

### **3. TRAVEL IN DOWNTOWN BROOKLYN**

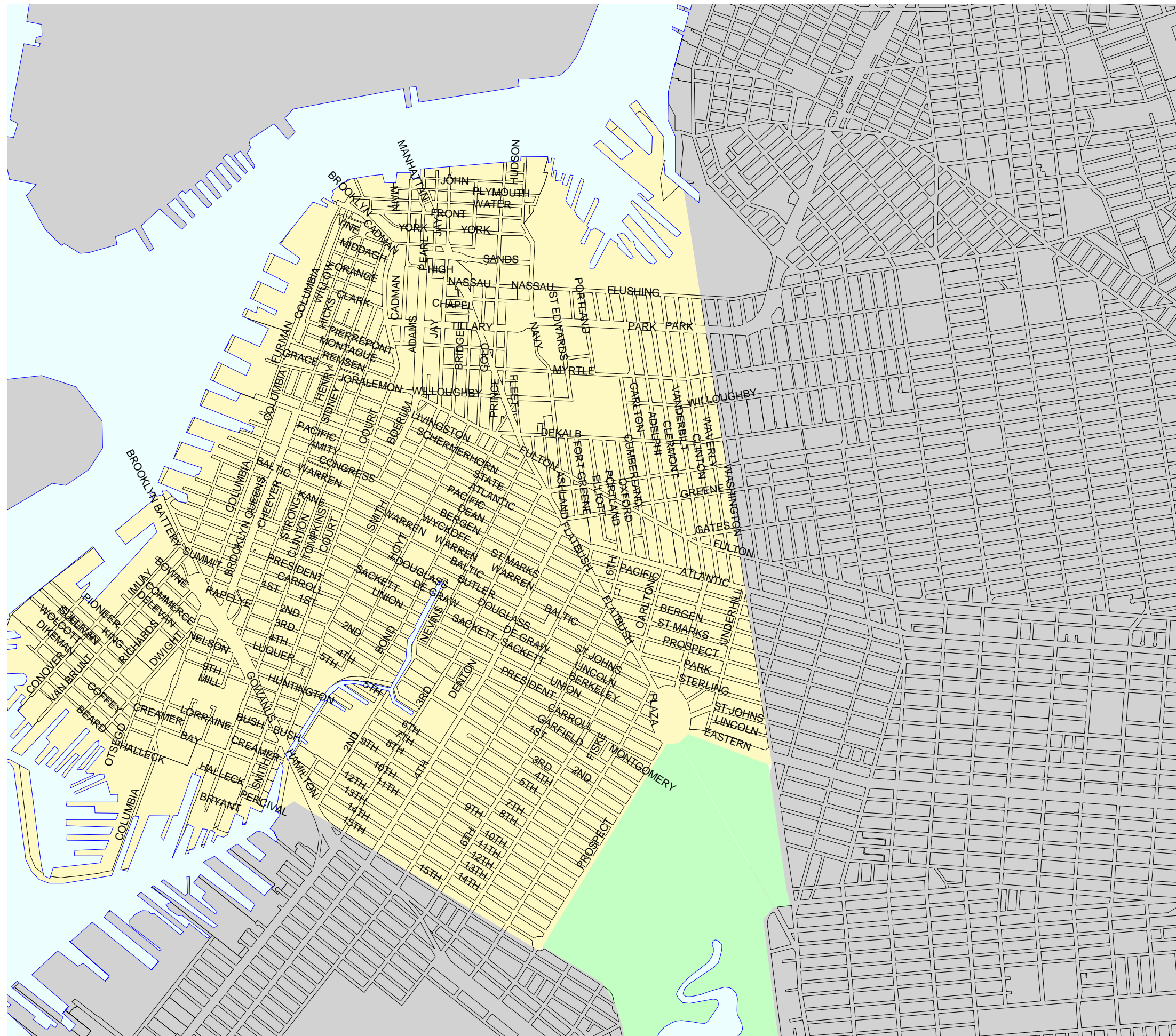
#### **3.1 Traffic Issues**

Together with the Brooklyn-Battery Tunnel, the Brooklyn and Manhattan Bridges provide the major points of entry into Lower Manhattan from Brooklyn. As each of these bridges is located at the northern edge of Downtown Brooklyn, traffic traveling to and from Manhattan from southwestern Long Island must pass through the study area. The Brooklyn/Queens Expressway (BQE) is intended to carry regional-scale traffic around the area. However, the BQE runs at capacity for much of each day and many drivers choose alternate routes through Downtown Brooklyn, where feasible alternate routes exist. *Figure 3.1* shows the streets in the project study area.

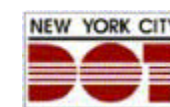
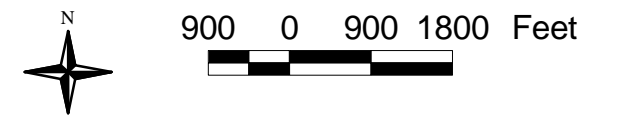
# Downtown Brooklyn Traffic Calming Project



Final Report  
May 2003



**Figure 3.1**  
**Streets in the  
Study Area**



**4<sup>th</sup> Avenue**, and to a lesser extent **3<sup>rd</sup> Avenue**, provides north-south capacity in the east of the study area. There is no real route through Downtown Brooklyn's street system with equivalent high capacity in the western part of the study area (although the BQE provides a high capacity link with limited access to streets in the area through which it passes), so overflow traffic from the BQE plus north-south traffic originating in or bound for the west of the area is forced onto streets where its presence is obvious and its impact is great – **Columbia/Van Brunt Streets, Hicks Street, Clinton Street, Henry Street, Court Street** and **Smith Street** all share the load of north-south traffic demand. The traffic-carrying role of a number of these streets is at odds with their predominantly residential uses. Also, many of these streets are one-way. This introduces asymmetry into the area's traffic patterns and means that some streets carry significant traffic only in one of the morning and evening peak periods.

**Atlantic Avenue**, which forms the southern boundary of the commercial core, is heavily congested, with the result that parallel streets to the south in Boerum Hill (**Pacific Street, Dean Street**) and to the north (**State Street, Schermerhorn Street, Livingston Street**) carry through traffic. For those streets to the south of Atlantic Avenue, this traffic intrusion is inconsistent with their predominantly residential nature. There is no other clear east-west route in the study area between Atlantic Avenue and **Hamilton Avenue**, which forms its southern boundary. However, the capacity of Atlantic Avenue is governed by the congested intersections with Fourth and Flatbush Avenues, meaning some opportunities exist to calm the blocks west of these intersections without compromising throughput.

**Flatbush Avenue** acts as a major traffic corridor through the study area and to the Manhattan Bridge. It carries a substantial amount of traffic, is congested in many places and acts as a barrier between the commercial core to its west and Fort Greene to the east. Wherever the heavily-trafficked Flatbush Avenue meets another road carrying a high traffic volume, substantial congestion ensues. The Flatbush Avenue/Atlantic Avenue/4<sup>th</sup> Avenue/3<sup>rd</sup> Avenue area, which represents the greatest confluence of traffic in the study area, is particularly badly congested. The Flatbush Avenue/Schermerhorn Street intersection is also heavily congested.

**Tillary Street** forms the northern boundary of the commercial core and performs an important east-west traffic function, linking access to the Brooklyn Bridge, Manhattan Bridge and the BQE to the east of the downtown area. The intersections of Tillary Street with both Adams Street and Flatbush Avenue carry heavy conflicting traffic volumes for much of the day. In this area, connections between the BQE and the access streets to the Brooklyn and Manhattan bridges need improvement.

### **3.1.1 Morning peak period**

In the morning peak period, the major movement of traffic is north- and west bound, as it converges on the commercial core or travels through it to reach either the Brooklyn or Manhattan bridges. *Figure 3.2* shows cordons of expected travel time to the Manhattan side of the Brooklyn Bridge for northbound vehicles in the AM peak hour, as measured in 2000.

The congestion that ensues from the confluence of the BQE and Prospect Expressway south of Hamilton Avenue forces some traffic onto local streets. Convenient connections between the southern boundary of the study area and the Brooklyn Bridge are provided by way of Clinton Street and Hicks Street. Both these streets carry substantial traffic volumes despite their 30 foot width, residential natures and low traffic capacity. The substantial congestion that results from this traffic in the morning peak has historically been accommodated through the imposition of morning peak period parking restrictions on sections of Clinton Street, particularly south of Atlantic Avenue and between Atlantic Avenue and Tillary Street, where congestion is particularly

severe. These parking restrictions have served to increase the number of vehicles that can queue on this street, without improving its through traffic capacity. As part of this study, the morning peak parking restrictions have been removed from sections of Clinton Street.

**Smith Street** also carries substantial commuter traffic in the morning peak period. This also forms part of a convenient route from the southern boundary of the study area to the commercial core and the Brooklyn Bridge via Atlantic Avenue, Boerum Place and Adams Street. Morning peak period parking restrictions are also imposed on the northern (congested) section of Smith Street on its approach to Atlantic Avenue.

**4<sup>th</sup> Avenue** acts as a major northbound traffic conduit in the morning peak period. It terminates at its intersection with Flatbush Avenue. Traffic traveling north on 4<sup>th</sup> Avenue generally connects to Flatbush Avenue and from there to the eastern side of the commercial core or the Manhattan Bridge, or to the Atlantic Avenue corridor and then to the southern and western side of the commercial core or the Brooklyn Bridge. 3<sup>rd</sup> Avenue acts as an important traffic route parallel to 4<sup>th</sup> Avenue and suffers significant congestion especially at its intersection with Atlantic Avenue.

As noted above, the **Flatbush Avenue/Atlantic Avenue/4<sup>th</sup> Avenue/3<sup>rd</sup> Avenue** group of intersections is heavily congested in the morning peak and some traffic intrusion is experienced in surrounding streets as a result of northbound drivers avoiding this congested area. Bond Street provides an important northbound connection into the commercial core that avoids the heaviest congestion in the area.

Previously, the congestion at the **3<sup>rd</sup> Avenue/Atlantic Avenue** intersection has been addressed through imposition of a left turn ban from 3<sup>rd</sup> Avenue northbound into Atlantic Avenue westbound. This movement is important at this intersection (not least because both 3<sup>rd</sup> Avenue and Atlantic Avenue are truck routes) and so this turn ban exacerbates the problem of traffic intrusion into surrounding streets.

**Atlantic Avenue** and **Flatbush Avenue** act as major arteries for northbound and westbound commuter traffic in the morning peak. They provide good connections to both the Manhattan and Brooklyn Bridges, as well as the commercial core. Both suffer substantial congestion in the morning peak period, notably at points where they meet roads carrying substantial traffic volumes: Flatbush Avenue/Atlantic Avenue/4<sup>th</sup> Avenue/3<sup>rd</sup> Avenue as noted above, Smith Street/Atlantic Avenue, Boerum Place/Atlantic Avenue, Schermerhorn Street/Flatbush Avenue, Livingston Street/Flatbush Avenue and Tillary Street/Flatbush Avenue.

**Tillary Street** suffers congestion, particularly at its intersection with Adams Street, the northern extension of Boerum Place. At this point traffic approaching the Brooklyn Bridge from three directions meets: traffic traveling north on Boerum Place/Adams Street, traffic traveling west from Flatbush Avenue and traffic traveling east from the northern terminus of Clinton Street.

In the Fort Greene area, **DeKalb Avenue** is one-way westbound and carries peak traffic to its terminus at Flatbush Avenue. Congestion primarily occurs at the intersection of DeKalb and Flatbush Avenues; traffic flows at higher speeds east of this intersection. Other two-way streets (**Myrtle Avenue** and **Fulton Street**) also carry some inbound volume in the morning peak.

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## DESCRIPTION

Each contour line represents a two-minute difference in travel time

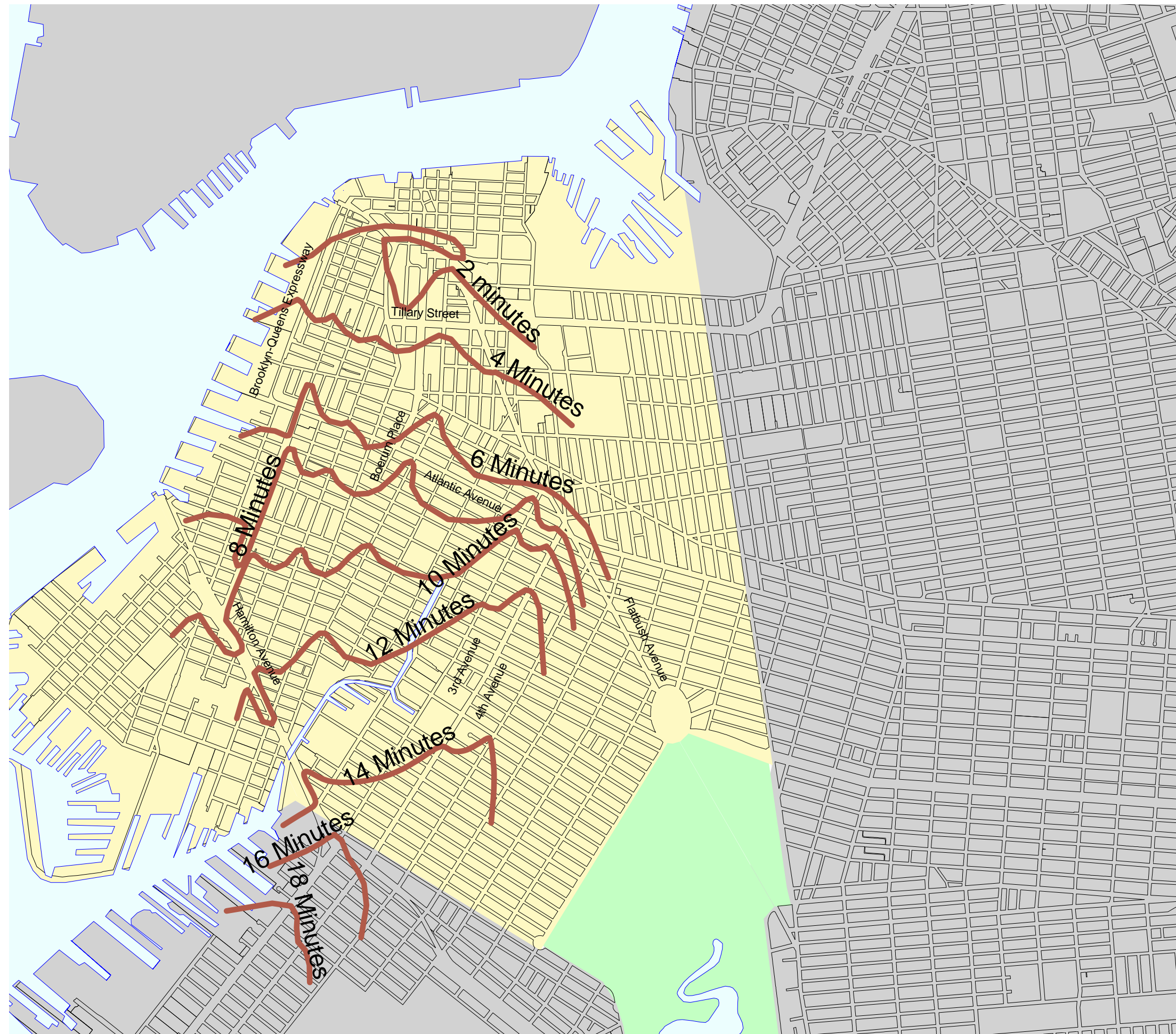
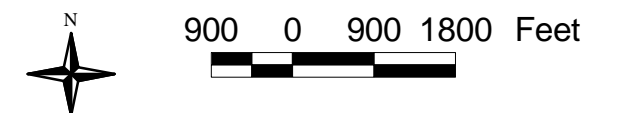


Figure 3.2

## A.M. Peak Travel Time to Manhattan



### 3.1.2 Evening peak period

Apart from the differences imposed by one-way streets, the traffic problems experienced in the morning peak period are mirrored in the evening peak. The major traffic demand is south and east, with substantial traffic leaving the commercial core and entering Brooklyn from the Brooklyn and Manhattan Bridges and the BQE. **Flatbush Avenue** and **Adams Street/Boerum Place/Atlantic Avenue** carry substantial traffic volumes and experience congestion at various points along their length. The confluence of traffic at the Flatbush Avenue/Atlantic Avenue/4<sup>th</sup> Avenue/3<sup>rd</sup> Avenue intersection yields the most significant congestion problem in the study area. This results in significant delays and traffic intrusion into surrounding streets and influences traffic patterns throughout the northern part of the Downtown Brooklyn area. An evening peak period parking restriction serves to increase its ability to store queued vehicles, but not its traffic capacity.

In Brooklyn Heights and Cobble Hill the southbound streets suffer traffic pressure: **Henry Street** (a residential street parallel to Clinton Street) and **Court Street** (a commercial street parallel to Smith Street) carry significant traffic. **Old Fulton Street** and **Furman Street** provide an attractive route for southbound traffic; because Furman Street is one-way southbound, this route is not reflected in the morning peak period. In Fort Greene, the high speeds experienced on DeKalb Avenue in the morning are observed on **Lafayette Avenue** in the evening, while **Myrtle Avenue** and **Fulton Street** also carry peak traffic loads.

## 3.2 Parking

The shortage of parking is an important issue throughout the study area.

Parking is at a premium through much of the study area. Morning peak period parking regulations reduce the available parking supply for residents and offer an opportunity for those traveling into the area to park on-street provided they arrive at the time that the parking restrictions come to an end. Peak parking restrictions on certain streets ensure extra capacity for peak travel, but this prevents parking in these locations at these times.

Parking by vehicles carrying permits (formally vehicles whose drivers are on official government business) is a problem in some parts of the study area, both because legitimate parking spaces are occupied by permit vehicles and because permit vehicles are able to park with impunity in what would otherwise be illegal spaces. This problem is exacerbated by the apparent problem of control over availability of permits. This is a policy issue whose solution lies beyond the scope of this study, though it is noted that Mayor Bloomberg has called for a 30% reduction in the number of city employee parking permits.