Charleston Transportation Study

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Charleston Transportation Study

Final Report

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Executive Summary

The Charleston Transportation Study assesses potential future land use development scenarios in order to provide a comprehensive analysis of existing and potential future vehicular, parking, public transit, and pedestrian circulation patterns within the study area.

The study focuses primarily on Arthur Kill Road and the local street system. It also includes an analysis of parking, bus service and pedestrian conditions in the area. This study documents the existing conditions and evaluates the adequacy of the local street system, parking, bus service and pedestrian circulation to accommodate new potential and proposed developments.

Many mapped streets are not built. Existing roads are generally two lane streets. The West Shore Expressway/Bloomingdale Road is the eastern boundary of the study area, however the major problem is local access. The area is served by only one north/south arterial, Arthur Kill Road. This two lane street has many curves, narrows down to a width of less than 35 feet in some places and is used by trucks serving manufacturing uses in the area. It appears to be dangerous in some locations, and may not have sufficient capacity to handle existing and planned development. This study analyzed these limitations and developed recommendations to improve the roadway system. An analysis of the Charleston street system is essential to determine if existing and potential development can be accommodated.

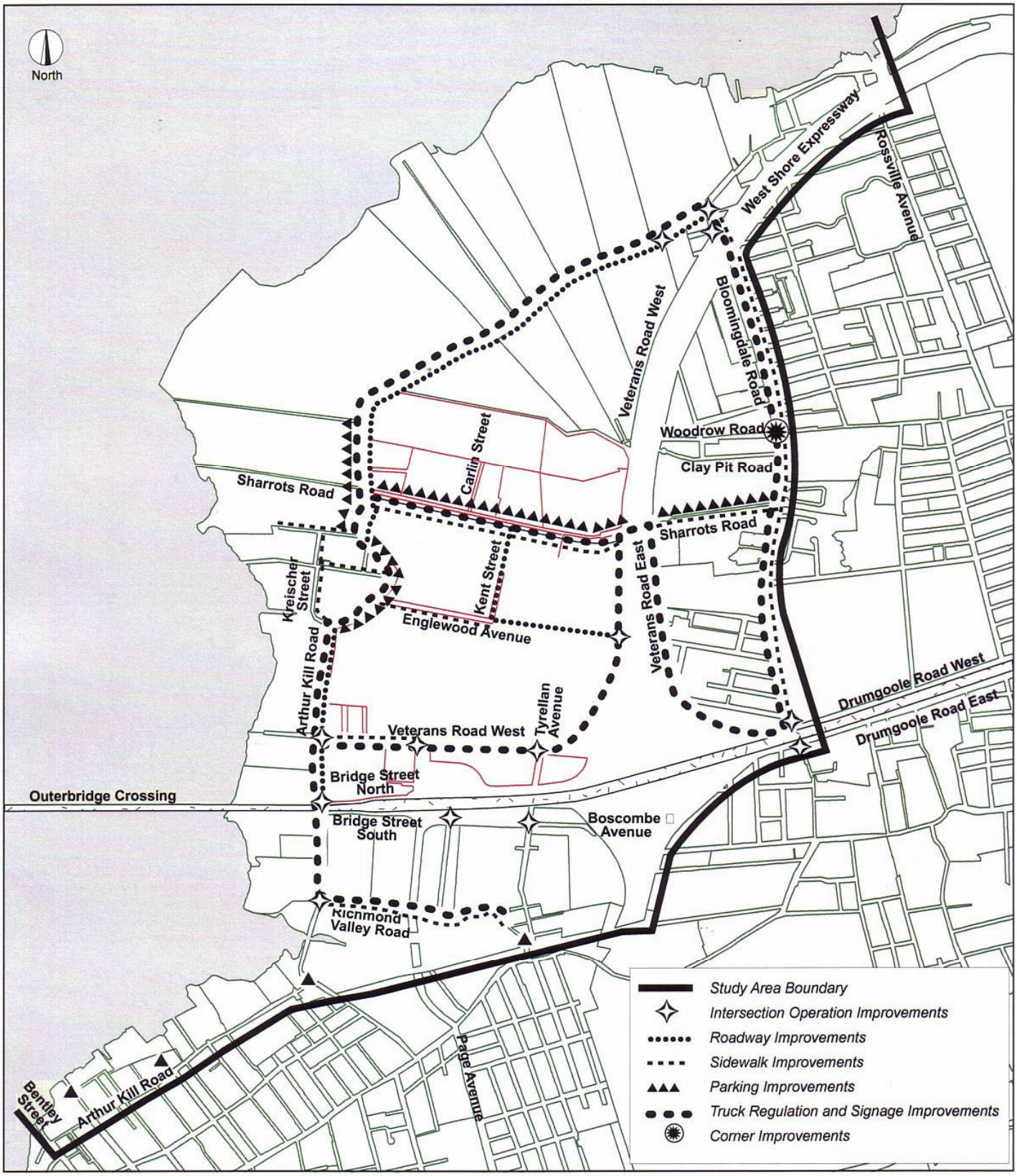
Recently approved projects that will use access from Arthur Kill Road in the Charleston area include:

- Westshore Center, a 159,000 square foot hardware store, 68,000 square foot supermarket and a 17,500 square foot retail shopping center. This development would include 930 parking spaces.
- A 23,000 square foot office development with 78 parking spaces at 351 Veterans Road West.
- A MTA bus depot on Arthur Kill Road, for bus storage and maintenance, to be built by 2007.
- Bricktown Center, a 412,474 square foot shopping center on city owned property along Veterans Road West, a quarter mile east of Arthur Kill Road.
- A 130-unit senior residence on the site of the landmark Kreischer Mansion.

The overall objective of this study is to examine the study area for the following:

- The 2002 existing conditions, including traffic level of service during AM, Midday and PM peak hours, parking conditions, transit service and pedestrian circulation.
- The 2012 future conditions, using a general background growth factor for South Richmond, and adding the new trips generated by the seventeen proposed projects within the study area.

The Charleston Transportation Study presents an evaluation of existing conditions including the result of a comprehensive field reconnaissance of the study area, inventory and analysis of the existing adjacent land uses and zoning, demographic and socioeconomic conditions, as well as street network and geometry, and the condition of streets and sidewalks. Additionally, traffic volumes, vehicle classification counts and turning movements were conducted at 27 intersections within the study area. Automatic Traffic Recorders (ATR) were installed at five locations during October 2002. On-



Recommended Improvements

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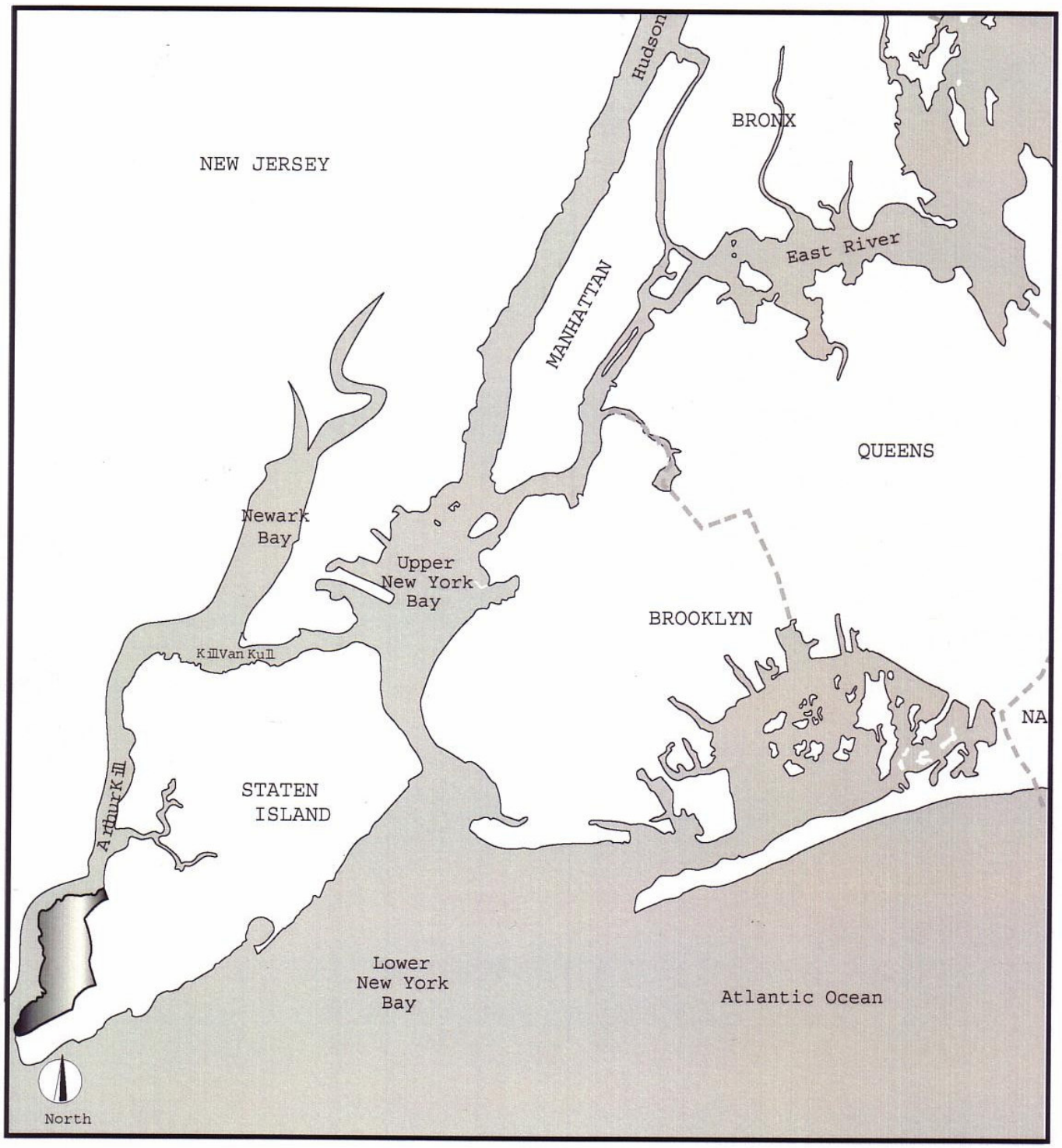
area. Automatic Traffic Recorders (ATR) were installed at five locations during October 2002. On-street parking regulations were analyzed along study area streets. Railroad station stair analyses were performed at four railroad stations. Bus services were examined as part of the transportation analysis and pedestrian counts were conducted at six locations. Future 2012 conditions were also analyzed, including land use, traffic, parking, transit and pedestrian activity. A level of service analysis for existing and future conditions is included in the report.

Based on the results of the existing and future conditions analyses, problems have been identified and improvements have been recommended in the following areas:

- Intersection operation
- Roadway
- Sidewalk
- Truck Regulations and Route Signage
- Parking
- Staten Island Railroad
- Bus Service
- Study Area Horse Industry
- Pedestrian

These recommendations enhance vehicular and pedestrian safety, reduce congestion, and improve quality of life. Additionally, they are important for the viability of the area and have been designed to create a more efficient street and transportation network in the study area.



Regional Context

Study Area Location

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Figure 1