

## 8.0 Other Projects Considered and Findings

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### 8.1 PARKING RATIO

Most urban areas have some form of parking management. However, few of these areas have attempted to limit the number of available spaces or provide incentives for non-single occupant vehicle (SOV) forms of travel. Jersey City has been one of a hand full of cities in the U.S. to limit the parking supply as a vehicle trip reduction strategy by setting a maximum parking space requirement that developers may not exceed. This is contrary to requirements in many areas that specify a minimum number of spaces that developers must create. In the private sector, many employers may provide preferential parking for carpoolers. These efforts may be performed voluntarily, or be required under a local trip reduction ordinance.

In order for Jersey City to continue to grow within the office and residential markets and to provide for economic growth of the Downtown area, public mass transit projects must be advanced ---- including the Transit Options 1,2,3 &4 contained in this report --- since the roadway network can not and would not be able to accommodate additional traffic in the future. In addition, Jersey City must prohibit commuter park and ride parking near transit stations since an unlimited requirement could promote additional vehicles deep within the downtown area and defeat the intent of intercept parking.

An additional benefit of limiting parking space may result from the potential higher economic use of land that would otherwise be used for parking. However, an unintended consequence is that drivers may circle an area frequently in search of parking, which could lead to increased congestion. Also, vehicles could be drawn to fringe, retail-only, or residential parking, which may be undesirable for residents and require further enforcement and signage needs.

Costs of this measure include those incurred for administration of a program and for enforcement if the measure is required. Additional costs may include the costs of building facilities for preferential parking, signs, and parking booth attendants if they are required.

Parking management measures may be required by ordinance or they may be voluntary. The measure does not require a substantial amount of financial resources to implement, although a large amount of political capital may be required to overcome business and employer objections to reducing or limiting available parking. To implement overall parking limits, an area may need to conduct parking surveys and studies, and develop and seek input on plans. This section identifies general guidelines for future refinement and/or endorsement by the governing body.

Policies that limit available parking supply work best where the following conditions are met:

- Current parking is well utilized (where supply doesn't greatly exceed demand);
- Transit, bicycle and pedestrian, and ridesharing facilities and programs exist to absorb commuters that no longer drive;
- Vacant land and neighborhoods do not have the capacity to absorb the overflow or are well controlled by parking restrictions.

Parking policies generally affect all groups of commuters equally. Those already using public transit or with access to it may be inconvenienced the least. Those who must drive may bear more of the cost because they will be required to pay higher parking fees which usually result when the parking supply is limited. Commuters who are able to carpool or vanpool may benefit the most from preferential parking for HOVs. Urban residents may find that residential parking becomes limited if overflow parking is not controlled.

The main focus of this section is to determine what the existing general parking ratios are for residential, office and retail and to recommend minimum and maximum general parking ratios.

**Table 8-1 Residential and Commercial Parking Ratios**

<b><u>Residential:</u></b>			
Total Housing Units	93,646		
Occupied Units	88,632	95% Occupied	
(approximately 70% rent and 30% own)			
Total Office Space:	5.5 million square feet		
<b>Vehicles Available</b>		<b>Number of Cars</b>	
None	36,050	41%	-
1	36,910	42%	36,910
2	12,224	14%	24,448
<u>3</u>	<u>3,448</u>	<u>4%</u>	<u>10,344</u>
	88,632		71,702
71,702	Total Parking Spaces Need For	88,632	Occupied Residential Units
0.81	Parking Spaces per Unit is the Existing Condition		

**Table 8-1 (continued)**

<b><u>Commercial:</u></b>		
4,902	Spaces of Office	29%
6,806	Spaces of Retail	40%
4,896	Spaces of Residential	29%
<u>295</u>	<u>Spaces of Hotel</u>	<u>2%</u>
16,899	Total Spaces in the Newport Area	5,500 thousand square feet
3.1 Commercial Parking Spaces per 1,000 square feet is the Existing Condition		
<i>Source: <a href="http://www.cityofjerseycity.com/about.html">http://www.cityofjerseycity.com/about.html</a>            January 26, 2007 Newport Redevelopment Project Semi-Annual Parking Management Report</i>		

**8.1.1 Existing Parking Ratios**

From a great deal of research the following information was tabulated based on review of the following:

1. Newport Redevelopment Project – 1/26/07 Semi-Annual Parking Management Report
2. Newport Redevelopment Project – 7/25/06 Semi-Annual Parking Management Report
3. Colgate Redevelopment Plan – 2/22/06 by Jersey City Div of City Planning
4. Harborside Financial Center Master Plan Proposal 1999
5. Jersey City master Plan Parking Needs Element - Schoor DePalma 1998

The Jersey City Master Plan Parking Element should be updated since many projects have been constructed and are planned which will have a substantial effect on the parking supply and demand.

**Residential**

On average 0.81 spaces per residential unit is the current parking ratio for general residential use. The low side of zero (living next to a transit station) to 1.5 for a unit with 3 bedrooms can be justified given the researched data and current usage.

The amount of parking supply that is used currently is approximately 40% retail, 30% office and 30% residential in the study area. Since many people that live in the study area have an assigned parking space this does not allow for shared parking with the office or retail uses. This could be a tremendous parking savings if a shared parking solution is allowed. At this point in time however, that option is not available but should be studied in the future.

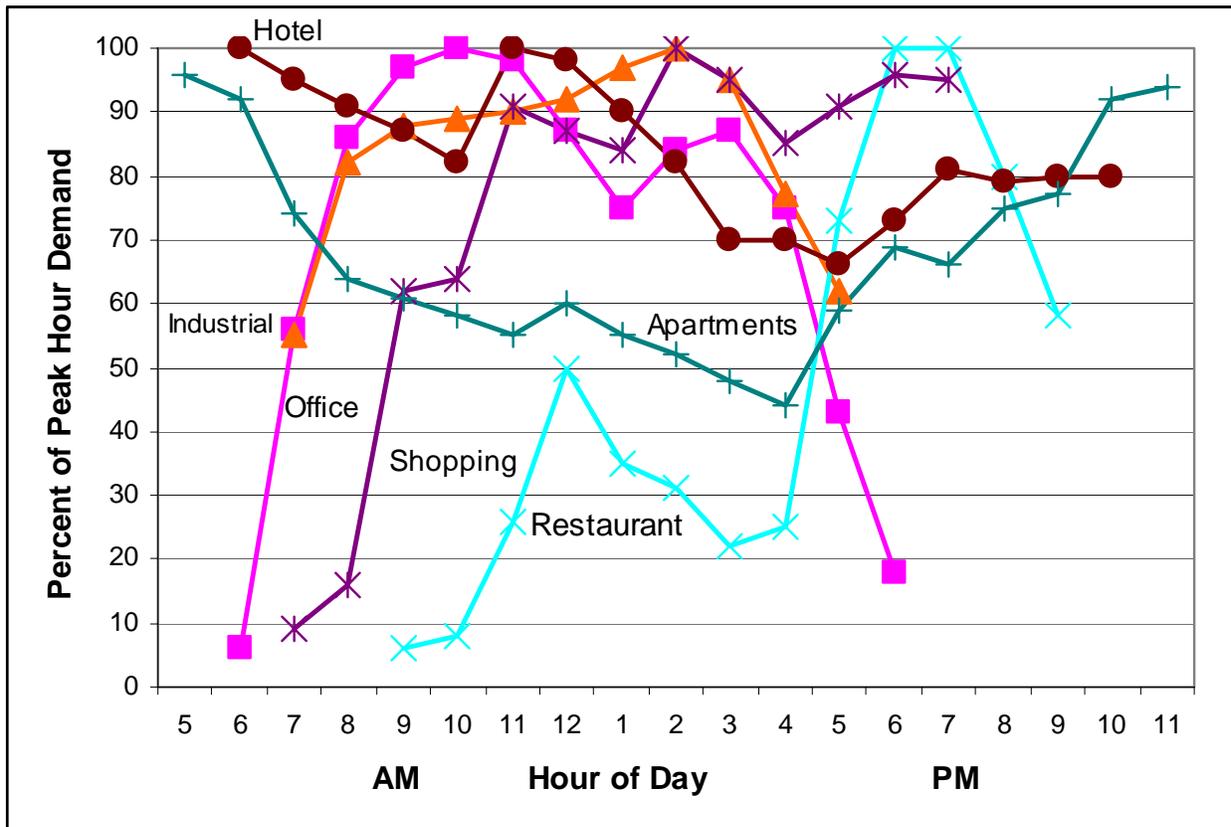
**Office**

The office data still reveals that the parking required for gross floor area of 650,000 sf still remains at 0.9 parking spaces per 1,000 sf.

The problem with identifying parking ratios is that there are many different ratios in Jersey City depending on the development or redevelopment zone / area that the site is located. The most recent parking requirements for this section of Jersey City are contained in the Colgate Redevelopment Plan (2/22/06).

A key component in Jersey City is the potential shared parking among the various land uses. The graphic show below describes land use types (Hotel, Industrial, Office, Shopping, Apartments and Restaurant) and the percentage of Peak Hour Demand during the temporal distribution of an average day. As an example, Office use would have the highest peak parking demand at 9:30am after the average work day start time of 9:00 AM. At the same time, Residential parking demand is only 15 minutes away from the second from the most underutilized time during the day 11:00 AM.

**Table 8-2 Hourly Fluctuation in Parking Demand**



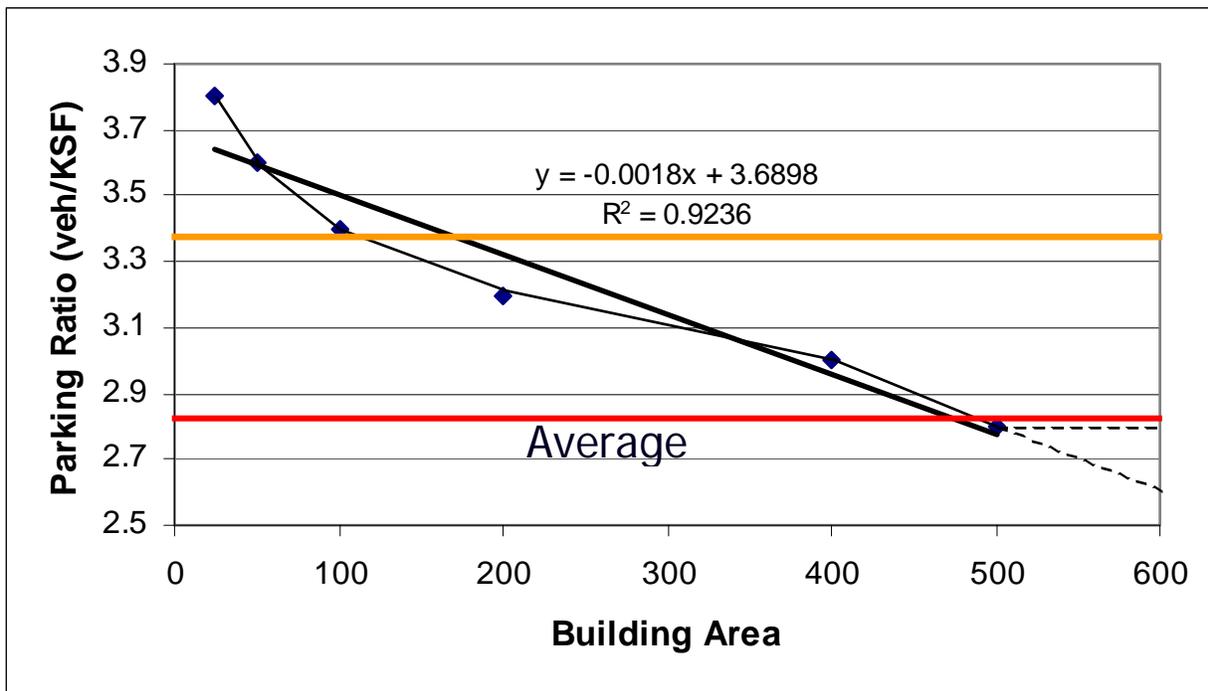
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Jersey City is not a logical place for shared parking for two reasons:

1. The office and retail space can not share in the parking spaces from the residential since either the parking space is reserved; or
2. the space is occupied during the day with a vehicle that is essentially being stored and the residents are using Mass Transit.

The parking ratio to building area also has a correlation: as the building area increases the parking ratio becomes lower. Therefore, besides the fact that there are many mass transit opportunities, the 85<sup>th</sup> Percentile will require more parking that is required on average. This means many parking requirements are calculated very conservatively. Again, since Jersey City is an Urban City and there are tremendous mass transit options, a min of 0.5 parking spaces for each 1,000 gfa to a max of 1.0 spaces per 1,000 gfa is a target range.

**Table 8-3 Parking Ratio versus Building Area**



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The parking ratio to employee density is also a useful tool in determining the correct parking ratio to use. The graphic below describes the relationship between the parking ratio (vertical axis) and the number of employees per 1,000 sf of area. At the low end 2 people per 1,000 sf has a parking ratio of nearly 2.5 ---- whereas, 6 people for the same 1,000 sf would require 4.8 (only 2 times rather than 3 times) spaces for the same 1,000 gfa.

Table 8-4 identifies the parking ratio ranges based on land use type for the general conditions of this study as it relates to the local and regional transportation systems.

The Approved Office Scenario would produce one of the highest levels of development to consider of all the scenarios that were considered, and thus would create the greatest congestion. This scenario was used for the parking ratio, but does not represent Build-out conditions. As a result 29,020 residential units and 6,753,450 sf of Commercial (office and retail) space would be constructed. The table below shows the minimum and maximum parking spaces for this level of development would be 10,632 and 35,773, respectively. The largest factor is the parking ratio for residential development given the demographic data contained in Section 2.0, more residential and less office space would be developed.

### **Recommendations**

Jersey City should be cautious about the level of parking and traffic within the downtown area. In order to grow economically, Jersey City should focus on the mass transit options (such as Transit Options 1, 2, 3 and 4) to build on the 40% - 60% Transit usage and to reduce vehicular traffic on the regional and local roadway network. As it is today, and forecasted for the future, the roadway network can not process more traffic during the traditional “peak hour”. Therefore, increased traffic would translate into a longer duration “peak hour” (peak two or three hour period).

The residential and office land uses have the potential to require and add a substantial amount of traffic. Continued office growth should rely on the public transit system and proposed options. Residential growth is less likely to effect the AM and PM peak hours as much compared to office; however, the amount of proposed growth could add over 35,700 parking spaces.

In addition, Jersey City must prohibit commuter park and ride parking near transit stations since an unlimited requirement could promote additional vehicles deep within the downtown area and defeat the intent of intercept parking.

Lastly, the preservation of right of way for bus service and other mass transit options will improve travel times via mass transit and assist in the continuation of Jersey City’s growth.

**Table 8-4 Parking Ratio Ranges by Land Use Type**

Land Use Type	Max	Min	Comment	Anticipated Parking Req.	
Residential	1.0 space Per Unit	0.25 Spaces Per Unit	The shared parking concept should be studied to determine if reserved parking spaces for residents can be removed	29,020	7,255
Office	1.0 Space Per 1,000 sf	0.5 Spaces Per 1,000 sf		6,753	3,377
Retail	1.0 Space Per 1,000 sf	0.25 Spaces Per 1,000 sf			
Hotel	1.0 Space Per Room	0.25 spaces per room			
Total				35,773	10,632

**8.2 BICYCLE / PEDESTRIAN IMPROVEMENTS**

The Transportation Policy Institute of Rutgers University prepared the *Jersey City Bicycle Plan* for the Jersey City Division of Planning in April, 2000. This report provided guidelines for the development of and implementation of an extensive bicycle network throughout Jersey City. The report included illustrative guidelines that defined major bicycle routes, requisite signage, parking facilities, and a program to encourage the practice of bicycling as a mode of transportation for both commuting and for recreation. In 2006, the Jersey City Planning Board amended the Jersey City Master Plan to include a bikeway system, which was prepared by the RBA Group and identified on-road and off-road routes. The recommendations in this section are intended to supplement the RBA plan and the April 2000 Rutgers report by providing additional detail on the major bicycle routes within the study area.

**East Coast Greenway**

Jersey City will also be an important link in the proposed East Coast Greenway (ECG), a 3,000 mile Maine-to-Florida urban trail that is currently under construction by the ECG Alliance. The ECG is planned as a primarily off-road facility for the use of cyclists, hikers, and other non-motorized recreational users. In Hudson County, the ECG is currently envisioned as traveling southward along the bank of the Hudson River; in

Jersey City the ECG would then travel westward on the 6<sup>th</sup> Street embankment and through the Bergen Arches ROW. Until this path is completed, Montgomery Street would serve as a temporary route.

### **Bicycle Parking Locations**

Long term and short term bicycle parking facilities should be provided to accommodate bicyclists. Facilities should be located near transit stations, schools, libraries, employment centers, shopping areas, and public buildings. Key locations for bicycle racks, as identified by the year 2000 Rutgers University report are:

- Three PATH transit stations:
  - Grove Street
  - Exchange Place
  - Pavonia/Newport
  
- Seven Hudson-Bergen Light Rail transit stations:
  - Jersey Avenue
  - Marin Boulevard
  - Essex Street
  - Exchange Place
  - Harborside
  - Harsimus Cove
  - Newport
  
- Three ferry landings:
  - Colgate Ferry
  - Newport Ferry
  - Liberty Harbor
  
- Five high schools:
  - St. Peter's Preparatory School
  - James J. Ferris High School
  - Kenmare High School
  - McNair Academic High School
  - St. Anthony's High School
  
- One Library:
  - Jersey City Library

- Major employment centers (may be added to existing PATH station bicycle parking):
  - Exchange Place
  - Grove Street
  - Pavonia/Newport
  - All new office buildings.
  
- Four major shopping centers:
  - Newport Mall
  - Newark Avenue
  - Montgomery Street
  - Grove Street
  
- One public building:
  - City Hall
  
- Four major recreational locations:
  - Hamilton Park
  - Van Vorst Park
  - Liberty State Park
  - Hudson River Waterfront Walkway

Readily available bicycle parking facilities are expected to encourage bicycle usage.

### Detailed Recommendations for Major Routes

The RBA plan defines a bicycle network for the study area consisting of the following nine major routes:

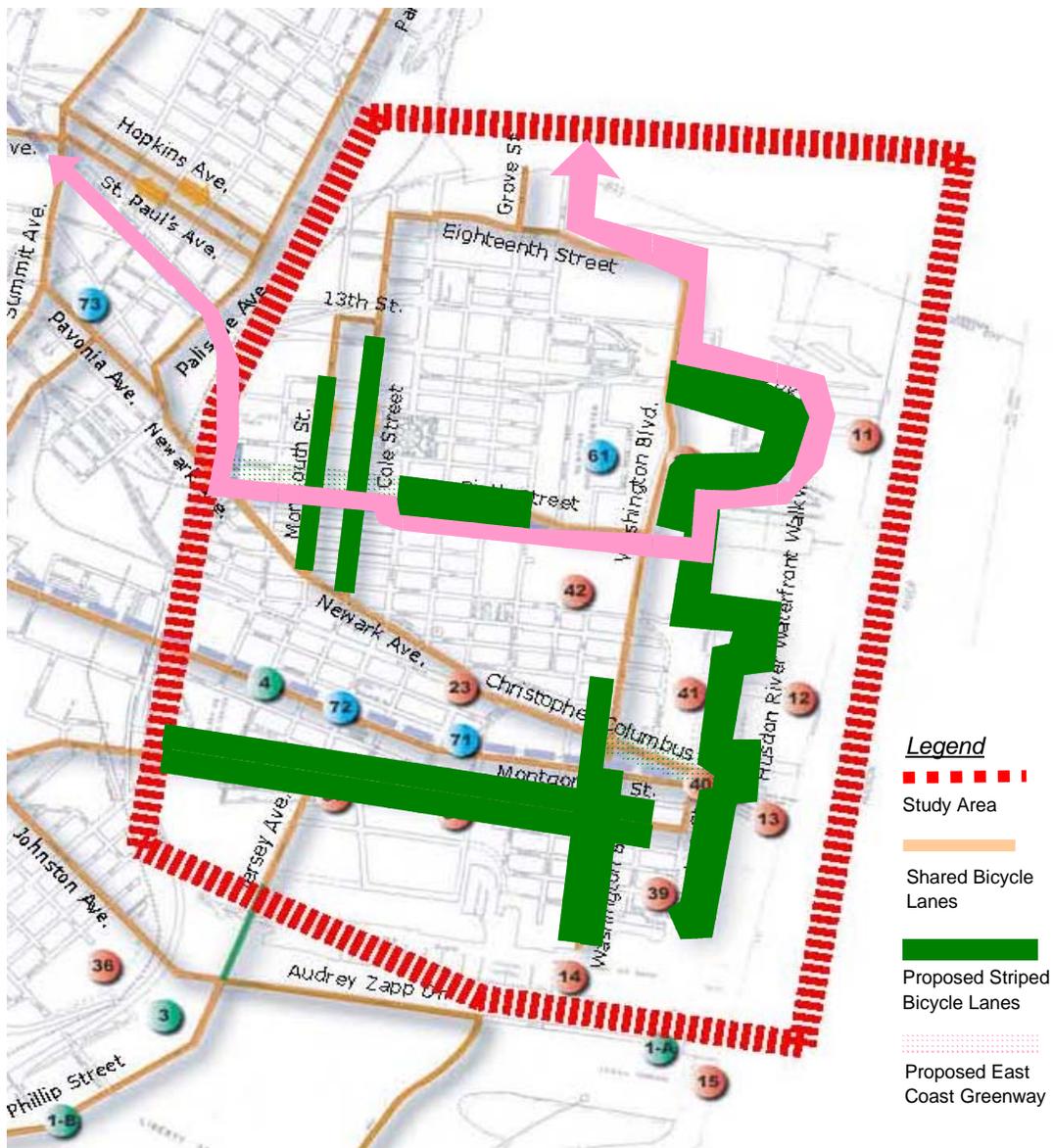
- Five North-South Routes
  - Route 1: Jersey Avenue
  - Route 2: Monmouth Street/Coles Street
  - Route 3: 18<sup>th</sup> Street / Washington Boulevard / Washington Street
  - Route 4: Grove Street
  - Route 5: Newport Parkway / Hudson River Waterfront Walkway
  
- Four East-West Routes
  - Route 6: 6<sup>th</sup> Street
  - Route 7: Newark Avenue / Christopher Columbus Drive
  - Route 8: Montgomery Street
  - Route 9: Grand Street

Figure 8-1 presents RBA Group's proposed Jersey City Downtown bikeway system.



The bicycle routes presented should use standard striping and signage where appropriate to inform motorists and bicyclists of the presence of the routes. Bicycle routes should be striped to allocate five feet of pavement for bicyclists where sufficient ROW is available, in accordance with standards stated on page 31 of the April 1996 New Jersey Department of Transportation document, *Bicycle Compatible Roadways and Bikeways: Planning and Design Guidelines*. Streets that have insufficient ROW to allow for a separate striped bicycle lane should be designated as shared vehicle and bicycle travel lanes. Figure 8-2 highlights streets in the proposed bicycle route system that are proposed to be striped.

**Figure 8-2: Jersey City Downtown Proposed Bikeway System Striping Plan**



Standard signs and markings as defined by the *Manual of Uniform Traffic Control Devices* (MUTCD), and as presented in the April 2000 study, should be used for all routes.

### **8.2.1 Route 1: Jersey Avenue**

The Jersey Avenue bicycle route spans approximately 0.5 miles between Grand Street and Audrey Zapp Drive. Bicyclists coming from Grand Street can use Jersey Avenue to access Liberty State Park.

#### **8.2.1.1 Segment 1-Grand Street to Morris Canal Big Basin**

##### Existing Conditions

- Two-way traffic;
- Two travel lanes in each direction;
- No on-street parking permitted

##### Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs should be used to indicate shared use travel lanes.

### **8.2.2 Route 2: Monmouth Street and Coles Street**

Monmouth Street and Coles Street are one-way streets that run parallel to each other. Monmouth Street has one northbound travel lane and Coles Street has one southbound travel lane. As part of the bicycle lane system, the two streets would be bounded by Newark Avenue to the south and 18<sup>th</sup> Street to the north. The 6<sup>th</sup> Street bicycle lanes would intersect Monmouth and Coles Streets, providing an additional path to Jersey City Downtown's east side waterfront.

#### **Part A - Monmouth Street: Northbound**

##### **8.2.2.1 Segment 1-Newark Avenue to 10<sup>th</sup> Street**

##### Existing Conditions

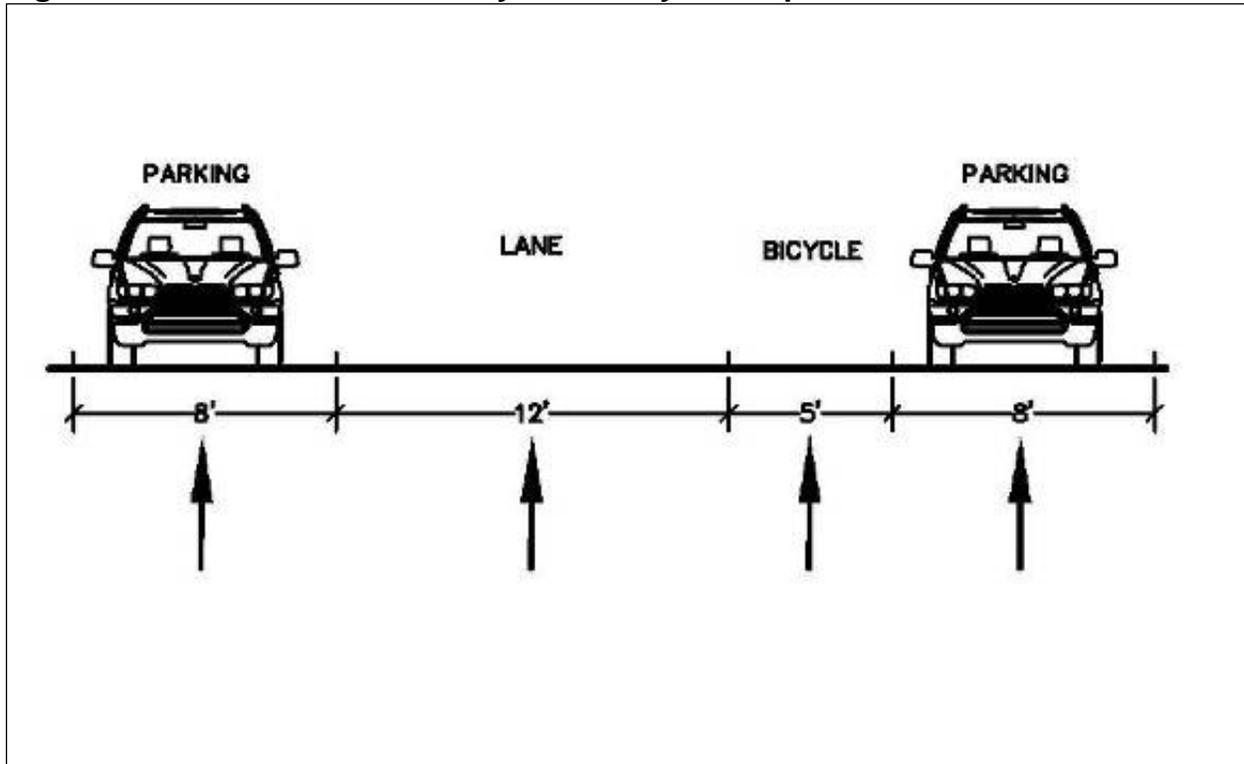
- One northbound travel lane;
- On-street parking on both sides of the street;
- Monmouth Street is protected from most cross traffic by stop signs.

##### Proposed Bicycle Facility

- Striped five-foot wide bicycle lane between vehicular travel lane and right hand parking lane;
- Standard signs and markings (including broken lines at intersections with potential turning conflicts) should be used.

Figure 8-3 illustrates the proposed Monmouth Street bicycle facility concept.

**Figure 8-3: Monmouth Street Bicycle Facility Concept**



**8.2.2.2 Segment 2 -10<sup>th</sup> Street to 13<sup>th</sup> Street**

Existing Conditions

- One northbound travel lane;
- Low traffic volume with some truck traffic;
- Crosses under the eastbound I-78/US 1-9 viaduct;
- No on-street parking observed.

Proposed Bicycle Facility

- Continue striped bicycle lane from Segment 1 along right-hand curbside lane;
- Provide a dashed line across 10<sup>th</sup> Street to guide bicyclists from the transition from Segment 1 to Segment 2, or other intersection treatment;
- Prohibit parking/stopping/standing on right side of street [if there is compelling reason for parking on right-hand side, parking on left hand side can be prohibited instead];
- Increased lighting would be beneficial.

### **8.2.2.3 Segment 3 – Connection to Coles Street Bicycle Route**

#### Existing Conditions

No on-street parking observed.

#### Proposed Bicycle Facility

- Striped five-foot bicycle lane along 13<sup>th</sup> Street;
- Design transition from right hand bike lane to left hand bike lane to prepare cyclists to make left turn onto Coles Street to continue northbound bicycle route.

### **Part B – Coles Street: Southbound**

#### **8.2.2.4 Segment 1 – 12<sup>th</sup> to 10<sup>th</sup> Streets**

#### Existing Conditions

- One way southbound;
- Low volume, vehicles with some truck traffic;
- Crosses under the eastbound I-78/US 1-9 viaduct;
- On-street parking on both sides of the street.

#### Proposed Bicycle Facility

- Implement five-foot wide striped bicycle lane along right hand curb;
- Increased lighting would be beneficial.

#### **8.2.2.5 Segment 2 – 10<sup>th</sup> Street to Newark Avenue**

#### Existing Conditions

- One northbound travel lane;
- On-street parking on both sides of the street;
- Protected from most cross traffic by stop signs.

#### Proposed Bicycle Facility

- Mark transition from Segment 1 to Segment 2 with a dashed line;
- Five-foot wide striped bicycle lane between vehicular travel lane and right hand parking lane.

### **8.2.3 Route 3: 18<sup>th</sup> Street / Washington Boulevard / Washington Street**

18<sup>th</sup> Street / Washington Boulevard / Washington Street run east-west and north-side in Jersey City's Downtown. 18<sup>th</sup> Street bounds the northern downtown and continues east to become the three-lane arterial named Washington Boulevard. This arterial continues east before turning to the south and allows access to the Hudson River waterfront and Newport Mall. South of 2<sup>nd</sup> Street, Washington Boulevard becomes Washington Street, generally a one-lane per direction street. The set of three streets generally have high

volume and no on-street parking, thus generally preventing the addition of striped bicycle lanes

The RBA plan's proposed 18<sup>th</sup> Street / Washington Boulevard / Washington Street shared bicycle lanes would allow bicyclists coming from and going to Downtown's north side to access the east side and south side destinations.

### **8.2.3.1 Segment 1 – 18<sup>th</sup> Street from Coles Street to Jersey Avenue**

#### Existing Conditions

- Two way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking not allowed.

#### Proposed Bicycle Facility

- Continuation of Coles Street bicycle lanes;
- Insufficient ROW to stripe bicycle lanes – standard signs should be used to indicate shared use travel lanes.

### **8.2.3.2 Segment 2 – 18<sup>th</sup> Street from Jersey Avenue to Marin Boulevard**

#### Existing Conditions

- Two way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking not allowed.

#### Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs should be used to indicate shared use travel lanes.

### **8.2.3.3 Segment 3 – 18<sup>th</sup> Street/Washington Boulevard from Marin Boulevard to 2<sup>nd</sup> Street**

#### Existing Conditions

- Two way traffic;
- Three eastbound to southbound and three northbound to westbound travel lanes;
- On-street parking not allowed;
- Hudson-Bergen Light Rail intersects Washington Boulevard east of Marin Boulevard, and runs parallel to Washington Boulevard on the west side.

#### Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs should be used to indicate shared use travel lanes. Use pavement markings to alert motorists and bicyclists that the curbside lane is shared;
- Signs should alert bicyclists of higher traffic volume on Washington Boulevard

#### **8.2.3.4 Segment 4 –Washington Street from 2<sup>nd</sup> Street to Morgan Street**

##### Existing Conditions

- Two-way traffic;
- Washington Boulevard's three lanes per direction narrow to one lane per direction northbound and southbound;
- On-street parking is not permitted;
- At-grade crossing of Hudson Bergen Light Rail Transit south of 2<sup>nd</sup> Street.

##### Proposed Bicycle Facility

- Sufficient ROW may be available to stripe a bicycle lane, but the segments to the north and south do not. Striping bicycle lanes in this segment while not striping those to the north and south is not recommended. Standard signs should be used to indicate shared use travel lanes. Use pavement markings to alert motorists and bicyclists that the curbside lane is shared;
- Flange fillers may be used at the grade to mitigate the potential hazard of a cyclist's wheels getting caught in the rail tracks

#### **8.2.3.5 Segment 5 –Washington Street from Morgan Street to Steuben Street**

##### Existing Conditions

- Two way traffic;
- Two northbound and two southbound travel lanes;
- Parking is permitted on both sides of the street.

##### Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between southbound vehicular travel lane and right hand parking lanes;
- Northbound travel lanes should not have striped bicycle lanes because the segments between Steuben Street and Montgomery Street to the south only operate in the southbound direction. Northbound travel lanes should be signed as shared vehicle and bicycle lanes;
- Standard signs and markings should be used on both southbound and northbound Washington Street.

#### **8.2.3.6 Segment 6 –Washington Street from Steuben Street to Christopher Columbus Drive**

##### Existing Conditions

- One-way traffic;
- Four southbound travel lanes;
- Parking is permitted on the east side of Washington Street.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between southbound travel lane and right hand parking lane;
- Standard signs and markings should be used on both southbound and northbound Washington Street.

**8.2.3.7 Segment 7 – Washington Street from Christopher Columbus Drive to Montgomery Street**Existing Conditions

- One-way traffic;
- Three southbound travel lanes;
- Parking is permitted on both sides of Washington Street.

Proposed Bicycle Facility

Five-foot wide striped bicycle lane between southbound travel lane and right hand parking lane;  
Standard signs and markings should be used on both southbound and northbound Washington Street.

**8.2.3.8 Segment 8 –Washington Street from Montgomery Street to Southern End / Liberty Harbor**Existing Conditions

- Two-way traffic;
- One northbound and one southbound travel lane;
- Parking is permitted on both sides of Washington Street.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between travel lanes and right hand parking lane;
- Standard signs and markings should be used on both northbound and southbound Washington Street.

**8.2.4 Route 4: Grove Street**

Grove Street intersects with 18<sup>th</sup> Street in the northern section of Jersey City's downtown area. This segment of the bicycle route is one-block long and passes under the New Jersey Transit railroad tracks.

Existing Conditions

- Two-way traffic;
- One northbound and one southbound travel lane;
- Crosses under the New Jersey Transit railroad tracks.

### Proposed Bicycle Facility

- Sufficient ROW may be available to provide a striped bicycle lane but striping is not recommended for this short block because the adjoining proposed bicycle lanes on 18<sup>th</sup> Street are proposed to be signed for shared vehicle and bicycle use.
- Standard signs and markings should be used;
- Increased lighting would be beneficial.

## **8.2.5 Route 5: Newport Parkway / Hudson River Waterfront Walkway**

The proposed Newport Parkway / Hudson River Waterfront Walkway route would consist of a relatively short east-west on-road segment along Newport Parkway, followed by a longer approximately 1-mile long off-road segment along the Hudson River Waterfront Walkway. Newport Parkway is an east-west road that runs along the northern section of the Newport Mall and above the Holland Tunnel approach. It is bounded by Marin Boulevard to the west and River Drive to the east. The Hudson River Waterfront Walkway is a north-south route intended for public recreational use. Bicyclists would share this route with pedestrians and other recreational users. Any bicycle improvements should follow the design guidelines for the Hudson River Waterfront Walkway.

### **8.2.5.1 Segment 1 – Newport Parkway: Washington Boulevard to Hudson River Waterfront Walkway**

#### Existing Conditions

- One eastbound and one westbound travel lane;
- Holland Tunnel runs underneath;
- On-street parking is permitted on both sides of the street.

#### Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between travel lanes and right hand parking lanes;
- Standard signs and markings should be used on both eastbound and westbound Newport Parkway.

### **8.2.5.2 Segment 2 – Hudson River Waterfront Walkway**

#### Existing Conditions

- Waterfront walkway for recreational users.

#### Proposed Bicycle Facility

- Two-way shared use facility;
- Two five-foot wide striped bicycle lanes separate from the pedestrian walkway;

- Standard signs and markings should be used to denote shared use for bicyclists and other recreational users (such as roller-skaters and roller-bladers). Signs should inform pedestrians that the bikeway is not intended for pedestrians.

### **8.2.6 Route 6: 6<sup>th</sup> Street**

6<sup>th</sup> Street is an east-west street that is bounded by Newark Avenue on the west and Washington Boulevard on the east. The western segment between Newark Avenue and Jersey Avenue operates westbound only and has one travel lane. East of Jersey Avenue, 6<sup>th</sup> Street operates both eastbound and westbound and has one or two lanes per direction. Jersey City's Newport Centre Mall is adjacent to 6<sup>th</sup> Street's north side on its eastern segment.

The proposed bicycle route along 6<sup>th</sup> Street will likewise be bounded by Newark Avenue on the west and Hudson Street on the east.

#### **Part A: 6<sup>th</sup> Street Westbound**

##### **8.2.6.1 Segment 1 – Newark Avenue to Jersey Avenue**

###### Existing Conditions

- One westbound travel lane;
- Parking permitted on both sides of the street.

###### Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between travel lanes and right hand parking lane;
- Standard signs and markings should be used on both northbound and southbound Washington Street.

##### **8.2.6.2 Segment 2 – Jersey Avenue to Marin Boulevard**

###### Existing Conditions

- Two way traffic;
- One eastbound and one westbound travel lane;
- Parking is permitted on the north side of 6<sup>th</sup> Street (westbound).

###### Proposed Bicycle Facility

- Five-foot wide striped bicycle lanes between travel lanes and right hand parking lane. Although parking is not permitted on the south side of 6<sup>th</sup> Street, sufficient ROW exists to accommodate one eastbound travel lane and one five-foot wide striped bicycle lane. Standard signs and markings should be used on both northbound and southbound Washington Street.

### 8.2.6.3 Segment 3 –Marin Boulevard to Washington Boulevard

#### Existing Conditions

- Two way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking is not permitted;
- At-grade crossing of HBLRT west of Washington Boulevard.

#### Proposed Bicycle Facility

- Insufficient ROW is available for a striped bicycle lane;
- Standard signs and markings should be used to indicate shared use;
- Flange fillers may be used at the grade to mitigate the potential hazard of a cyclist's wheels getting caught in the rail tracks.

### 8.2.7 Route 7: Newark Avenue/Christopher Columbus Drive

Newark Avenue runs diagonally from northwest to southeast Jersey City. It is a busy corridor lined with shops and restaurants. Traveling southeast, it becomes Christopher Columbus Drive at the intersection of Marin Boulevard. Newark Avenue's narrow streets are generally not conducive for a striped bicycle lane. Instead, standard signs and markings should be installed to inform motorists and bicyclists of the shared use lanes.

#### 8.2.7.1 Segment 1: Newark Avenue from 7<sup>th</sup> Street to 5<sup>th</sup> Street

##### Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- On-street parking is not permitted.

##### Proposed Bicycle Facility

- Insufficient ROW is available for a striped bicycle lane;
- Standard signs and markings should be used to indicate shared use.

#### 8.2.7.2 Segment 2: Newark Avenue from 5<sup>th</sup> Street to Monmouth Street

##### Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- On-street parking is permitted on either one or both sides of the street. Parking rules vary over this three-block section.

Proposed Bicycle Facility

- Newark Avenue's narrow corridor does not provide sufficient ROW to add striped bicycle lanes;
- Standard signs and markings should be used to indicate shared use.

**8.2.7.3 Segment 3: Newark Avenue from Monmouth Street to Jersey Avenue**

Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- On-street parking is permitted on both sides of the street;

Proposed Bicycle Facility

- Newark Avenue's narrow corridor does not provide sufficient ROW to add striped bicycle lanes;
- Standard signs and markings should be used to indicate shared use.

**8.2.7.4 Segment 4: Newark Avenue from Jersey Avenue to Grove Street**

Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- On-street parking is permitted on the north side (westbound) of the street only.

Proposed Bicycle Facility

- Newark Avenue's narrow corridor does not provide sufficient ROW to add striped bicycle lanes;
- Standard signs and markings should be used to indicate shared use.

**8.2.7.5 Segment 5: Grove Street to Newark Avenue and Christopher Columbus Drive junction**

Existing Conditions

- Closed to traffic due to construction.

Proposed Bicycle Facility

- Bicyclists desiring to continue on the route would be required to turn onto Grove Street to access Newark Avenue (westbound bicyclists) or Christopher Columbus Drive (eastbound bicyclists);
- Standard signs and markings should be used to indicate shared use and the continuation of the route via Grove Street.

### **8.2.7.6 Segment 6: Christopher Columbus Drive between Newark Avenue and Washington Street**

#### Existing Conditions

- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- Parking permitted on both sides of the street.

#### Proposed Bicycle Facility

- Christopher Columbus Drive will be redesigned in the future to provide for three lanes eastbound during the AM peak period and three lanes westbound during the PM peak period. This design is incompatible with striped bicycle lanes;
- Standard signs and markings should be used to indicate shared use.

### **8.2.7.7 Segment 7: Christopher Columbus Drive from Washington Street to Greene Street**

#### Existing Conditions

- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- Parking permitted on both sides of the street.

#### Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between travel lanes and right hand parking lane if compatible with future design of roadway;
- Standard signs and markings should be used on both northbound and southbound Washington Street.

### **8.2.7.8 Segment 8: Christopher Columbus Drive from Greene Street to Hudson Street**

#### Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- Parking permitted on both sides of the street.

#### Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between travel lanes and right hand parking lane if compatible with future design of roadway;
- Standard signs and markings should be used on both northbound and southbound Washington Street.

### **8.2.8 Route 8: Montgomery Street**

Montgomery Street is an approximately 1-mile east-west road that runs through the southern section of Jersey City's downtown. A handful of schools and Van Vorst Park are situated on Montgomery Street's western segment. The eastern segment of Montgomery Street is a two-lane per direction street with a planted median and is flanked by a variety of retail and commercial activity. Montgomery Street also leads directly into the New Jersey Transit's HBLRT / PATH Exchange Place Station.

#### **8.2.8.1 Segment 1: I-78 to Brunswick Street**

##### Existing Conditions

- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking is not permitted.

##### Proposed Bicycle Facility

- Although on-street parking is not permitted, sufficient ROW exists to provide five-foot wide striped bicycle lanes between vehicular travel lane and right hand parking lanes;
- Standard signs and markings should be used

#### **8.2.8.2 Segment 2: Brunswick Street to Monmouth Street**

##### Existing Conditions

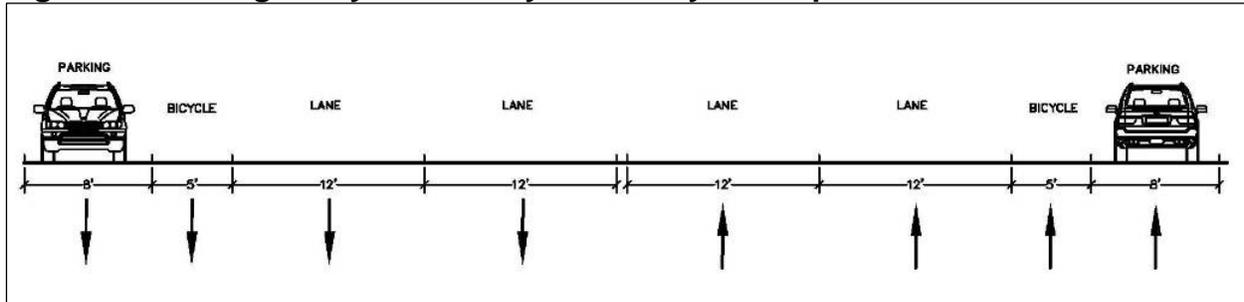
- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking is permitted on both sides of the street.

##### Proposed Bicycle Facility

- Five-foot wide striped bicycle lanes between vehicular travel lane and right hand parking lanes;
- Standard signs and markings should be used.

Figure 8-7 presents a cross-section of the proposed Montgomery Street Segment 2 concept.

**Figure 8-7: Montgomery Street Bicycle Facility Concept**



**8.2.8.3 Segment 3: Monmouth Street to Jersey Avenue**

Existing Conditions

- Two-way traffic;
- Two eastbound and one westbound travel lane;
- On-street parking is permitted on both sides of the street.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lanes between vehicular travel lane and right hand parking lanes;
- Standard signs and markings should be used.

**8.2.8.4 Segment 4: Jersey Avenue to Marin Boulevard**

Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- Parking is permitted on the north side (westbound) of this segment.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between westbound vehicular travel lane and right hand parking lane;
- Eastbound travel lane should be signed as a shared vehicular and bicycle travel lane;
- Standard signs and markings should be used.

**8.2.8.5 Segment 5: Marin Boulevard to Greene Street**

Existing Conditions

- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- Parking is permitted on both sides of this segment.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between vehicular travel lanes and right hand parking lanes;
- Standard signs and markings should be used.

**8.2.8.6 Segment 6: Greene Street to Hudson Street**Existing Conditions

- Two-way traffic;
- Three eastbound and three westbound travel lanes;
- On-street parking is not permitted;
- New Jersey Transit bus stops on both sides of street.

Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs and markings should be used to indicate shared use travel lanes.

**8.2.9 Route 9: Grand Street**

Grand Street is an east-west road that runs through the southern section of Jersey City's downtown. It is located south of and parallel to Montgomery Street. A variety of retail and commercial units, and schools and a hospital are located on the approximately 1-mile of road in the downtown area. Grand Street serves as the southern-most east-west bicycle path in the proposed system and connects Jersey City's downtown with other sections of Jersey City.

**8.2.9.1 Segment 1: I-78 to Jersey Avenue**Existing Conditions

- Two-way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking is not permitted.

Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs and markings should be used to indicate shared use travel lanes.

**8.2.9.2 Segment 2: Jersey Avenue to Barrow Street**Existing Conditions

- Two-way traffic;
- Two eastbound and one westbound travel lane;
- Parking is permitted on north side of the street only.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between westbound vehicular travel lane and right hand parking lanes;
- Insufficient ROW exists to provide a striped eastbound bicycle lane;
- Standard signs and markings should be used to denote striped lanes on westbound lanes and shared use eastbound lanes.

**8.2.9.3 Segment 3: Barrow Street to Greene Street**Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- Parking is permitted on both sides of the street.

Proposed Bicycle Facility

- Five-foot wide striped bicycle lane between vehicular travel lanes and right hand parking lanes in both directions;
- Standard signs and markings should be used.

**8.2.9.4 Segment 4: Greene Street to Hudson Street**Existing Conditions

- Two-way traffic;
- One eastbound and one westbound travel lane;
- On-street parking is not permitted.

Proposed Bicycle Facility

- Although on-street parking is not permitted on either side of this segment of Grand Street, sufficient ROW exists to provide five-foot wide striped bicycle lane between vehicular travel lane and right hand parking lanes;
- Standard signs and markings should be used.

**8.2.9.5 Segment 5: Hudson Street to eastern terminus**Existing Conditions

- Two way traffic;
- Two eastbound and two westbound travel lanes;
- On-street parking is not permitted.

Proposed Bicycle Facility

- Insufficient ROW to stripe bicycle lanes – standard signs and markings should be used to indicate shared use travel lanes.

### **8.2.10 Comprehensive Bicycle Program**

A program to encourage bicycle usage, provide regular maintenance of facilities, ensure compliance of laws regarding bicycle lane travel, and educate motorists and bicyclists about bicycle facilities should be implemented. Recommendations as presented in the Rutgers study are:

#### **Encouragement**

- Create a Jersey City Bicycle Map
- Support National “Bike to Work Week” in May
- Post publicity information on bicycling at bus shelters, schools, and government centers
- Encourage Jersey City employees to commute by bicycle

#### **Engineering**

- Design all roads for bicycle travel
- Maintain facilities to ensure safe use (street sweeping, pothole repair, etc.)

#### **Enforcement**

- Ensure compliance with bicycle lane and automobile travel lane laws;
- Increase priority on investigation of reported incidents of bicycle theft.

#### **Education**

- Publish safety literature and develop safety education programs to educate the community on safe bicycle operation on city streets.

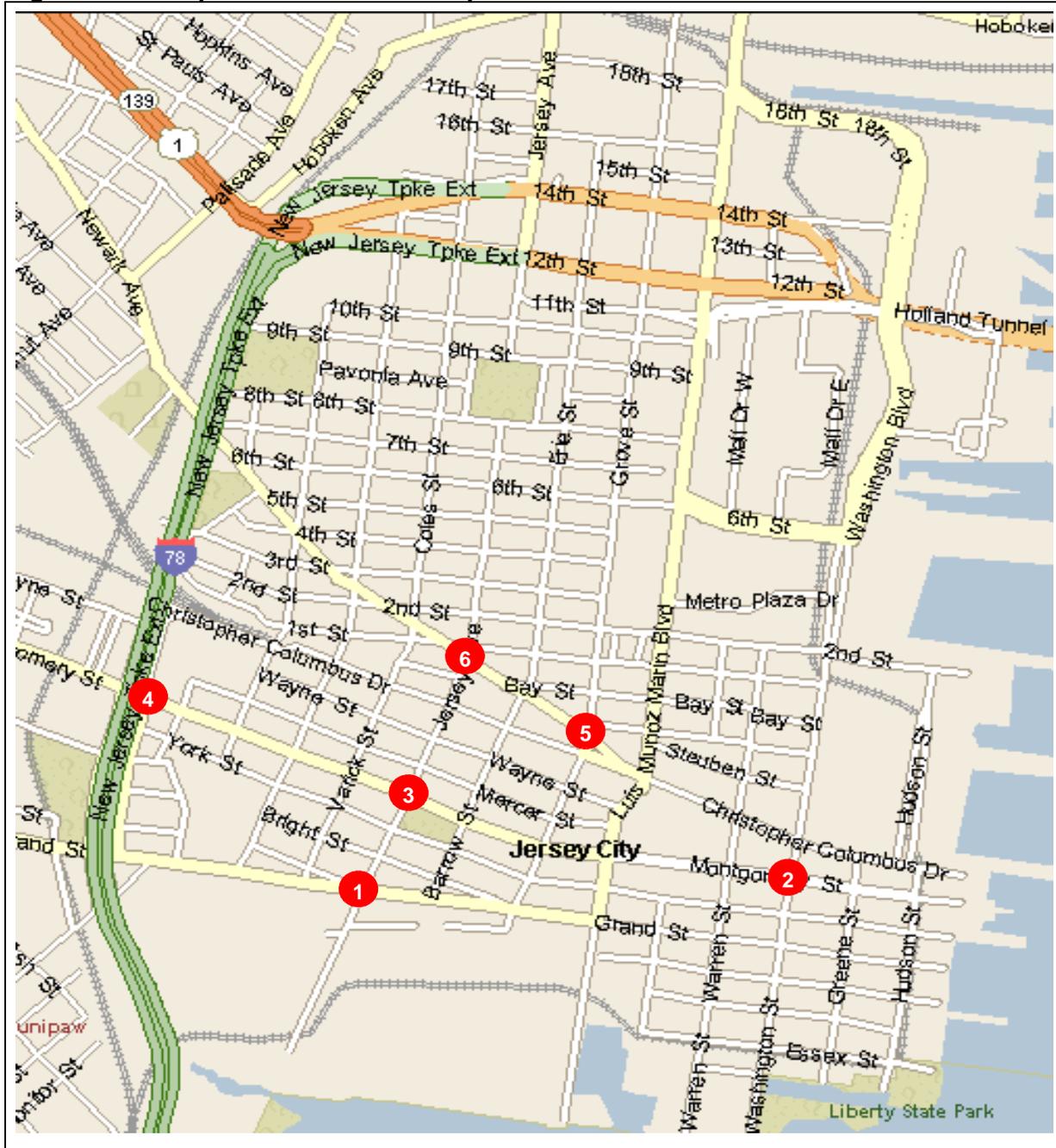
### **8.2.11 Proposed Pedestrian Improvements**

The following six intersections were selected for identification of potential pedestrian improvements. These specific intersections were chosen due to their proximity to a school or other pedestrian generators of interest, such as a transit stations. Many of the recommendations made for these intersections can be applied to other intersections throughout the study area.

- Intersection 1: Grand Street and Jersey Avenue
- Intersection 2: Montgomery Street and Washington Street
- Intersection 3: Montgomery Street and Jersey Avenue
- Intersection 4: Montgomery Street and Center Street / New Jersey Turnpike and Merseles Street
- Intersection 5: Christopher Columbus Drive and Grove Street
- Intersection 6: Newark Avenue and Jersey Avenue

Figure 8-8 presents the location of the proposed pedestrian improvements.

Figure 8-8: Proposed Pedestrian Improvement Locations



### 8.2.12 Intersection 1: Grand Street and Jersey Avenue

- Improved maintenance of crosswalk and pavement markings, such as restriping (cost: approximately \$100-3,000) (Figure 8-9);
- Installation of high visibility crosswalks;
- Installation of raised and/or textured crosswalks or intersection. Crosswalks cost \$2,000-15,000 and Intersections cost \$25,000-75,000 (see Figure 8-13 located along Washington Street);
- Installation of bollards at the intersection corners for added pedestrian protection (similar to Figure 8-13, located along Washington Street);
- Installation of embedded lights and/or reflectors;
- Increase street sign size. Cost approximately \$150-300 per sign (Figure 8-14);
- Standardize or update pedestrian signals to new code (as detailed in MUTCD section 4E.04);
- Installation of count-down pedestrian indicator. Cost approximately \$5,000 (Figure 8-10 and Figure 8-11);
- Installation of pedestrian call buttons for all approaches. Cost \$20,000-40,000 (Figure 8-12);
- Retime signal to provide leading pedestrian interval or increase clearance interval.
- Installation of neckdowns (curb extensions, nubs, bulb-outs, knuckles, intersection narrowing, corner bulges, safe crosses, chokers) to reduce traffic speeds and pedestrian crossing distance. Cost approximately \$2,000-20,000 per corner, depending on site conditions, such as drainage and/or utilities issues;
- Removal or relocation of any existing street furniture from the path of the crosswalk at the intersection corners (e.g., newspaper dispensers).

### 8.2.13 Intersection 2: Montgomery Street and Washington Street

- Extension of median into crosswalk to provide pedestrian refuge (Figure 8-15). Improvement can be similar to that shown in Figure 8-16;
- Installation of median protection for added pedestrian safety of vehicular turning movements;
- Installation of bollards at the median for added pedestrian protection.
- Installation of pedestrian fence or decorative chain to channel pedestrians to crosswalk (Figure 8-13);
- Installation of neckdowns (curb extensions, nubs, bulb-outs, knuckles, intersection narrowing, corner bulges, safe crosses, chokers) to reduce traffic speeds and pedestrian crossing distance;
- Cost approximately \$2,000-20,000 per corner, depending on site conditions, such as drainage and/or utilities issues;
- Improved maintenance of trees and vegetation to improve sign visibility. (Figure 8-17). Installation count-down pedestrian signal;
- Cost approximately \$5,000 (Figure 8-10 and Figure 8-11);

- Prohibition of parking near intersections to improve sight distance. (Figure 8-18).

Note: Post office is located at the southeast corner of the intersection (potential frequent vehicular stops). This may require a reevaluation of parking regulations.

#### **8.2.14 Intersection 3: Montgomery Street and Jersey Avenue**

- Standardize or update pedestrian signal to new code. (as detailed in MUTCD section 4E.04);
- Installation of high visibility crosswalks, due to proximity of school (Figure 8-13);
- Retime signal to provide leading pedestrian interval or increase clearance interval;
- Removal or relocation of any street furniture (e.g. newspaper dispensers) from crosswalk path.

#### **8.2.15 Intersection 4: Montgomery Street and Center Street / New Jersey Turnpike and Merseles Street**

The following improvements are compatible with Concept 2, the Center/Merseles Structures over Montgomery Street:

- Installation of high-visibility crosswalk;
- Installation of embedded lights and/or reflectors;
- Standardize or update pedestrian signal to new code. (as detailed in MUTCD section 4E.04) (Figure 8-19). Installation of count-down pedestrian indicator. Cost approximately \$5,000. (Figure 8-10 and Figure 8-11). Retime signal to provide leading pedestrian interval or increase clearance interval. Improved maintenance of crosswalk and pavement markings, such as restriping. Cost approximately \$100-3,000;
- Improved maintenance of signage. Cost approximately \$150-300 per sign.

#### **8.2.16 Intersection 5: Columbus Drive and Grove Street**

- Improved maintenance of regulatory signage. Cost approximately \$150-300 per sign (Figure 8-20);
- Improved maintenance of channelization device during construction;
- Improved maintenance of street signs;
- Prohibition of parking near intersections to improve sight distance;
- Standardize or update pedestrian signal to new code. (as detailed in MUTCD section 4E.04);
- Installation and/or improved maintenance of pedestrian call buttons for all approaches. Cost \$20,000-40,000;
- Retime traffic signal to provide leading pedestrian interval or increase clearance interval;
- Maintenance of planter or improve protection device.

**8.2.17 Intersection 6: Newark Avenue and Jersey Avenue**

- Standardize or update pedestrian signal to new code. (as detailed in MUTCD section 4E.04);
- Lower the height of pedestrian signal;
- Retime traffic signal to provide leading pedestrian interval or increase clearance interval.

Note: High-visibility crosswalks are primarily recommended only at intersections adjacent to schools. The overuse of high-visibility crosswalks can lessen the impact of those crosswalks that are most necessary.

**Figure 8-9: Facing North at Grand Street and Jersey Avenue (Pavement markings have faded)**



**Figure 8-10: Example of Upgraded Pedestrian Signal with Countdown Timer During Walk Phase**



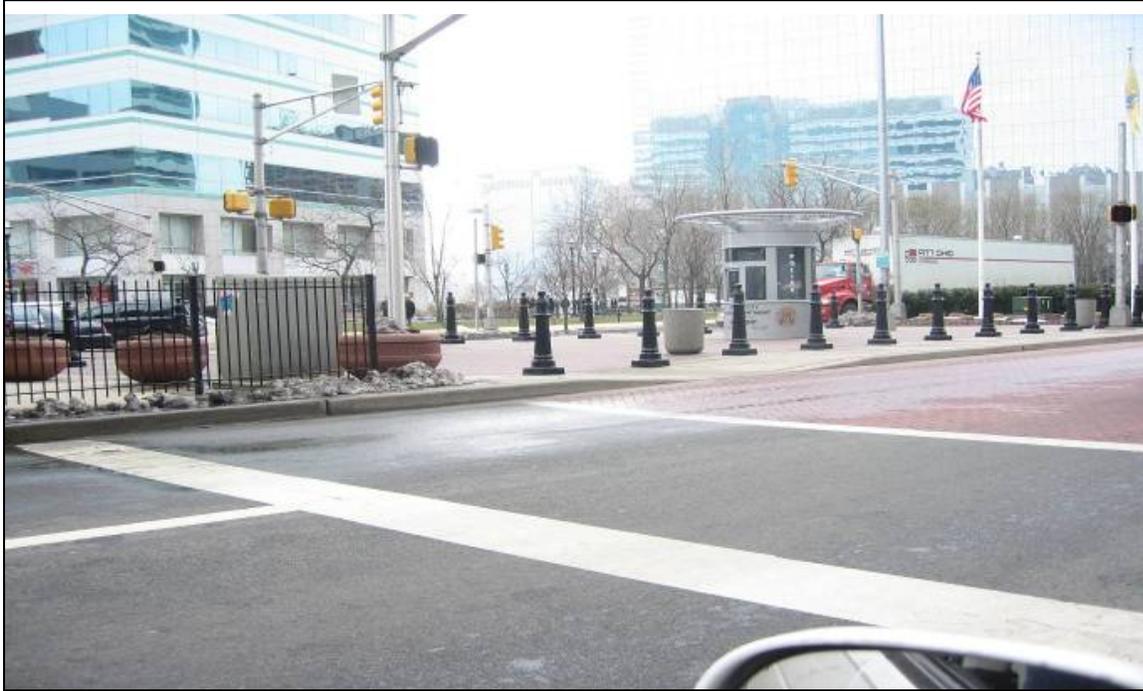
**Figure 8-11: Example of Upgraded Pedestrian Signal with Countdown Timer During Flashing Don't Walk Phase**



**Figure 8-12: Example of High Visibility Push Button and Pedestrian Instructions**



**Figure 8-13: Pedestrian Crossing on Washington Boulevard**



**Figure 8-14: Facing North at Grand Street and Jersey Avenue**  
Street signs are difficult to read.



**Figure 8-15: Facing North at Montgomery Street and Washington Street  
Median can be extended into the crosswalk to provide pedestrian protection.**



**Figure 8-16: Extended Median at Washington Boulevard and North Garage**



**Figure 8-17: Montgomery Street and Washington Boulevard  
Sign is not visible behind tree branches.**



**Figure 8-18: Montgomery Street and Washington Street  
Parked vehicles near intersection obscure sight lines.**



**Figure 8-19: Montgomery Street and Center Street / New Jersey Turnpike and Merseles Street  
Standardize pedestrian signal.**



**Figure 8-20: Facing South at Columbus Drive and Grove Street  
Improve maintenance of regulatory signs.**



## 9.0 Public Participation Process

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The public outreach effort for this project consisted of a two-part process to ensure that the project followed an open public process format. The steering committee represented the first part of the public outreach and was created to guide the project, help to collect information, and obtain input from major stakeholders and concerned organizations. The steering committee included representatives from the following project groups:

- Public and Quasi-Public
  - Jersey City Department of Housing, Economic Development and Commerce
  - Jersey City Division of City Planning
  - Jersey City Division of Engineering
  - Jersey City Traffic and Transportation
  - Jersey City Planning Board
  - Jersey City Board of Education
  - Jersey City Economic Development Corporation
  - Jersey City Redevelopment Agency
  - Hudson County Engineering
  - Hudson County Improvement Authority
  - Hudson County Planning
  - Hudson County Transportation Management Association
  - Liberty Science Center
  - Liberty State Park
  - New Jersey Department of Environmental Protection
  - New Jersey Department of Transportation
  - New Jersey Transit
  - New Jersey Turnpike Authority
  - North Jersey Transportation Planning Authority
  - Port Authority of New York and New Jersey
- Development and Business Community
  - Colgate Property Owners Association
  - Goldman Sachs
  - Hartz Mountain Industries, Inc.
  - Mack-Cali Real Estate
  - Newport Associates Development Company
- Community Groups
  - Harsimus Cove Association
  - Friends of Liberty State Park
  - Historic Paulus Hook Association
  - Van Vorst Park Association

- Lafayette Neighborhood Action Committee
- Hamilton Park Neighborhood Association
- Other
  - Jersey City Medical Center
  - New York Waterway
  - Voorhees Transportation Center

The steering committee met ten times throughout the course of the study. At the meetings, the steering committee provided input and feedback on the consultant team's draft work products. The steering committee also played an integral role in the development and weighting of the evaluation criteria.

The second part of the public outreach process included a series of four public meetings at key milestones to inform the general public of the project and to obtain input and comments. The following is a list of public meeting dates and purpose:

- *Public Meeting 1, February 1, 2006*: Introduction to study goals and consultant team
- *Public Meeting 2, June 29, 2006*: Presentation of anticipated deficiencies in transportation network of study area and solicitation of potential improvement projects
- *Public Meeting 3, March 1, 2007*: Presentation of evaluation criteria, project scoring system, and proposed projects for analysis, including concept designs for roadway projects.
- *Public Meeting 4, May 24, 2007*: Presentation of the consultant team's final recommendations.

All public meetings were held in the Council Chambers of Jersey City City Hall. Flyers advertising the meetings were posted at City Hall and distributed to attendees of previous transportation study public meetings. A public comment period followed Public Meetings 1-4 during which the public was encouraged to submit written comments to the Jersey City project manager.

The consultant team made a presentation to the Jersey City Municipal Council in December 2006 during the Council Caucus meeting. A second presentation is to be scheduled during the Summer 2007. Caucus meetings are broadcast on JC 1, a local cable television channel. A project website, [www.downtownjcras.com](http://www.downtownjcras.com), was also created to inform the general public of the project and disseminate study-related documents, including:

- Presentation slides and minutes for all steering committee and public meetings
- Public comments submitted during public comment periods
- Meeting handouts
- Task deliverables.

The complete minutes of all four public meetings, and the comments received during the public comment periods, are provided in Technical Appendix F.

## 10.0 Summary and Next Steps

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The Jersey City Regional Waterfront Access and Downtown Circulation Study has identified the complete set of feasible roadway and transit concepts that can be advanced during the next decade to provide improved accessibility and mobility in the Jersey City Downtown and Hudson River Waterfront area.

Table 10-1 provides a list of the identified projects and the time frame during which they should be advanced. A hand-off agency is identified for each project – this is the agency that would take responsibility for the project and advance it from the conceptual plans presented in this report to the next stage of planning, scoping, design and construction.

The Enhanced No Build option ranks highest, which indicates that the City should move forward with an aggressive signal optimization program and implement spot improvements to the selected intersections. It is also important that the city complete the projects assumed for the No Build scenario, particularly the project to expand Christopher Columbus Drive to three lanes in the peak direction.

The bicycle and pedestrian improvement plans discussed in Chapter 5 should be advanced in the short term (0 to 3 years). These plans would enhance the quality of life in Jersey City at low cost and provide additional transportation options. It would also be advisable to advance the low-cost transit options (Transit 5, 6, and 7). The Port Liberte feeder service can be classified as medium term as it does not need to be commenced until the Port Liberte development is significantly completed.

As shown above in Table 7-19 the combination of Roadway Concepts 1 and 2 scores the highest of all the combinations. This seems to indicate that Concepts 1 and 2 complement each other and should both be advanced in the short term. Concept 2 in particular will complement the expansion of Christopher Columbus Drive to three lanes. Aesthetic and security concerns regarding the flyovers can be resolved by implementing Concept 2 as tunnels under Montgomery Street, which would be more costly than flyovers.

The combination of Concept 2 and 4 is the best roadway combination from a strictly traffic flow perspective. As in the case of combination on Concepts 1 and 2, aesthetic and security concerns can be resolved by implementing Concept 2 as tunnels under Montgomery Street.

Roadway Concepts 3 and 4 should be considered medium term prospect (3 to 5 years), possibly requiring additional reevaluation after the construction of the Jersey Avenue

Extension and the Center/Merseles Streets overpasses and a reassessment of traffic patterns by the updated traffic model. Concept 4 adds significant capacity to the system, at least in the inbound direction. Although it scores high for the traffic flow categories, the concept ranks lower than the other three roadway concepts due to its high costs and high construction and environmental impact.

The analysis indicates that the Bergen Arches transit projects have significant potential to reduce traffic congestion. However, the projects are ranked low due to their high cost and long time frame, and should be considered for long term implementation.

The traffic modeling does indicate that virtually all of the roadway concepts will have a detrimental effect on traffic flow on the local streets during the PM peak period. These concepts all have the effect of transferring vehicles from the regional routes to the local routes without adding major additional capacity to the local street system.

The traffic model indicates that this effect will be exacerbated as the concepts are combined. The roadway combination with one of the least detrimental impacts to both local traffic flow and overall traffic flow is the combination of Concepts 3 and 4. This combination also provides maximum access to developable land in the south end of the study area. Also, the combination of Concepts 1, 3 and 4 has a less detrimental effect on traffic than the combination of Concept 1 and 4.

The city will have to remain vigilant in efforts to mitigate the traffic congestion problem. The traffic model should be updated on an annual basis in order to adequately monitor levels of congestion. The projects should be implemented in a phased development sequence with reevaluation of the modeling assumptions following the completion of each phase.

Aggressive promotion of mass transit options such as the intercept parking and enhanced bus service will also be vital. None of the recommendations in this report should have a negative impact on existing or planned transit service, such as the planned increase in the frequency of the HBLRT.

Possible solutions to the potential gridlock scenario are the use of the parking management regulations to limit the demand into the study area, or the introduction of a congestion fee for vehicles that enter the study area during the morning peak period.

**Table 10-1: Recommended Schedule for Advancement of Projects**

Project	Description	Score	Rank	Cost	Handoff Agency
<b>Short Term</b>					
Enhanced No Build	Spot Improvements and Signal Optimization	838	1	< \$5 million	Jersey City Engineering / NJDOT
Pedestrian Plan	Pedestrian Improvements at Select Locations	N/A	N/A	< \$5 million	Jersey City Engineering / NJDOT
Bicycle Plan	Striped Bicycle Lanes at Selected Locations	N/A	N/A	< \$5 million	Jersey City Engineering / NJDOT
Concept 1	Jersey Avenue Extension	819	2	\$6.4 million	Jersey City Engineering / NJDOT
Concept 2	Center-Merseles Street Structures	713	9	\$18.3 million	Jersey City Engineering / NJDOT
Transit 5	Improved Bus Service to Jersey City	803	3	< \$5 million	New Jersey Transit / Hudson TMA
Transit 6	Staten Island Feeder Service to HBLRT	803	3	< \$5 million	New Jersey Transit / Hudson TMA
<b>Medium Term</b>					
Concept 3	Merseles-Aetna-Wilson Streets Extension	727	7	\$11.5 Million	Jersey City Engineering/NJDOT
Concept 4	11th Street Viaduct	716	8	\$80.0 million	New Jersey Turnpike
Transit 7	Port Liberte Feeder Service	803	3	< \$5 million	Hudson TMA
Transit 3	Intercept Parking at External Location(s)	746	6	\$5 million	New Jersey Transit
Transit 4	Intercept Parking at Internal Location	619	14	\$5 million	New Jersey Transit
<b>Long Term</b>					
Transit 1	Bergen Arches/6 <sup>th</sup> Street Embankment LRT	574	17	>\$100 Million	New Jersey Transit
Transit 2	Bergen Arches/6 <sup>th</sup> Street Embankment BRT	574	17	>\$100 Million	New Jersey Transit

*Note: Rank includes combinations of projects which are not shown here.*