

### Open Space

There are twelve open space and recreation areas in the primary study area. These include parks, community gardens, playgrounds and viewing gardens. Open spaces located in the primary study area include: Liz Christy Houston Bowery Garden, Sara D. Roosevelt Park, First Park, Allen Street Mall, Peretz Square, ABC Playground, Le Petit Versailles, Boy's Club of NY, Hartman Square, Hamilton Fish Recreation Center, Wald Playground, East River Park. The sites provide for activities such as handball, baseball, basketball, soccer, jogging, walking, cycling and swimming. Additionally, Tompkins Square Park and numerous community gardens are situated in the East Village, north of the primary study area.

**East River Park (left);  
Sara D. Roosevelt Park (center-top);  
Hamilton Fish Park (center-bottom);  
Liz Christy Garden (right).**

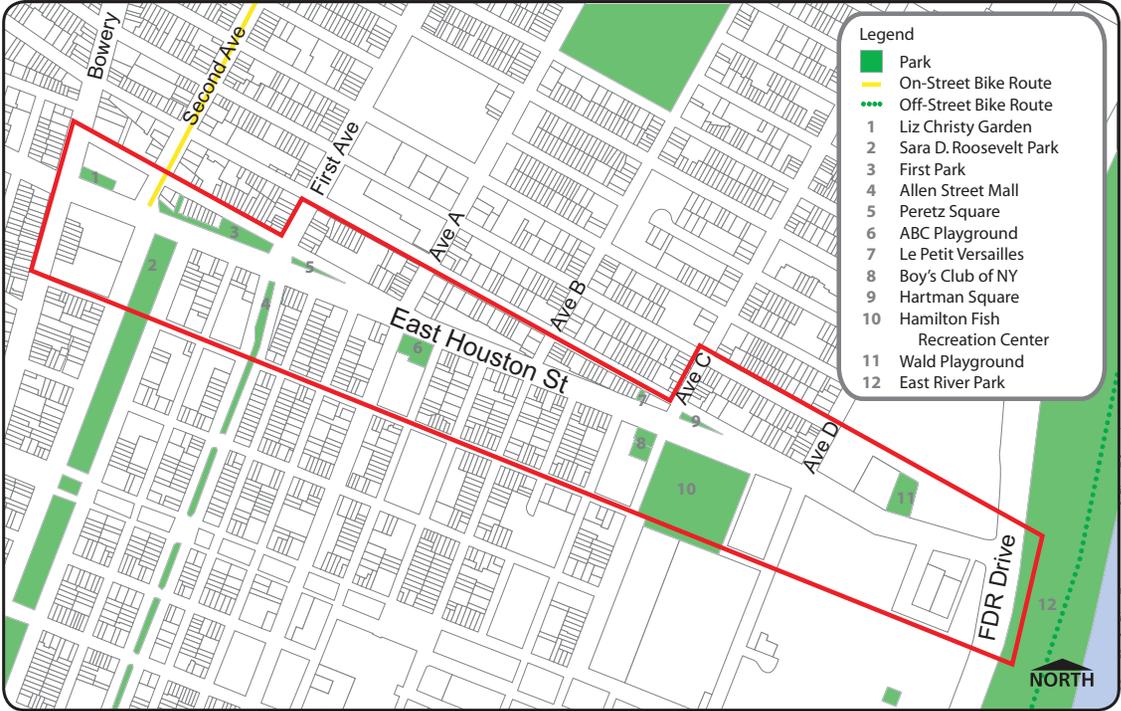


Figure 5: Open Space



## Institutions

Institutions and facilities, including schools, day care facilities, and facilities for the elderly, the disabled, and the homeless, present special populations that must be accommodated in any recommended improvements. There are six such institutions and facilities in the primary study area: PS 20, PS 188, Bard High School/Early College, New Explorations in Science, Technology and Math, Barrier-Free Living and Auxiliary Services. Just outside the primary study area are PS 15, PS 63, Lower East Side Prep and the NY Society for the Deaf.

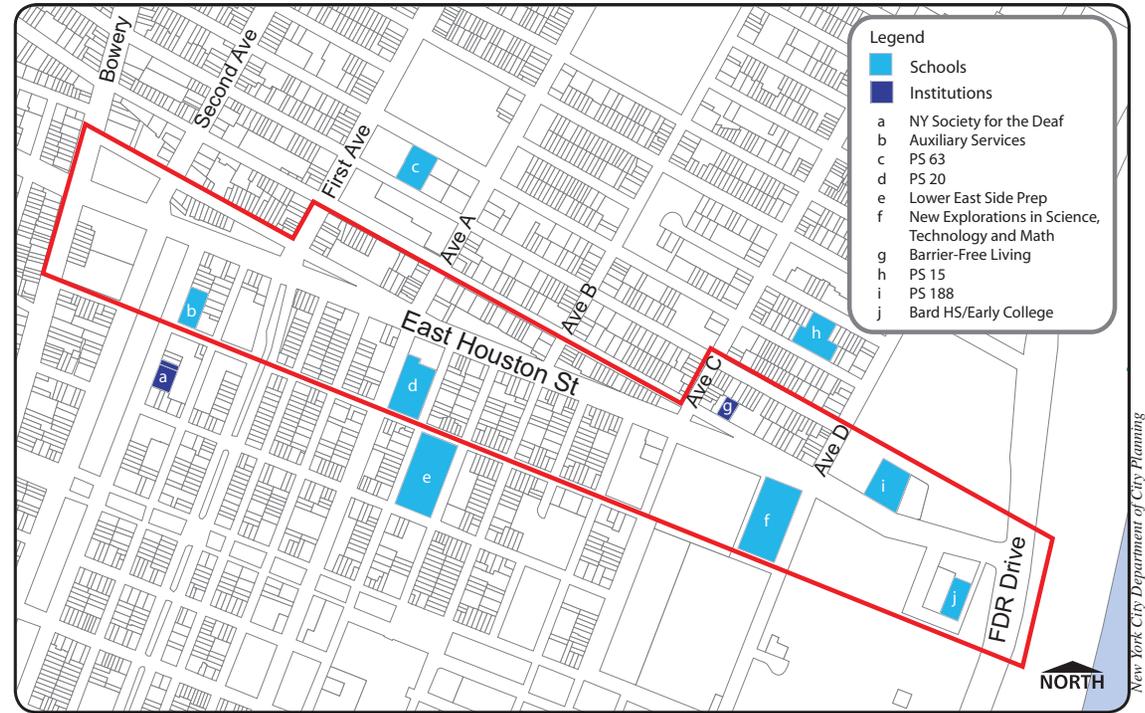


Figure 6: Institutions



N.E.S.T High School (top);  
Barrier-Free Living (left);  
PS 188 (right).

## Public Transportation

### Subway Service

The primary study area is served by the Sixth Avenue local F and V trains connecting subway riders to Brooklyn, Midtown Manhattan, and Queens. Subway entrances on East Houston Street are located at the intersections of First and Second avenues. Approximately one-third of a mile south of the study area is the Delancey/Essex station where the F, J, M, and Z trains stop, and approximately one-third of a mile west of the study area is the Broadway-Lafayette/Bleecker station, where the 6, B, D, F, and V trains stop (See Figure 6).

New York City Transit's *Subway and Bus Ridership Report* for the year 2000 states that from 1998 through 2000 the Second Avenue, Delancey/Essex, and Broadway-Lafayette/Bleecker subway stations all experienced increased usage. The Broadway-Lafayette/Bleecker station is the 29th busiest of 424 subway stations serving nearly 9 million riders in the year 2000, an increase of 11.9% from 1999. The Second Avenue station ranks



Figure 7: Public Transportation

### Subway entrance at southwest corner of East Houston and Allen streets.



109th system-wide and served just over 3.6 million riders, an increase of 9.3% from 1999. The Delancey/Essex subway station ranks 90th system-wide with a little over 4 million riders, an increase of 3.6% from 1999.

### Bus Service

The primary study area is served by five bus lines. The M9, M14, M15 and M103 lines provide north/south access to Manhattan along the Bowery, Second Avenue, First Avenue/Allen Street, Avenue A/Essex Street, Avenue B, and Avenue D, while the M21 line provides crosstown access along Houston Street, as well as north-south access along Avenue C.

New York City's Transit *Subway and Bus Ridership Report* for the year 2000 ranks the M15 first in annual bus ridership, serving over 19 million riders. The M14, ranked ninth, served just over 11.3 million people, and the M103 ranked 55th with approximately 4.5 million riders.

New York City Department of City Planning

### Streets

This section describes the streets in the study area, including street geometry, signalization, parking regulations, and accident data.

#### East Houston Street

##### *Street Geometry*

East Houston Street is the dividing line between two disjointed Manhattan street grids, creating irregular street geometry at many of the intersections in the study area. Where East Houston Street intersects with Avenue A and Avenue D, traffic triangles are created which pose challenges for pedestrians, cyclists and motorists.

East Houston Street is a major east-west corridor and through truck route carrying heavy vehicular traffic west of First Avenue and Allen Street and connecting motorists to the FDR Drive. Between the Bowery and the FDR Drive the roadbed is approximately 96 feet wide. East Houston Street has four eastbound and three westbound travel lanes

##### **Looking north at Second Avenue.**



**A view west from Mangin Street.**

from the Bowery to First Avenue and Allen Street, three travel lanes in each direction from First Avenue and Allen Street to Avenue C and Pitt Street, and two travel lanes in each direction east of Avenue C and Pitt Street to the FDR Drive.

At most intersections there are either standard, ladder, or high-visibility crosswalks. Left turn bays are located at its intersections with the avenues, as well as Baruch Place, Ludlow and Ridge streets. At intersections where left turn bays do not exist, a planted median approximately 14 feet wide runs through the center of the street and is maintained by the New York City Department of Parks and Recreation (NYCDPR) through the Greenstreets program.

Sidewalks range in width from 12 to 18 feet. Sidewalks at the west end of the study area are generally narrower than those at the east end.

##### *Parking Regulations*

Along East Houston Street's south curb parking is permitted except from 3:00am to 6:00am Tuesday,

Thursday and Saturday from the Bowery to Ludlow Street or; 7:30am to 8:00am except Sunday. Two hour parking is permitted from 8:00am to 7:00pm including Sunday, from Essex Street to Ridge Street; 9:00am to 10:30am Tuesday and Friday from Ridge Street to Mangin Street. In addition, between Baruch Place and Mangin Street parking is permitted except from 7:00am to 4:00pm on school days.

Parking is permitted along East Houston Street's north curb, from Avenue A to the FDR Drive, except from 9:00am to 10:30am Monday and Thursday. Standing is not permitted anytime from the Bowery to Second Avenue, and from Avenue C to Avenue D. Two hour parking is permitted from 9:00am to 7:00pm between Second Avenue and First Avenue; one hour parking is permitted from 7:00am to 9:00pm between First Avenue and Avenue A. On school days parking is permitted except from 7:00am to 4:00pm west of Baruch Drive.

Bus stops are located on the south curb of East Houston Street at the east corner of the Bowery, between Chrystie Street and Forsyth Street, the west corner of Eldridge Street, the west corner of Essex Street, the east corner of Norfolk Street, the east corner of Clinton Street, the east corner of Ridge Street, the east corner of Columbia Street, the east corner of Baruch Drive, and the west corner of Mangin Street. Bus stops are located on the north curb of East Houston Street at the west corner of Second Avenue, the east corner of First Avenue, the east corner of Avenue A, the west corner of Avenue B, and the west corner of Avenue C.

### *Accidents*

An analysis of NYSDOT accident data for the years 1998 through 2000 indicates that the highest accident totals occurred where major through streets such as the Bowery, Second Avenue, Allen Street and Essex Street/Avenue A intersect with East Houston Street. The Bowery at East

Houston Street had 261 accidents, the highest number along the corridor. Of these accidents, 97 were reportable, meaning that the accident resulted in an injury and/or at least \$1,000 worth of damage.

Fatal accidents occurred at three locations on East Houston Street: the Bowery; Essex Street/Avenue A; and mid-block between Chrystie Street and Forsyth Street. The Bowery at East Houston Street had the most bicycle accidents with a total of eight. Essex Street/Avenue A had the highest number of pedestrian accidents, sixteen, while the Bowery had fifteen.

There have been few accidents of any kind (and only one reportable accident), and no fatalities, at the FDR Drive intersection, despite its complexity and numerous approaches. This may be due to the limited pedestrian access or the slow speed at which vehicles must navigate the intersection. There were, however, 29 total accidents at nearby Mangin Street and East Houston Street, of which sixteen were reportable, including one pedestrian accident and one bicycle accident.

Many of the intersections with a high number of accidents have irregular street geometry or non-continuous traffic flow which may contribute to the cause of accidents along the corridor. Additionally, some of these locations encourage high vehicular speeds, such as at Bowery, First Street, and Second Street. (See Appendix 1 for detailed accident data from the NYS Department of Transportation.)

### **A westbound cyclist approaching the Bowery.**



## Existing Conditions

### The Bowery @ East Houston Street

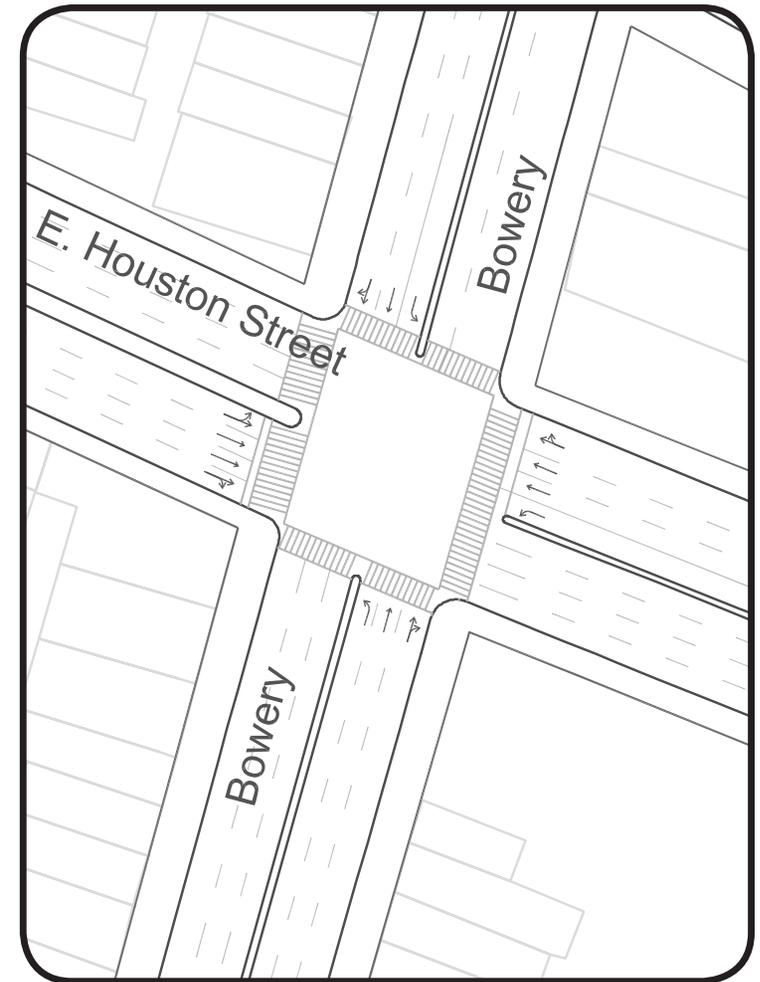
The area surrounding the Bowery is primarily comprised of commercial and office buildings, public facilities, and some mixed use commercial and residential buildings. Liz Christy Garden, a community garden maintained by the Green Guerillas, is located on the northeast corner of the intersection.

#### *Street Geometry*

The Bowery, a local truck route that carries heavy vehicular traffic, is approximately 79 feet wide with three southbound travel lanes, three northbound travel lanes and two parking lanes. There is a narrow median of about four feet running along the Bowery. Ladder crosswalks connect the corners of the four-way intersection.

#### *Signalization*

This intersection is signalized and has a 90-second signal cycle. There is a permitted and protected left turn onto East Houston Street from both northbound and southbound Bowery. Traffic has 36 seconds of green time on East Houston Street, 31 seconds on the Bowery and eight seconds for the left turn from the Bowery, with three seconds of amber and two seconds of red at each phase for both streets.



A view of westbound East Houston Street traffic and the Liz Christy Garden at the northeast corner of the intersection.

*Parking Regulations*

North of East Houston Street parking is not permitted from 8:00am to 6:00pm on either side of the Bowery. South of East Houston Street, a bus stop is located on the east corner of the Bowery, and south of the bus stop parking is not permitted from midnight to 3:00am Tuesday, Thursday and Saturday. Standing is not permitted from 7:00am to 7:00pm except trucks. Another bus stop is located on the west side of the Bowery, and south of the bus stop one hour parking is permitted 9:00am to 4:00pm. Standing is not permitted from 4:00pm to 7:00pm.

*Accidents*

There were a total of 261 accidents at this intersection, 97 of which were reportable, from the years 1998 through 2000. One of these accidents resulted in a fatality. Eight of these accidents involved a cyclist, and 15 involved a pedestrian.



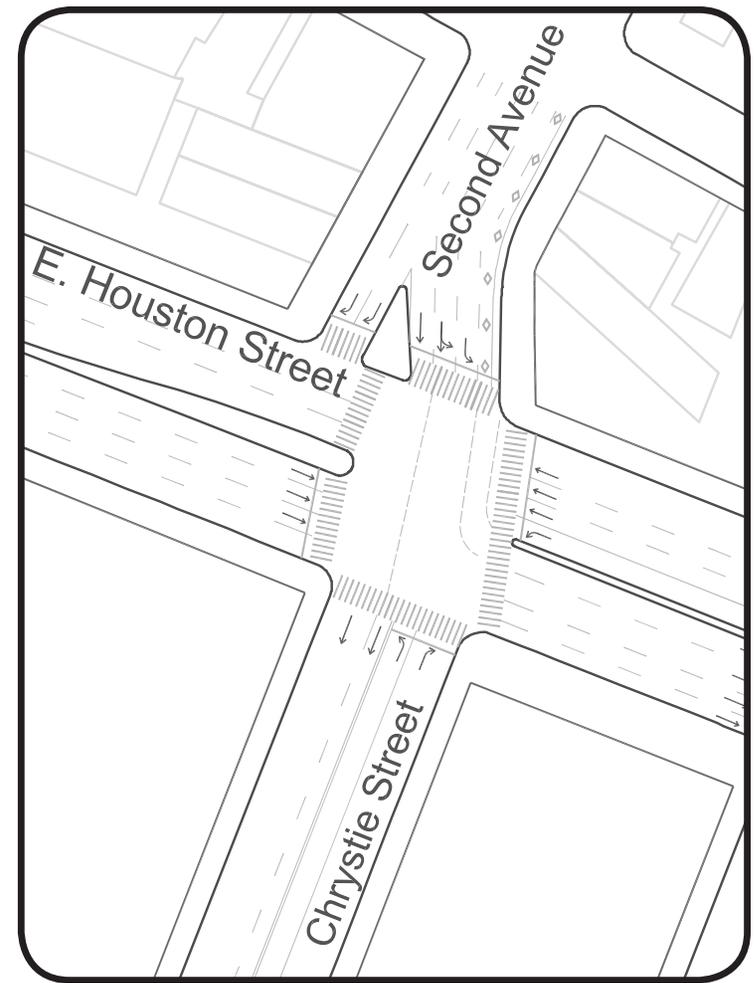
**Looking north at traffic on the Bowery.**

### Second Avenue and Chrystie Street @ East Houston Street

The area surrounding Chrystie Street and Second Avenue is comprised of a mix of industrial and manufacturing buildings, commercial and office buildings and some mixed-use commercial and residential buildings. *Irreplaceable Artifacts*, an architectural salvage-and-sell operation, occupied the northwest corner of Houston Street at Second Avenue and Chrystie Street until a wall collapsed on July 13, 2000, leaving a vast construction site in that lot. Sara D. Roosevelt Park, a seven block-long park maintained by the Forsyth Street Garden Conservancy, begins at the southeast corner of Houston Street at Chrystie Street and continues south along Chrystie and Forsyth streets.

#### Street Geometry

Second Avenue, a local truck route, is a one-way southbound street north of East Houston Street. It is 60 feet wide, with five lanes of traffic and a bike lane along its eastern curb. Vehicular traffic is heavy, and as Second Avenue approaches East Houston Street it widens to accommodate a traffic triangle to channelize vehicles. Two right turn only lanes are directed west of the offset traffic triangle; the three through and left turn lanes, along with the bike lane, are directed south or east. Chrystie Street, a through truck route, is a 68-foot wide two-way street that approaches East Houston Street from the south. The street has two northbound travel lanes, two southbound travel lanes and parking lanes. Northbound vehicles on Chrystie Street must turn either right or left onto Houston Street since Second Avenue is a one-way southbound street. High visibility crosswalks connect the corners of this intersection.



The former site of Irreplaceable Artifacts (left). Sara D. Roosevelt Park at the southeast corner of the intersection (top). Southbound Second Avenue traffic seen from the northeast corner of the intersection (bottom).

### *Signalization*

This intersection has a 90-second signal cycle. Traffic has 31 seconds of green time on East Houston Street, 19 seconds on Chrystie Street and 21 seconds on Second Avenue. The amber phase is three seconds, and the red phase is two seconds. There is a four-second interval allotted to pedestrians, known as the Leading Pedestrian Interval (LPI), during which pedestrians may cross East Houston Street before vehicles are permitted to turn east from Second Avenue.

### *Parking Regulations*

Immediately north of East Houston Street parking is not permitted anytime on either side of Second Avenue. One parking spot is available on the east side of Second Avenue near East First Street, however parking is not permitted from 8:00am to 6:00pm Monday through Friday. Parking is permitted on the west side of Second Ave, extending north approximately 100 feet from the corner, except from 8:00am to 6:00pm Monday through Friday.

South of East Houston Street parking is permitted on the east side of Chrystie Street except from midnight to 3:00am Monday, Wednesday and Friday; on the west side parking is permitted except from midnight to 3:00am Tuesday, Thursday and Saturday.

### *Accidents*

There were a total of 153 accidents at this intersection, 63 of which were reportable, from the years 1998 through 2000. Four of these accidents involved a cyclist, and six involved a pedestrian. A fatality occurred midblock between Chrystie and Forsyth streets, where a bus turning left from Second Avenue onto East Houston Street struck a pedestrian.



A left-turn bay for westbound East Houston Street traffic (top). A view of the west and north crossings at Second Avenue and East Houston Street (above).

## Existing Conditions

### Forsyth Street @ East Houston Street

In addition to the open space and recreational facilities, such as Liz Chrystie Garden and Sara D. Roosevelt Park, the intersection of East Houston Street at Forsyth Street is comprised primarily of multi-family walk-up buildings and some commercial and office buildings. Commercial activity has recently surged along East Houston Street between Forsyth and Eldridge Streets with the opening of a new Howard Johnson's Motel, and the resurrection of the landmark Sunshine Theatre.

#### *Street Geometry*

Forsyth Street is six blocks long and carries light, one-way, northbound traffic from Hester Street until it terminates at a T-intersection with East Houston Street. Traffic on Forsyth Street is permitted to turn onto both east and westbound East Houston Street. It has a 45-foot wide roadbed and parking lanes on both sides of the street. Standard crosswalks traverse Forsyth Street and East Houston Street, west of Forsyth Street. A ladder crosswalk traverses East Houston Street east of Forsyth Street.

#### *Signalization*

This intersection has a 90-second signal cycle. Traffic has 54 seconds of green time on East Houston Street and 26 seconds on Forsyth Street, with three seconds of amber and two seconds of red at each phase for both streets.

#### *Parking Regulations*

Parking is permitted on Forsyth Street at all times except for midnight to 3:00am Tuesday, Thursday, and Saturday along the west curb and Monday, Wednesday, and Friday along the east curb.

#### *Accidents*

There were a total of 16 accidents at this intersection, eight of which were reportable, from the years 1998 through 2000. One of these accidents involved a pedestrian.



The east crosswalk of the intersection of Forsyth Street and East Houston Street (left). Sara D. Roosevelt Park borders Forsyth Street to the west (right).



## Eldridge Street @ East Houston Street

Eldridge Street is largely residential, and is comprised primarily of multi-family elevator buildings, multi-family walk-up buildings and mixed residential and commercial buildings. Like neighboring Forsyth Street, Eldridge Street at East Houston Street is enjoying a new surge of activity due to the new motel and movie theater nearby.

### *Street Geometry*

Eldridge Street is a one-way northbound street that terminates at a T-intersection with East Houston Street. Eldridge Street carries light, local traffic, and all traffic is controlled by a stop sign and must turn right onto East Houston Street. The 25-foot wide roadbed has one moving lane and parking lanes on both sides of the street. A ladder crosswalk traverses Eldridge Street.

### *Signalization*

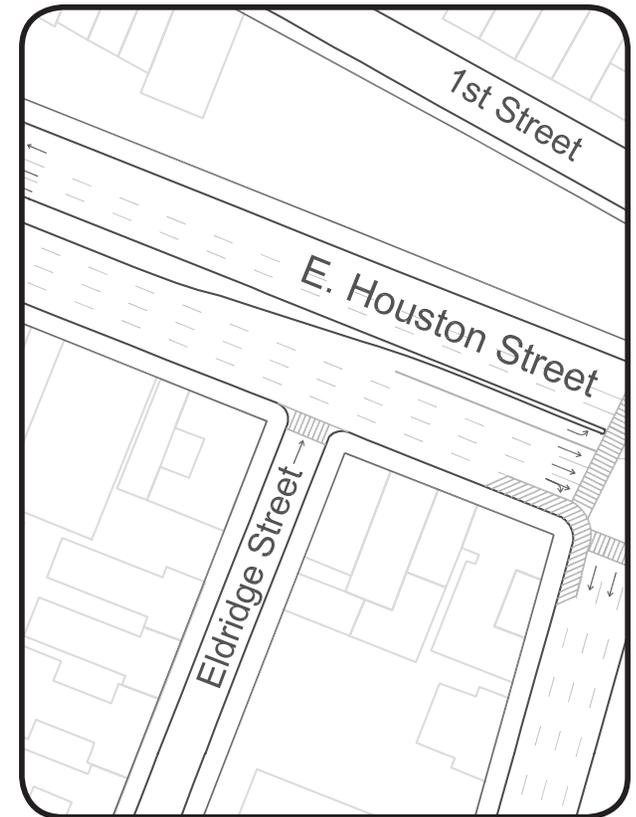
This intersection is unsignalized. A stop sign controls Eldridge Street traffic entering East Houston Street.

### *Parking Regulations*

Parking is permitted except from 8:00am to 9:30am Tuesday and Friday on the east side of Eldridge Street, and from 8:00am to 9:30am Monday and Thursday on the west side of Eldridge Street.

### *Accidents*

There were a total of 26 accidents at this intersection, six of which were reportable, from the years 1998 through 2000. Three of these accidents involved a cyclist.



Two views of Eldridge Street, a one-way northbound local street.

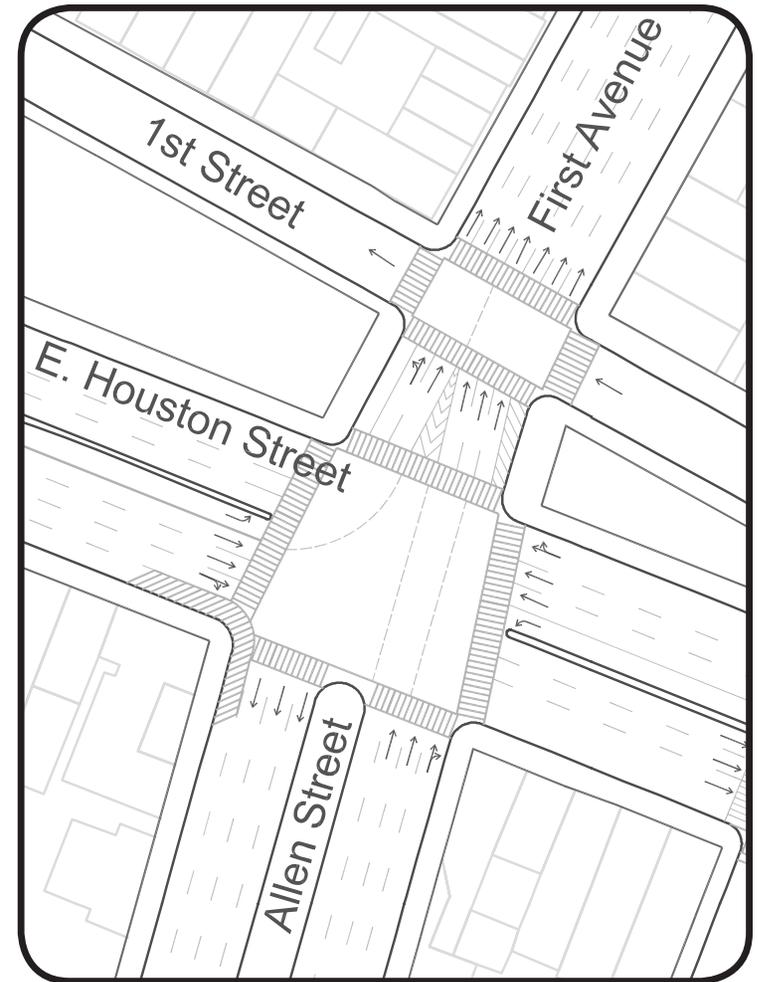
## Existing Conditions

### First Avenue and Allen Street @ East Houston Street (and First Avenue @ First Street)

The area around First Avenue and Allen Street at East Houston Street is composed of many mixed commercial and residential buildings, retail and office buildings and some multi-family elevator and walk-up buildings. The area is also home to a number of open space and recreational facilities, such as First Park, at the northwest corner of First Avenue at East Houston Street; Peretz Square, a pocket park located on East Houston Street between First Avenue and Avenue A; and the Allen Street Malls, a series of concrete malls that extend along Allen Street from East Houston Street to Division Street, all maintained by the New York City Department of Parks and Recreation (NYCDPR).

#### Street Geometry

Both First Avenue and Allen Street carry heavy vehicular traffic. First Avenue, a local truck route, is a one-way northbound street with five travel lanes and two parking lanes. Allen Street, a through truck route, is eight blocks long. A two-way street that begins at East Houston Street, it has six travel lanes, three northbound, three southbound, and two parking lanes. There is excess roadbed along the southwest corner of Allen Street at East Houston Street as a result of the discontinuous travel direction. On Houston Street, traveling east and approaching Allen Street, there is a striped neckdown reducing traffic from four to three travel lanes. Ladder crosswalks connect the corners of this intersection.



A view of the south crosswalk, subway entrance, and bus stop (left); First Park (middle); Peretz Square (right).

First Street is a one-way westbound street with one travel lane and two parking lanes. North of its intersection with First Street, First Avenue provides five northbound travel lanes and two parking lanes. Ladder crosswalks connect the corners of this intersection.

*Signalization (East Houston Street @ First Avenue)*

This intersection has a 90-second signal cycle. Traffic has 29 seconds of green time on First Avenue and Allen Street, 30 seconds on East Houston Street, and 12 seconds for the two protected left turn on East Houston Street and First Avenue. Each phase has three seconds of amber and two seconds of red. There is a four-second LPI for pedestrians crossing East Houston Street.

*Signalization (First Avenue @ First Street)*

This intersection has a 90-second signal cycle. Traffic has 50 seconds of green time on First Avenue and 30 seconds of green time on First Street, with three seconds of amber and two seconds of red for each phase for both streets.

*Parking Regulations*

Between East Houston Street and First Street, standing is not allowed anytime on the eastern side of First Avenue. Parking is not permitted from 8:00am to 8:30am on the western side of First Avenue. One hour parking is permitted from 8:30am to 7:00pm. On either side of First Avenue, north of First Street, parking is not permitted from 8:00am to 8:30am and one hour parking is permitted from 8:30am to 7:00pm. There is a bus stop located on the eastern side of First Avenue, north of First Street.

South of East Houston Street, two hour parking is permitted on either side of Allen Street from 9:00am to 7:00pm. In addition, on the western side of Allen Street, parking is not permitted from midnight to 3:00am Monday, Wednesday, and Friday, and there is a bus stop located just south of East Houston Street.

*Accidents*

There were a total of 166 accidents at this intersection, of which 49 were reportable, from the years 1998 through 2000. Seven of these accidents involved a cyclist, and five involved a pedestrian.



**A pedestrian crossing East Houston Street using the west crosswalk (top); Looking north along First Avenue (bottom).**