URBAN DEVELOPMENT AND TRANSPORTATION NETWORKS IN THE REGIONS OF NEW YORK, CHICAGO and LOS ANGELES

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This report was developed during a study trip to the United States from September 1st to the end of December, 1989, within the framework of a contract between the IAURIF (Institut d'Urbanisme et d'Aménagement de la Région Île-de-France – Institute for Urban Planning and Development in the Île-de-France Region) and the JHU (Johns Hopkins University) Institute for Policy Studies in Baltimore.

Initially, the study was to be limited to an analysis of infrastructural networks of different major metropolitan areas, but the final approach became a more general view of urban development and transportation networks, because the opportunity of working with a number of local authorities presented itself. The author of this report wishes to thank them warmly for their assistance.

The geographic selection includes the three major regions of the country, which together cover the range of transportation problems raised in American metropolitan areas: New York, Chicago and Los Angeles. A more fragmentary study of the Baltimore and Phoenix areas did not allow the author to go beyond rudimentary notes, which have not been published here.

This translation of the original report in French includes only the last two chapters written on each region, the major conclusions and a comparative table.

The numbers given before each section of text refer to the chapter sections of the original, full-length study.
NEW YORK

1.7 - MAJOR TRANSPORTATION PROBLEMS

The conditions of transportation in the region have been deteriorating over many years. There are many types of causes: economic, institutional and technical.

As established in previous chapters, the region began growing again after the crisis years of the 70s. But the growth of the population and employment has not been homogeneous. There has been more growth in the far suburbs in regard to both population (except for the case of Manhattan) and employment compared to regional averages. This has resulted, in particular, in:

- a high level of immigration (mainly from the Caribbean) of an unqualified population, most of whom settle in New York City, which changes the pattern of company set-ups; when companies want more skilled labor they locate in the suburbs;

- the exodus of center city population seeking more acceptable living conditions.

Thus the growth of domicile-workplace travel is much higher in the suburbs.

But transportation networks, whether public or individual, no longer are flexible enough to keep up with trends. As in all major metropolises, these networks were essentially built in radial form to serve movement toward the center of the region, New York City, and especially Manhattan. The result is that the existing network meets current needs inadequately (see annex 1.21).

The use of private cars increased more than the use of public transport, where the relative share of transportation provided diminished, although this trend seems to be stabilizing. This situation, to cite a few examples, arises from:

- increase in one-family housing units;

- the virtual necessity of use of a private car in the absence of sufficient public transportation, in particular in regard to suburban travel;

- the progressive increase of the number of working women;
- the low cost of gasoline;
- maintenance lags in public transportation networks that took place in the 70s.

Currently, the main transportation problems concern:

- the operation of different public transportation and the main road network;
- the maintenance of public transportation vehicles and existing infrastructures.

An overall concern is the necessity of reducing the level of atmospheric pollution (50% of New York City intersections have unacceptable levels of pollution).

The situation of the major New York bridges is especially worrisome to the east of Manhattan (Williamsburg, Manhattan bridges), and most operate at the limits of saturation.

In the suburbs, "strip" development around highways, as in Long Island or New Jersey, has contributed to the deterioration of the situation. Entire areas of the region are threatened with strangulation, and travel time continues to increase (it takes an average of three hours to go from the IMIS control center to Manhattan during rush hour, at an average speed of 16 miles/hour).

Some experts even fear a possible blockage of merchandise distribution in some areas (Long Island) if the Washington Bridge were saturated.

As for public transportation, many of the subway and suburban train lines are saturated (see annex 1.22). The biggest problem is maintenance of the existing infrastructure, which takes up the better part of the MTA's maintenance budget.
Some consensus has been established in regard to the extension of the highway network. No major projects are planned. The city of New York has no more space for construction of specific highway projects other than those entailed in planning projects (West Street in Manhattan, along the Hudson River). In the suburbs, the only major operations concern the completion of highway 287 (between I80 and I287 in the north), which is a beltway, and the project for expanding the Long Island Expressway by 4 lanes in each direction.

Emphasis has rather been placed on:

- improvement of the operation of the existing network by better informing users (IMIS) and by reinforcing controlled access;

- creation of HOVLs (High Occupancy Vehicle Lanes) reserved for private cars with more than two occupants and buses (ie; the approach to the Brooklyn Tunnel).

The state of New York plans on an annual budget of 2 billion dollars for highway expenditures.

In the state of New Jersey, there has been a policy change in regard to highways; the "Trans Plan" program reveals a number of important intentions:

- to try to solve traffic problems without necessarily building new highways;

- to reduce access to new highways and encourage developers to have a localization policy taking into account traffic problems;

- to limit vehicle access by access control;

- the reduce densification in the oldest sectors.
Public Transportation Projects

In the MTA's ten-year emergency program, a 15 billion-dollar investment is planned for infrastructures, including 8 billion dollars to be invested in the next five years.

The three major sectors of intervention for the subway concern:

- The East Manhattan sector which requires short and long term investment: East of midtown, near Second Avenue, commercial density is high and major development has occurred over the past twenty years. The subway must be reinforced in the corridor, linking it with the Bronx, the first section to be located between 63rd and 164th Streets;

- Queens, where a new tunnel must be linked to existing infrastructures;

- Brooklyn, where the line is made up of a series of bridges and tunnels. Speed must be increased, as well as the capacity of the red and green lines (a small investment around the Botanic Gardens neighborhood would allow for an additional 15 trains per hour on the red line).

As for the subway, there is also a plan for car replacement, vehicle maintenance, and station refurbishment in order to improve the system's public image.

There is also a public transportation axis project along the Hudson river from South Street towards the Washington Bridge. Study is now underway at the New York Planning Department. This would be integrated with riverfront development plans (manufactories, warehouses, etc.). The project might be a tramway, although projected demand does not seem sufficient. Another alternative would be to increase the capacity of nearby subway lines with feeder-lines.

Another tramway project in Manhattan proposes a line on 42nd Street, along the Hudson River, linking Penn Station, Grand Central Station and Convention Center.

All these tramway projects are currently under study.

No reserved bus lanes are planned for Manhattan, but the city projects the construction of a terminal station near the World Trade Center.

Links between the states are also under study. One proposal is to extend subway line n°7 beyond the Hudson River, which would double the capacity between New Jersey and Manhattan and relieve congestion in the Lincoln Tunnel (20 to 25 minutes wait in rush hour). This new section would also improve train connections at the Secaucus interchange.

Along with New Jersey riverside development, a bus terminal could be constructed for the 1,500 vehicles which go into Manhattan every morning, which would
diminish traffic congestion in the center created by buses waiting for the afternoon return.

More and more Long Island residents work there. The MTA is considering a plan for Suffolk County (which would be subject to significant growth), with an aim to improve feeder bus lines and suburban train lines.

A last problem concerns links between international airports and the regional center. Currently, to go from J.F.K. to Manhattan takes 60 to 90 minutes. There is a proposal to create a tramway line between this airport and the Jamaica train station, which would reduce transportation time to 30 minutes.

For La Guardia, proposals will certainly include a train line with connections at Woodside in Queens.
These problems are the result of changes in:

- socio-economic characteristics (population, employment localization, etc.);
- urban structure;
- use of means of transportation.

In general, public transportation has not kept up with growth and major changes in demand and distribution over the past twenty years in the region.

This seems to be due to several reasons:

- the existence of a radial public transportation network which is so old that it requires major maintenance and therefore major investment;

- the difficulty of public transportation to adapt to low-density urban development in the greater part of the suburbs and the multiplicity of intersuburban travel;

- the difficulty of obtaining a consensus on urban highways, particularly beltways, given the problems raised by proposed routes, which meet local resistance in regard to environmental impact.

The growth of demand in regard to domicile-workplace travel (which is the major part of rush hour traffic) between 1970 and 1980 reached the same level as that of new jobs (about 13%) and far surpassed that of population growth (+2%). Motorized mobility thus greatly increased. Distribution was acutely modified.

Reasons can be classified under two headings:

- the massive entry of women in the job market;

- suburban growth, in particular employment growth in the first ring zone (suburban Cook and Dupage counties) and increased activity.

Distribution has favored the use of private cars, due to:
- the traditional flexible nature of private cars versus public transportation;
- the necessity for many households of having two cars for domicile-workplace travel;
- shorter travel time by private car (see annex 2.18);
- the price of transportation by private car is viewed favorably by most drivers (gas inexpensive).

All of these factors have meant an increase in motorization. Between 1970 and 1980, the number of households owning two or three cars increased respectively by 41% and 131% (see annex 2.19) and represented, in 1980, 36% of regional households.

But this increase in private car demand has resulted in:

- deterioration of the operating condition of express and local highway networks; tie-ups have increased and the density of traffic means that rush hours lasts considerably longer;
- an increase in atmospheric pollution, which is already high, though lower than in New York (unacceptable levels are only reached several times a year);
- a contribution to the financial instability of public transportation, and thus its development.

The satisfaction of this demand is met by bigger and bigger highway projects, which eat up space, given the low occupancy of private vehicles (1.33 persons per car, and less on expressways). New interchanges attract developers who benefit from access roads to mount projects and thereby contribute to increased private car demand.

Facing these problems, the NIPC\(^1\) and CATS\(^2\) have put together a development plan for public transportation reaching the year 2010.

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\(^1\) NIPC: Northern Illinois Planning Commission

\(^2\) CATS: Chicago Area Transport Studies
A development plan for public transportation projected to the year 2010, adopted in April 1989 by the Board of Directors of CATS, is the region's official long-term transportation plan. The NIPC integrated it in its Comprehensive General Plan, and the RTA approved it as a guideline for the long-term public transportation plan.

Forecasts and strategy

This plan is related to forecasts of population, employment and land use into the year 2010, as debated and defined with local authorities, ie:

- population: + 15%
- households: + 29%
- employment: + 23%

with a consequent increase in travel of 23%.

To meet this need, two methods are possible:

- either plan for facilities to be set up to meet foreseeable demand as well as possible;
- or make the transportation system more efficient by reducing demand, in particular during rush hours.

The proposed strategy is as follows:

a/ to act on demand:

- develop land use planning adapted to public transportation and discourage one-person travel by private car;
- increase company personnel transportation programs;
- construct parking lots reserved for high occupancy vehicles, two-wheeled vehicles;
- discourage subsidies for other types of parking lots;
- develop peripheral parking lots and main branches of public transportation;

- institute variable business/working hours;

- create mixed (public/private) groups for handling local problems.

b/ to improve the efficiency of facilities:

- encourage traffic regulation;

- extend traffic control systems and safety patrols;

- study one-way street plans, intersection improvement and high occupancy vehicle lanes;

- expand information systems;

- indicate detour routes in the event of road work;

- promote the use of two-wheeled vehicles and provide facilities for them.

Public Transportation Projects

The plan recommends 6 major projects (4 for the subway and 2 for suburban trains) and the localization of 7 corridors to be reserved for future development (see annex 2.20).

- Subway extension projects:
  - in the city center, improvement of internal service;
  - improvement of service along the south side of the lake;
  - link O'Hare and Dan Ryan subway lines;
  - extend the O'Hare line to Schaumburg.

- Suburban train network extension projects:
  1/ Create a circular line around the first urban ring zone serving suburban Cook and Dupage counties.

  2/ Create another branch in the north (Wisconsin Central Railroad).
The plan also calls for the preservation of corridors, 6 radials and a circular route, between peripheral counties, to be reserved for future projects.

**Infrastructure Projects**

The plan for 2010 offers eight major highway projects. Their role is to fill in missing connections in the network, in particular in high-growth sectors (see annex 2.21). The reservation of space for future corridors shows the determination to plan urban development; 6 corridors are planned which will complete the list of major projects.

**Financial Needs**

The Region will have to deal with an enormous investment in the maintenance and repair of existing infrastructures, three quarters of the current highway needs, and more than 80% for public transportation. Respectively, for the year 2010, these needs will rise to between 10.1 and 10.4 billion dollars. Yet foreseeable resources (see annex 2.22) in the average (most probable) calculation do not even reach the level of financing needed for maintenance alone. The region is thus confronted with a veritable financial crisis which, if not resolved, will inevitably lead to the worsening of travel conditions for the population, followed by the unavoidable economic consequences.
Regional development has been conceived in such a way that the private car is virtually the only means of transportation. A very large highway-style rapid roadway network handling most regional travel has about reached its limits. Although decentralization of activities has meant that average domicile-workplace travel distances are limited, the number of trips made by private car has reached such heights that the network is now undergoing progressive strangulation. Roadway operations including highway access control, user information, etc., have not brought about enough improvements to contain the growth of this type of travel.

Private car registration is growing at the rate of 2.7% per year. Average vehicle occupancy is very low: 1.18 for domicile-workplace travel and 1.39 for overall travel. In 1986, the number of accidents resulting in injury reached almost 118,000.

But the most urgent problem to be solved is certainly that of atmospheric pollution, mainly caused by automobile traffic. Various elected officials and planners are thus obliged to act to reverse the current trend which contains the seeds of disaster for economic growth.

Although the urban structure, because of the low average population density, is not well adapted to the operation of public transportation networks, it nonetheless remains true that limitations placed on the use of private cars must be accompanied first of all by alternative means of transportation and, more generally, by the promotion of a regional development plan aimed at limiting domicile-workplace distances.

To this end, a number of programs and projects are underway.
Regional strategy developed in the "Regional Mobility Plan" is integrated in the "Growth Management Plan". It is based on several programs:

- organization of transportation demand;
- operation of networks;
- multifunctional highways;
- secondary road networks;
- high occupancy vehicle lanes;
- public transportation.

**Organization of Transportation Demand**

Three objectives:

- the reduction of the number of trips per person;
- the reduction of the number of trips by private car;
- modification of rush hour periods.

Proposed measures to meet these objectives include the development of:

- flexible working/business hours;
- working at home, in particular with computer systems;
- reduction of other travel;
- company transportation programs,
- support for the Vanpool system.

**Operation of Networks**

The goal is the establishment, between now and 1993, a series of measures designed to improve roadway efficiency, including:

- 600 highway access ramps outfitted with traffic signals;
- installation of more variable-message roadway signs;
- one thousand intersections outfitted with traffic lights.

**Multifunctional Highways**

Most of this program concerns improving existing facilities, as few new sections are planned (see Annex 3.7).
High Occupancy Vehicle Lanes

A major program is planned for the development of these reserved lanes (see Annex 3.8). This strategy seems to be the only one which can be applied to highways, given local resistance to anything that aims to limit the use of the private car.

Public Transportation

The proposed program certainly represents a critical turning point in regional transportation policy.

The system includes subway, tramway and suburban train lines.

In Los Angeles County, three lines are under construction (see Annex 3.9):

- a 28-km subway line between San Fernando Valley and downtown;
- two tramway lines:   - 34 kms. between Long Beach and downtown;
  - 32 kms. between Norwalk and El Segundo.

Extensions are under study, as well as improved service on the Los Angeles - San Diego railway line, and the creation of a downtown - San Bernardino service (see Annex 3.10); a total of 160 kms. for suburban trains.

A complementary program is also under study, known as the New Technology Development Program, Program for Advanced Technology for the Highway (PATH).

It encompasses several lines of study:

- PATHFINDER: 25 vehicles will be equipped with a monitor showing a simplified map of the network. These experimental vehicles will be in communication with the control center (Traffic Operations Center - TOC) and have access to real-time information on traffic conditions and detours.

- SMART CORRIDOR DEMO: The Santa Monica Freeway Corridor is managed with five major parallel arteries. Drivers will have real-time information on traffic conditions by variable-message roadway signs, radio, television, and possibly on-board computers (see Annex 3.11).

- ADVANCED TRAFFIC OPERATIONS CENTERS: A simulator in the TOC guides operators in new strategies for managing freeway and corridor traffic.

- TELECOMMUNICATION (HIGH TECH DEMAND MANAGEMENT): Development of telecommunications can help reduce the number of trips (telecommuting, teleshopping, telebanking, etc.).
ROADWAY-VEHICLE COMMUNICATIONS: A system of communication is being developed for the identification of vehicles, localization and speed verification.

VEHICLE LONGITUDINAL CONTROL: A system of controlling the distance between vehicles to reduce the risk of accident and increase the capacity of traffic lanes.

VEHICLE LATERAL GUIDANCE: A system of lateral control to reduce the width of traffic lanes.

VEHICLE COMMAND AND CONTROL: Vehicle guidance, communication, traffic management and longitudinal and lateral control are integrated in an automatic highway system.

ROADWAY-POWERED ELECTRIC VEHICLE: Promotion of electric vehicles.

THE HALF-WIDTH AUTO: A small three-wheeled vehicle for only two passengers.

Other themes including Next Generation Intersections and Robotics, are also under study.
PRINCIPAL CONCLUSIONS

From the analysis of the three major regions studied (New York, Chicago, Los Angeles), it appears that the problems of transportation are more and more important to urban economics and development. While existing networks meet current demand with difficulty, it is possible that in the next decades, in the absence of adequate solutions to problems raised, transportation will become the main limiting factor in all projected growth patterns. Although in the past the transportation policies of each of the regions have been different:

- in New York: a dense urban highway network is completed by a large public transportation network which predates the intensive use of private cars (it was the world's first subway network);

- in Chicago: a comparable situation persists, although the highway network has not been so highly developed;

- in Los Angeles: a region where growth is much more recent and where transportation policy has been limited almost exclusively to the use of private cars;

yet a number of causes producing comparable effects can be observed.

In regard to urban growth:

- an enormous extension of the agglomerations with the densification of suburbs, resulting from the exodus from the city center for economic reasons as well as quality of life considerations. This is especially significant in New York, whereas in Los Angeles decentralization has been carried out as a veritable regional development policy;

- a vast recomposition of the distribution of population and employment, in particular in New York and Chicago.

In regard to displacement of individuals:

- acute growth of alternating migration progressing in conjunction with employment and the labor force (massive entrance of women on the job market);

- general increase in individual mobility.

In regard to means of transportation:

- significant growth in the use of private cars;
significant growth in the use of private cars;
- a decrease in the relative share of public transportation with an observable increase in areas where supply is consequential.

Changes in distribution of different means of transportation results from:
- low-density urban extension poorly adapted to public transportation networks and thus poorly served by the latter;
- the relatively low cost of gasoline;
- the traditional flexibility offered by the use of a private car.

On an environmental level, there are serious pollution problems, especially in New York and Los Angeles, where the issue is central to urban politics.

Faced with this situation, the three regions must make urgent decisions based on the analysis of foreseeable development. Political awareness is fed by debates raised by the media, diverse associations, analyses furnished by transportation network planners and operators.

But the process suffers from delays caused by the number of organizations and institutions having power in the matter, and also from the practical absence of a regional power capable of unifying reflection and making major decisions. Only the Chicago region seems to have an efficient coordination on a regional level (the regional area is almost all in one single state). In New York and Los Angeles, despite these difficulties and the necessity of reducing pollution according to standards set by the federal administration, (with associated pressure in respect to funds allocated to the region), changes seem to be taking shape. The idea of reducing trips by private car is recognized by virtue of the fact that road networks have reached their limits.

Thus, in the regions under study, emphasis is placed:

- In New York, on the limitation of new infrastructures, the improvement of highway operation (access control, user information, detour routes, etc.), maintenance of infrastructures in poor condition (in particular the major bridges) and a renewal of public transportation development (interconnections, quality improvement, projects for new lines, airport service);

- In Chicago, on the reinforcement of public transportation networks (creation or extension of subway and suburban train lines), and in particular peripheral beltway projects and new infrastructures, but with an aim to linking the existing networks and importing their efficiency, encouraging company transportation programs and promotion variable business/work hours to spread demand over a longer period;

- In Los Angeles, on improving the efficiency of urban highway systems (access control, dynamic signalization, user information), set up of HOVL (reserved high occupancy vehicle lanes), development of a public
transportation network (subway, tramway, suburban train lines); flexible working hours, working at home.

Even if awareness has grown in regard to the urgency of developing coherent policies for transportation, projects aimed at limiting the use of private cars only seek, in the short term, to avoid the foreseeable degradation of travel conditions, because the means required call for enormous investment. Financing possibilities are insufficient, as in Chicago, or resources as determined by a most probable-case scenario do not even cover maintenance.

Thus the main stakes in the years to come will involve the capacity of regions to organize urban development (control of urban extension and localization of new operations, organization of areas of density sufficient to be served by public transportation) in collaboration with local authorities (in charge of land use planning) and also involve the means accorded transportation policies in favor of public transportation.
## COMPARATIVE TABLE

<table>
<thead>
<tr>
<th>GEOGRAPHICAL AND SOCIO-ECONOMIC DATA</th>
<th>PARIS</th>
<th>NEW YORK</th>
<th>CHICAGO</th>
<th>LOS ANGELES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Surface (in KM²)</td>
<td>12,012</td>
<td>32,480</td>
<td>9,960</td>
<td>97,750</td>
</tr>
<tr>
<td>City surface</td>
<td>97</td>
<td>780</td>
<td>620</td>
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</tr>
<tr>
<td>Regional population (in thousands)</td>
<td>9,830 (82)</td>
<td>19,500 (84)</td>
<td>7,307 (86)</td>
<td>13,200 (86)</td>
</tr>
<tr>
<td>Population density (inhabitants/HA)</td>
<td>8.2</td>
<td>6</td>
<td>7.3</td>
<td>1.4</td>
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<tr>
<td>City Population</td>
<td>2,130 (82)</td>
<td>7,200 (84)</td>
<td>3,009 (86)</td>
<td>8,300 (86)</td>
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<tr>
<td>Density City Population</td>
<td>220</td>
<td>94</td>
<td>51</td>
<td>8</td>
</tr>
<tr>
<td>Regional employment (in thousands)</td>
<td>4,536 (82)</td>
<td>9,300 (85)</td>
<td>3,445 (85)</td>
<td>6,500 (87)</td>
</tr>
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### TRANSPORTATION SUPPLY

#### SUBWAY

<table>
<thead>
<tr>
<th>Number of Lines</th>
<th>PARIS</th>
<th>NEW YORK</th>
<th>CHICAGO</th>
<th>LOS ANGELES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15 (87)</td>
<td>25 (88)</td>
<td>6 (89)</td>
<td>/</td>
</tr>
<tr>
<td>Length of Network (in miles)</td>
<td>124 (87)</td>
<td>244 (88)</td>
<td>219 (89)</td>
<td>/</td>
</tr>
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#### BUS

<table>
<thead>
<tr>
<th>Number of Lines</th>
<th>PARIS</th>
<th>NEW YORK</th>
<th>CHICAGO</th>
<th>LOS ANGELES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>57 (u)+ 175 (i)</td>
<td>227 (u)+47 (i)</td>
<td>132 (u)+230 (i)</td>
<td>?</td>
</tr>
<tr>
<td>Length of network (in miles)</td>
<td>324 (u)+1,253 (i)</td>
<td>1,744 (u)+881 (i)</td>
<td>2,188 (u)</td>
<td>?</td>
</tr>
<tr>
<td>Pool</td>
<td>3,987</td>
<td>3,830 (u)+305 (i)</td>
<td>2,220 (u)+672 (i)</td>
<td>3,330 (87)</td>
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#### SUBURBAN TRAINS

<table>
<thead>
<tr>
<th>Length of Network (in miles)</th>
<th>PARIS</th>
<th>NEW YORK</th>
<th>CHICAGO</th>
<th>LOS ANGELES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1,028</td>
<td>676*</td>
<td>500</td>
<td>?</td>
</tr>
<tr>
<td>Pool (cars)</td>
<td>3,962</td>
<td>2,034*</td>
<td>680</td>
<td>?</td>
</tr>
<tr>
<td>TRAMWAY</td>
<td>HIGHWAYS AND EXPRESSWAYS (in miles)</td>
<td>PARIS</td>
<td>NEW YORK</td>
<td>CHICAGO</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------</td>
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</tr>
<tr>
<td></td>
<td>408 (87)</td>
<td>313</td>
<td>3,725</td>
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<table>
<thead>
<tr>
<th>TRANSPORT DEMAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>No domicile-workplace trips per day (in thousands)</td>
</tr>
<tr>
<td>No of trips per day (in thousands)</td>
</tr>
<tr>
<td>SUBWAY</td>
</tr>
<tr>
<td>BUS</td>
</tr>
<tr>
<td>SUBURBAN LINES</td>
</tr>
<tr>
<td>Vehicles x miles per day (in millions)</td>
</tr>
<tr>
<td>No vehicles registered (in thousands)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DISTRIBUTION OF MEANS OF TRANSPORTATION FOR DOMICILE-WORKPLACE TRIPS (in %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NYC /NYS/ NJ</td>
</tr>
<tr>
<td>Private Car</td>
</tr>
<tr>
<td>Public Transportation</td>
</tr>
<tr>
<td>Other</td>
</tr>
</tbody>
</table>

NYC = New York City  
NYS = New York State  
NJ = New Jersey  
(year)  
u = urban  
i = interurban  
* not including the state of New Jersey