Lower Manhattan Transportation Strategies

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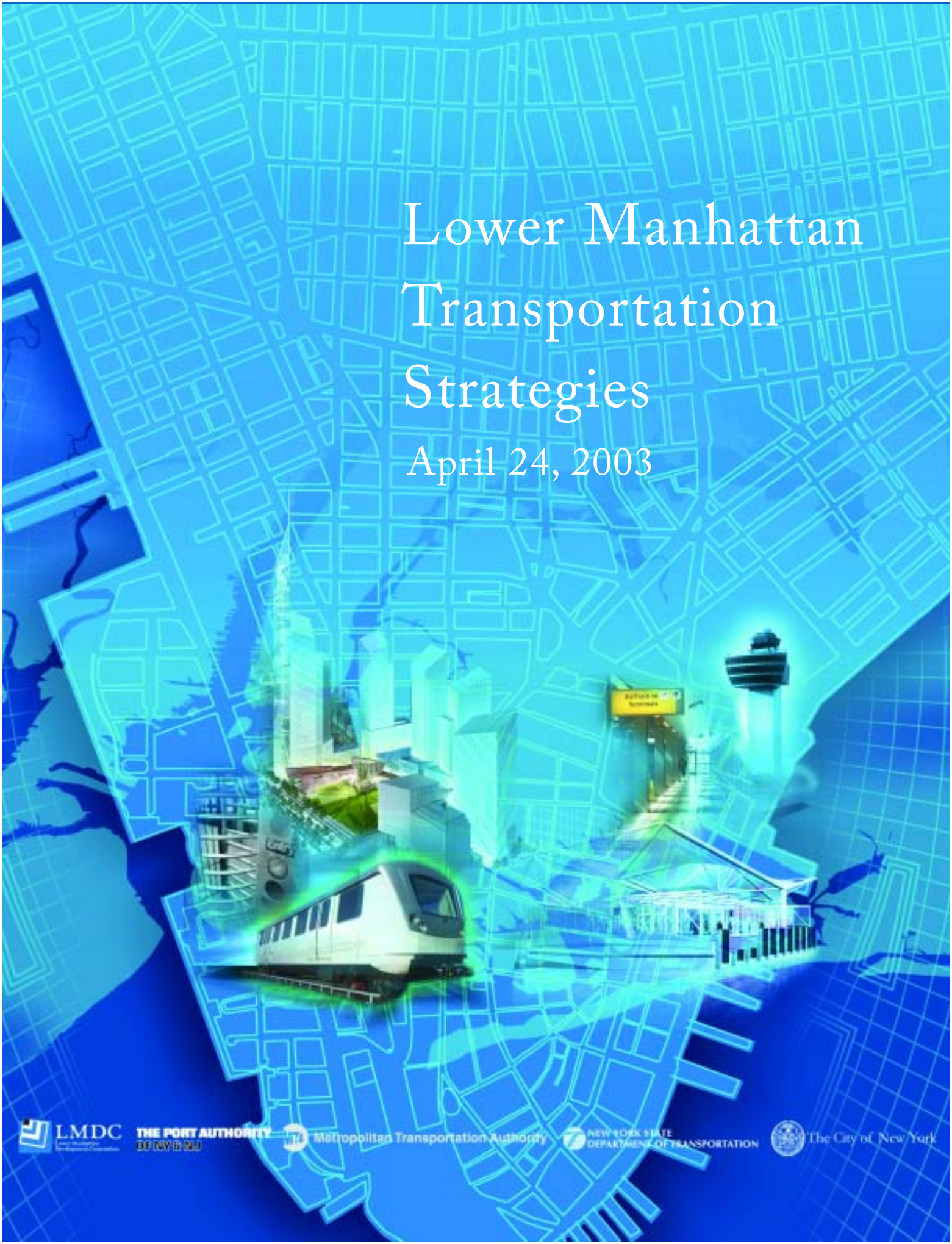

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Introduction

The destructive effects of September 11, 2001, have necessitated the restoration and catalyzed the renewal of Lower Manhattan's transportation system. As Lower Manhattan rebuilds, it is critical not only to restore the transportation functionality lost due to the disaster, but also to anticipate and accommodate the range of changes that September 11th has triggered. These changes include the creation of a glorious and fitting September 11th memorial, the transformation of the World Trade Center site, and the broader revitalization of Lower Manhattan.

Key to the recovery and future success of Lower Manhattan is accessibility. Downtown must provide swift, convenient and comfortable transportation for commuters from within the city, workers from throughout the region, and travelers from other parts of the world. This document sets forth transportation strategies that will help Lower Manhattan accomplish these goals. Chief among these strategies are: creating a world-class airport and regional access system linking Lower Manhattan to all three of the area's major airports and Long Island; and revitalizing downtown's damaged and aging transportation network, including its two transportation hubs and outmoded infrastructure. This document offers a description and timeline for these and other transportation projects. Together, these projects will enable Lower Manhattan to grow into an even stronger center of international commerce and rise to its role as a major visitor destination.

Introduction

Prior to September 11, 2001, more than 85% of workers arriving daily in Lower Manhattan traveled by public transportation, making New York's downtown the most transit-dependent central business district in the United States. Unfortunately, investment in Lower Manhattan's 19th and 20th century infrastructure has not kept pace with its 21st century needs. Due in part to the inadequacies of its increasingly overburdened and outmoded transportation infrastructure, Lower Manhattan's position in the region, nation, and the world has been slipping. In one of the most prosperous economic periods in New York City history — the years between 1991 and 2000 — the share of office employment in Lower Manhattan as a percentage of total employment south of 59th Street fell from 39% to 33%, while Midtown's share increased from 42% to 45%.[1]

The events of September 11th have exacerbated this trend. The attacks led to the temporary displacement of approximately 138,000 downtown jobs.[2] To date, 60,000 jobs — beyond the 16,000 drop already experienced in the 1990's — have not returned to Lower Manhattan and many have relocated to other nearby areas, including Midtown, Jersey City, and Stamford, leaving the current employee population of Lower Manhattan at approximately 325,000.[3] The decision of employers to relocate their businesses outside of Lower Manhattan has been due in significant part to September 11th's disastrous impact on downtown's infrastructure and the severe worsening of its transportation problems — including the temporary paralysis of the downtown 1/9 line, the closure of important city streets, and the destruction of the World Trade Center PATH terminal with the resultant loss of PATH service.

In the aftermath of September 11th, Governor George E. Pataki has enumerated a set of priority projects to restore Lower Manhattan's transportation infrastructure and lay the foundation for the area's future growth. Mayor Michael R. Bloomberg has articulated New York City's *Vision for Lower Manhattan*, offering a broad set of strategies for revitalizing Lower Manhattan through transportation upgrades and innovative land-use improvements. Taken together, the Governor's and Mayor's strategies lay the groundwork for the revitalization of Lower Manhattan.

The Search for Solutions

While looking to the future, the rebuilding of the World Trade Center and the revitalization of Lower Manhattan have also occasioned a fresh look at the half-century of studies that have proposed solutions to Lower Manhattan's long-standing infrastructure problems. Generations of transportation experts and advocates have devoted thousands of pages to the topic. The reports range from a series of studies issued by the Downtown Lower Manhattan Association (DLMA),

a group chaired by David Rockefeller from the 1950's through the mid-1970's, to the *Master Links* regional transportation strategy articulated by Governor Pataki in the 1990's. Almost every large-scale study of development issues in New York City and the greater metropolitan region has cited Lower Manhattan's transportation issues as important to address.

These fifty years of studies[4] have drawn the same conclusion: for Lower Manhattan to remain a world-class, international business center, it must provide for more efficient movement of people – particularly from their homes to work. Woven through the long literature regarding Lower Manhattan's transportation system are several remarkably consistent themes that can assist in the development of post September 11th strategies. The continuing importance of these themes has been verified by numerous recent studies.[5] These themes include:

- The Lower Manhattan subway system must be rationalized and improved, particularly by restructuring the labyrinthine connections among the many lines and creating/increasing key strands of service.
- Innovative solutions are required to improve automobile, truck, bus, and pedestrian movement on the streets of Lower Manhattan.
- Direct access to the region's airports is vital to the growth of Lower Manhattan as a global business center.[6]
- Commuters from Long Island, New Jersey, and the northern suburbs of New York and Connecticut, must be provided with faster and more convenient transportation to Lower Manhattan.

Many recommendations introduced in the past have been pursued and implemented, including the expansion of the PATH system, changes in pedestrian and vehicular circulation, and planning for the Second Avenue Subway. However, many key projects remain unrealized. As an important example, convenient airport and Long Island access remains a much-needed but elusive goal.

Restoring Jobs and Catalyzing Economic Development

A February 2002 LMDC Advisory Council meeting.

Numerous constituencies agree that transportation improvements form the backbone of the revitalization of Lower Manhattan's economy. Members of the LMDC Financial Services and Professional Firms Advisory Councils, comprised of prominent business leaders who advise the LMDC on the concerns of

Access to a Business Center - Canary Wharf, London

A growing commercial business district has developed at Canary Wharf in London over the last two decades, transforming the area from an abandoned dock to a thriving cluster of global financial service institutions. Similar to Lower Manhattan, the weakness of the transportation infrastructure was one of the main obstacles to the growth of the commercial tenant base. The construction on the Jubilee subway line, which connects Canary Wharf to Central London's West End in 15 minutes, proved to be a turning point in the development of the area.

Much like parts of the Lower Manhattan shore, Canary Wharf was a cargo warehouse at the center of the Docklands district up until the mid-1960s. Sea-cargo business at the docks declined precipitously in the early 1970s as new technology and containerization reduced the competitiveness of the London Docklands.

The London Docklands Development Corporation was created in 1981 to revitalize the Docklands area. The central area, representing about 10% of the total, was designated an Enterprise Zone, offering tax incentives to both investors and developers. The first major commercial buildings were completed in 1991, but were not immediately successful. One reason for the failure of the development was the inadequacy of the existing public transportation infrastructure coupled with the down turn in the global economy. Until the construction of the Jubilee Line, Canary Wharf's public transportation system was limited to the Docklands Light Rail, a newly constructed transit system that had limited connections with other London transit systems. To address the Docklands' problems, construction of the Jubilee line commenced in 1993.

When construction began in 1993, the total employment in Canary Wharf was 7,000 people. By the beginning of 2000, one year after completion of the Jubilee subway line, the number of jobs had grown almost 300% to 27,000 and by January 2003 it totaled 55,000. Key financial and professional service firms relocated to Canary Wharf, with the pace of new tenants accelerating in the late 1990s.[1]

While the financial market boom of the late 1990s played a key role in the absorption of commercial space in Canary Wharf, it is widely acknowledged that the development would not have succeeded at the pace observed without the transportation enhancement provided by the Jubilee line. A total of 9 million square feet of commercial space has been completed since 1991 and another 5.5 million square feet is under construction, of which 95% is pre-leased.

[1] Key tenants include State Street Bank (1991), Morgan Stanley (1991), Credit Suisse First Boston (1994), Skadden, Arps, Slate, Meagher & Flom (1996), Burlington Resources (1997), Readers Digest (1997), Bank of Montreal (1998), HSBC (1998), Bank of New York (1998), KPMG (2000), Clifford Chance (2000), McGraw-Hill (2000), Northern Trust Bank (2000), Lehman Brothers (2000), and Barclays (2001).

their industries, have consistently cited transportation as an essential driver in their businesses' location decisions. In their *Key Principles in Rebuilding Lower Manhattan*, the Alliance for Downtown New York, Association for a Better New York, New York City Partnership, and Real Estate Board of New York cite transportation and infrastructure as the first priority.[7] Similarly, surveys by the Downtown Alliance and Wall Street Rising found that transportation is the single most important improvement for firms and workers in Lower Manhattan.[8]

CBD	Square Footage*	Number of Employees*	Available Transportation*	Change in Office Jobs During the 1990's
Midtown Manhattan	282,900,000	970,000	3 commuter rails, PATH, 19 subway lines, ferries, bus, Amtrak, airport access	49,000
Lower Manhattan	107,800,000	388,000	0 commuter rail, PATH, 18 subway lines, ferries, bus	-16,000

* Pre-September 11 numbers; square footage numbers obtained from Cushman & Wakefield.

Midtown Manhattan provides a valuable example of how enhancements to local, regional, and international transportation can spur economic development. Between the 1980s and today, several transportation improvements have occurred in Midtown that are the result of long-term transportation planning. Enhancements to key subway stations, such as Times Square - 42nd Street, have improved navigation and convenience for thousands of daily subway riders. New Jersey Transit's Midtown Direct service to Midtown's Penn Station created a one-seat ride between New Jersey and Midtown Manhattan for additional New Jersey Transit customers. During the same time period, the MTA increased its fleet of Metro-North and LIRR trains, enabling a higher frequency of service to Midtown from several of the surrounding suburban regions. More recently, the Port Authority has completed an airport link from Midtown to Newark Liberty International Airport, while construction to connect Midtown to JFK is underway.

If Lower Manhattan were to follow Midtown's example, it would be of mutual advantage. A 1997 study by Empire State Development Corporation found that improved transportation for Lower Manhattan would create 14,000 new downtown jobs, increase average Class A commercial rents in Lower Manhattan by as much as 12%, and boost economic activity across all of Manhattan by as much as $930 million[9] – benefiting not only Downtown, but also Midtown.

The Future of Lower Manhattan — Connectivity for the City, Region, and World

The development of a September 11th memorial and a rebuilt World Trade Center will require substantial upgrades to the area's rail, bus, ferry, and street systems. The Statue of Liberty already receives 3.5 million visitors per year departing from Lower Manhattan, while the original observation deck for the World Trade Center site received approximately 2 million visitors per year.

Access to An International Airport - The Rail Link for Hong Kong's Chek Lap Kok Airport

Air-rail links are becoming a central amenity for leading global airports. Currently, the gold standard of a successful airport access system is the Hong Kong Airport Railway, which provides direct service to the airport and has stimulated significant economic development in the areas near the rail stations.

The Hong Kong International Airport at Chek Lap Kok airport was opened in 1996, and is largely built on filled land. The Hong Kong Government made the strategic decision that more than 50% of all passenger trips to the airport should be made by rail. Direct rail access to the airport opened in 1998 and was built by the Mass Transit Railway Corporation ("MTRC"), an autonomous body wholly owned by the government of Hong Kong.[1] The Hong Kong Airport Railway is comprised of two types of rail access services. First, a dedicated high-speed rail service, the Airport Express Line ("AEL"), provides efficient and convenient access to the downtown business districts of Kowloon and Central Hong Kong. Second, there is a regular rail rapid transit line (the Lantau line) that is a part of the citywide metro network and connects to other lines and transfer points. It is expected that 250,000 passengers will use the rail access system to the new airport per day.

The Airport Express Line was designed to create the feeling that arriving at an AEL station is tantamount to arriving at Chep Lap Kok. Attractive features of the stations include high quality finishes, use of natural lighting, flight information displays, advance baggage check-in, and food service. The travel time to the airport from Central Hong Kong is 23 minutes, and passengers experience a business class environment.

The construction of the Airport Express Line spurred significant development of apartments, hotels and commercial buildings on the property surrounding the stations. Much of this development occurred on formerly vacant land or landfill, which became valuable due to its linkage to the Airport Express Line. The MTRC purchased from the government ownership of sites above station depots and associated transport interchanges. The MTRC then developed the sites as joint ventures with private developers and its share of the profits was used to partially finance the railway. Property development on AEL-linked sites includes 24.8 million square feet of residential development, 6.6 million square feet of commercial space, 3.6 million square feet of retail space and 3.1 million square feet of hotel space and serviced apartments.[2]

[1] The MRTC was privatized in June 2000 and is listed on the Hong Kong Stock Exchange.

[2] Alistair J. Budge Reid, *Japan Railway and Transport Review* 19: 40.

The September 11th memorial has the potential to receive 5 million visitors per year or more. Upgrades of Lower Manhattan's existing facilities will not only significantly improve visitor experiences, but will also substantially raise the quality of life for this area's residents and workers. These advances are key to retaining and growing Lower Manhattan's commercial base.

Beyond the boundaries of Lower Manhattan, population growth across the region demands key transportation system improvements to maintain access to Lower Manhattan for critical labor pools. These projections lead to the conclusion that practical, achievable improvements should be made within the area's rail and ferry systems to serve Long Island, the northern New York suburbs/Connecticut, and New Jersey more effectively.

The global reach of business demands that top firms have ready access to clients and partners around the world. Consequently, airport access is a central focus of this document. Convenient airport access is a critical driver of Lower Manhattan's future growth and the key to maintaining its prominence in international business. Benefiting all of Manhattan, the airport access options presented in this publication represent the borough's best chance for centralized, coordinated connections to all three airports in the region.

Going forward, it is imperative that Lower Manhattan transform itself into an even stronger international commercial center. This transformation can be achieved through transportation improvements – both in the reconstruction of facilities lost on September 11th and in the implementation of local, regional, and international connections. By achieving a new level of global reach, Lower Manhattan can secure its position as a global business leader.

Paramount Goals: Serving the Memorial and Catalyzing the Economy

Providing a gateway to the planned September 11th memorial and revitalizing the downtown economy are the paramount goals for the improvement of the Lower Manhattan transportation system. The transportation infrastructure that is built today will be used by millions of visitors to the World Trade Center memorial for years to come. It is essential that design and construction proceed in a way that is both sensitive to the magnitude of the events that took place on the site and capable of handling large numbers of visitors.

Transportation improvements also must act as a catalyst for economic development, spurring commercial growth and enhancing neighborhood life in Lower Manhattan. The new transportation infrastructure should more effectively link Lower Manhattan to the region and the world. Improvements to the quality of the transportation network will enhance passengers' travel experience, attract a larger pool of residents and workers to the area, and provide a foundation upon which to rebuild the downtown economy. The potential to locate in close proximity to the new transit complex, for example, will attract commercial tenants to new office buildings, as well as drive the conversion or revitalization of underutilized buildings in the area. Enhanced airport and regional access will serve as an asset for existing Lower Manhattan firms and help to attract new ones.

Within this overall goals framework, the following set of objectives has been drawn from analyses of the existing transportation network and input from an extensive public dialogue. These objectives have guided the identification and development of the ideas within this document.

- **Create a Grand Point of Arrival**
  Although Lower Manhattan contains some of the most extensive transit infrastructure in the world, it is largely concealed from sight and often confusing to navigate. For example, while the Fulton Street subway station complex serves nearly as many commuters as Grand Central Terminal, its entrances are tucked away in building lobbies and its interior space is cramped and convoluted. An easily navigable central station providing connections among numerous transit services — including the twelve Lower Manhattan subway lines, PATH, and the World Financial Center ferry terminal — can serve as a grand point of arrival and signature location for people arriving in Lower Manhattan. The presence of an iconic and efficient transportation complex will reaffirm Lower Manhattan's preeminence as a center for global business and an attractive place to live, work and visit.

- **Improve Access to the Region's Airports**
  Access to the region's airports is crucial to Lower Manhattan's continued viability as the financial capital of the world and as the country's third largest central business district. New York's economy is increasingly dependent on financial and professional service firms that have intensive national and global travel requirements. While Lower Manhattan is located in proximity to the three major New York airports, it currently lacks efficient airport access. Traveling to JFK, LaGuardia, and Newark from Lower Manhattan is presently time-consuming and unpredictable. A 21st century central business district requires routes to the area's airports that are efficient and reliable. Transportation invest-

ments must make business trips across the nation and globe more convenient in order to maintain the competitiveness of the industry-leading firms of Lower Manhattan.

· Improve Access To the Region's High Growth Areas

Lower Manhattan must become more accessible to the region's growing labor pools. Currently, Lower Manhattan benefits from strong links to some portions of the commuter market, e.g., communities in New Jersey. However, its connection to the fast-growing counties of Long Island should be significantly improved. Transportation investments should aim to improve the everyday commute of workers from Long Island and other parts of the region in order to make Lower Manhattan a desirable place in which to locate major companies.

· Promote New Commercial and Retail Development

The volume of people passing through the new transit complex every day will provide lucrative opportunities for retailers and restaurants and will stimulate new business to locate in proximity to the station. Indeed, the new permanent PATH terminal itself will include shops, restaurants, and markets, restoring the retail activity that existed within the original World Trade Center concourse. Building upon the traffic and streetscape improvements that will make downtown streets more attractive and navigable, these new retail facilities will serve workers, residents, and visitors whose presence at various times of day will help make Lower Manhattan a 24-hour community.

· Improve Efficiency, Connectivity, and the Passenger Experience

Increasing the efficiency of the existing transit system is an extremely cost-effective way to increase capacity while at the same time enhancing the overall passenger experience. Improving connections among rail lines, increasing linkages between different modes of transit, and modernizing station facilities can yield valuable benefits in reducing the time it takes to make transfers and to travel in and out of subway stations. Similar improvements to the passenger environment have shown positive results in the past: the MTA's first major capital program for the entire subway system in the 1980's included massive renovations and upgrades to passenger facilities. The program successfully improved the passenger perception of the subways and, as a result, ridership increased. Since 1996, subway and bus ridership has increased by 27% and 50% percent, respectively.

· Ease Surface Congestion

Commercial and residential districts depend upon streets and sidewalks as primary means of movement. Surface congestion slows the movement of both people and goods, diminishing economic activity and hindering residential life. For the anticipated growth in Lower Manhattan, including the surge in visitors, a strategy must be formulated for dealing with loading and unloading of freight, dropping off and picking up passengers, bus parking, and other vehicular traffic issues. Alleviating sidewalk congestion and improving the overall pedestrian experience are also critical needs for improving quality of life for residents. The new streets established as part of the redevelopment of the World Trade Center site will play an important role in the strategy to rationalize the street network and create a lively, attractive new streetscape for a revitalized downtown.

· Promote Active Pedestrian Life on the Streets

If Lower Manhattan is to be active seven days a week, 24 hours a day, it must be welcoming to pedestrians on its streets at all hours. Residents, workers, and visitors are all drawn to street activity, and want to live, work, and visit places that are vital and energetic. All transportation improvements should be geared toward enlivening the streets that surround them, and the streets themselves should be improved to encourage pedestrians to walk, shop, and spend more time in Lower Manhattan.

Funding Priorities for Lower Manhattan

In keeping with the goals and objectives outlined above, Governor George E. Pataki has articulated a set of priority projects to revitalize Lower Manhattan. These projects were determined after consultation with the Transportation Working Group comprised of representatives of the State of New York, the City of New York, the Metropolitan Transportation Authority (MTA), the Port Authority of New York and New Jersey (PANYNJ), the New York State Department of Transportation (NYSDOT) and the Lower Manhattan Development Corporation (LMDC). These projects include a number of key transportation investments: a Lower Manhattan Transit Hub that incorporates the World Trade Center Transportation Complex (including the permanent World Trade Center PATH Terminal, pedestrian connections and related infrastructure) and the Fulton Street Transit Center; the South Ferry Subway Terminal; access to regional airports; bus facilities and WTC site sub-grade infrastructure; and improvements to West Street.

The federal government has earmarked $4.55 billion of the $20.6 billion of federal funds allocated for recovering from the September 11th attacks for transportation investment. On February 6, 2003, the Governor submitted to the Federal Emergency Management Agency and the Federal Transit Administration the funding requests for three priority projects — the World Trade Center Transportation Hub, Fulton Street Transit Center and South Ferry — estimates for which total $2.55 to $2.85 billion. Descriptions of the proposed projects are included in the chapters that follow.

Cost estimates are based upon the responsible agencies' current estimates. Because many projects are in the preliminary stages of development, the cost estimates are likely to be refined as projects move forward. In recognition of the fact that the scope of each of these projects, as well as the cost estimates, may change over time, the Transportation Working Group will continue meeting to review project status and propose changes to scopes and costs.

Going forward, the allocation of the remaining $1.7 to $2.0 billion of the $4.55 billion in FEMA and FTA funding must now be determined. In addition to the three listed projects, there are a number of additional projects that the State, City and the transportation agencies consider important for the revitalization of Lower Manhattan and that should be accomplished. Preliminary cost estimates for the set of transportation projects which are under consideration are listed on the accompanying table. The remaining $1.7 to $2.0 billion will not be sufficient to finance all of these projects. Additional funding will be required.

FUNDING PLAN AND PROJECT STATUS

High priority for remaining $1.7 to $2.0 billion of FEMA/FTA funds and other funding to be identified		
	Cost Estimate	**Development Status**
JFK Airport/Long Island Access	$2.0 to $5.3 billion	Inter-agency alternatives analysis study beginning as an initial step towards design and construction.
West Street	$400 to $900 million	Alternatives analysis and preliminary engineering under way.
Tour Bus Facility and WTC Sub-Grade Infrastructure	$500 million	Bus facility site alternatives analysis under way.
Commuter Ferries	$150 to $200 million	Funding in place for some sites. New expansion study in preparation.
Street Configuration and Circulation	$100 million	City identification of streets conducted. Some street reconstruction under way, more slated.
Funding anticipated from sources outside FEMA/FTA Funds, including agencies' capital programs		
Newark Airport Access	$525 million	PANYNJ feasibility study in progress.
LaGuardia Airport Ferry	$3 to $6 million	PANYNJ to issue Request for Expression of Interest (RFEOI) later this year.
Linking Metro-North to 4/5 at Grand Central Station	$50 to $75 million	MTA in final stages of analysis.
Downtown Heliport/ Airport Access	Less than $1 million (significant investment not required)	Mainly requires organizational & regulatory approvals

In coming months, the Lower Manhattan Development Corporation, in conjunction with the State, the City and its partner agencies, will continue to study the possible impact of transportation investment alternatives on the future of Lower Manhattan and also explore potential sources of funds. Potential sources include the following:

- LMDC Community Development Block Grant funds,
- Insurance proceeds related to the destruction of the transportation complex at the World Trade Center site,
- The capital programs of the transportation agencies,
- Transportation user fees, and
- Other federal funding sources.