Net SF Change in New Jersey
Logistics Industry	(279,800)	(93,267)	0
Industrial	(573,950)	(191,317)	0
Housing	4,575,600	4,575,600	4,575,600
Office	175,000	175,000	175,000
Retail	134,250	134,250	134,250

Nearly 574,000 sf of industrial activity is anticipated to be displaced from the Western Waterfront, along with nearly 280,000 sf of logistics industry space (e.g., warehouses). It has been assumed that one-third of the displaced industrial and logistics industry businesses will relocate elsewhere in Hudson County and that all of the remaining displaced businesses will relocate elsewhere in New Jersey. The changes in housing, office and retail space are assumed to be net new additions to Jersey City, Hudson County and the State; this new space does not represent relocations from elsewhere in New Jersey.

The permanent impacts (Table 11.2) associated with the annual operation of the net new activities operational in 2020 include:

- A total of 2,103 direct full-time jobs in New Jersey, with nearly 1,900 of these jobs created in Hudson County. The job impacts reflect full-time equivalent employees; the actual number of workers could be higher if part-time employees are used. For example, retail businesses often use part-time staff. Thus, the actual number of workers in Jersey City could be higher. The number of direct jobs is greater for the State because the industrial and logistics industry jobs are assumed to be fully retained in the State.
- A total of nearly 3,600 full-time jobs in New Jersey, with nearly 2,500 of these jobs created in Hudson County. The total employment impact includes the direct, indirect and induced impacts.
- \$147 million in personal income is generated in Hudson County and \$190 million across New Jersey.



- \$367 million in business income is generated in Hudson County and \$503 million in new business income across New Jersey.
- \$44.6 million in new Federal, State and local tax revenues in Hudson County and nearly \$74 million in new tax revenues throughout the State.

Table 11.2: Annual Economic Impacts Associated with the Net New Activities in the Western Waterfront - 2020 *

Economic Impact	Hudson County	New Jersey
Direct employment	1,884	2,103
Total employment	2,507	3,598
Personal income (in millions \$)	\$ 146.63	\$ 190.43
Business activity (in millions \$)	\$ 367.27	\$ 503.31
Local Tax revenues (in millions \$)	\$ 5.37	\$ 9.88
State Tax Revenues (in millions \$)	\$ 7.03	\$ 11.16
State and Local Taxes (in millions \$)	\$ 12.40	\$ 21.05
Federal Tax Revenue (in millions \$)	\$ 32.19	\$ 52.48
Total Tax Revenue (in millions \$)	\$ 44.6	\$ 73.5

* Monetary Values are in present value (2010 dollars)



11.1.3 Economic Impacts Associated With Ongoing Operation of Activities in the Western Waterfront - 2035

Additional changes in land uses in the Western Waterfront of Jersey City are anticipated by 2035 (Table 11.3). The development of the 2035 land use projections followed the same process as the 2020 projections. Table 11.3 summarizes the incremental net changes associated with each land use in 2035 for Jersey City, Hudson County and the State of New Jersey. These changes are over the current year and include projections for the year 2020 described above. Housing continues to represent the largest component of land development growth in the Western Waterfront, with over 10 million square feet (sf) of new residential development anticipated (inclusive of the additional 4.5 million sf of residential development anticipated by 2020). As with the 2020 scenario, it has been assumed that one-third of the displaced industrial and logistics industry businesses will relocate elsewhere in Hudson County and that all of the remaining displaced logistics industry and industrial businesses will relocate from Jersey City to sites located elsewhere in New Jersey. The housing, office and retail space are net new additions to Jersey City, Hudson County and New Jersey.

Table 11.3: Net Changes in Land Uses in the Western Waterfront - 2035

Development Type	Total New Net SF Operational in the Western Waterfront Redevelopment Area	Total New Net SF Operational in Hudson County	Total New Net SF Operational in New Jersey
Logistics Industry	(479,800)	(159,933)	0
Industrial	(592,450)	(197,483)	0
Housing	10,026,000	10,026,000	10,026,000
Office	490,000	490,000	490,000
Retail	170,500	170,500	170,500



The permanent impacts (Table 11.4) associated with the annual operation of the total net new square footages that are anticipated to be built and fully operational in 2035 include:

- Over 3,800 new direct full-time jobs in New Jersey, with nearly 3,600 of these jobs created in Hudson County.
- Over 6,100 full-time jobs in New Jersey, with nearly 4,600 of these jobs created in Hudson County. The total employment impact includes the direct, indirect and induced impacts.
- \$237 million in personal income is supported in Hudson County and \$298 million across New Jersey.
- \$587 million in business income is generated in Hudson County and over \$782 million in new business income across New Jersey.
- \$72 million in new Federal, State and local tax revenues in Hudson County and a total of \$114 million in new tax revenues throughout the State.

Table 11.4: Annual Economic Impacts Associated with All New Activities in the Western Waterfront - 2035 *

Economic Impact	Hudson County	New Jersey
Direct employment	3,586	3,832
Total employment	4,580	6,157
Personal income (in millions \$)	\$ 236.62	\$ 297.74
Business activity (in millions \$)	\$ 587.19	\$ 781.74
Local Tax revenues (in millions \$)	\$ 8.83	\$ 15.17
State Tax Revenues (in millions \$)	\$ 11.30	\$ 17.15
State and Local Taxes (in millions \$)	\$ 20.13	\$ 32.31
Federal Tax Revenue (in millions \$)	\$ 51.96	\$ 81.98
Total Tax Revenue (in millions \$)	\$ 72.1	\$ 114.3

* Monetary Values are in present value (2010 dollars) and includes the activities that became operational in 2020.



11.1.4 Economic Impacts Associated With Ongoing Operation of Activities in the Western Waterfront - 2050

Additional changes in land uses are anticipated by 2050 (Table 11.5). These data represent the total new square footages associated with each land use anticipated to be operational in 2050 over the base condition in Jersey City, Hudson County and the State of New Jersey. These changes are over the current year and include projections for the years 2020 and 2035 described above. Housing continues to represent the largest component of land development growth in the Western Waterfront, with close to 23 million square feet (sf) of residential development anticipated. In addition, 700,000 sf of office space and approximately 787,000 sf of retail activity are anticipated, with a mix of 80 percent retail stores and 20 percent restaurants. It has been assumed that one-third of the displaced industrial and logistics industry businesses will relocate elsewhere in Hudson County and that all of the remaining displaced logistics industry and industrial businesses will relocate from Jersey City to locations elsewhere in New Jersey. As with the previous scenarios, the housing, office and retail space are net new additions to Jersey City, Hudson County and New Jersey.

Approximately 1.2 million sf of industrial space and 586,000 sf of logistics industry space, such as warehouses, will be eliminated in the area. Accordingly, the economic effects associated with these activities have been netted out of the overall impacts.



Table 11.5: Net Changes in Land Uses in the Western Waterfront - 2050

Development Type	Total New Net SF Operational in the Western Waterfront Redevelopment Area	Total New Net SF Operational in Hudson County	Total New Net SF Operational in New Jersey
Logistics Industry	(586,000)	(195,333)	0
Industrial	(1,209,000)	(403,000)	0
Housing	22,980,000	22,980,000	22,980,000
Office	700,000	700,000	700,000
Retail	787,000	787,000	787,000

The permanent impacts (Table 11.6) associated with the annual operation of the total net new square footages that are anticipated to be built and fully operational in 2050 include:

- Nearly 8,200 new direct full-time jobs in New Jersey, with over 7,700 of these jobs created in Hudson County.
- Nearly 12,300 full-time jobs in New Jersey, with over 9,400 of these jobs created in Hudson County. The total employment impact includes the direct, indirect and induced impacts.
- \$414 million in personal income is supported in Hudson County and \$524 million across New Jersey.
- Over \$1billion in business income is generated in Hudson County and nearly \$1.37 billion in new business income across New Jersey.
- \$127 million in new Federal, State and local tax revenues in Hudson County and a total of \$202 million in new tax revenues throughout the State.



Table 11.6: Annual Economic Impacts Associated with All New Activities in the Western Waterfront - 2050 *

Economic Impact	Hudson County	New Jersey
Direct employment	7,731	8,193
Total employment	9,447	12,267
Personal income (in millions \$)	\$ 413.74	\$ 523.98
Business activity (in millions \$)	\$ 1,016.64	\$ 1,366.91
Local Tax revenues (in millions \$)	\$ 14.70	\$ 26.21
State Tax Revenues (in millions \$)	\$ 20.98	\$ 31.55
State and Local Taxes (in millions \$)	\$ 35.68	\$ 57.76
Federal Tax Revenue (in millions \$)	\$ 91.09	\$ 144.54
Total Tax Revenue (in millions \$)	\$ 126.77	\$ 202.30

* Monetary Values are in present value (2010 dollars) and includes the activities that became operational in 2020 and 2035.

Table 11.7 summarizes the types of occupations associated with the new jobs at full build out in 2050. As expected with the large amount of housing, office and retail activity, the majority of the jobs are in the service occupations. Administrative support is the second largest occupational category. Appendix 11.2 provides more detailed information on the occupations generated.



Table 11.7: The Occupations Associated with the New Permanent Jobs in the Western Waterfront Redevelopment Area at Full Build-Out in 2050

Occupations	Hudson County	New Jersey
Executive, administrative, and managerial occupations	846	1,193
Professional specialty occupations	264	447
Technicians and related support occupations	106	167
Marketing and sales occupations	819	1,239
Administrative support occupations, including clerical	1,358	1,931
Service occupations	5,534	5,957
Agriculture, forestry, fishing, and related occupations	12	62
Precision production, craft, and repair occupations	264	519
Production occupations, precision	22	82
Plant and system occupations	1	5
Transportation workers, operators, fabricators, and laborers	219	664
Total	9,447	12,267



11.1.5 Conclusions

The anticipated development in the Western Waterfront is significant in terms of square footages and, accordingly, brings significant economic benefits to the City, County and the State. The positive economic impacts are net benefits and account for the displacement of existing employment generators. The large increases in housing, retail, and office space are consistent with the economic objectives of Jersey City. The assumption that industrial and logistics industry businesses will relocate elsewhere in Hudson County and the State is also consistent with patterns of industrial relocations and the availability of space for such operations.



11.2 Construction Cost Estimate

11.2.1 Boulevard and Complete Street LPA

Cost of design and construction of the LPA was estimated following the procedures set forth in the NJDOT Construction Cost Estimation Preparation Manual, and excludes consideration of funding sources or responsible entity for implementation. The process of developing this construction cost estimate began with identification of the standard items as specified in the cost estimating procedures manual including:

- Right of Way Acquisition
- Site Clearing and Earthwork
- Pavement
- Bridges/Structures (Gateway Circle)
- Utilities
- Drainage
- Curbing
- Landscape & Bikeways
- Retaining Walls
- Traffic Signals
- Lighting, Traffic Stripes, Signs and Delineators
- Preliminary Engineering
- Final Design
- Construction Engineering/Inspection
- Maintenance of Traffic During Construction
- Contingencies

Additional non-standard items were added to account for special features incorporated into the LPA such as the HAWK pedestrian signals in the southern section and the bike and pedestrian tunnels beneath the railroad embankment. Costs associated with the extension of the HBLR across Route 440 are not included in this estimate, nor are costs associated with building an adjoining network of local streets.

At this concept development level of detail, the cost for construction of the LPA is estimated to be \$367.9 million (Table 11.8) estimated in 2010 dollars and escalated to the midpoint of construction anticipated to be in the year 2019. This midpoint construction year was identified based upon a 2035 full LPA completion date and the need to complete construction of a majority of the full LPA improvements by the year 2020 (see section 9.2). The estimated cost



for construction of the interim 2020 improvements exceeds 90 percent of the estimated construction costs for the full LPA.

Table 11.8: Construction Cost Estimate - 2035 Full LPA Summary

PROJECT COST SUMMARY	Within Existing ROW	Expanded ROW	Project Total
Construction Estimate	\$ 47,632,537	\$ 139,474,295	\$ 187,106,833
Construction Engineering (CE)	\$ 4,525,091	\$ 13,250,058	\$ 17,775,149
Utilities Relocations	\$ 31,134,987	\$ 16,736,915	\$ 47,871,903
Change Order Contingencies	\$ 944,500	\$ 2,322,100	\$ 3,266,600
Total Construction Cost	\$ 84,237,116	\$ 171,783,369	\$ 256,020,485
Right of Way Cost	\$ -	\$ 40,099,233	\$ 40,099,233
Contingency (15-percent)	\$ 12,635,567	\$ 31,782,390	\$ 44,417,957
TOTAL CONSTRUCTION COST	\$ 96,872,683	\$ 243,664,992	\$ 340,537,675

ENGINEERING AND DESIGN	Within Existing ROW	Expanded ROW	Project Total
Preliminary Engineering	\$ 3,715,338	\$ 10,878,995	\$ 14,594,333
Final Design	\$ 3,239,013	\$ 9,484,252	\$ 12,723,265
TOTAL DESIGN COST	\$ 6,954,351	\$ 20,363,247	\$ 27,317,598

TOTAL FUNDING REQUIREMENT	\$ 103,827,034	\$ 264,028,239	\$ 367,855,273
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Unit costs were developed for each identified cost item based upon the unit costs from recent highway construction projects. The estimate was segregated between the costs of construction within the existing NJDOT right of way, and the costs of construction outside of the right of way. Details by item are summarized in Table 11.9. The gateway circle at the intersection of Route 440 and Communipaw Avenue encompasses portions of both existing right-of-way and expanded right-of-way across multiple cost line items.



Table 11.9: Full LPA Construction Cost Estimate – Item Category Details

PROJECT COMPONENT	Within Existing ROW	Expanded ROW	Project Total
Stripping (4 - 6" Depth)	\$ -	\$ -	\$ -
Existing Roadway Excavation	\$ 1,544,040	\$ -	\$ 1,544,040
Borrow Excavation / Fill	\$ 2,851,989	\$ 2,213,036	\$ 5,065,025
EARTHWORK TOTAL	\$ 4,396,029	\$ 2,213,036	\$ 6,609,065
PAVEMENT			
DGABC (8")	\$ 1,321,200	\$ 375,920	\$ 1,697,120
Subbase (6")	\$ 758,052	\$ 215,676	\$ 973,728
Base Course (6")	\$ 3,544,920	\$ 1,008,600	\$ 4,553,520
Inter. Course (2")	\$ 1,392,930	\$ 396,340	\$ 1,789,270
Surface Course (2")	\$ 1,596,429	\$ 454,248	\$ 2,050,677
PAVEMENT TOTAL	\$ 8,613,531	\$ 2,450,784	\$ 11,064,315
BRIDGES/STRUCTURES	Structural costs associated with Gateway Circle included as part of retaining walls and in Gateway Circle cost estimate below. Cost for anticipated HBLR not included in estimate.		
DRAINAGE	\$ 2,068,264	\$ 1,088,560	\$ 3,156,824
DRAINAGE TOTAL	\$ 2,068,264	\$ 1,088,560	\$ 3,156,824
INCIDENTAL ITEMS			
Beam Guide Rail	\$ 33,500	\$ -	\$ 33,500
Fence 8 Foot High	\$ -	\$ 101,500	\$ 101,500
9" X 16" Conc. Vertical Curb	\$ 342,000	\$ 384,480	\$ 726,480
4" Conc. Sidewalk	\$ 797,616	\$ 1,700,016	\$ 2,497,632
Cantilever Sign Structure	\$ -	\$ 427,200	\$ 427,200
INCIDENTAL ITEMS TOTAL	\$ 1,173,116	\$ 2,613,196	\$ 3,786,312
LANDSCAPE & BIKEWAYS			
Topsoil and Seeding (Mainline)	\$ 428,697	\$ 225,630	\$ 654,327
Planting (Mainline)	\$ 245,100	\$ 129,000	\$ 374,100
Median Landscaping	\$ 1,574,865	\$ 1,238,825	\$ 2,813,690
Bikeways	\$ 1,885,350	\$ 2,333,900	\$ 4,219,250
Amenity Strip	\$ -	\$ 2,607,600	\$ 2,607,600
LANDSCAPE/BIKEWAY TOTAL	\$ 4,134,012	\$ 6,534,955	\$ 10,668,967
RETAINING WALLS			
Retaining Wall - Roadways to/from Gateway Circle	\$ -	\$ 18,115,680	\$ 18,115,680
Gateway Circle Closure Walls (24')	\$ -	\$ 7,989,120	\$ 7,989,120
Median 20" Walls	\$ 8,507,999	\$ 10,492,000	\$ 18,999,999
RETAINING WALL TOTAL	\$ 8,507,999	\$ 36,596,800	\$ 45,104,799
BIKE/PED TUNNELS BENEATH RAILROAD EMBANKMENT			
Ped Tunnel	\$ -	\$ 1,175,000	\$ 1,175,000
Bike Tunnel	\$ -	\$ 1,880,000	\$ 1,880,000
BIKE/PED TUNNEL TOTAL	\$ -	\$ 3,055,000	\$ 3,055,000
GENERAL ITEMS			
Field Office	\$ 168,188	\$ 88,520	\$ 256,708



**Route 440/Routes 1&9T Multi-Use Urban Boulevard and Through Truck Diversion
Concept Development Study**

PROJECT COMPONENT	Within Existing ROW	Expanded ROW	Project Total
Materials Field Laboratory	\$ 110,086	\$ 57,940	\$ 168,026
Erosion Control during Construction	\$ 244,625	\$ 128,750	\$ 373,375
GENERAL ITEMS TOTAL	\$ 522,899	\$ 275,210	\$ 798,109
WORK CATEGORY SUMMARY			
Earthwork	\$ 4,396,029	\$ 2,213,036	\$ 6,609,065
Pavement	\$ 8,613,531	\$ 2,450,784	\$ 11,064,315
Bridges/Structures/Culvert Tunnels	\$ -	\$ 56,261,497	\$ 56,261,497
Drainage	\$ 2,068,264	\$ 1,088,560	\$ 3,156,824
Incidental Items	\$ 1,173,116	\$ 2,613,196	\$ 3,786,312
Landscape & Bikeways	\$ 4,134,012	\$ 6,534,955	\$ 10,668,967
Retaining Walls	\$ 8,507,999	\$ 36,596,800	\$ 45,104,799
General Items	\$ 522,899	\$ 275,210	\$ 798,109
New "Hawk" Traffic Signals	\$ 1,000,000	\$ -	\$ 1,000,000
New Circle Signals	\$ -	\$ 500,000	\$ 500,000
New Traffic Signals	\$ 6,400,000	\$ -	\$ 6,400,000
		\$	\$
PROJECT SUBTOTAL	\$ 36,815,850	108,534,038	145,349,888
OTHER ITEMS			
Lighting, Traffic Stripes, Signs and Delineators	\$ 1,104,475	\$ 3,256,021	\$ 4,360,497
Maintenance of Traffic During Construction	\$ 552,238	\$ 1,628,011	\$ 2,180,248
Training	\$ 368,158	\$ 1,085,340	\$ 1,453,499
Mobilization	\$ 3,681,585	\$ 10,853,404	\$ 14,534,989
Progress Schedule	\$ 40,000	\$ 58,000	\$ 98,000
Clearing Site	\$ 250,000	\$ 490,000	\$ 740,000
Construction Layout	\$ 490,000	\$ 890,000	\$ 1,380,000
		\$	\$
PROJECT SUBTOTAL PLUS OTHER ITEMS (BASE)	\$ 43,302,307	126,794,814	170,097,121
ESCALATION (10-PERCENT)	\$ 4,330,231	\$ 12,679,481	\$ 17,009,712
		\$	\$
PROJECT BASE PLUS ESCALATION	\$ 47,632,537	139,474,295	187,106,833
CONTINGENCIES AND CONSTRUCTION ENGINEERING			
CONSTRUCTION ENGINEERING	\$ 4,525,091	\$ 13,250,058	\$ 17,775,149
CONSTRUCTION CHANGE ORDER CONTINGENCY (Federal Elements)	\$ 944,500	\$ 2,322,100	\$ 3,266,600
UTILITIES RELOCATIONS			
5 Major Lines	\$ 25,419,083	\$ 5,526,900	\$ 30,945,983
All Other Minor Facilities	\$ 5,715,904	\$ 16,736,915	\$ 22,452,820
UTILITY TOTAL	\$ 31,134,987	\$ 22,263,815	\$ 53,398,803
RIGHT OF WAY COST	\$ -	\$ 40,099,233	\$ 40,099,233

Acquisition of approximately 24.1 acres is required for construction of the boulevard and complete street. Of this total, 1.8 acres are required for construction of the gateway circle.



Approximately 1.9 acres are required for construction of improvements south of Society Hill Drive and north of Duncan Avenue. The remaining 20.4 acres are required for construction of the central section from Danforth Avenue to Communipaw Avenue.

Of the required acquisition in the central section, approximately 3.4 acres are within the Bayfront development site and are to be dedicated to the construction of the boulevard and complete street as part existing agreements between the developer and the City of Jersey City. Similarly, along the northbound side, approximately 1.1 acres are within the NJCU West Campus redevelopment area, and are also expected to be dedicated to the construction of the boulevard and complete street as part existing agreements between the developer and the City of Jersey City. While the remaining 15.9 acres required along the central section are not explicitly addressed as part of any redevelopment plan, it is anticipated that as redevelopment advances, some portion of the 15.9 required acres will be dedicated to construction of the boulevard and complete street in exchange for density bonuses in redevelopment areas. However, the cost estimate was prepared assuming purchase of the affected properties at 2010 market values.

Of the \$40.1 million estimated cost for property acquisition, approximately \$20.6 million is required for acquisition of undeveloped land or portions of developed properties that do not contain buildings. The remaining \$19.5 million is required for acquisition of properties with buildings. Excluding the properties to be dedicated by the Bayfront and the NJCU redevelopment plans, acquisition of 13 buildings located wholly or in part on a total of 42 unique tax lots is required. Estimated cost for property acquisition was based upon 2010 tax assessed values of the affected properties. The tax assessment values were converted to current market value through application of a market equalization factor. The market equalization factor was developed by the Value Research Group, LLC as presented in their February 19, 2009 Summary Appraisal Report, 150 Kellogg Street Block 1290.A, Lot 9.L prepared for the City of Jersey City. Dividing the tax assessment value of the property by the market equalization rate of 0.234 yields the 2010 market value of the property and associated improvements.

11.2.2 2020 Interim Improvement

As detailed in section 9.2, construction of a significant portion of the full LPA is required by the interim year 2020 when significant components of the redevelopment of the Western Waterfront are expected to be complete. Construction costs were estimated for the portions of the LPA that are required to accommodate the initial phases of redevelopment as well as address existing congestion and traffic operational deficiencies along the corridor. Estimated



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cost of construction of the 2020 interim improvements equals \$331.3 million, or approximately 90 percent of the estimated cost of construction of the full LPA (Table 11.10).

Details by item are summarized in Table 11.11. The gateway circle at the intersection of Route 440 and Communipaw Avenue encompasses portions of both existing right-of-way and expanded right-of-way across multiple cost line items. The portion of the 2020 project cost that is attributable to Segment D under the northern section big box retail development scenario is \$8.44 million (Tables 11.12 and 11.13).



Table 11.10: Construction Cost Estimate – 2020 Interim Improvement Summary

PROJECT COST SUMMARY	Within Existing ROW	Expanded ROW	Project Total
Construction Estimate	\$ 31,913,167	\$ 131,794,159	\$ 163,707,325
Construction Engineering (CE)	\$ 3,031,751	\$ 12,520,445	\$ 15,552,196
Utilities Relocations	\$ 29,248,663	\$ 15,815,299	\$ 45,063,962
Change Order Contingencies	\$ 708,700	\$ 2,206,900	\$ 2,915,600
Total Construction Cost	\$ 64,902,281	\$ 162,336,803	\$ 227,239,083
Right of Way Cost	\$ -	\$ 40,099,233	\$ 40,099,233
Contingency (15-percent)	\$ 9,735,342	\$ 30,365,405	\$ 40,100,747
TOTAL	\$ 74,637,623	\$ 232,801,441	\$ 307,439,063

ENGINEERING AND DESIGN	Within Existing ROW	Expanded ROW	Project Total
Preliminary Engineering	\$ 2,489,227	\$ 10,279,944	\$ 12,769,171
Final Design	\$ 2,170,095	\$ 8,962,003	\$ 11,132,098
TOTAL DESIGN COST	\$ 4,659,322	\$ 19,241,947	\$ 23,901,269

TOTAL FUNDING REQUIREMENT	\$ 79,296,945	\$ 252,043,388	\$ 331,340,332
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Table 11.11: 2020 Interim Improvement Construction Cost Estimate – Item Category Details

PROJECT COMPONENT	Within Existing ROW	Expanded ROW	Project Total
EARTHWORK			
Existing Roadway Excavation	\$ 1,005,342	\$ -	\$ 1,005,342
Borrow Excavation / Fill	\$ 2,851,989	\$ 2,213,036	\$ 5,065,025
EARTHWORK TOTAL	\$ 3,857,331	\$ 2,213,036	\$ 6,070,367
PAVEMENT			
DGABC (8")	\$ 860,249	\$ 346,365	\$ 1,206,614
Subbase (6")	\$ 493,576	\$ 198,720	\$ 692,296
Base Course (6")	\$ 2,308,139	\$ 929,304	\$ 3,237,442
Inter. Course (2")	\$ 906,953	\$ 365,180	\$ 1,272,133
Surface Course (2")	\$ 1,039,453	\$ 418,535	\$ 1,457,988
PAVEMENT TOTAL	\$ 5,608,370	\$ 2,258,103	\$ 7,866,473



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PROJECT COMPONENT	Within Existing ROW	Expanded ROW	Project Total
BRIDGES/STRUCTURES	Structural costs associated with Gateway Circle included as part of retaining walls and in Gateway Circle cost estimate below. Cost for anticipated HBLR not included in estimate.		
DRAINAGE	\$ 1,190,340	\$ 1,088,560	\$ 2,278,900
DRAINAGE TOTAL	\$ 1,190,340	\$ 1,088,560	\$ 2,278,900
INCIDENTAL ITEMS			
Beam Guide Rail	\$ 19,280	\$ -	\$ 19,280
6" X 16" Conc. Vertical Curb	\$ 196,830	\$ 307,584	\$ 504,414
4" Conc. Sidewalk	\$ 459,049	\$ 1,360,013	\$ 1,819,062
Cantilever Sign Structure	\$ -	\$ 341,760	\$ 341,760
INCIDENTAL ITEMS TOTAL	\$ 675,159	\$ 2,009,357	\$ 2,684,516
LANDSCAPE & BIKEWAYS			
Topsoil and Seeding (Mainline)	\$ 246,726	\$ 112,815	\$ 359,541
Planting (Mainline)	\$ 245,100	\$ 129,000	\$ 374,100
Median Landscaping	\$ 1,574,865	\$ 1,238,825	\$ 2,813,690
Bikeways	\$ 762,400	\$ 2,333,900	\$ 3,096,300
Amenity Strip	\$ -	\$ 2,607,600	\$ 2,607,600
LANDSCAPE/BIKEWAY TOTAL	\$ 2,829,091	\$ 6,422,140	\$ 9,251,231
RETAINING WALLS			
Retaining Wall - Roadways to/from Gateway Circle	\$ -	\$ 18,115,680	\$ 18,115,680
Gateway Circle Closure Walls (24')	\$ -	\$ 7,989,120	\$ 7,989,120
Median 20" Walls	\$ 4,411,155	\$ 8,411,363	\$ 12,822,518
RETAINING WALL TOTAL	\$ 4,411,155	\$ 34,516,163	\$ 38,927,318
BIKE/PED TUNNELS BENEATH RAILROAD EMBANKMENT			
Ped Tunnel	\$ -	\$ -	\$ -
Bike Tunnel	\$ -	\$ -	\$ -
BIKE/PED TUNNEL TOTAL	\$ -	\$ -	\$ -
GENERAL ITEMS			
Field Office	\$ 168,188	\$ 88,520	\$ 256,708
Materials Field Laboratory	\$ 110,086	\$ 57,940	\$ 168,026
Erosion Control during Construction	\$ 244,625	\$ 128,750	\$ 373,375
GENERAL ITEMS TOTAL	\$ 522,899	\$ 275,210	\$ 798,109
WORK CATEGORY SUMMARY			
Earthwork	\$ 3,857,331	\$ 2,213,036	\$ 6,070,367
Pavement	\$ 5,608,370	\$ 2,258,103	\$ 7,866,473
Bridges/Structures (Gateway Circle)	\$ -	\$ 53,206,497	\$ 53,206,497



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PROJECT COMPONENT	Within Existing ROW	Expanded ROW	Project Total
Drainage	\$ 1,190,340	\$ 1,088,560	\$ 2,278,900
Incidental Items	\$ 675,159	\$ 2,009,357	\$ 2,684,516
Landscape & Bikeways	\$ 2,829,091	\$ 6,422,140	\$ 9,251,231
Retaining Walls	\$ 4,411,155	\$ 34,516,163	\$ 38,927,318
General Items	\$ 522,899	\$ 275,210	\$ 798,109
New "Hawk" Traffic Signals	\$ -	\$ -	\$ -
New Circle Signals	\$ -	\$ 500,000	\$ 500,000
New Traffic Signals	\$ 5,600,000	\$ -	\$ 5,600,000
PROJECT SUBTOTAL	\$ 24,694,346	\$ 102,489,066	\$ 127,183,412
OTHER ITEMS			
Lighting, Traffic Stripes, Signs and Delineators	\$ 740,830	\$ 3,074,672	\$ 3,815,502
Maintenance of Traffic During Construction	\$ 370,415	\$ 1,537,336	\$ 1,907,751
Training	\$ 246,943	\$ 1,024,891	\$ 1,271,834
Mobilization	\$ 2,469,435	\$ 10,248,907	\$ 12,718,341
Progress Schedule	\$ 30,000	\$ 58,000	\$ 88,000
Clearing Site	\$ 240,000	\$ 490,000	\$ 730,000
Construction Layout	\$ 220,000	\$ 890,000	\$ 1,110,000
PROJECT SUBTOTAL PLUS OTHER ITEMS (BASE)	\$ 29,011,970	\$ 119,812,871	\$ 148,824,841
ESCALATION (10-PERCENT)	\$ 2,901,197	\$ 11,981,287	\$ 14,882,484
PROJECT BASE PLUS ESCALATION	\$ 31,913,167	\$ 131,794,159	\$ 163,707,325
CONTINGENCIES AND CONSTRUCTION ENGINEERING			
CONTINGENCIES	\$ 638,263	\$ 1,976,912	\$ 2,615,175
CONSTRUCTION ENGINEERING	\$ 3,031,751	\$ 12,520,445	\$ 15,552,196
CONSTRUCTION CHANGE ORDER CONTINGENCY (Federal Elements)	\$ 708,700	\$ 2,206,900	\$ 2,915,600
UTILITIES RELOCATIONS			
5 Major Lines	\$ 25,419,083	\$ 5,526,900	\$ 30,945,983
All Other Minor Facilities	\$ 3,829,580	\$ 15,815,299	\$ 19,644,879
UTILITY TOTAL	\$ 29,248,663	\$ 21,342,199	\$ 50,590,862
RIGHT OF WAY COST	\$ -	\$ 40,099,233	\$ 40,099,233



Table 11.12: Construction Cost Estimate – Segment D Summary

PROJECT COST SUMMARY	Project Total (2020 Interim Improvement)	Segment D - Duncan to Sip
Construction Estimate	\$ 163,707,325	\$ 4,560,377
Construction Engineering (CE)	\$ 15,552,196	\$ 802,626
Utilities Relocations	\$ 45,063,962	\$ 547,245
Change Order Contingencies	\$ 2,915,600	\$ 187,400
Total Construction Cost	\$ 227,239,083	\$ 6,097,649
Right of Way Cost	\$ 40,099,233	\$ 664,401
Contingency (15-percent)	\$ 40,100,747	\$ 1,014,307
TOTAL	\$ 307,439,063	\$ 7,776,357

ENGINEERING AND DESIGN	Project Total (2020 Interim Improvement)	Segment D - Duncan to Sip
Preliminary Engineering	\$ 12,769,171	\$ 355,709
Final Design	\$ 11,132,098	\$ 310,106
TOTAL DESIGN COST	\$ 23,901,269	\$ 665,815

TOTAL FUNDING REQUIREMENT	\$ 331,340,332	\$ 8,442,172
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Table 11.13: Segment D Item Category Details

PROJECT COMPONENT	Project Total (2020 Interim Improvement)	Segment D - Duncan to Sip
EARTHWORK		
Existing Roadway Excavation	\$ 1,005,342	\$ 173,550
Borrow Excavation / Fill	\$ 5,065,025	\$ 161,980
EARTHWORK TOTAL	\$ 6,070,367	\$ 335,530
PAVEMENT		
DGABC (8")	\$ 1,206,614	\$ 103,648
Subbase (6")	\$ 692,296	\$ 59,481
Base Course (6")	\$ 3,237,442	\$ 278,100
Inter. Course (2")	\$ 1,272,133	\$ 109,270
Surface Course (2")	\$ 1,457,988	\$ 125,226
PAVEMENT TOTAL	\$ 7,866,473	\$ 675,725
BRIDGES/STRUCTURES	Structural costs associated with Gateway Circle included as part of retaining walls and in Gateway Circle cost estimate below. Cost for anticipated HBLR not included in estimate.	
DRAINAGE	\$ 2,278,900	\$ 195,941
DRAINAGE TOTAL	\$ 2,278,900	\$ 195,941
INCIDENTAL ITEMS		
Beam Guide Rail	\$ 19,280	\$ -
Fence 8 Foot High	\$ -	\$ -
9" X 16" Conc. Vertical Curb	\$ 504,414	\$ 68,400
4" Conc. Sidewalk	\$ 1,819,062	\$ 138,144
Cantilever Sign Structure	\$ 341,760	\$ -
INCIDENTAL ITEMS TOTAL	\$ 2,684,516	\$ 206,544
LANDSCAPE & BIKEWAYS		
Topsoil and Seeding (Mainline)	\$ 359,541	\$ 40,613
Planting (Mainline)	\$ 374,100	\$ 23,220
Median Landscaping	\$ 2,813,690	\$ 133,250
Bikeways	\$ 3,096,300	\$ 152,000
Amenity Strip	\$ 2,607,600	\$ -
LANDSCAPE/BIKEWAY TOTAL	\$ 9,251,231	\$ 349,083
RETAINING WALLS		
Retaining Wall - Roadways to/from Gateway Circle	\$ 18,115,680	\$ -
Gateway Circle Closure Walls (24')	\$ 7,989,120	\$ -
Median 20" Walls	\$ 12,822,518	\$ 927,200
RETAINING WALL TOTAL	\$ 38,927,318	\$ 927,200



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PROJECT COMPONENT	Project Total (2020 Interim Improvement)	Segment D - Duncan to Sip
BIKE/PED TUNNELS BENEATH RAILROAD EMBANKMENT		
Ped Tunnel	\$ -	\$ -
Bike Tunnel	\$ -	\$ -
BIKE/PED TUNNEL TOTAL	\$ -	\$ -
GENERAL ITEMS		
Field Office	\$ 256,708	\$ 15,934
Materials Field Laboratory	\$ 168,026	\$ 10,429
Erosion Control during Construction	\$ 373,375	\$ 23,175
GENERAL ITEMS TOTAL	\$ 798,109	\$ 49,538
WORK CATEGORY SUMMARY		
Earthwork	\$ 6,070,367	\$ 335,530
Pavement	\$ 7,866,473	\$ 675,725
Bridges/Structures/Culvert Tunnels	\$ 53,206,497	\$ -
Drainage	\$ 2,278,900	\$ 195,941
Incidental Items	\$ 2,684,516	\$ 206,544
Landscape & Bikeways	\$ 9,251,231	\$ 349,083
Retaining Walls	\$ 38,927,318	\$ 927,200
General Items	\$ 798,109	\$ 49,538
New "Hawk" Traffic Signals	\$ -	\$ -
New Circle Signals	\$ 500,000	\$ -
New Traffic Signals	\$ 5,600,000	\$ 800,000
PROJECT SUBTOTAL	\$ 127,183,412	\$ 3,539,561
OTHER ITEMS		
Lighting, Traffic Stripes, Signs and Delineators	\$ 3,815,502	\$ 106,187
Maintenance of Traffic During Construction	\$ 1,907,751	\$ 53,093
Training	\$ 1,271,834	\$ 35,396
Mobilization	\$ 12,718,341	\$ 318,560
Progress Schedule	\$ 88,000	\$ 6,000
Clearing Site	\$ 730,000	\$ 45,000
Construction Layout	\$ 1,110,000	\$ 42,000
PROJECT SUBTOTAL PLUS OTHER ITEMS (BASE)	\$ 148,824,841	\$ 4,145,797
ESCALATION (10-PERCENT)	\$ 14,882,484	\$ 414,580
PROJECT BASE PLUS ESCALATION	\$ 163,707,325	\$ 4,560,377
CONTINGENCIES AND CONSTRUCTION ENGINEERING		



PROJECT COMPONENT	Project Total (2020 Interim Improvement)	Segment D - Duncan to Sip
CONSTRUCTION ENGINEERING	\$ 15,552,196	\$ 802,626
CONSTRUCTION CHANGE ORDER CONTINGENCY (Federal Elements)	\$ 2,915,600	\$ 187,400
UTILITIES RELOCATIONS		
5 Major Lines	\$ 30,945,983	\$ -
All Other Minor Facilities	\$ 19,644,879	\$ 547,245
UTILITY TOTAL	\$ 50,590,862	\$ 547,245
RIGHT OF WAY COST	\$ 40,099,233	\$ 664,401

11.3 Annual Operations and Maintenance Cost Estimate

In addition to the cost of constructing the boulevard and complete street, there will be recurring costs associated with the operation and maintenance of the facility. Many operating costs are routinely recurring items such as landscape maintenance and roadway repaving. Other items are recurring, but not necessarily on a routine basis such as snow removal, signal or lighting pole knockdown repair. For a traditional roadway facility, operating and maintenance costs range from one to one and one-half percent of the construction costs of the facility. However, due to the many unique features of the proposed boulevard and complete street such as the extensive landscaping and sidewalk amenities, the annual operating costs are likely to be somewhat greater than the typical range experienced on typical roadways.

Details necessary to develop a location-specific operation and maintenance cost estimate will be developed during the preliminary engineering phase of the project delivery process. Accordingly, estimates were utilized in developing this preliminary estimate of annual operating costs based upon the 2009 and 2010 typical per-lane-mile routine maintenance costs for Route 440, per-lane-mile milling and resurfacing costs from recent work performed along Route 440 in Bayonne, preventive signal maintenance costs from recent maintenance contracts in Jersey City, and landscape/public area maintenance costs estimated based upon order of magnitude per-square-foot costs for the various types of landscape areas along the corridor. Annual maintenance and operating costs are estimated to be approximately \$7.25 million (Table 11.14), including a 25 percent contingency for unforeseen items and electric costs to power the lighting and traffic signals. This represents approximately 2.1-percent of the total estimated construction cost of the boulevard and complete street LPA.



Table 11.14: Annual Operations and Maintenance Costs

Annual Operations and Maintenance Costs	
Routine Roadway Maintenance	\$ 1,327,229
Landscape / Streetscape Area Maintenance	\$ 2,219,133
Traffic Signal / Lighting Maintenance	\$ 140,000
Milling/Resurfacing (5 Year intervals)	\$ 2,113,924
Sub-Total	\$ 5,800,286
Contingencies	\$ 1,450,071
TOTAL	\$ 7,250,357

The boulevard and complete street LPA is designed to accommodate heavy trucks in the event that none of the through truck diversion alternatives are constructed. In addition to the range of benefits provided by the recommended through truck diversion alternatives (section 8.1) the reduction in the volume of heavy trucks traveling along the boulevard and complete street reduces annual maintenance costs for the corridor. Annual heavy truck VMT reductions along the length of the boulevard and complete street were projected for the four through-truck diversion alternatives recommended for advancement. Annual highway maintenance cost savings for each of the alternatives is summarized in table 11.15.

Table 11.15: Annual Maintenance Cost Savings from Diversion of Heavy Through Trucks

	Alt W-4	Alt W-5	Alt S-5	Alt S-6
Annual Heavy Truck VMT Change along Route 440/Routes 1&9T Corridor	-654,497	-1,136,923	-22,275	-22,275
Highway Maintenance Cost per Heavy Truck-Mile	\$0.156	\$0.156	\$0.156	\$0.156
Annual Maintenance Savings	\$102,101.55	\$177,359.97	\$3,474.97	\$3,474.97

Maintenance and upkeep of the boulevard and complete street is critical in maintaining livability of the neighborhoods that abut the corridor. It is recommended that a Special Improvement District (SID) be created to provide adequate upkeep of all aspects of the boulevard and complete street. SID operations should be funded through a combination of special assessments and external funding.



11.4 Potential Funding Sources and Constraints

11.4.1 Capital Construction Funding

Funding preliminary engineering, final design and construction of the physical improvements proposed as part of the Route 440/Routes 1&9T Concept Development Study will likely prove challenging, particularly in the existing economic climate. The project proposes multi-modal improvements, including bicycle and pedestrian improvements and rail service extensions. Presently, no single funding program exists that could provide the necessary funding to cover all multi-modal categories in the necessary amounts projected to complete the project. Additionally, the nationwide and statewide demands for capital investment funds are highly competitive.

Competition for existing and future funds is anticipated to be intense because of the constrained fiscal environments at the federal, state and local levels combined with the increasing need to maintain/replace the area's aging infrastructure. Some projects have, therefore, used a combination of funding mechanisms. For example, the Liberty Corridor Phase I projects used a combination of private funds, NJ Transit funds, NJDOT funds, NJ Turnpike funds, and federal funds. Even with this combination of project partners and funding participants, inadequate funding was made available for completion of all of the program projects. The program projects are being advanced in a phased fashion, with uncertainty beyond the next couple of years regarding future funding availability and what other major infrastructure projects will be competing for these funds.

A local example of this potential competition challenge is the Pulaski Skyway. The NJDOT has identified the Pulaski Skyway as being in need of significant repair and potentially replacement due to the age and deteriorated state of the infrastructure. The NJDOT FY2012-2016 Draft Capital Program allocates \$900 million over the next five years, with an additional \$400 million allocated beyond FY2016 for structural repair and replacement of the 4.4 mile long Pulaski Skyway. Annual allocations of up to \$200 million represent nearly 10 percent of the \$2.12 billion NJDOT's annual funding from the Transportation Trust Fund and federal support. With limited federal and state resources available, an extensive list of competing projects also seeking funding, and the current principle of Fix-it-First guiding investment prioritization decisions, it is likely that traditional funding sources like the transportation trust fund will not be available to fully finance the implementation of the Route 440/Routes 1&9T corridor improvements.



The Route 440/Routes 1&9T study corridor falls within two jurisdictions, NJ Department of Transportation (NJDOT) and the City of Jersey City. Funding sources available to the state agency (NJDOT) may not be available to the local jurisdiction (Jersey City), and vice versa. It is important to understand the various sections of the project, the proposed improvements in those sections, and the potential funding sources available. Different elements of the corridor may be eligible for different funding sources based on the element type. For example, special funding sources may be available for the enhancement of bicycle facilities. The PANYNJ is a potential source of funds as the improvements will serve the regional movement of freight.

It is also important to understand the current fiscal and funding climate, which is severely constrained at both the state and federal levels. Competition for project funding is intense and requires a compelling case be made to obtain funds. As a result, it is likely that the Route 440/Routes 1&9T study will require a creative funding approach that will draw funds from a range of public sources. The NJTPA, which is a conduit for federal monies through a variety of programs with different transportation goals, does provide funds to the State of New Jersey as well as its northern New Jersey subregions, such as Hudson County and Jersey City, and accordingly, could be a potential source of funds for the project. The federal government occasionally has offered unique programs that the City can directly apply for, such as the TIGER and TIGER II programs. Additionally, some funding may be leveraged from the private sector, as the LPA is likely to attract private sector investment in land adjacent to the corridor.

11.4.1.1 State and Federal Transportation Fund Status

New Jersey Transportation Trust Fund - In anticipation of the Transportation Trust Fund (TTF) renewal in 2011, the FY 2011 Capital Program compressed some anticipated multi-year TTF expenditures into FY 2011. This limits the available resources in several asset areas of the spending plan for new projects.

The FY 2011 Transportation Capital Program is supported primarily by the TTF and federal resources. The overall program presented in final form amounts to \$3.54 billion (<http://www.state.nj.us/transportation/capital/tcp11/>). The program is a list of projects identified by the state as necessary. Under typical circumstances, all of these projects would receive funding.



However, the state contribution to the Transportation Trust Fund is programmed at only \$1.6 billion, shared between NJDOT and NJ Transit. The Federal support for FY 2011 is projected at \$1.72 billion shared between NJDOT and NJ Transit. While the combined federal and state contribution brings the total available funds up to \$3.52 billion, \$3.54 billion is required to fund the programmed improvements. This means that not all programmed improvements will be funded in FY 2011, leaving a remainder to be addressed in the next fiscal year. FY 2012 funding is expected to remain at the FY 2011 levels. Funding levels for subsequent years is uncertain at this time.

While the available and promised funds for planned transportation improvements in New Jersey have always been less than the demands, the present fiscal climate is worse than normal and improvement may be a while in coming. Recent analysis by the Regional Plan Association of NY, NJ, and CT indicates that the Fund will run out of money by mid-2011 at the latest, placing road repairs, transit services and vital federal funds at risk. By 2011, the nearly \$900 million in tax revenues raised for the fund every year will be dedicated entirely to paying off interest and principal on old debt. This scenario puts at risk is \$1.6 billion in federal matching grants, and increasing revenue for the Fund by raising the gasoline tax is considered to be politically infeasible at this time.

As a result, the NJ Transportation Trust Fund is funded at a level below what is needed to pay for road, bridge and transit repairs in the state. Using the Fund for a new project not based in a pressing safety issue is unlikely in the near term.

Federal Government Transportation Fund - Recent estimates by the U.S. Department of Transportation concluded that the federal government requires \$76.1 billion in annual highway spending until 2026 to maintain national highways and eliminate a backlog of road and bridge projects. The gap between the projected revenue into the Highway Trust Fund (estimated by the Congressional budget Office (CBO) to be \$234 billion from 2010 through 2015) and the program needs as estimated by the House Transportation Chairman James Oberstar (\$450 billion for highways and transit) would require an extra \$216 billion over the life of the next authorization.

The federal gas tax (18.4 cents per gallon) is expected to fully fund highway and transit programs through the end of 2012 and into 2013, according to the Congressional Budget Office. However, funding for the long term is not assured. While the Hiring Incentives to Restore Employment (HIRE) Act, which moves \$19.5 billion from the General Fund into the Highway



Trust Fund (to reimburse the HTF for interest payments not received since 1998) and allows the HTF to heretofore collect interest on its deposits, will provide sufficient federal highway and transit funding for maintenance and backlog funding for the near future, HIRE does not provide sufficient funding for new projects.

Projects of National and Regional Significance – The FHWA allocates special funding for high cost projects of national or regional importance. Established as part of SAFETEA-LU, projects eligible for this special funding include any surface transportation project that has a total cost greater than or equal to the lesser of (1) \$500 million or (2) 75 percent of the amount of Federal highway funds apportioned to the State in which the project is located for the most recently completed fiscal year. Assuming that federal highway funds will remain at their existing levels for the foreseeable future, surface transportation projects with costs in excess of \$500 million. Applications for funding are solicited by the U.S. Secretary of Transportation with funding for projects awarded competitively through an evaluation process that considers the ability of the project to:

- generate national economic benefits
- reduce congestion
- improve transportation safety
- enhance the national transportation system
- garner support for non-Federal financial commitments and the degree to which Federal investment is leveraged
- provide evidence of stable and dependable financing for construction, maintenance, and operation of the facility
- use new technologies that enhance project efficiency
- help maintain or protect the environment

This study addresses the benefits of the through truck diversion alternatives within the context of support for growth in the Western Waterfront. As the four through truck diversion alternatives recommended for further study are advanced, the potential national and regional significance of these projects should be evaluated to determine the potential for success in securing funding as projects of National and Regional Significance.

Transportation Capital Program & Transportation Improvement Program - The New Jersey Department of Transportation allocates funds to projects and programs through two main capital program documents: the transportation capital program and the statewide transportation improvement program.



The transportation capital program allocates state and federal transportation funding for the period of one state fiscal year (July 1 through June 30) for both the NJDOT and the NJ TRANSIT Corporation. It also includes funds that are allocated to counties and municipalities. Although a four-year constrained plan is required by federal law, NJDOT and NJ TRANSIT are allocating funding over a ten-year period and constraining the plan to what are reasonable revenue expectations.

Like the transportation capital program, the statewide transportation improvement program (STIP) includes both state and federal funding and includes projects and programs of the NJDOT, the NJ TRANSIT Corporation, and the counties and municipalities. The STIP is compiled from three regional transportation improvement programs (TIP), which are developed in conjunction with New Jersey's three metropolitan planning organizations (MPO).

The portions of the Route 440/Routes 1&9T project under state jurisdiction may be included in the STIP. The likelihood of funding through the Transportation Capital Program relies in part on the function of the project in the regional roadway network, relative to other STIP projects. As the STIP changes yearly, reflecting the implementation of multiple project statewide, use of the NJDOT's Transportation Economic Land Use System (TELUS) is recommended to determine the funding potential for the Route 440/Routes 1&9T project in any given year.

Demonstration Funds (DEMO) - Federal transportation acts sometimes target specific projects in various states in addition to general programs for federal support. This funding category includes "demonstration" funding such as the funding provided under the Intermodal Surface Transportation Efficiency Act (ISTEA), as well as "high priority project" funding provided under Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU). While both of these programs have recently expired, it is anticipated that similar programs will be advanced as the next generation of these programs. These projects, for "demonstration" or "high priority project" funding often have special rules applying to their use. Demonstration projects are generally provided as part of the annual transportation appropriation acts or the six-year transportation authorization acts. Both acts provide general project description and fund amount.

Demonstration projects are initiated by Congress at the request of constituents within a given congressperson's district. The agency, special interest group, or individual that requests the project through a Congressperson is known as the project sponsor. Once a project has been



earmarked, the project sponsor should notify and provide NJDOT with a copy of the application that was sent to their Congressperson.

Demonstration funds are allocated to specific projects by law. The proposed project must therefore, match the legislated project description and fund amount. It is therefore, the responsibility of the project sponsor to assure the accuracy of the project description and fund amount. These funds can only be used for the project to which they were assigned by law. Any changes to the legislated project description or funding must be approved by Congressional action.

The yearly allocations for Demonstration projects are only available after passage of the respective annual acts. The yearly allocations are subject to the annual limits set by Congress in the appropriations act. This means that even though a certain amount of funds are allocated, the appropriations act sets limits on how much can actually be spent.

Funding through the Demonstration program requires that the Route 440/Routes 1&9T project be identified as a “high priority highway and bridge” or “State priority” project. Competition for DEMO funds is significant, and the annual appropriations have been in the \$100-million range, available to all priority projects in all 50 states. It is unlikely that if the Route 440/Routes 1&9T project could be designated as a priority project, that the DEMO funding would be sufficient to address the project’s funding requirements in their entirety.

National Highway System (NHS) - Route 440 is a component of the Nation Highway System (NHS) and qualifies for the NHS funds apportioned to the State of New Jersey. The NHS funding category has been established to support improvement projects on this highway network that may be obligated for:

- Construction, reconstruction, resurfacing, restoration, and rehabilitation of the NHS
- Operational improvements for segments of the NHS
- Highway safety improvements for segments of the NHS
- Carpool and vanpool projects
- Bicycle transportation and pedestrian walkways in accordance with 23 U.S.C. 217
- Infrastructure-based intelligent transportation systems capital improvements



The total annual appropriation for the National Highway System is notably greater than the DEMO program, totaling in the billions each appropriation year; however, the increase in available funding is the consequence of the scale and importance of the National Highway System. As a result, NHS funds are not necessarily more plentiful than DEMO funds.

The portion of the Route 440/Routes 1&9T boulevard right-of-way under NJDOT control areas would likely qualify for NHS funding. Areas outside of the existing right-of-way are designed primarily to serve the adjacent neighborhoods and incorporate bicycle and pedestrian facilities and would likely not qualify for NHS funding.

Recreational Trails Programs (RTP) - New Jersey's Recreational Trails Program provides grants to public agencies and non-profit organizations for a variety of trail projects. The NJ Department of Environmental Protection's Division of Parks and Forestry administers the program. The RTP is an assistance program of the US Department of Transportation's Federal Highway Administration (FHWA).

The Recreational Trails Program (RTP) provides funds to the States to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Funds may be used to construct new trails (with restrictions for new trails on Federal lands) but may not be used for land condemnation for trails. Examples of trail uses include hiking, walking, bicycling, in-line skating, and other off-road motorized vehicles. This includes urban and town centered trails that link to other existing pedestrian and bicycle travelways, connect neighborhoods to public transportation systems, downtowns, retail centers, and employment sites.

The maximum grant award for non-motorized trail projects is \$25,000, and all projects awarded grant money must be completed within three years of the grant award. The proposed pedestrian improvements that link uses east of Route 440/Routes 1&9T with the existing trail along the Hackensack River as well as the pedestrian and bicycle paths along the corridor would be eligible to compete for this grant. Additional limitations and qualifications can be found on the NJDEP's website at: http://www.nj.gov/dep/parksandforests/natural/trail_grants.htm.

Safe Routes to School (SRTS) - The Safe Routes to School Program is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). This federal funding category provides funds to the states to substantially improve the ability of primary and middle school students (grades K – 8) to walk and bicycle to school safely. The program



establishes two distinct types of funding opportunities: infrastructure projects (engineering improvements) and non-infrastructure related activities (such as education, enforcement and encouragement programs). New Jersey's appropriation for the SRTS funding in 2009 was approximately \$5.1 million.

Eligible infrastructure-related projects include the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including:

- sidewalk improvements
- traffic calming and speed reduction improvements
- pedestrian and bicycle crossing improvements
- on-street bicycle facilities
- off-street bicycle and pedestrian facilities
- secure bicycle parking facilities, and
- traffic diversion improvements in the vicinity of schools

Construction and capital improvement projects must be located within approximately two miles of a primary or middle school (grades K - 8).

Proposed pedestrian circulation elements of the Route 440/Routes 1&9T project may be eligible for these funds. Additional information on restrictions and applications may be found on the program's website: <http://www.saferoutesinfo.org/>

Congestion Mitigation and Air Quality (CMAQ) - This federal-aid funding category was established under ISTEA to support projects which improve air quality and/or relieve congestion without adding new highway capacity. These funds are especially targeted for states like New Jersey with serious air quality problems.

To be eligible for CMAQ funds, a project must be included in the MPO's current transportation plan and TIP (or the current STIP in areas without an MPO). Eligibility for CMAQ funding requires that the projects will demonstrate net emissions benefits.



The bicycle lanes and the pedestrian facilities proposed for the Route 440/Routes 1&9T Study are anticipated to contribute to decreasing vehicle emissions and should qualify wholly or in part for CMAQ funding.

Surface Transportation Program (STP) - The Surface Transportation Program (STP) provides flexible funding that may be used by States and localities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intra-city and inter-city bus terminals and facilities.

This federal-aid funding category, established under ISTEA, encompasses funding previously made available under various smaller federal-aid categories as well as a broad, flexible component. STP (Section 1108) funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use. TEA-21 lists the modification of public sidewalks to comply with the Americans with Disabilities Act as an activity that is specifically eligible for the use of these funds. Approximately \$33 billion was authorized for this program over the six years of the legislation (Section 1101(a)(4)). While ISTEA and TEA-21 have expired, it is anticipated that future reauthorization of these programs will include similar funding category availability

11.4.1.2 Other Funding Programs (OTHER)

This section discusses funding provided from sources other than those traditionally offered by state or federal transportation agencies for capital improvements. Many address service programs. Sources could include the Port Authority of New York and New Jersey, other state agencies, private developers, counties or municipalities.

Hudson County Open Space Trust Fund - Hudson County maintains an Open Space Trust Fund dedicated to the advancement of open space, parks and recreation, and historic preservation activities. The trust fund is replenished each year through collection of a one-cent tax per \$100 of assessed valuation on properties within Hudson County. Equating to an average of approximately \$25 per tax assessed property within Hudson County; the fund generates approximately \$6 million per year. These funds are allocated to the support of four categories of projects: property acquisition; improvements to parks and recreation facilities; historic preservation; and planning, environmental, engineering, historic preservation studies. In 2010,



the fund received a total of 31 applications for seeking approximately \$25 million in funding support. A total of 17 projects were selected to receive \$6.1 million in funding support.

In 2010, it is likely that no additional projects will receive support from the fund. Preliminary plans are for the revenues generated by the tax assessment to be used exclusively for servicing of debt from the bonding of past projects. While there is uncertainty as to the level of support that will be available in future years, application could be made by the City of Jersey City for financial support in the design and construction of the Route 440 / Routes 1&9T Multi-Use Urban Boulevard, particularly the elements related to the creation of a new public realm within the central portion of the roadway circle planned for construction at the intersection of Route 440 with Communipaw Avenue.

Private Sources and Local Funding - Developer Contributions - Several other states, most notably California, assess fees to developers to compensate the local jurisdiction for the anticipated impact of the proposed development on existing facilities and services. The fees, which can take the form of monetary compensation or physical construction, are codified in an approved fee schedule adopted by the municipal government and are typically considered to be either “Development Impact Fees” or “Developer Exactions.”

Development Impact Fee

Development impact fees are one-time charges applied to offset the additional public-service costs of new development. They are usually applied at the time a building permit is issued and are dedicated to the provision of additional services such as roadways, traffic control devices, utilities, and sidewalks that become necessary with a land use change due to redevelopment or a new development. The funds collected cannot be used for operation, maintenance, repair, alteration, or replacement of existing capital facilities and cannot just be added to general revenue. They are essentially user fees levied in anticipation of use, expanding the capacity of existing services to handle additional demand. The amount of the fee must be clearly linked to the added service cost, not some arbitrary amount.

The fees must be applied to all parties on the same basis. All new development that imposes an impact must be assessed the same kind of fees, although fees



may vary by the magnitude of impacts and must be rationally related to the public purpose. Courts have considered whether imposing a fee on new but not pre-existing residences violates the equal protection clause of the 14th Amendment to the U.S. Constitution. The general conclusion has been that municipalities have a legitimate governmental purpose in classifying properties for levying fees, and impact fees have been upheld.

Developer Extractions (applied in California)

This type of program requires a developer to contribute a specific amount of money per residential unit or per 1,000 square feet of commercial development toward a community fund for public infrastructure improvements. This is a variation of a development impact fee.

Although impact fees and exactions are not part of the land development approval process in New Jersey, it is possible to establish a mechanism by which development would be so assessed. The process is complex, however, requiring the development of municipal codes and approvals from the various municipal authorities affected by the new regulations. In addition, the development of the code must conform to the Supreme Court determinations made in both *Nollan vs. The California Coastal Commission* and *Dolan vs. Tigard*, which establish the tests for rational nexus and rough proportionality, respectively.

While both impact fees and exactions can be useful tools for leveraging private dollars to fund necessary improvements, the context must be carefully regarded. In New Jersey, a developer would not typically encounter fees and exactions. Deliberately selecting a location that would cost more to develop as a result of the fees and exactions is counter-intuitive to the profit-making aspect of land development. Practical incentives would likely be required as a companion to the fees and exactions if this approach to funding is seriously considered.

A third method of obtaining developer contributions, Negotiated Agreements, has been regarded as potentially illegal and therefore not possible in New Jersey. Negotiated Agreements are used in some other states primarily as a method to obtain necessary housing ratios. During the negotiation, incentives for the developer, such as tax deferments, are offered in exchange for increasing the number or type of affordable housing units included in a project. New Jersey's builder's remedy largely addresses this issue without requiring closed-door negotiations between the developer and the local jurisdiction.



PANYNJ - The PANYNJ has provided funds in support of infrastructure improvements that facilitate the movement of goods to and from the regional maritime and rail terminals. As with other public agencies, funding is presently scarce and obtaining what funding is available is a competitive process. If available, PANYNJ funds would most likely be applied to any improvements associated with truck diversions that facilitate the movement of trucks to and from the maritime terminals, or accommodating some trucks along the corridor and mitigating the impacts as is inherent to the design of the LPA.

Special Needs/Service Funding Categories - These funding categories may contribute a relatively minor investment to the overall funding needs. While these funding programs are generally geared towards the operation of mass transit, components of the LPA such as the BRT system and linkages to the HBLR improve job accessibility for the residents of environmental justice communities and transportation for the disabled. These elements of the LPA could potentially qualify for funding under one or more of the following funding section categories.

Section 5316

This is a Federal Transit Administration program which provides funding for selected municipal plans that either increase job accessibility for the most disadvantaged members of the population or facilitate reverse commute movements (offering access to employment outside of the urban centers).

Section 5317

Improved public transportation services, and alternatives to public transportation, for people with disabilities beyond those required by the Americans with Disabilities Act of 1990 (ADA). (N/A)

Section 5339

Federal Transit Administration-Federal Congressional earmarks to projects for Alternatives Analysis.



Section 5310

Programs for Elderly and Persons with Disabilities— Federal funds are provided for the purchase of small buses or van-type vehicles with lifts for private or non-profit agencies that serve the elderly and persons with disabilities. (formerly known as the Section 16 Program).

DOT/HUD/EPA Livability Principles - The NJDOT provides some grant funding under their “Centers of Place” program for municipalities that participated in the implementation of the New Jersey State Development and Redevelopment Plan. The funding source would apply to elements of the LPA that also meet these principles:

- Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation’s dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- Support existing communities. Target federal funding toward existing communities—through strategies like transit oriented, mixed-use development, and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
- Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.

TIGER II Discretionary Grants -. In 2010, the USDOT was authorized to award \$600 million in TIGER II Discretionary Grants pursuant to Title I (Department of Transportation) of the FY 2010



Appropriations Act (Pub. L. 111-117, Dec. 16, 2009). This appropriation was similar, but not identical to the appropriation for the Transportation Investment Generating Economic Recovery, or "TIGER Discretionary Grant", program authorized and implemented pursuant to the American Recovery and Reinvestment Act of 2009 (the "Recovery Act"). Because of the similarity in program structure and objectives, DOT referred to the grants for National Infrastructure Investments under the FY 2010 Appropriations Act as "TIGER II Discretionary Grants". As with the TIGER program, funds for the TIGER II Discretionary Grant program were awarded on a competitive basis for projects that will have a significant impact on the nation, a metropolitan area, or a region. Although this specific program has concluded, continuation of this type of funding "competition" program into the future is anticipated

Transportation Infrastructure Finance and Innovation Act (TIFIA) - The TIFIA program provides Federal credit assistance to nationally or regionally significant surface transportation projects, including highway, transit and rail. The program is designed to fill market gaps and leverage substantial private co-investment by providing projects with supplemental or subordinate debt. Participation by developers in the advancement of transportation infrastructure along the corridor constitutes substantial private investment with respect to the LPA and potential funding under TIFIA.

Each project must meet certain objectively measurable thresholds to qualify, several of which were lowered by SAFETEA-LU. A project must cost at least \$50M or 1/3 of the State's annual apportionment of Federal-aid highway funds whichever is less. Freight projects with a common objective of improving the flow of goods may be combined to meet project thresholds. A project must be consistent with the State's long-range transportation plan and be included in the transportation improvement program.

New Jersey Environmental Infrastructure Trust - Established in 1987, the New Jersey Environmental Infrastructure Trust has been providing low interest loans to municipalities for drinking water, waste water, storm water, remediation and land acquisition projects. To encourage development in urban areas, the program offers low-interest loans for qualifying Smart Growth projects. Smart Growth loans receive 75 percent of project costs from zero interest State Revolving Funds and 25 percent from a market-rate Trust loan (75/25 split), effectively reducing the loan rate to approximately one-quarter of traditional market rate loans. Following is a summary of the types of projects that could qualify for these loans.



- Clean water and drinking water infrastructure projects serving an approved Urban Center. Jersey City and development activity centers within Bayonne are included in the list of approved Urban Centers.
- Projects that eliminate or improve combined sewer overflows, and
- Wastewater and/or stormwater infrastructure projects to serve increased populations in Transit Villages designated as such by the inter-agency Transit Village Task Force

As the preferred alternative for improvements to the Route 440/Routes 1&9T corridor includes relocation and replacement of major potable water, stormwater and combined sewer lines, this fund may prove viable for securing of financing for the implementation of the utility components of the project.

11.4.1.3 Challenges and Constraints to Funding – Limited Resources, Program Uncertainty and Project Competition

The nation is currently facing a transportation infrastructure funding crisis, manifesting itself in a growing transportation infrastructure investment deficit. The challenges and constraints to securing adequate funding to construct the Route 440 / Routes 1&9T Multi-Use Urban Boulevard and Complete Street may be aggregated into three (3) primary categories: limited funding availability; uncertainty in the future form of federal and state funding programs; and competition between other infrastructure projects seeking funding.

Limited Resources

On December 8, 2010, the U.S. House of representatives passed a Continuing Resolution (CR) extending federal programs for funding of transportation infrastructure maintenance and construction through Sept. 30, 2011. While passage of this CR was critical to allowing the maintenance and improvement of the nation’s infrastructure to continue, it merely continued the funding for surface transportation programs at fiscal year 2010 levels. At these funding levels, it is likely that a majority of the available funding will be dedicated to maintenance and reconstruction, with limited resources available for expansion and growth.



Uncertainty in Future Program Forms

While the federal reauthorization bill is still being formulated, three considerations can be identified now:

- The overall federal legislation will not be available immediately, but will be available at some point during the period of time when funding will be required for the boulevard and complete street design and/or construction phases
- The requirements for federal funding are likely to be different and may include more competitive application programs similar to the TIGER grant programs.
- In the interim, programs similar to TIGER I and II may be announced, and Jersey City should be prepared should such funding opportunities emerge.

In addition, the 2009 American Recovery and Reinvestment Act created a new form of bonds known as Build America Bonds ("BABs"). Build America Bonds are taxable and, through Federal subsidies or tax credits, are intended to reduce municipal borrowing costs. Build America Bonds were intended to expand the market for municipal bonds by attracting buyers that normally would not buy tax-exempt bonds, thus creating a new alternative for funding infrastructure improvement on a state or local level with federal support.

The program expired on Dec 31, 2010. On December 10, 2010 - Senate Majority Leader Harry Reid releases a tax compromise measure that did not include an extension of the Build America Bond (BAB) program. However, Representative John Mica, who became House Transportation and Infrastructure Committee chairman in January 2011, subsequently announced plans to introduce a "reincarnation" of the Build America Bonds program.

11.5 Routes 440 /1&9T Boulevard and Complete Street Capital Funding Plan

Although the status of the federal Transportation Bill is undecided, the project implementation plan should anticipate that the US Congress will pass the annual appropriation bill. To be realistic, it should be anticipated that the eventual appropriation, now expected in June 2011, will provide less funding than in previous years.



In terms of the other funding options summarized above, efforts to pursue a single funding source from the typical public sources will face assertive challenges from other competing projects due to the limited availability of public funds. However, the proposed improvements include a variety of elements that may be funded through a combination of the focused programs and initiatives detailed above.

Additionally, the planned improvements to the boulevard will affect an increase in property values, especially those adjacent to the corridor, and attract private development or investments to the area. It is therefore reasonable to anticipate private sector contribution to funding elements of this public transportation infrastructure through land contributions to support the transportation infrastructure that is required to support development, and in exchange for zoning permissions for build at increased densities

It is therefore likely that funding will come from multiple sources at various levels, multiple funding programs, both public and private sources, and in multiple year allocations. These funding programs have specific use categories and other required features for eligibilities. The implementation strategy should be tailored with the flexibility to accommodate funding program requirements and availability, including a phased construction schedule that allows project elements to proceed in the order that funding becomes available. Compartmentalization of the improvements, such as pedestrian and bicycle facilities, will also provide the flexibility to pursue several funds concurrently.

It is important to note that right-of-way acquired by way of subdivision and site plan approval (granting developer approval in exchange for turning over right of way for road widening) is not permitted by the FHWA regulations governing the acquisition of Right-of-Way. These requirements are set forth in the 23 CFR 710, and incorporated into the *Federal-Aid Policy Guide, December 22, 1999, Subtitle A - Part 24 - Uniform Relocation Assistance And Real Property Acquisition For Federal And Federally Assisted Programs*, the stated purpose of which is:

- (a) To ensure that owners of real property to be acquired for Federal and federally-assisted projects are treated fairly and consistently, to encourage and expedite acquisition by agreements with such owners, to minimize litigation and relieve congestion in the courts, and to promote public confidence in Federal and federally-assisted land acquisition programs;



(b) To ensure that persons displaced as a direct result of Federal or federally-assisted projects are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole.

Since Route 440 / Routes 1&9T corridor was constructed with a combination of federal and state funds, and in anticipation of federal and state funds being used to fund portions of the planned improvements, these regulations would govern any conveyance or acquisition of property required for the completion of the improvements. The regulations prohibit the voluntary transfer, or *donation* of privately owned real property for the benefit of a public transportation project without compensation or with compensation at less than fair market value. These guidelines expressly state in section 710.505 that;

(c) Donations and conveyances in exchange for construction features or services. A property owner may donate property in exchange for construction features or services. The value of the donation is limited to the fair market value of property donated less the cost of the construction features or services. If the value of the donated property exceeds the cost of the construction features or services, the difference may be eligible for a credit to the State's share of project costs.

Within the central section of the boulevard (Route 440 from Danforth Avenue to Communipaw Avenue), construction of the local travel lanes and the medians separating them from the through travel lanes (to be constructed within the existing NJDOT right of way) is to be the responsibility of the local developers as part of their redevelopment projects because the frontage road will serve to provide access and facilitate circulation for the development projects themselves. Local zoning may be modified to include provisions for density bonuses as a form of compensation in exchange for the donation of property along the corridor for construction of the boulevard improvements that are outside of the existing NJDOT right of way.

11.6 Conclusions

Redevelopment of the Western Waterfront as envisioned in the Circulation Element of the Jersey City Master Plan will provide significant benefits to the residents, employees and visitors



to Jersey City. In addition to creating new livable communities and expanding open space in Jersey City, the envisioned redevelopment will generate over 12,000 new jobs, nearly 9,500 of which will be created in Hudson County. These jobs will generate in excess of \$520 million in personal income annually. Combined with over 41.3 billion in annual business activity, over \$200 million in tax revenues will be generated annually. Nearly \$32 million of these tax revenues will accrue to the State of New Jersey, with an additional \$26 million in local revenues.

Construction of the boulevard is critical to attracting the level of new development envisioned in the Master Plan. Without significant improvement to the corridor, including the integration of multi-modal opportunities, the existing transportation infrastructure simply cannot accommodate significant growth.

The cost for construction of the LPA is estimated to be approximately \$ \$367.9 million. The growth that this investment will support and make possible is expected to generate over \$202 million in federal, state and local tax revenues annually, and create over 12,000 new permanent jobs in new Jersey, nearly 9,500 of which will be in Hudson County. While the initial investment is significant, the annual return on this investment is highly positive, and will continue year after year, long after the initial investment is complete.



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