THE MTA BLUE RIBBON COMMISSION ON SUSTAINABILITY

SMART GROWTH/TOD REPORT

OCTOBER 29, 2008

Prepared for:

METROPOLITAN TRANSPORTATION AUTHORITY (MTA)

I. Introduction

Smart growth and transit-oriented development (TOD) are important elements of MTA's commitment to a sustainable future. The sprawling pattern of development that has characterized the region's residential and commercial growth of the past generation generates energy consumption, auto-dependence, carbon emissions and other environmental effects that threaten the health and prosperity of the MTA's service area, the NY Metropolitan area and the Nation. With a projected increase of population in the MTA service area of over 4 million by 2030[1], a major effort will be needed among MTA, New York State, the federal government, counties, localities and the private sector to direct development to be within walking distance of mass-transit stations or feeder bus lines.

The MTA must make near- and long-term program enhancements and leverage planned capital investment that will support a greater intensity of development around its stations and feeder lines and a dramatically increased share of trips. By encouraging the private sector to concentrate development around its stations and make its service more competitive and attractive than auto travel, MTA can make a major contribution to reduction of carbon emissions in the region. The MTA cannot achieve this sea change unilaterally. It must seek and receive help from existing and new partners in state and federal government, local communities, public agencies, developers, and others to achieve greater capture of trips within its service area.

A. Goals and Objectives

The TOD Committee is establishing two goals for this component of MTA sustainability plan:

- The MTA should work with New York State, communities and other partners throughout its service region so they can collaboratively ensure that MTA transit can capture two-thirds of all additional trips generated between 2008 and 2030. The Regional Planning Association estimates that there will be 3.8 million additional weekday person trips between 2005 and 2030 in the region. Using the 2/3 goal, 2.5 additional transit trips is the target for the MTA.

- The MTA should work with New York State, municipalities, developers, and other public agencies to ensure that two-thirds of all new residential and commercial growth in the MTA region between 2008 and 2030 is concentrated within a half-mile of an MTA station or within a quarter mile of two bus lines.

The basis for these goals is the ability to transform existing communities and create new communities in ways that will decrease single-occupancy vehicle trips, increase the use of public transit, and encourage carbon-free trips such as walking and biking. The Commission believes that new transit oriented villages and cities will become the residential and commercial hubs and economic engines of the MTA service area. The infrastructure and development in MTA supported TOD's must meet the highest standards of green design achievable in today's marketplace. Furthermore, they must be constructed outside of zones that will be vulnerable,

[1] *Source: MTA's Strategic Regional Review – 2007 Update*

based on the best available modeling, to the rising tides and storm surges associated with climate change.

The remainder of this section will focus on two areas that directly address the goals and objectives detailed above; an analysis of specific transformational initiatives that represent proposed transit projects in the region which are designed to capture new transit trips, and the examination of transit oriented development policies and strategies that can be utilized to direct growth around rail stations and bus lines. For each area, a discussion of the method(s) used to collect and analyze data/information is presented, along with a summary of the results. The section concludes with a summary that details the obstacles to achieving these goals, and recommendations that can assist the MTA in moving forward in each of these areas.

B. Transformational Initiatives

One of the methods that can assist the MTA in capturing two-thirds of all additional trips generated between 2008 and 2030 is to consider the benefits of increasing service on currently underutilized rail lines and establishing bus rapid transit which can feed into TOD's or station hubs. The consultant team working with the MTA have identified eleven of these type of projects that have been proposed over the past few decades. A summary description of each of these projects is provided below. Information for each of these projects was obtained from past feasibility studies, major investment studies, research periodicals, and newspaper articles. If capital cost and ridership estimates were not found for these projects, estimates were extrapolated based on similar projects (and per unit costs). Additionally, the capital cost and ridership estimates presented below represent order of magnitude estimates and are provided for comparative purposes only. Given that many of these estimates were prepared with different build years, it is recommended that a more detailed analysis, normalizing all estimates for one consistent build year, is done, if further study is required.

It should also be noted that no specific examination of the local implications, support or concerns regarding any of these possibilities has been performed to date.

Nassau Hub – The Nassau Hub project involves the development of new transportation options and land use strategies that can help achieve the County's concept of "New Suburbia" which is a vision to guide the County's growth for the next 50 years. The key to New Suburbia is to provide opportunities for economic growth in targeted areas, while preserving the historic suburban quality of life for the majority of the County.

Under this vision, carefully planned development investments would be focused in the County's traditional downtowns, emerging minority communities, reclaimed Brownfield sites and the Nassau Hub. Collectively, the proposed new developments would help expand the County's tax base and provide new sources of revenue. As the most important commercial district within the County, developing the Hub into Nassau's downtown, or Nassau Centre, is the cornerstone of this vision.

Accordingly, the *Nassau Hub Major Investment Study (December 2005), or MIS*, was commissioned, by Nassau County Planning Commission, to propose new transportation options and land use strategies that can help achieve this vision for New Suburbia. As such, any proposed new development must be done in conjunction with addressing the future

transportation needs in this area, with the ultimate goals to improve access and mobility, promote economic development, and enhance the quality of life for the County's residents. Through the MIS process, a conceptual plan was developed with extensive public input.

The Nassau Hub study area is located in central Nassau County. The northern boundary lies just to the north of the Long Island Rail Road's (LIRR) Port Jefferson Branch, while the southern boundary lies just to the south of the Hempstead Turnpike. The western boundary runs along Rockaway Avenue and Cathedral Avenue and the eastern boundary is Eisenhower Park. The study area covers approximately 10 square miles and encompasses all or parts of the Villages of Mineola, Westbury, Garden City and Hempstead; the Hamlets of Carle Place and Uniondale; and the unincorporated area (Census Designated Place) area of East Garden City.

In terms of transit options, the short list of alternatives included three different transit technologies:

- Bus Rapid transit (BRT): BRT provides high capacity bus operation when operated along exclusive bus-only-roadway; it combines the quality of rail transit with the flexibility of buses.
- Light Rail Transit (LRT): LRT is a technology that uses lightweight passenger rail cars that can operate as either single-car or multiple-car trains on fixed rails.
- Automated Guideway Transit (AGT): AGT is an automated transit service generally operated without an onboard crew; computers are used to control vehicular speed, spacing and stopping.

For each mode, two build out scenarios were developed: the Core System and a Full Network System.

The Core System is envisioned to enable customers to access the Hub Area by making new connections not generally available today, particularly from the LIRR. This will help attract reverse peak riders from areas west of Nassau County, while also attracting new peak direction (westbound) riders to the Hub Area. The Core System will help distribute new regional and county-wide transit customers to existing and proposed destinations within the Hub Area, as well as serve as a Hub circulator system (which includes a connection to Garden City and Hofstra).

Under the Full System, the benefits of the Core System are extended to reach other parts of Nassau County, including as far north as Oyster Bay, Hicksville to the East, Freeport to the southeast and Valley Stream to the southwest. Fully established, these four branches would radiate from the Hub Area in an "X" pattern, with the traditional downtowns of the Hub Area firmly centered in the nexus of the "X." Whenever possible, new intermodal connections to the LIRR and to Long Island Bus would be created, so as to make connecting travel within the County as convenient as possible and to extend the benefits of the Full System investment. Furthermore, the Full System will provide additional regional transit connections to Suffolk County and New York City.

The short list of alternatives were subsequently refined to include a greater level of detail so that analytical results would better help decision makers and the public evaluate the relative merits

of each option. During this evaluation phase, the following information and analyses were produced:

- Development of preliminary operating plans
- Development of preliminary travel demand forecasts
- Development of high-level, order of magnitude capital costs
- Development of high-level, order of magnitude operating & maintenance (O&M) costs
- Development of preliminary financial analysis

The operating plans for all of the modes assumed that the vehicles will run along a fixed guideway system, will be separated from traffic, and will receive traffic signal preemption.

Ridership forecasts were developed using a travel demand model system developed by the New York State Department of Transportation (NYSDOT) for its MIS – The Long Island Transportation Plan to Manage Congestion (LITP). Due to time and funding constraints, the LRT and AGT modes were combined since these modes have similar carrying capacities and operating characteristics. What was learned was that the LRT and AGT alternatives were projected to attract the highest levels of ridership compared with BRT under both the core system and full system scenarios. The full system scenarios for all modes attracted significantly higher numbers of riders compared with the core system alignment.

A breakdown of the ridership and capital costs for each alternative and scenario is shown below.

	Weekday Ridership	Capital Cost
Core		
LRT	13,300	$555M
BRT	8,800	$563M
AGT	13,300	$1.3B
Full		
LRT	60,800	$2.1B
BRT	46,000	$1.9B
AGT	60,800	$5.1B

Creation of Tappan Zee Bridge with mass transit component - The Tappan Zee Bridge with mass transit component project is designed provide a transit mode recommendation for the 30-mile corridor that extends from the I-87/I-287 Interchange in Rockland County to the I-287/I-95 Interchange in Westchester County and includes the Tappan Zee Bridge.

The *Transit Mode Selection Report, which was completed in 2008,* documents the in-depth analysis, evaluation, and public and agency participation conducted to date for the Tappan Zee Bridge/I-287 Environmental Review and provides a transit mode recommendation that best meets the project's purpose and need, goals, and long-term public interest. Transit is needed in this corridor to address mobility and travel demand needs within the study area through 2035, principally focusing on accommodating both the cross-corridor and New York City metropolitan area travel markets.

The Alternatives Analysis (AA) process for the Tappan Zee Bridge/I-287 Environmental Review ended with the selection of six preliminary alternatives for analysis in the draft environmental impact statement (DEIS):

- Alternative 1 – No build
- Alternative 2 – Rehabilitated bridge with transportation demand management/ transportation system management (TDM/TSM) measures
- Alternative 3 – Full-corridor bus rapid transit (BRT)
- Alternatives 4A, 4B, and 4C – Commuter rail transit (CRT) in Rockland and either CRT, light rail transit (LRT), or BRT in Westchester.

In the course of evaluating the six DEIS alternatives that were developed in the AA process, several variations were developed during the scoping update process. Thus, the range of alternatives/options evaluated in this report was as follows:

- No Build – Alternative 1 is used as the baseline to measure impacts, where appropriate
- Option 3A (Alternative 3 with enhanced service plan). Buses would use the high-occupancy vehicle/high occupancy toll (HOV/HOT) lanes in Rockland County, and exclusive bus lanes integrated into the existing bus system and dedicated busway east of White Plains in Westchester County
- Option 3B (Alternative 3 with enhanced service plan and full-corridor busway). Buses would use the HOV/HOT lanes in Rockland County and exclusive busway in the I-287 right-of-way (ROW) in Westchester County
- Option 4D (Option 3A plus CRT in Rockland)
- Alternatives 4A, 4B, and 4C as developed in the AA process
- Option 4A-X (4A without a Hudson Line connection) and cross-corridor LRT.

With such a wide scope of alternatives/options, this transit mode selection report was prepared to select a feasible transit mode or modes to carry forward into the DEIS. These analyses (1) enabled comparisons among the alternatives/options based on selective criteria; (2) determined whether there were significant differentiators among them; and (3) ascertained whether there were any major issues associated with any alternative/option.

Based on the previous analyses, it was recommended that full-corridor BRT from Suffern to Port Chester and CRT from Orange/Rockland to Grand Central Terminal be studied in the DEIS. The estimated (new) weekday ridership for this option is 52,600, while the capital cost for the project would be $16 billion dollars.

Extension of Metro-North's Port Jervis line to downtown Newburgh and Stewart Airport - The *Stewart Airport Transit Access Feasibility Study*, completed in December of 2003, identified and evaluated the feasibility to improve transit access to Stewart International Airport. This study, sponsored by MNR and the NYSDOT, was conducted in coordination with the development of Stewart Airport's updated Master Plan, and concluded that commuter rail alternatives using the existing Metro-North Port Jervis Line, with significant upgrades and constructing an extension of approximately 4 miles into Stewart Airport, would provide the best combination of speed and reliability for transit access from Midtown Manhattan. Preliminary

capital cost estimates for the extension totaled between $276 and $592 million, with a weekday ridership projected at between 9,200 and 10,200.

In 2007- MNR sought proposals from consulting firms to perform a 12-month Alternatives Analysis and an 18-month option to be exercised at Metro-North's discretion for an Environmental Impact Statement. This study is currently underway.

Reactivation of the Staten Island North Shore Line – The *Feasibility Study of the North Shore Railroad Right-of-Way* released by the Staten Island Borough Presidents' office in March 2004, calls for a new five mile light rail line which would connect Arlington and the St. George Ferry Terminal. The project would cost $360 million, with funding coming from federal, state and local agencies. The proposed route would run along an old rail line and could potentially cut commute times between Arlington and St. George by half to less than fifteen minutes. The study also estimated that the light rail would serve between 10,000-15,000 people a day and reduce the number of cars on the road by up to 7,500. Construction could be completed within eight to ten years depending on when funds are approved. Reported on Monday, August 04, 2008 funding for an analysis of the North Shore rail line has finally been secured. MTA chairman Elliot Sander and Staten Island Borough President James Molinaro agreed on a unique deal to fund the $3.5 million study. The study will analyze the pros and cons of various forms of transportation along the old North Shore rail line and will get the project one step closer to being eligible for consideration for federal dollars.

Reactivation of the LIRR Rockaway Line – When the Rockaway Beach branch of the Long Island Rail Road was in operation half a century ago, residents of the Rockaways glided into Manhattan on a pleasant 30-minute ride. Currently, the only public transportation available to the 100,000-plus residents of Rockaway is the A train, and the trip to Manhattan can take upwards of an hour. Examined by the MTA in the 1990's, the proposed plan called for the reactivation of the LIRR's Rockaway Branch south through Rego Park, Forest Hills Middle Village, Woodhaven, Ozone Park, Howard Beach, across Jamaica Bay and through Broad Channel, and on to the Rockaway Peninsula. Its reactivation would also permit a fast, one-seat ride between Penn Station and Kennedy Airport. With the advent of the AirTrain as well as the substantial residential growth of these neighborhoods, this unused resource could become a vital link to the region's future to serving airport passengers and employees and local commuters. Last year the Regional Rail Working Group estimated the capital cost to reactivate the line at approximately $400 million. Given the population of the area, it is likely that the proposed service could at a minimum attract a weekday ridership of at least 10,000 passengers.

Reactivation of the Bay Ridge Line – In the 2008 State of the MTA Address, Chairman Lee Sander stated that the agency will "explore the Regional Planning Association's 1996 circumferential rapid transit line proposal (named the Triboro RX)," which would convert the lightly used Bay Ridge freight line, as well as existing rail rights of way, into a rapid transit service arcing from southern Brooklyn to Queens to the Bronx. Original ridership estimates done by the RPA indicated that the service would attract 32,000 new riders each weekday. While no capital cost estimates were developed as part of the initial plan, recent estimates done for the Tappan Zee Bridge with mass transit component indicate that new rapid rail service costs approximately $1 billion dollars per mile to construct. Given the length of the proposed Triboro Rx (approximately 21 miles), the total capital cost for the project would be in approximately 21 billion dollars.

Reactivation of the Montauk Line at Long Island City – The western end of the LIRR's Montauk branch, known as the "Old Montauk" or "Lower Montauk", runs from Long Island City to a connection west of Jamaica. This portion of the line, which is not electrified is still used for freight and for express Jamaica-LIC service for a few runs during the week. Five intermediate stations in Queens (Richmond Hill, Glendale, Fresh Pond, Haberman, and Penny Bridge) were closed on March 13, 1998 due to low ridership. The New York Times indicated in March 1998 that the capital cost to upgrade all of the stations on the line would total approximately $11 million dollars, while the average daily ridership was only 12.

Reactivation of the West Shore line in Orange & Rockland County – NJ TRANSIT conducted a Major Investment Study (MIS) in 2001 examining the feasibility of reinstituting rail service on former passenger rail lines in eastern Bergen and Passaic counties in New Jersey and Rockland County in New York. This project was referred to as the West Shore Region MIS since it included the former West Shore Line and two other closely related rail lines, the Northern Branch and the New York, Susquehanna and Western Railway (Passaic - Bergen Line). The MIS recommended the advancement of rail projects along each of the three corridors under review.

The MIS recommended that a DEIS should be prepared for commuter rail service between West Nyack, New York and Hoboken Terminal. The proposed West Shore Line would utilize CSX Railroad's River Line. Since the completion of the MIS NJ TRANSIT has adopted a plan for The Trans-Hudson Express Tunnel between New Jersey and Manhattan. In upcoming work NJ TRANSIT will examine the potential to link the proposed West Shore Line into THE Tunnel. This will be closely coordinated with the proposed Northern Branch and Passaic - Bergen Rail projects. As part of the next phase of work the service and infrastructure plan for the West Shore Line will be updated.

A transportation network that would advance all three rail options would serve an estimated 24,400 average weekday passengers by 2020, with a total estimated capital cost of over $1 billion.

Reactivation of the Maybrook Branch which connects the Metro-North stations of Beacon (Hudson Line), Brewster (Harlem Line), and Danbury (New Haven Line) – The east-west Maybrook Line, cutting through the center of the planning region, originates in Beacon, NY. It is single tracked to the east to the Danbury Branch Line and then double tracked to Berkshire Junction near the Danbury- Brookfield Line. A connecting track to the Harlem Division Line at Brewster was eliminated many years ago; there is a cross-over between the Maybrook and Harlem Line at Dykemans, north of Brewster.

The line continues eastward single tracked through the Botsford section of Newtown and southeast through the long descent down the Housatonic River Valley to Derby Junction. The line is owned by the Housatonic Railroad between the Connecticut border and Derby Junction. From the state line west to Beacon, MTA Metro-North Railroad owns the tracks. This portion of the Maybrook is also referred to as the Beacon Line.

The Maybrook Line was a major east-west freight corridor until the early 1970s. Service west of Beacon, NY ended when the bridge over the Hudson River at Poughkeepsie burned in 1974.

There is no active freight usage on the Maybrook/Beacon line west of Danbury, although HRRC is in negotiations with Metro-North and CSX to set up an interchange agreement with the Hudson Line at Beacon.

As noted above Metro-North purchased the Maybrook Line running west from Danbury to Beacon, N.Y. in 1995 to preserve it for possible passenger service. Metro-North decided it was prudent to buy the line to preserve the right of way for the potential to connect the three Metro-North (Hudson at Beacon, Harlem at Brewster North and New Haven in Danbury) Lines.

As part of efforts in the winter of 2001 to improve connections between the Upper Harlem Line and communities in the Housatonic Region, Metro-North completed a non-engineering examination of the feasibility of initiating passenger service between Danbury Railroad Station and Brewster North Station.

The study determined that a frequency of 4 trips per day would require a capital investment of $74.1 million over a 6-year period to rehabilitate the Maybrook line (approximately 8 miles between Danbury and Brewster) to 40-59 MPH standards (speeds on the line are now limited to 10 to 15 MPH). Track reconfiguration at Danbury and Brewster North that would be advantageous to the operation of such a service would require an additional $39.9 million investment. Other capital requirements would be two train sets consisting of 2 locomotives and 12 coaches. The annual incremental operating costs to operate the service would be $4.5 million. If service were to be expanded between Brewster and Beacon (approximately 32 additional miles), the capital cost to rehabilitate the line would grow to $400 million. In addition, given the limited amount of service being proposed, weekday ridership would probably be in the range of 500 to 6,000. For example, the Danbury Branch, which makes 20 trips per day has a weekday ridership of approximately 2,000.

Establishment of Greenport to Riverhead (Long Island) bus rapid transit – This project involves the implementation of a Bus Rapid Transit route between Greenport and Riverhead on the North Fork of Long Island. The BRT would essentially be an express version of the current S92, with priority lanes provided for faster travel in the Riverhead area, and upgraded station locations. Building on work that the consultant is currently doing as part of the Suffolk County Bus Study, the number additional weekday trips would total 400, while the capital cost to implement the service would be approximately $7.5 million.

Establishment of North-South bus rapid transit/light rail transit feeder corridors, on Long Island – After significant detailed analysis of hundreds of possible congestion-management options, substantial public input, and guidance *LITP2000* Study (which was completed in November 2001) identified a proposed plan to be implemented over time to address projected traffic increases on Long Island. The proposed plan is an achievable balance of transit and highway solutions, as well as bicycle, pedestrian and freight improvements, to improve Long Island's future mobility—while protecting Long Island's cherished quality of life.

The LITP Plan calls for an integrated, multimodal, congestion-management strategy for all of Long Island:

- Long Island Rapid Commute (LIRC) transit system
- Rapid Commute Vehicles (RCVs)
- Complementary roadway, freight, bicycle and
- Pedestrian improvements.

Other future projects that this strategy would be coordinated with include: local bus system improvements, LIRR East Side Access Project and Operating Plans for 2010 and 2020, LIE HOV lanes from Exits 32 to 64, and the Nassau Hub Study, which is being undertaken by Nassau County.

LIRC Transit System

- About 90 new transit routes
- About 70 miles of RCV Priority Lanes, newly constructed on expressways and parkways, in addition to 40 miles of HOV Lanes on the LIE, so RCVs won't get stuck in traffic (including north-south corridors such as the Meadowbrook State Parkway, Route 110, and County Route 97)
  - 2+ carpools permitted to use Priority Lanes, complementing LIRC system
  - If HOV lane usage approaches capacity, priority will be given to higher occupancy vehicles
- RCV priority treatment on other major roadways:
  - Automatic electronic communication with traffic-signal system to change light from red to green, if traffic conditions permit.

About 130 miles of roadway improvements, but only where transit alone won't manage congestion.

Strategies to improve goods movement, bicycle and pedestrian travel—For example, new bike and pedestrian routes to link with railroad stations; a major new freight facility to enable more freight to be moved on and off Long Island by train rather than by truck.

The plan is estimated to have a weekday ridership of 63,000 at an annualized capital cost of $236 million.

Results

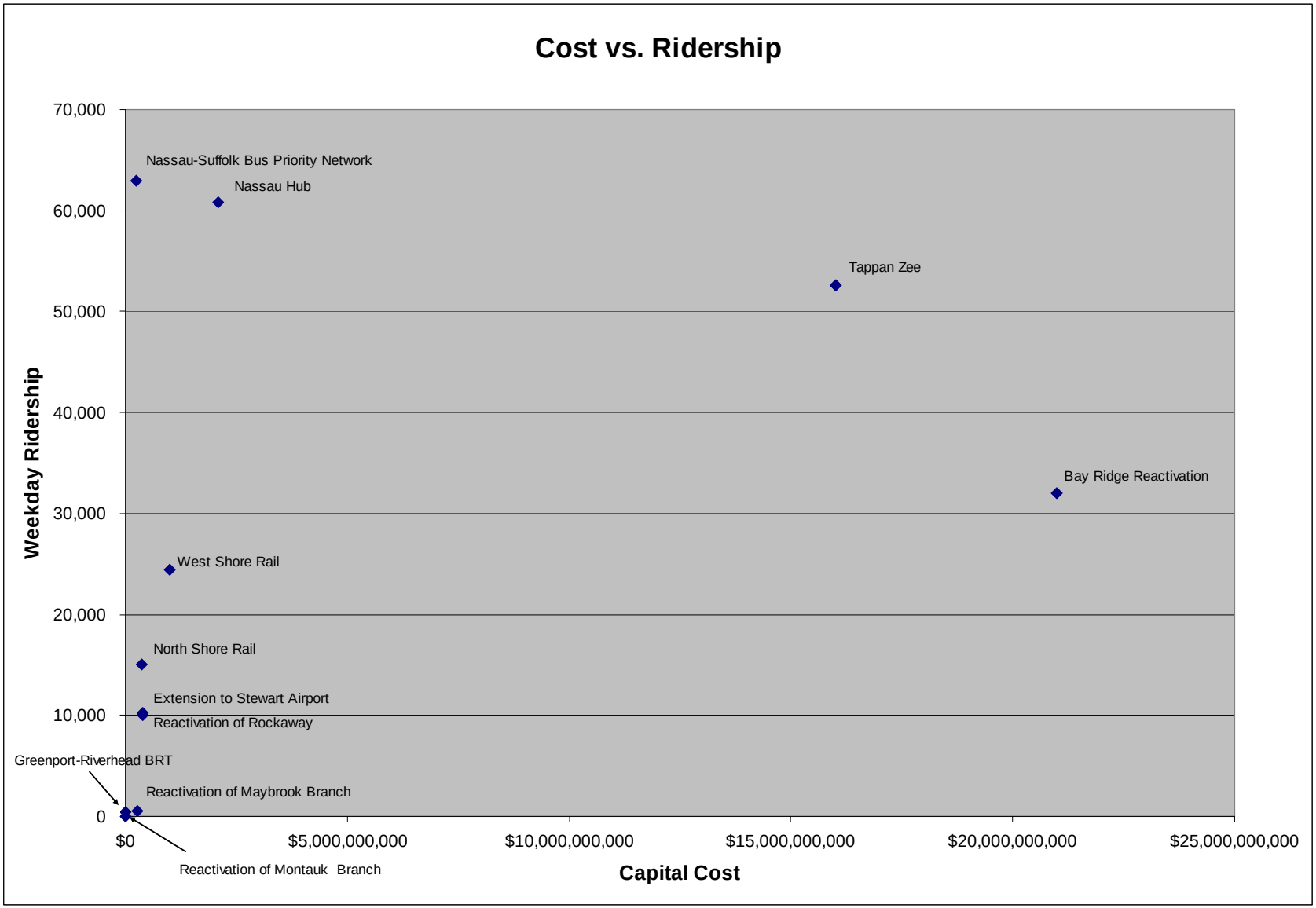
The graph on the following page measures each of the above projects against one another in terms of estimated capital cost vs. estimated weekday ridership. The graph is designed to illustrate which projects may be more cost effective to implement over the next two decades. The graph indicates that the Nassau-Suffolk Bus Priority and the Nassau Hub projects may deliver the highest impact in terms of additional riders given the cost.

However, an examination of the ridership and cost estimates for each of the projects identified above indicates that if all of the projects were constructed and in operation by 2030, the total

number of additional transit trips generated by the new services would be approximately 200,000.

In addition to the transformation projects, a number of other proposed non-MTA system projects could impact the total number of additional transit trips that could be generated by 2030. One significant project is the Access to the Region project, which is designed to increase NJ Transit's Trans-Hudson Rail Capacity into Manhattan through the construction of a new tunnel. It is estimated that 11,130 additional NJ Transit riders would transfer to the NYCT subway system each day after this project is constructed, while 145 riders would transfer to NYCT buses. Other non-MTA system projects include establishing high speed ferry services to Manhattan from locations such as Greenpoint, Williamsburg, and Bay Ridge, Glen Cove, Rye, and New Rochelle in New York, and Stamford in Connecticut, and the potential extension of the Hudson Bergen Light Rail Line into Staten Island. A percentage of riders on these new services are likely to transfer to NYCT transit and bus services, which when taken with the Access to the Regions Core project could push the total number of additional transit trips to over 250,000.

Even with the additional non-MTA system projects factored in, this number falls far short of the target value of 2.5 million additional transit trips that need to be captured by 2030. Based on these results, it is clear that other options need to be looked at to help capture additional new transit trips. A discussion of these options is provided in the recommendation section.


Cost vs. Ridership
Weekday Ridership
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
Nassau-Suffolk Bus Priority Network
Nassau Hub
Tappan Zee
Bay Ridge Reactivation
West Shore Rail
North Shore Rail
Extension to Stewart Airport
Reactivation of Rockaway
Greenport-Riverhead BRT
Reactivation of Maybrook Branch
Reactivation of Montauk Branch
$0
$5,000,000,000
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$15,000,000,000
$20,000,000,000
$25,000,000,000
Capital Cost

II. Smart Growth/TOD Policies & Strategies

When cities across America tore up their trolley rails in the 1950s, they dismantled a way of life. Since that time, an explosion of automobile use and under-investment in rapid transit has spawned the host of ills known collectively as sprawl. Soaring oil consumption, lengthening commutes, and disintegrating downtowns were among the local symptoms. Climate change has emerged as a global problem, driven in part by the massive auto emissions that result from a decentralized pattern of development. Now, half a century later, a turnaround is beginning to occur. Downtown markets, bike paths, even trolley lines are reappearing in cities around the country—part of the collective response known as Smart Growth and Transit Oriented Development (TOD).

The mission of MTA's Smart Growth and TOD program is to encourage the use of mass transit by supporting residential and commercial development within walking distance of transit stations, to reduce miles traveled in single occupancy vehicles and their environmental impacts and to increase MTA riders. The Smart Growth strategies have the potential to play a significant role in reducing the region's carbon footprint. Studies have shown that automobile trips in TOD's are significantly lower than in non-TOD communities. Smart Growth policies involve collaboration between many different stakeholders, so MTA's programs must be both proactive and flexible. Throughout the United States, from New Jersey to San Francisco, transit agencies are playing a pivotal and proactive role in supporting and promoting TOD's. MTA must build on these successful models and create a cutting edge program for the 21st century.

A report published in May of 2007 (and recently updated) by Reconnecting America and the Center for TOD indicates that the market demand estimate for the number of households likely to be looking to rent or buy housing near transit is expected to reach 15.2 million households by 2030. These numbers are more than double the number of households who live near transit today. Meeting this demand would necessitate building 2,000 housing units near every station in the United States. In New York City, the report indicates that the number of households near transit is expected to grow from 2.8 million to a projected demand of 5.3 million.

The demand estimate presented above makes it clear that there will be a market for residential housing near transit stations in the New York City region. The issue then is to make sure residential, as well as commercial growth, is directed toward existing and future transit stations and bus feeder lines in the region.

The remainder of this section examines current TOD policies in the region and then presents a series of TOD case studies from other transit agencies, highlighting policies & strategies that can assist the MTA in achieving their goal of capturing 2/3 of all new residential and commercial growth in the MTA region between 2008 and 2030 within a half-mile of an MTA station or within a quarter mile of two bus lines.

A. Current Footprint & Achievements to Date

The MTA has a record of investing in mixed-use development around transit stations. The classic example is Grand Central Terminal and the leveraging of air rights over the rail infrastructure. This is a model that the MTA has and can continue to replicate today.

Another more recent example is Metro-North's collaborative model, the "Be in Beacon" project, which is a smart growth initiative in the City of Beacon on the Hudson Line. A Request for Expressions of Interest (RFEI) was released by Metro-North to the development community in October 2007. "Be In Beacon" is the culmination of several years of collaboration with 20 stakeholders, New York State and the City facilitated by Metro-North. With a riverside setting and a growing arts community centered on the DIA: Beacon art museum, this waterfront community is undergoing a renaissance in which Metro-North is playing a site-sensitive role. Metro-North is also participating in the City of Beacon's planning effort for development on the waterfront and working with local officials in applying livable, walkable and sustainable TOD principles around the Metro-North train station. Beacon is just one of several TOD's Metro-North is studying; others include Harrison, Harriman (with other stakeholders) and locations in the Bronx and suburban counties. This effort will include planning for mixed-use 11 development such as green residential and commercial space, as well as other ecofriendly uses.

The LIRR has also extended its involvement in local smart growth initiatives. Using a $25 million FTA grant, LIRR approached several townships with plans for inter-modal projects. The result was a revitalization plan for Mineola centered on a new inter-modal transit facility on LIRR right-of-way a short walk from the LIRR train station. Designed, scaled, and sited to enhance the downtown area, the facility earned several local Smart Growth awards. The project also included plans for local business development and 600 new commuter parking spaces, helping to concentrate growth around the LIRR station. In other projects, LIRR is working with officials from the Town of Brookhaven on mixed-use, pedestrian-friendly commuting hubs at the new Ronkonkoma station.

In addition, the MTA is partnering with the New York State Housing Finance Agency on a number of TOD projects throughout Long Island, all aimed at concentrating future growth near rail and transit hubs.

This bottom-up revolution goes to the heart of the MTA's mission, while offering the promise of a stronger regional economy, employment and property values and mitigation of climate impacts.

B. Current TOD Initiatives at MTA and in the Region

Though the MTA is in principal dedicated to the concept of promoting Transit Oriented Developments (TODs) at various locations covering all its business lines inclusive of Metro North Railroad(MNR), Long Island Railroad (LIRR) and New York City Transit (NYCT), almost negligible concrete actions have been taken to that effect as of this date.

The New York State Governor's office has created a Smart Growth Cabinet (SGC) which has been entrusted to oversee various sustainability issues among which providing incentives for MTA for development of TODs at various locations is one. However, till date no financial support has been extended to the MTA from the SGC.

The MTA itself has yet to develop a program for promoting TODs, though it is expected that in the future efforts will be underway to create such program/s and formally create policies, implementable actions, funding requirements, etc.

Even though MTA itself has yet to make big strides in the aspect of TOD developments, MNR and LIRR have been making efforts to pursue TOD initiatives on their own. As MTA continues to develop its TOD program it is also aiming towards an increased coordination between the different agencies under its umbrella and a more comprehensive approach towards TOD planning.

As shown in the section above, MNR has been more successful in pursuing strategies in TOD development, primarily because of land ownership at certain stations like Beacon and Harrison. Ownership of land has allowed MNR to take a proactive role in TOD development around the above mentioned stations, whereas LIRR has had to depend on the process initiated by local government. In spite of the lack of land resources, a recent success story along LIRR corridor has been the Ronkonkoma Station at Brookhaven.

Potential sites/areas that should be considered (or where coordination should occur) by MNR, the LIRR, and the MTA for TOD development include:

- Site of the former Harlem Valley Psychiatric Center in Dover, NY – near Tenmile River station - Dover Knolls Development Co. II L.L.C. currently has an application into the Town of Dover to develop a TOD type development that consists of 1,376 housing units and 245,800 square feet of commercial space, both office and retail.
- Site of the former Pilgrim State Psychiatric Hospital Pilgrim in Brentwood, NY – A developer has plans to develop the 460 acre site into a walk able community that clusters residential units near the village center, with its shops and restaurants, parks, multiplex movie theater, civic center and three million square feet of office space. The plan also calls for the development to be tied into Suffolk County Transit bus routes, as well as for the implementation of a shuttle network that would circulate within the development and provide service to the Deer Park Train Station
- Downtown Brooklyn
- Long Island City
- Jamaica
- Nassau Hub
- Hauppauge/Brentwood.

Even though there has been interaction between MTA and New York City of high profile projects like the development of the Hudson Yards, there is no ongoing mechanism by which there is coordinated project review by the NYCT arm of MTA and the Department of City Planning. Similarly there has minimal coordination efforts between MTA and its agencies to coordinate land use and transportation issues with other local governments. This coordination would be essential to achieving the goal of capturing the 2/3 of all new transit trips in the region over the next 20 years.

As MTA embarks upon its TOD program, it envisions to create a TOD Development hand book to provide guidance to local communities on this kind of development. The agency envisions to create a product modeled on the principles of the handbook created by New Jersey Transit for distribution to local communities.

New Jersey – With the development of NJ Transit's "Planning for Transit-Friendly Land Use: A Handbook for New Jersey Communities" in 1994, the State of New Jersey has long been recognized as a leader in transit-friendly development policies. In addition, since the establishment of NJ Transit and NJDOT's Transit Village Program (which is discussed in detail below) in 1999, 19 municipalities have become designated "Transit Villages". The Transit Village Initiative also fits into New Jersey's larger Smart Growth agenda, which is led by the State's Office of Smart Growth because it helps to promote the growth of businesses and residential population around existing (or planned) transportation infrastructure investments. One of the objectives of NJ's Smart Growth plan is to reduce traffic congestion and improve air quality by promoting increased transit ridership, pedestrian activity and bicycle use. In addition, goals of economic revitalization and growth of housing stock are part of an overall effort to create vibrant, fun and exciting areas around major transit nodes.

Connecticut – The State of Connecticut has only recently embraced the concept of TOD, as Connecticut DOT indicated in late 2007 that they are looking to utilize TOD throughout the entire state and that they will work with municipalities, private developers and metropolitan planning organizations to develop TOD plans using the $5 million included in the October 2007 bonding bill for a TOD pilot program. The State also has an Office of Responsible Growth, which was established in October of 2006 by Governor Jodi Rell, and is charged with coordinating state efforts to revitalize cities, preserve the unique charm of the state and build livable, economically strong communities while protecting natural resources for the enjoyment of future generations. A report issued by the Responsible Growth Task Force, working under the Office of Responsible Growth, in February 2008, indicated that municipal zoning regulations should be crafted around smart growth principles that include tools such as village zoning districts, transit oriented development, and incentive housing zones.

C. Case Studies

While the MTA is just embarking on the development of a comprehensive TOD program, many other transit agencies in the United States have already implemented TOD programs that have been used to focus growth on existing & future transit stations and bus lines. The consultant team has identified the following 4 case studies that highlight successful TOD programs and policies that may be applicable to the MTA.

a. Case Study: Metropolitan Transportation Commission TOD Policy

Overview

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordination and financing agency for the nine-county San Francisco Bay Area. Resolution 343 was adopted in 2001 authorizing an $11.8 billion Regional Transit Expansion Program which includes a strong directive to develop a policy that would condition the allocation of regional discretionary funds for transit expansion projects on supportive local land use plans and policies. This, along

with other MTC directives to generate new transit riders and make the region's transit investments more cost-effective, lead to the development of MTC's TOD policy.

MTC's regional TOD policy involves three key elements:

(a) Corridor-level thresholds to quantify appropriate minimum levels of development around transit stations along new corridors
(b) Local station area plans that address future land use changes, station access needs, circulation improvements, pedestrian-friendly design, and other key features in a TOD
(c) Corridor working groups that bring together CMAs, city and county planning staff, transit agencies, and other key stakeholders to define expectations, timelines, roles and responsibilities for key stages of the transit project development process.

The TOD policy is applied to any physical transit extension project with regional discretionary funds, regardless of level of funding.

Corridor-level thresholds

The MTC regional TOD policy views the transit elements in terms of corridors and lists eight corridors to be developed as TOD. Each corridor has been assigned a "threshold" based on potential increased transit ridership, exemplary existing station sites in the Bay Area, local general plan data, predicted market demand for TOD-oriented housing in each county, and an independent analysis of feasible development potential in each transit corridor. Awarded grant require that thresholds are met within ½ mile radius of the station, planned land uses must be adopted through general or specific plans and the appropriate implementation must be put in place, such as zoning. Below-market rate housing is awarded with a 50 percent bonus toward meeting the required corridor threshold. Programming, planning and design of development is given local jurisdiction. Corridor Working Groups are encouraged to plan for housing that significantly exceeds housing unit thresholds.

Station Area Plans

Each proposed transit extension project seeking MTC funding is required to demonstrate that the threshold requirements will be met. If existing station plans do not meet thresholds, the MTC will assist in funding new plans.

At a minimum, Station Area Plans will define the land use plan for the area as well as the policies for implementation. Plans are required to include the following:

- Current and proposed land use programming, including density and number of housing units and jobs
- Station access and circulation plans for motorized, non-motorized and transit access.
- Estimate of riders within half mile radius
- Transit village design policies and standards
- TOD-oriented parking demand and requirements
- Implementation plan.

Corridor Working Groups

The purpose of Corridor Working Groups (CWG) is to assist in coordinating planning efforts for the development of TOD. Each transit extension that is attempting to meet threshold requirements requires a CWG. The groups are made up of relevant CMAs, sponsoring transit agencies, local jurisdictions, and representatives of other relevant agencies. Existing transit project working groups may be modified to create CWG. GWGs will be responsible for determining if Station Area Plans meet threshold requirements and assist in addressing any shortfalls in the plans. MTC will confirm that plans meet the required thresholds prior to releasing any project funding.

Policy Evaluation

An interim evaluation of MTC's TOD was conducted in July 2006 by an outside consultant. The following observations and recommendations were made:

Ridership

- Ridership benefits of TOD are undeniable
- Well-designed, mixed-use development around transit nodes can boost patronage as much as five to six times higher than comparable development away from transit
- BART's analysis of the Lake Merritt-Fremont line found that TOD has the potential to generate about 1.76 times the number of daily boardings as in the AM peak period, helping to generate a significant volume of off-peak ridership.

Corridor Thresholds

- Proposed thresholds are achievable
- Thresholds can be achieved with only moderate increased over existing allowable densities, without "forcing urban density on suburban jurisdictions"
- Thresholds are significantly lower than the those already achieved in other regions, including NJ (HBLR and TVI).

Station Area Plans

- MTC awarded station area planning grants to eight local jurisdictions and transit operators
- Plans are in progress (at the time of the study) and cannot be evaluated for their effectiveness
- However, some initial conclusions can be reached:
  - Station Area Plans are emerging as critical to the TOD policy
  - Planning areas are set at a ½ mile radius, but future plan should be allowed to encompass a wider areas if appropriate, especially for consideration of access improvements
  - Decisions regarding future planning cycles should await firmer results from the first round of plans
  - Plans should also include

- Transportation level of service (LOS) standards
- Review of permitting and design review procedures
- Explicit examination of the tradeoff between parking, new development and access improvement
- Integration with other regional plans/efforts.

Corridor Working Groups

- At the time of the study, it was too soon to fully evaluate the success of the CWGs, although they have the potential to be highly valuable
- Little incentive for the CWGs to continue to meet without a clear path to ensuring that the thresholds are met
- Additional functions that CWGs may be able to assume moving forward:
  - A role in determining potential incentive funding
  - Determining how to maximize ridership and meet other criteria such as farebox recovery
  - A role in planning access improvements to the stations through a MTC-funded strategic plan.

b. Case Study: NJ Transit Village Initiative

Overview of Program

The Transit Village Initiative (TVI) is a program sponsored by New Jersey Transit and the New Jersey Department of Transportation (NJDOT) that is intended to provide a Smart Growth approach to redeveloping and revitalizing communities near transit facilities and to make them a more appealing place for people to live, work and play, thereby reducing automobile dependence, reducing congestion and improving air quality.

Under the TVI, municipalities must apply to a Transit Village Task Force for Transit Village designation. Municipalities selected for Transit Village designation are those that have demonstrated a commitment to revitalizing and redeveloping the area around its transit facilities into a mixed-use neighborhood with a strong residential component. Thus, much of the planning and background work has been conducted by the municipality prior to application and thereby is intended to support municipalities that have already made commitments and efforts to creating TOD.

The TV Task Force is comprised of eleven statewide agencies including NJ Transit and NJDOT. Selections are made by the Task Force based upon a specific set of criteria, which includes:

- A commitment to grow in jobs, housing and transportation
- A transit facility - rail or light rail station, ferry terminal, a bus hub or bus transfer station
- Vacant land and/or underutilized or deteriorated buildings within walking distance of transit where redevelopment can take place
- An adopted land-use strategy (a redevelopment plan or zoning ordinance) for achieving compact, transit-supportive, mixed-use development within walking distance of transit
- A strong residential component

- "Ready-to-go" projects
- Pedestrian and bicycle friendliness
- Transit station as the focal point of the community and uses its station plaza as a gathering place for community activities such as festivals, concerts, public ceremonies and farmers markets
- Station area is in a station area management plan, in a special improvement district (SID) or part of a Main Street New Jersey designation
- Maximizing the appeal of transit through special features such as concierge service.
- Commuter parking for residents and non-residents
- Support local arts and culture
- Support the historic and architectural integrity of the community
- Incorporate affordable housing.

The benefits of Transit Village designation include a commitment from the State of New Jersey to the municipality's vision, coordination among the various state agencies that comprise the Task Force, priority funding from some state agencies, technical assistance and eligibility for grants from NJDOT's $1 million annual funding.

Outcome of Program

Investment

According to a progress report from an ongoing evaluation of the TVI conducted by the Voorhees Transportation Center (VTC), the initiative resulted in $522 million in construction investment between 1999 and 2004, of which $191 was invested in residential construction creating 879 units. (source)

Resident Survey

VTC conducted a survey of TOD residents and business managers and owners. The results indicated the following:

- Over 60% of all residents felt their towns were somewhat or much more attractive than the previous three years.
- A higher percentage of residents in the Transit Village district (just over 50%) indicated that transit was important in their decision in choosing housing location, as opposed to those living outside the half-mile circle around the station (38%)
- A higher percentage of residents in the Transit Village area (42%) used transit more often than those outside the TV district (32%)
- Residents in the Transit Village area had a lower vehicle ownership per household (slightly less than 1.75) than those outside the TV district (almost 2)
- Commercial survey respondents generally support Smart Growth and housing construction in the downtown area and feel that the downtown areas are more attractive and pleasant than three years ago.
- Still, they felt that the Transit Village designation had no impact on the downtown or their business. In fact, 43 percent were unaware of their town's designation. This is probably

because 64 percent of the respondents indicated that they are not residents of the town where they conduct business.

Therefore, the survey indicated that program successful in revitalizing communities, increasing desire to live near transit and reducing automobile use. However, the survey also indicated that business owners and managers did not associate TOD with more successful business.

c. Case Study: Portland's Metro TOD Program

Overview

The Metro TODs Program was developed in response to Metro's growth management plan, the 2040 Growth Concept, which concept calls for the region to grow up rather than out and to focus growth around transit in an effort to protect forest and farm land from development. This concept calls for the development of urban density mixed-use, walkable centers and corridors. While this concept is embraced by many public officials, planners and citizens, the development community is skeptical due largely to economic infeasibility. (source) The aim of the TOD Program is to provide built examples of TOD to demonstrate the potential of public-private partnerships for communities. Specifically, the TOD Program provides financial incentives and uses public/private partnerships to enhance economic feasibility of proposed TOD projects. The TOD program is the only Metro program that seeks to influence development through the delivering of actual "brick and mortar" projects, rather than through planning and regulation. Areas within ¼ mile of rail station or within 800 feet of a frequent bus stop are eligible to be part of the program.

Metro's TOD Program provides services to a variety of customers and partners, both internal and external to the agency, including:

- Private developers
- Lending institutions
- Tenants/owners in TOD projects
- Transit riders
- Public at large
- Local municipalities
- Various state and federal agencies.

The primary source of funding for the TOD Program is from federal funds distributed every two years through the Metropolitan Transportation Improvement Program. Other funding sources to date have included CMAQ funds, direct FTA funds and earmarks, local government funds and interest earned.

Success & Results

Since its inception in 1998, the TOD Program has funded 29 projects, helped bring 17 projects to construction or completion, and has 9 more in design and development (as of 2007).

Metro's TOD Program is the first in the United States that used federal transit administration funds to acquire a TOD development site for private development. The program was featured in

the British Broadcasting Corporation's (BBC) series, "The World's Best Public Services," in August 2006 and shown worldwide.

Issues & Challenges

- Market demand for smaller, high density residential units has been demonstrated
- However, private market will only build if found to be feasible
- Mid-rise housing was found to be feasible if sold at $300 to $350 per square foot
- High-rise housing was found to be feasible if sold at $400 to $450 per square foot
- Construction cost gap between wood frame over concrete and reinforced concrete construction making construction over five stories difficult in the region
- Parking would need to be sold at $20,000 to $40,000 or leased at $200 per month to be feasible
- Cooling market and increasing construction costs may make mixed-use development more difficult and may require added public investment
- Development trend in the region is moving towards rental construction
- State funding is becoming more limited and decreasing project investment
- Secondary mortgage market instability may prove dangerous to future development
- Potential rate hikes would make home-ownership more difficult
- Despite problems, it is important to build on the energy created by the program: TODs are becoming better understood and embraced by the public, developers, and local leaders
- Program expansion would help strengthen local real estate markets to the point where higher density condominiums will become feasible in some centers without further public investment.

Future Programs

Metro is seeking to expand the TOD Program by adding two new Program approaches. The first approach would be to designate "Focus Centers" where repeated investments will occur in order to create a visible sense of market momentum in an effort to attract other investors. The second new approach will be an "Urban Living Infrastructure" program designed to improve the economic feasibility of mixed-use development within the Focus Centers. Recent empirical evidence suggests that urban living infrastructure, such as specialty grocers, cinemas, bookstores, and cafes have a positive effect on housing prices (source). The goal of this program would be to change the market conditions of a center so that mid-rise buildings become economically feasible where they were not before. This strategy would begin as a $600,000 pilot program. The TOD Program is also interested in funding affordable housing within TOD.

d. Case Study: Massachusetts

The State of Massachusetts Smart Growth/Energy Program, which was developed under Governor Patrick's administration, includes a Transit Oriented Development policy that encourages mixed-use and high-density development designed to take advantage of transit that can reduce energy consumption and provide needed housing and economic development in a smart growth consistent way.

As part of the TOD effort, the State of Massachusetts has set up an online tool-kit to encourage localities to zone for transit-oriented development and lower the challenges they face in doing so. The state also promotes TOD with district improvement financing, tax increment financing, and location efficient mortgages (a product of Fannie Mae that allows people taking out mortgages in walkable, transit-oriented neighborhoods to qualify for better terms). These measures have spurred development projects across Massachusetts in localities like Somerville, Canton, Concord, and throughout Boston.

The online-tool kit includes an introduction to TOD, a description of the characteristics that support TOD, benefits, and financial considerations. The tool kit also includes TOD case studies in Massachusetts and a bylaw that defines how to create a TOD overlay district. The model Transit-Oriented Development bylaw provides a foundation for developing a municipal TOD bylaw for communities. No single "model" bylaw or ordinance can be adopted by a municipality without some tailoring to the unique characteristics and needs of that individual municipality. Therefore, readers are encouraged to revise and adapt the text to reflect the community's character, and to be compatible with existing zoning bylaws/ordinances.

III. Recommendations

The recommendations detailed below are based on the analysis of transformational initiatives, an understanding of the current TOD initiatives in the region, and an examination of what types of Smart Growth/TOD policies have been carried out by other agencies in the United States.

A. Transformational Project Recommendations

- Given that the transformational projects (as well as the non-MTA system projects) listed earlier generate only a fraction of the trips necessary to capture the 2/3 2030 ridership goal, the MTA should explore a range of intermodal transportation services and links along MTA feeder corridors, including light rail, rapid transit buses, streetcars, and ferries. It should seek to provide, extend or facilitate with public/private partners for bus or other transit services to increase the linkage with and density of existing suburban villages or hamlets not on train lines. In addition, the MTA should seek to develop and/or increase local bus service in outlying areas to generate additional midday trips, as well as promote projects that increase the capacity on existing commuter rail and bus lines. The Regional Planning Association recently published their "Transit Blueprint for the Urban Core" which discusses these type of services and lists specific projects that can help the MTA move toward their 2/3 goal. These projects include several BRT routes including the Nostrand Avenue BRT and a number of NJ BRT services; express subway service on unused middle tracks in Brooklyn, Queens, and the Bronx; increased and discounted price commuter rail service within New York City (such as on the Hudson and Harlem line stops in the Bronx); converting the Atlantic Branch of the LIRR into a rapid transit service once the East Side Access project is complete; new entrances and transfers, such as a new entrance on the Canarsie L line at First Avenue to serve the Lower East Side; and improvements to the Nostrand Junction. These projects, along with system wide policies that promote more convenient fare payment, real time travel information, and purchasing low floor buses, coupled with other transit agencies

expansion projects (e.g., ConnDOT increasing parking at New Haven Line stations), should allow the MTA to capture at least 50% of all additional transit trips.

B. General Smart Growth/TOD Policy Recommendations

- Participate in planning for both transit agency property and the wider station area with the aim of fostering long-term rather than short-term value. Use transit agency resources to support this long-term value.
- Create station-access plans that recognize the critical link between the station and its adjacent land uses, as well as the need for the station to be an integral part of a larger area. Plans should be developed with a focus on all the desired outcomes for TOD. The MTA better integrate stations and station parking into the surrounding communities through station-access plans that facilitate bus, pedestrian and bicycle access. Trail-to-train linkages will be enhanced through collaboration with the appropriate state agencies and local and regional organizations.
- Plan for TOD at the system-wide scale, assessing opportunities at each station site and thinking regionally about the interplay between land uses around each station and the way they can affect system-wide ridership

  - Have a system-wide approach
  - Consider TOD at a regional level in terms of goals and functioning
  - Consider the functioning of the line as a whole, connecting several individual TODs
  - Create some degree of specialization at individual TODs
  - Consider how TODs work with each other and how they support an overall system.

C. Policy Recommendations for Specific MTA Smart Growth/TOD Issues:

Issue: Generally, the MTA does not own the land surrounding the stations – municipalities own the land.

Policy Recommendations:

- Encourage state-wide policies for TOD
- Establish incentives for towns and municipalities to use TOD at the state or MTA level
- Create partnerships between MTA and municipalities for development
- Allow local municipalities jurisdiction over site, however create incentives for development to achieve desired targets (creation of housing, affordable housing, riders, jobs, etc.)
- Offer public amenities in exchange for density
- Present TOD as a way to improve municipal tax revenue.

Issue: No existing TOD policy at MTA.

Policy Recommendations:

- Develop an MTA-wide policy concerning TOD that clearly address the goals and intent of the policy and begin to market that policy to partners and stakeholders. As part of this effort the MTA should MTA should hire a consultant to develop a handbook and on-line guide to support and articulate the principles and guidelines of TOD project

development. This document and on-line source will provide information, guidance and contact information that will assist local officials, developers and stakeholders throughout the region in planning community-based TOD initiatives that meet MTA criteria. This guidance will also lay out the expectations and/or requirements for TOD's to meet high standards for green design and carbon neutrality, the use of renewable energy, recycled materials and how to access the full range of incentives available from NYS agencies such as NYSERDA. In addition, it will identify areas where TOD's should be avoided, e.g. in zones that will be subject to rising tides and storm surges under predicted climate change conditions.

- Encourage state wide policy or legislation concerning TOD, as development will cross various local jurisdictions. The MTA should develop a system-wide TOD program able, supported by a New York State incentive package and partnership to provide Smart Growth/TOD plans, resources, and models to MTA agencies and communities within its service area. As part of this program, the MTA should work with the NYS Smart Growth Cabinet to examine the TOD opportunities associated with all of the major transportation projects under development including the Tappan Zee Bridge/ I – 287 Corridor Mass Transit project, the Stewart Airport expansion, LIRR Main Line Corridor Improvements and East-Side Access. MTA and NYS should work to make available to these projects the TOD incentives described above and to provide capital that will enhance their viability. Locations cited as TOD opportunities in the Rockland County area include Suffern, Pearl River, Spring Valley and Nanuet.
- Other successful TOD programs have had top-down leadership through funding, incentives, goals and targets, cross-agency coordination with design and planning being controlled at the local level.
- Agency should seek "value capture" vs. return on investment; financial outcomes should include increased revenue through increased ridership, potential ground lease and other joint development ventures.

Issue: Infill opportunities exist in outer boroughs and Long Island.

Policy Recommendations:

- The MTA should proactively identify current and potential sites for TOD planning and development in conjunction with smart growth initiatives throughout its service region.

Issue: No coordination of agencies/coherent TOD policy among multiple agencies: NY State, NYC, NJ State, MTA, DOT, Metro-North, Local Municipalities.

Policy Recommendations:

- Establish a TOD Task Force
- The MTA and NYS should work together on legislative initiatives that will support the goals of enhanced TOD and smart growth development and provide disincentives for sprawling development. (Need to cite specific legislative initiatives).

Issue: Current and projected budget crisis at NY State.

Policy Recommendations:

- Pursue formulating a TOD policy even if current conditions will not allow funding of the program. The MTA and New York State should work together to develop a process for providing capital to localities, developers and/or the MTA for physical assets related to MTA-sanctioned TOD projects. Examples include structured parking, real estate, shuttle buses, and facilities at or near transit stations such as bicycle racks that will facilitate TOD development, non-auto station access and enhanced use of transit.

Issue: Desire to have development meet the highest standards of green design achievable in today's marketplace.

Policy Recommendations:

- Offer incentives for green design in proposed TOD
- Determine feasibility (cost vs. benefit) of various green methods and technology
- Fund key projects to be used as demonstration projects to promote and market the concept of green TOD
- Offer incentives (cost offsets) for LEED ND certification
- Alternatively, require LEED certification for application to MTA TOD Program
- Partner with U.S. Green Building Council (USGBC) and Congress for New Urbanism to create pilot study for LEED Neighborhood Design (ND) for a TOD project
- Consider alternatives to USGBC LEED program to achieve green building certification.

Issue: Requirement that construction must be outside of zones that will be vulnerable to the rising tides and storm surges associated with climate change (based on best available modeling).

Policy Recommendations:

- Commission a study to model the effects of tidal changes and projected future water levels and conditions
- Exclude development of critical areas from future TOD Program.

Issue: Parking costs and coordination.

Policy Recommendations:

- Reduce parking ratio requirements for development within TOD
- Allow and encourage shared parking schemes within TOD
- Partner with local municipality to fund centrally located parking structures when appropriate and feasible.

If the MTA follows through on the above policy recommendations, they should be able to be in the range of capturing one-half to two-thirds (which is the ultimate goal) of all new residential and commercial growth in the MTA region between 2008 and 2030 concentrated within a half-mile of an MTA station or within a quarter mile of two bus lines. As New York City expects over 1 million residents to be added to the population by 2030, the Mayor's PlaNYC already has begun to address the goal on the housing side of the equation, calling for the addition of 500,000 house units over that time period, with 95% to be constructed within ½ mile of mass

transit. The MTA needs to work cooperatively with the City to ensure that a cohesive TOD program is developed that will make it easier for the agency and the region to achieve its goal.

IV. Obstacles

The following section identifies a number of obstacles that were identified in the process of developing recommendations that address the goals and objectives of this section of the study.

With regard to achieving the 2/3 goal of capturing additional transit trips, many of the barriers to fulfilling the MTA's regional transit vision are institutional and financial, not physical. These include:

- A number of the transformational projects are dependant on other efforts in the region, including the Access to the Regions Core project. This project would for example need to be completed before the implementation of the West Shore Rail project.
- As RPA stated in the Region at Risk 1996 report, conflicts exist even within the same transit organization. Metro North, for instance, is wary of its sister agency, the LIRR, operating trains into Grand Central Terminal. And, LIRR is concerned about Metro North trains operating into Penn Station.
- Each agency continues to make its choices based on its own mandate and policies which is understandable in the absence of coordinated planning.
- There is no universally agreed to set of evaluation criteria to apply to alternatives.
- The overall decision-making responsibility is scattered among many entities and across many jurisdictions. While Federal legislation theoretically puts this process in the hands of the Metropolitan Planning Organizations (MPOs) in each metropolitan area, there are separate MPOs in each state of the region, which complicates the process. In addition, even within each state, the MPOs do not now have clear control over the process of prioritizing projects as intended by the legislation. A decision making process across jurisdictions is needed.
- Federal funding for capital projects is directly assigned to each transit operator in the process making it difficult for individual agencies to give up funding for projects beneficial to their operations and constituencies for projects whose benefits will be shared with other political jurisdictions. Current funding mechanisms must be changed to accommodate the regional funding of worthy regional projects.

With respect to achieving the 2/3 goal that all new residential and commercial growth in the MTA region between 2008 and 2030 is concentrated within a half-mile of an MTA station or within a quarter mile of two bus lines, the following obstacles were identified.

- Challenges to project getting built:
  - Local residents fears new development will harm the character of the neighborhood or hurt property values
  - Developers and lenders perception that TOD is higher cost and more risk
  - Perception that mixed-use development is riskier
  - Failure of existing land use patterns to support TOD
  - Lack of market for TOD
  - Difficulties of financing

  - Poor transit design
  - Unsupportive regulatory framework
- Challenges to TOD achieving potential
  - No universal working definition of TOD
  - Actors engaged in TOD had varying goals and visions and thus may employ strategies that contradict each other
  - No universal goals or performance standards to measure success of TOD
  - TOD functions as both a *node* and a *place* and therefore must achieve a functional integration of transit uses with surrounding uses
  - Different actors value function as a node while others value TOD as a place
  - For example, a regional node may create large demands for parking, while parking may disrupt aspects of place
  - Planners lack guidelines for translating location efficiency into concrete prescriptions for TOD – what makes a place has not been codified
  - Place making in itself is difficult – few advocates for place making
  - Inherent complexity of TOD due to synergy of varying uses and functions
  - TOD frequently occurs in a fragmented regulatory and policy environment – no comprehensive plan or vision and many local governments suffer from a significant leadership gap
  - Transit agencies can overestimate the impact on value that transit can have if market conditions are not supportive
- *Transit-related* vs. *Transit-oriented* development: Simply because project features proximity to transit and takes advantages of *some* of the benefits, it is not TOD if the project is still auto-oriented
- Often projects focus on physical characteristics of development and not the functioning of the project.