



**New York State Department of Transportation
Metropolitan Transportation Authority Metro-North Railroad
New York State Thruway Authority**

Presentation - Part I

***Stakeholders' Advisory Working Groups (SAWGs)
Smart Growth and TOD Land Use (#11) SAWG Meeting***

Tappan Zee Bridge/I-287 Corridor Project



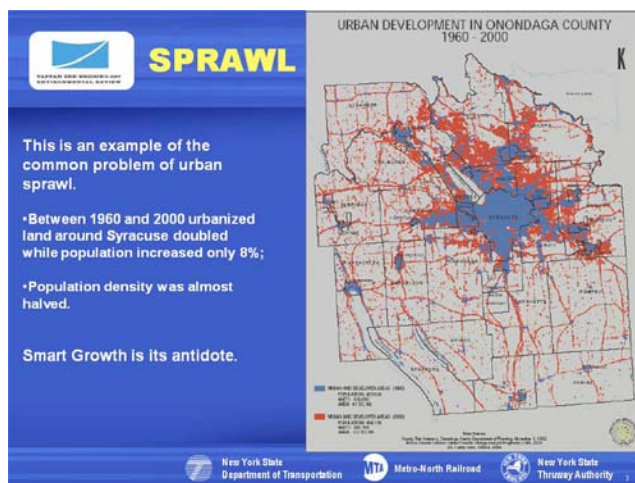
July 21, 2010



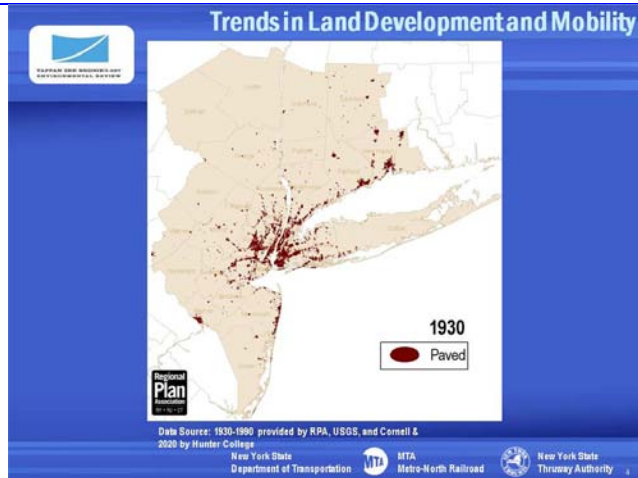
Slide 1. Title slide for Land Use SAWG #11, held at Palisades Center Mall Community Room July 21, 2010.



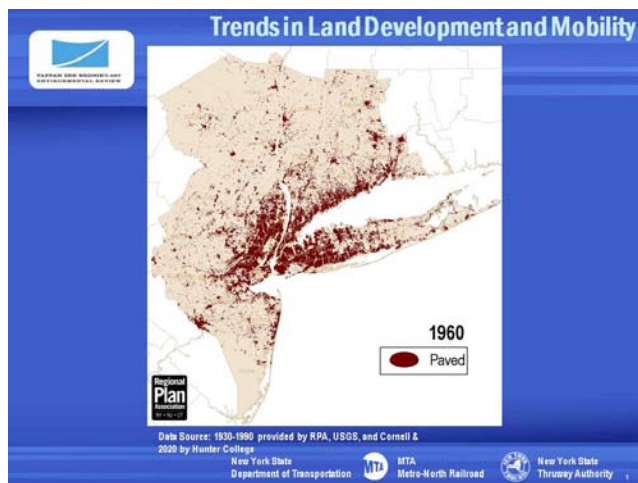
Slide 2. Agenda focuses on Smart Growth: issues, trends and concepts as the first part of the evening, and Transit-Oriented Development (TOD) opportunities along the I-287 Corridor.



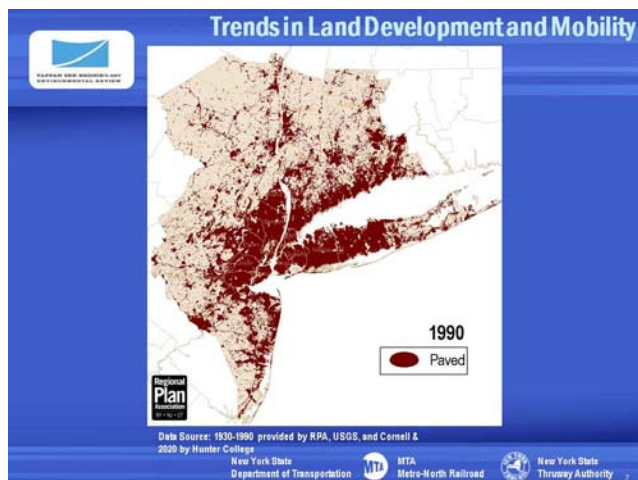
Slide 3. This slide shows an example of the common problem of urban sprawl, citing Syracuse NY, the urban area doubled over 1960-2000 when the population increased only 8%.



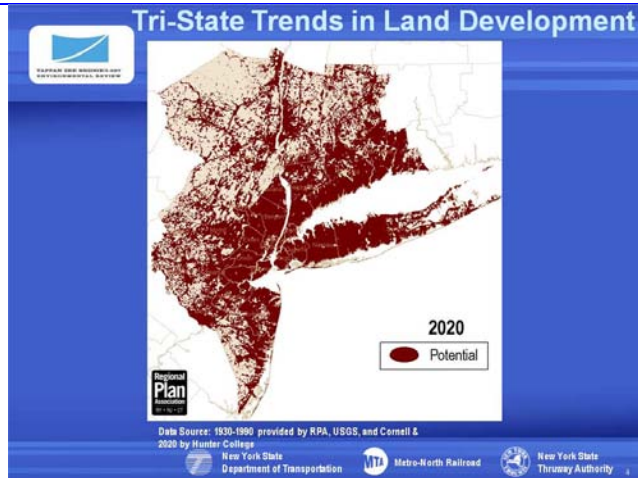
Slide 4. Recent growth trends in the New York metropolitan region are shown in this series of four slides from the Regional Plan Association shows developed areas at three time points: 1930, 1960, and 1990 and projects to 2020. (NYMTC forecasts now extend to 2035). Growth has been dramatic in the past and seems inexorable for the future too. We see the way the region has sprawled in the past, the question is how will it develop in the future?



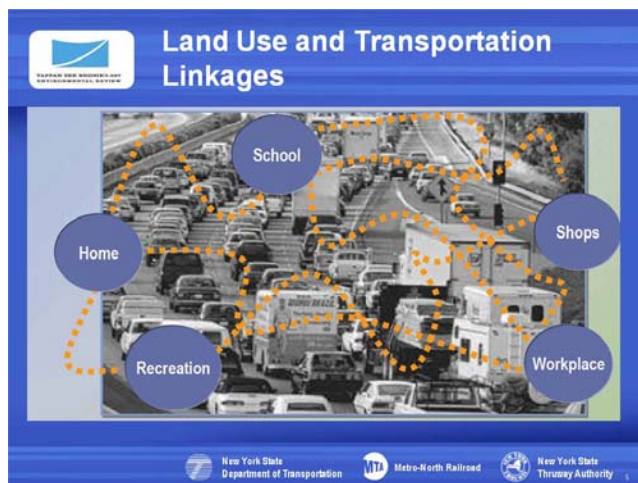
Slide 5. 1960.



Slide 6. 1990.



Slide 7. 2020.



Slide 8. The growth pattern of the last 60 years with separated locations for daily activities has impacts that we now recognize as undesirable: traffic congestion, environmental degradation, high public and private costs, and a diminished quality of life.

Issues of Current Pattern of Development

Wide ranging personal, local, national and global consequences, including:


- Traffic Impacts
- Cost Impacts
- Environmental Impacts
- Social Impacts

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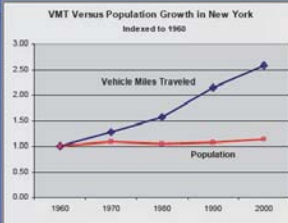
Slide 9. The wide-ranging consequences of the current pattern of development include traffic, cost, environmental and social impacts.

Traffic Impacts

In 2004, the average New Yorker was stuck in traffic for 34 hours. In 2006 this increased to 36 hours, or a week of time that could be spent with family, etc.



On average every person in New York traveled nearly 8,000 miles per year, more than double the average in 1970.



VMT Versus Population Growth in New York Indexed to 1960

Vehicle Miles Traveled

Population

1960 1970 1980 1990 2000

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Slide 10. Traffic consequences are the result of ever increasing vehicle miles traveled. The graph shows this travel pattern in relationship to population in New York State.

Cost Impacts

- Transportation is the second-highest household cost for average families after housing, exceeding 19.1% of total family spending in 2003.*
- The life-cycle cost for roads built to accommodate housing on one-acre lots can consume 50% plus of the property tax from those homes.**
- Between 1996 and 2003 municipal transportation expenditures outside of NYC grew by 30%, to \$3.1 billion. Transportation costs accounted for 22% of total expenditures by towns in 2003.***
- Other infrastructure costs and their maintenance in low-density communities are greater per dwelling unit for electric, gas, water, sewer, etc. all with on-going cost implications.

Sources:
 *Surface Transportation Policy Project.
 **NYSDOT
 *** NYSDOT & NYS Comptroller's Office.

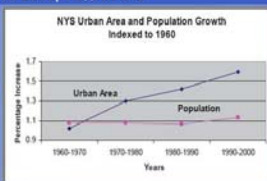
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Slide 11. Cost impacts include those shown on the slide: to households, and municipal and state budgets. Utilities and business in general also experiences inefficiencies when serving low-density populations

Environmental Impacts

- 85.7 million tons of CO2 equivalent were emitted from transportation sources in NYS 2006, representing 39% of total greenhouse gas emissions in the state.*
- More than 80% of New Yorkers live in counties that do not meet federal air-quality standards.**
- NYS consumed 288.1 million barrels of oil in 2006; 72% in the transportation sector.***
- Between 1960 and 2000, the rate of growth in urban land was more than six times the rate of population growth.****

Sources:
 * NYS Energy Research and Development Authority.
 **US Environmental Protection Agency
 *** NYS Energy Research and Development Authority
 **** US Census and USDA



NYS Urban Area and Population Growth Indexed to 1960

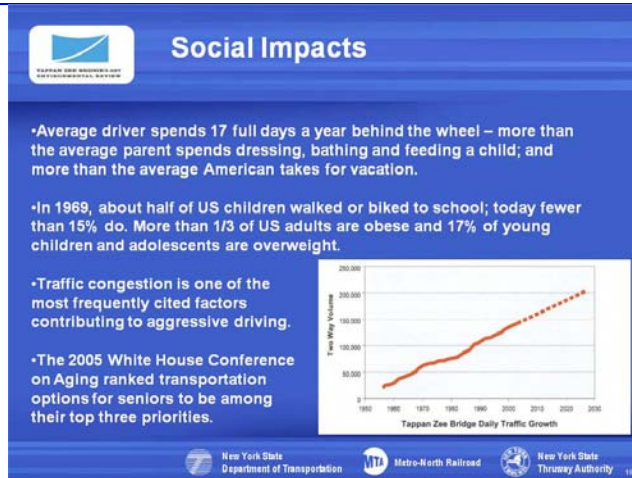
Urban Area

Population

1960 1970 1980 1990 2000

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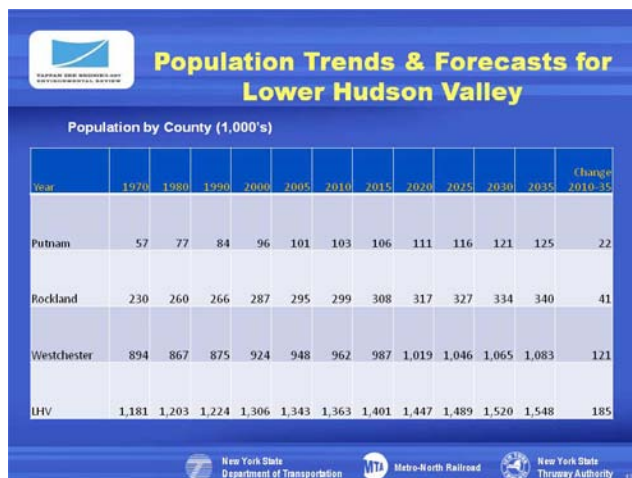
Slide 12. Environmental consequences of sprawl include increased green-house gas emissions, poor air quality and health impacts, and dependency on foreign oil. The graph shows that in NYS the growth of urban land was six times the rate of population growth.



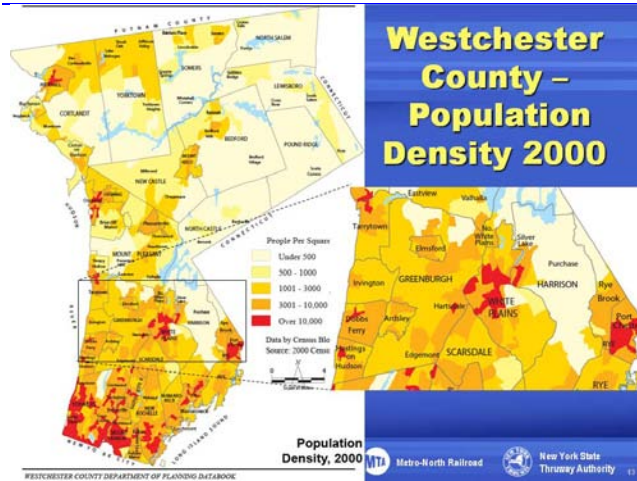
Slide 13. Social impacts include: the increased time spent in traffic , often resulting in frustration and aggressive behavior; dependency on vehicles contributes to unhealthy lifestyles and obesity; seniors are often isolated when driving becomes a problem.



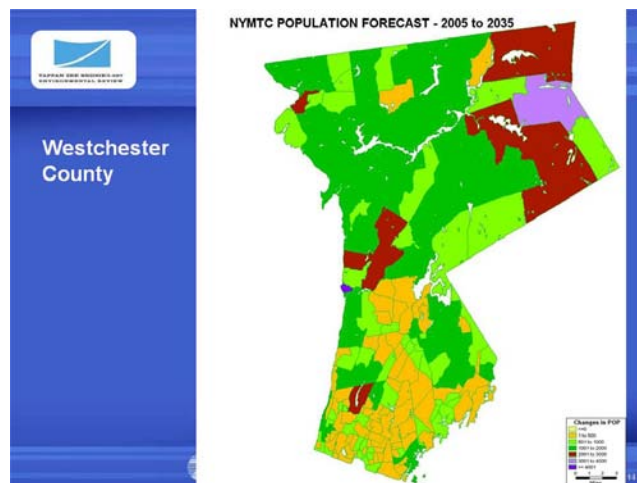
Slide 14. The New York Metropolitan Transportation Council (NYMTC) generates population and employment forecasts (presently to 2035). For both Westchester and Rockland counties, NYMTC forecasts similar rates of growth to those of recent decades as the graph shows.



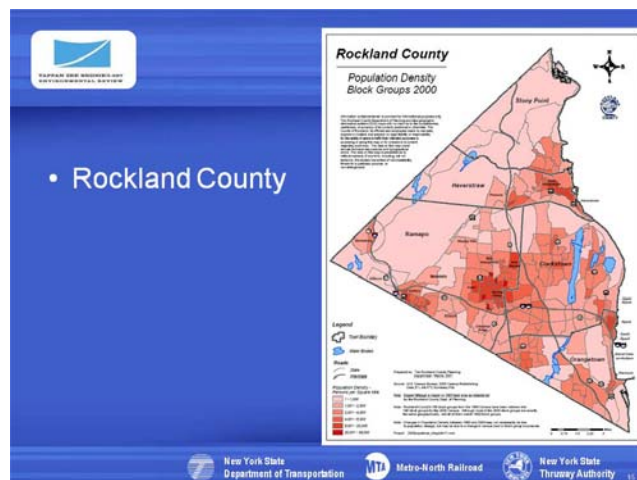
Slide 15. Among the three counties of the Lower Hudson Valley subregion, forecast population growth is led by Westchester, adding 121,000, an increment three times that of Rockland's 41,000.

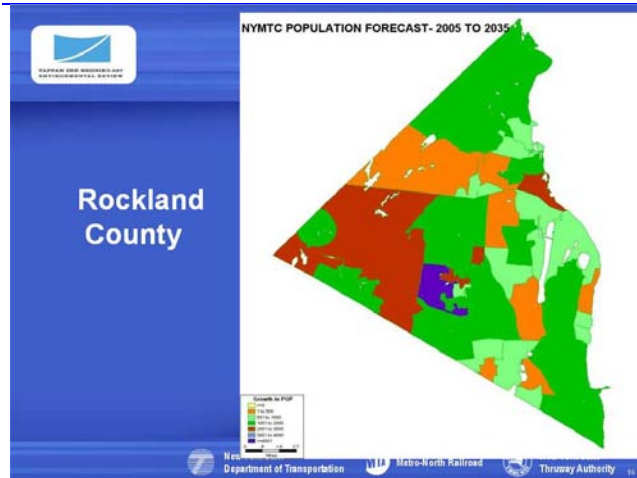


Slide 16. This map from Westchester County Planning shows the distribution of population from the 2000 Census. The insert blow-up of the I-287 Corridor portion clearly shows the existing population centers of White Plains, Port Chester and Tarrytown. Note also the low density areas of Harrison, northern Greenburgh, and much of the county's north country.



Slide 17. In this map NYMTC's forecast data are shown at the traffic analysis zone (TAZ) level for Westchester County. The greatest growth is shown in the purples and reds. Specific large-scale projects are picked up, e.g., Ridge Hill in Yonkers and the proposed former GM site in Sleepy Hollow, but elsewhere the greatest growth is forecast in the presently less developed north and northeast of the county, e.g., Lewisboro, Pound Ridge, and North Salem.





Slide 19. In this map NYMTC's forecast data are shown at the traffic analysis zone (TAZ) level for Rockland County. The greatest growth is shown in the Spring Valley area, together with Ramapo, and Haverstraw.



Slide 20. By 2020, Regional Plan forecasts that only the lakes, parks and highlands will remain undeveloped in both Rockland and Westchester counties. This evening's discussion will examine how some of this anticipated growth could be steered towards TOD development along the proposed transit corridor of I-287.



Slide 21. The term Smart Growth involves lots of concepts. It is sensible, planned efficient growth that integrates economic development and job creation with community quality of life by preserving and enhancing the built and natural environment. It encourages growth in developed areas with existing infrastructure, particularly in centers, downtowns, urban cores, and historic districts. This kind of growth does not magnify our traffic problems or increase tax burdens, consume open space or needlessly pollute.



Smart Growth Concepts

- Preserve open space, farmland and critical environmental areas
- Strengthen and direct development towards existing communities
- Take advantage of compact building design
- Promote mixed land uses
- Provide a range of housing opportunities and choices
- Create walkable neighborhoods
- Provide a variety of transportation choices
- Make development decisions predictable, fair and cost-effective
- Encourage community and stakeholder collaboration
- Foster distinctive, attractive communities with a strong sense of place

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Slide 22. These smart growth concepts or principles can be tailored for specific community's context and goals; cities will be different than their suburbs and more rural areas.



Smart Growth Vision

1. Smart Growth is a no-fault exercise. It's not how we got here but what we do to make it better.
2. Smart Growth is an on-going process. It has taken generations to achieve the current pattern of development. We can restore a more livable environment in less time.
3. Each community is unique. Smart Growth will vary from urban to suburban to rural communities.
4. Success begins and ends at the community level, largely through its own efforts.
5. We can't solve our problems with the same sort of thinking with which we created them.

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Slide 23. With New York State being a "home rule" state, one community's Smart Growth Vision and implementation plans will not be the same as another's but each can consider whether a proposed project is more economically efficient, attractive, and contributes to a user-friendly community.



Smart Growth Vision Recognizes All the Characteristics of the Community

Must recognize the interrelationship among the many elements of the community:

- Environmental conditions and resources
- Land Use
- Historic, cultural and recreational resources
- Educational and institutional resources
- Economic conditions
- Demographic conditions
- Financial conditions
- Transportation system
- Energy resources and uses
- External pressures

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Slide 24. Communities should think comprehensively when addressing smart growth. Comprehensive Plans are an excellent means to integrate the variety of perspectives, resources and conditions that need to be considered.

Creating a Smart Growth Vision Depends on:

- Broad Community Involvement.
- Ability to partner with outside experts, interest groups and developers in integrated land use and transportation planning and operational improvements.
- Community's use of its own land use management capabilities to achieve the pattern, density and diversity that characterize Smart Growth.



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Slide 25. Broad community participation is the basis of a successful smart growth vision. This can be facilitated by the use of outside experts, ranging from DOT officials, special initiatives such as the TOD Training presently being conducted across the I-287 Corridor, metropolitan planning organizations (NYMTC in our region), universities, regional and county planning agencies, and special interest groups, such as the NY Bicycling Coalition.

Smart Growth and Local Tools

- Comprehensive Plans
- Topical and Sub-area plans
 - Economic development plans
 - Conservation & resource preservation plans
 - Urban redevelopment plans
 - Corridor management plans
 - Capital improvement plans
 - Bike and pedestrian plans
- Zoning
 - Subdivision ordinances
 - Local transportation system improvements
 - SEQRA reviews
 - Site plan and subdivision approvals




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Slide 26. Local land use policies are shaped through a variety of plans, resolutions, ordinances, reviews and approvals and capital investments.

Smart Growth Tools and Transportation

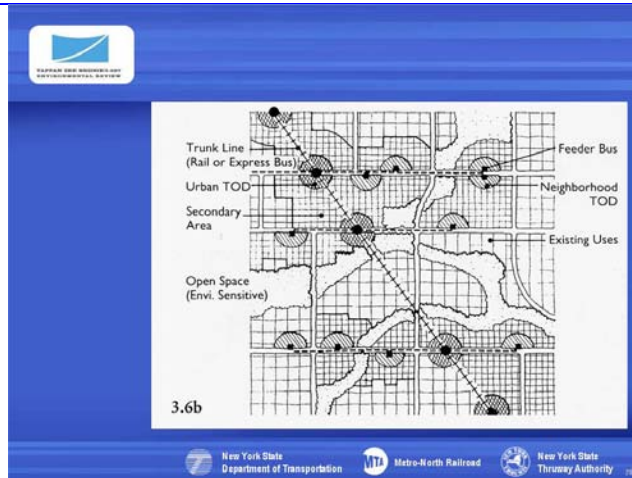
- Conventional zoning separates land uses and increases the distance to travel between them.
- Smart growth zoning mixes land uses, increases densities, and through improved connectivity reduces travel distances.



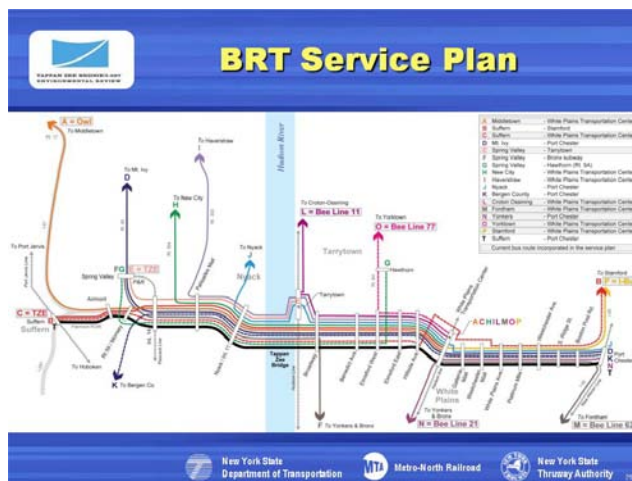
Zone for high-density, mixed uses and transit-oriented development to promote walking and bicycling and to establish conditions in which transit is viable and self-supporting.

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Slide 27. Zoning has long been a basic land use tool but traditional zoning has contributed to patterns of sprawl by separating land uses. More mixed uses and higher densities enable residents to make fewer vehicular trips.



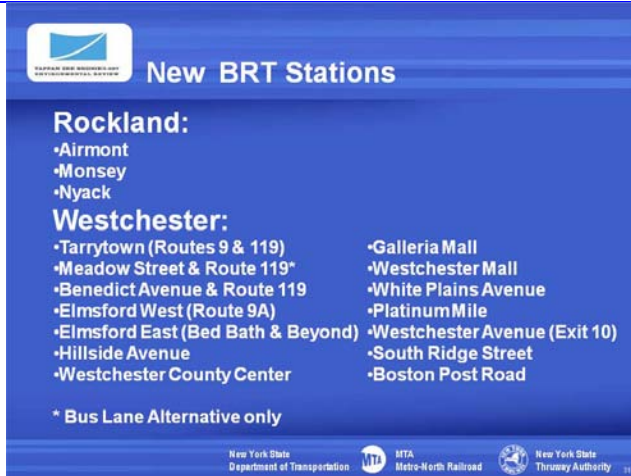
Slide 31. TOD could be part of a regional network, with TODs on feeder lines as well as on the trunk line.



Slide 32. The BRT Service Plan will connect with CRT at Hillburn, Interchange 14, and Palisades Mall, with additional stops/stations along its 30-mile Trunk line, where service is all day at frequent intervals. All other bus routes can be feeders to the trunk off-peak, but provide one seat rides during peak periods. Some lines proposed are modifications to existing routes, Bee Line, Tappan Zee Express and OWL.



Slide 33. Three entirely new multi-modal stations are proposed in Rockland County; and the existing CRT stations in Westchester will be enhanced with the new BRT services.



New BRT Stations

Rockland:

- Airmont
- Monsey
- Nyack


Westchester:

- Tarrytown (Routes 9 & 119)
- Meadow Street & Route 119*
- Benedict Avenue & Route 119
- Elmsford West (Route 9A)
- Elmsford East (Bed Bath & Beyond)
- Hillside Avenue
- Westchester County Center
- Galleria Mall
- Westchester Mall
- White Plains Avenue
- Platinum Mile
- Westchester Avenue (Exit 10)
- South Ridge Street
- Boston Post Road

* Bus Lane Alternative only

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Slide 34. New BRT stations are proposed: 3 in Rockland and up to 14 in Westchester. Development of stations will be determined in the Tier 2 Transit analysis, when location and specific community-sensitive designs will be developed.



Transit Station Types

Various typologies of stations have been developed, usually distinguishing between:

1. Size
2. Parking
3. Surrounding land use

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Slide 35. Stations will impact, and are impacted by, their surroundings. Stations should be located and designed to respond to existing and planned land uses. Criteria, such as parking, vehicular access, acreage and zoning will define the station. Some criteria such as acreage requirements and vehicular access will reflect existing station-area conditions. Other criteria, notably zoning, reflect the need to look forward and encourage new transit-oriented development.

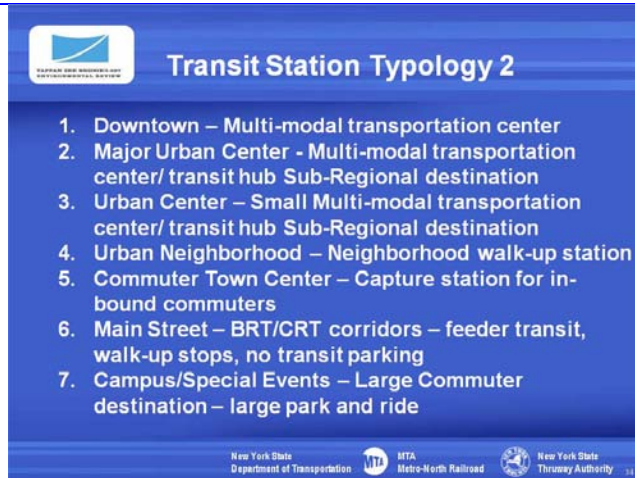


Transit Station Typology 1

1. City Center Stations
2. Town Center Stations
3. Neighborhood Stations
4. Employment Center Stations
5. Local Park-Ride Stations
6. Regional Park-Ride Stations
7. Airport/Seaport Stations
8. Special Events Venue Stations

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Slide 36. There is no one-size fits all, cities and regions are complex and sophisticated with a wide variety of conditions to serve. This first “typology” of stations shown here is derived from a South Florida transit corridor study.



Transit Station Typology 2

1. Downtown – Multi-modal transportation center
2. Major Urban Center - Multi-modal transportation center/ transit hub Sub-Regional destination
3. Urban Center – Small Multi-modal transportation center/ transit hub Sub-Regional destination
4. Urban Neighborhood – Neighborhood walk-up station
5. Commuter Town Center – Capture station for in-bound commuters
6. Main Street – BRT/CRT corridors – feeder transit, walk-up stops, no transit parking
7. Campus/Special Events – Large Commuter destination – large park and ride

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Slide 37. This second typology from a Denver area transit study emphasizes whether a stations is multi-modal and its regional-local nature. Both station typologies are shown to indicate the variety of “customized” station types and design that will be appropriate for the I-287 Corridor.



Station Types

1. Multi-Modal & Multi Purpose

Four photographs showing different transit station types: a bus stop, a streetcar, a train station, and a large transit hub.

Slide 38. Multi-modal and multi-purpose stations are appropriate for downtowns and regional centers. Two existing multi-modal stations on the I-287 Corridor (White Plains and Tarrytown) are shown in the lower photos. White Plains is of course a major regional transit hub,; Tarrytown is more of a traditional commuter center. In both cases there are many opportunities to enhance their integration with local land uses and create more special, user-friendly places.



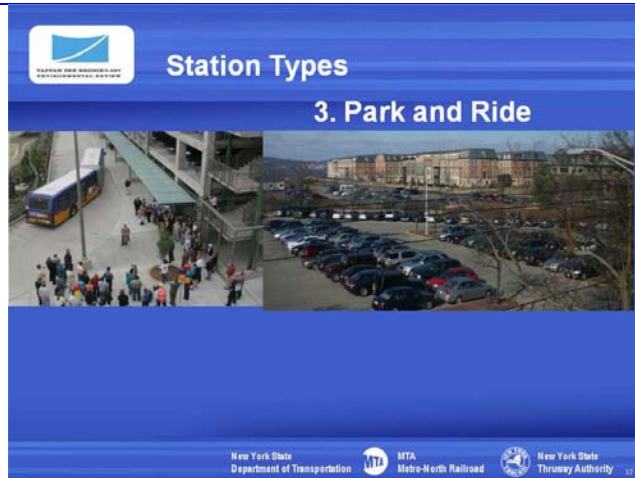
Station Types

2. Walk-Up

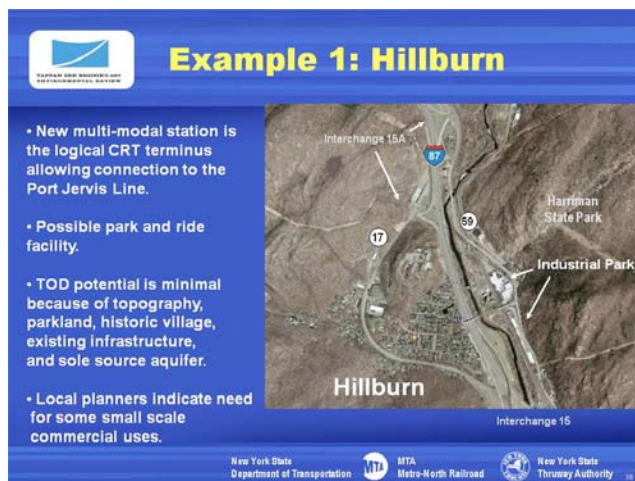
Three photographs showing different walk-up station types: a bus stop, a streetcar, and a train station.

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Slide 39. At the other extreme are walk-up stations and bus stops; several proposed BRT stations on the I-287 Corridor are likely to be at this scale, e.g., Meadow Street, Westchester Mall, South Ridge Street. Even small stations would provide high-tech information about service conditions, and pre-boarding fare collection.



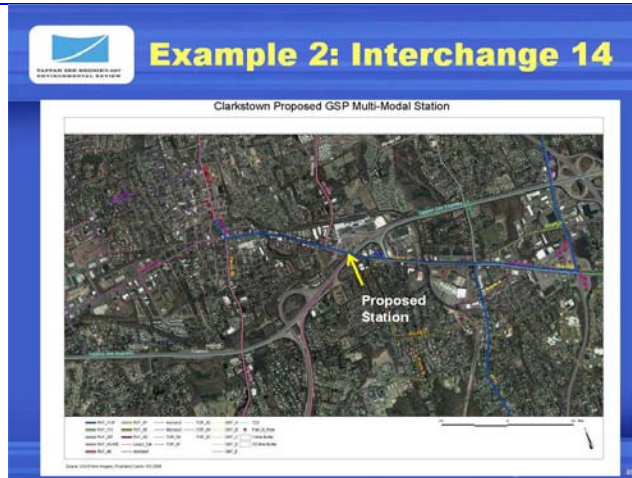
Slide 40. Park and ride stations are more likely to serve regional populations than traditional TOD communities, where residents within ¼ to ½ mile could walk or bike to the station. Parking Lot J of the Palisades Center Mall and Interchange 14 are both existing bus park and ride facilities with good regional transportation access. These would be enhanced with both the BRT and CRT. Future design of these stations would be in collaboration with local planners.



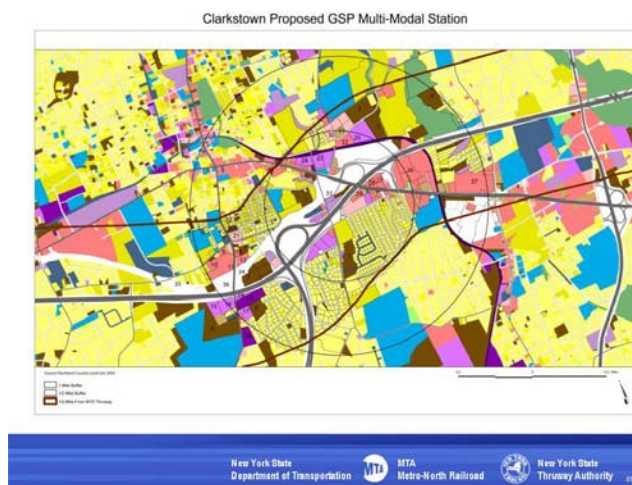
Slide 41. The proposed multi-modal station at Hillburn would be at the industrial park located between the Port Jervis Line and Route 59. Route 59 here is pressed close to the mountain and park. I-87 and I-287 together with Routes 59, 17 and 202 provide good regional access. Parking facilities could be integrated with the station and/or at Interchange 15A.



Slide 42. This figure shows ¼-mile and ½-mile radii from the proposed Hillburn Station overlaid on a land use map. The ¼-mile buffer reaches the Village of Suffern and the ½-mile covers most of its downtown. The brown parcels are vacant land but the great majority of these are on steep slopes and are zoned for low density residential. The large purple area (#26) is the former Tilcon Quarry for which development proposals are presently being considered.



Slide 43. The proposed station at Interchange 14 is in Clarkstown in the Nanuet/Spring Valley area. This aerial map shows the existing bus routes serving the area and the park and ride lots. The area is well served by I-287, Route 59 and other north-south routes (Routes 306, 45 and 33) and already functions as a bus park and ride. The design and final locations will be developed in close cooperation with local planners.



Slide 44. The proposed multi-modal station near Interchange 14 (Garden State Parkway) is shown with the 1/4-mile and 1/2-mile radii. The 1/4-mile area is mostly within the Town of Clarkstown, while the 1/2-mile extends to include the Village of Spring Valley. The radii are super-imposed on the land use map with the vacant parcels colored brown. Other commercial (pink) and industrial parcels (purple) that could be redeveloped are also identified. The area surrounding the station is already substantially developed, including medium density residential (darker yellow). Nonetheless, there are several opportunities for reuse and infill, including the existing Nanuet Mall, to enhance the area's TOD potential. The scale of this station should match the potential ridership demand, especially from Spring Valley, as well as existing feeder buses, and park and ride commuters taking advantage of the area's vehicular access.



Slide 45 features a blue background with a white logo in the top left corner that reads "PLANNING AND ANALYTICS GROUP". The main text, in white, says "More to come from David Kooris on:" followed by "TOD opportunities along I-287n". The bottom of the slide contains logos for the New York State Department of Transportation, MTA Metro-North Railroad, and New York State Thruway Authority, along with a small number "45" in the bottom right corner.

Slide 45. End slide.