

Transit-Oriented Development Opportunities

in

Somerset County, New Jersey

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The Somerset County Planning Board

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May 2005

Disclaimer

The preparation of this study has been financed in part through funds from the U.S. Department of Transportation, Federal Highway Administration, under the Federal Highway Act of 1956, as amended. This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The contents do not necessarily reflect the official views or policies of the Federal Transit Administration, the Federal Highway Administration, of the State of New Jersey. This study does not constitute a standard, specification or regulation.

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Executive Summary

The Somerset County Planning Board conducted the Transit Oriented Development Opportunities in Somerset County Study to advance the County's Smart Growth planning initiatives through policies that enhance and encourage transit use and pedestrian and bicycle activity by reducing dependency on single occupant automobiles. One of the most effective methods of enhancing alternative transportation choices is through Transit Oriented Development (TOD).

TOD is defined as higher density mixed-use development located within ½ mile of transit facilities and routes. Such development allows sites to realize maximum benefits because of their proximity to public transit. Some of the benefits of TOD include:

- Accommodates growth while preserving natural resource lands
- Accommodates growth while reducing traffic congestion
- Enhances accessibility to non-drivers (elderly, disabled, youth, low income residents)
- Improves the local economy
- Promotes air quality
- Reduces infrastructure costs associated with sprawl

The TOD Study is intended to be a working document and guide for municipalities to effectively implement TOD planning at the local level by identifying three sites in the County that have excellent potential for TOD implementation. These key sites, or "pilot sites" will provide a model to encourage and facilitate TOD in the rest of County.

The overall TOD study process was guided by the Implementation Team (I-Team), a steering committee comprised of various public and semi-public agencies, including the Somerset County Planning Board, New Jersey Transit, NJDOT, the North Jersey Transportation Planning Authority (NJTPA), the New Jersey Office of Smart Growth, the Regional Partnership, and others. The I-Team provided feedback on the key issues and goals of the TOD study, the criteria and process used to identify potential station study areas and pilot TOD sites, consensus on study area and site selection, public and municipal outreach, review of design concepts, and review of the full planning document.

In addition to meeting with the I-Team throughout the process, the consultant team also consulted with representatives from municipalities, key stakeholders in

the development community, and the general public.

The identification of three pilot sites from the vast network of transit areas in Somerset County required a thorough planning process that included substantial public and stakeholder participation, transit system analysis, physical site analysis and an understanding of market conditions.

Working with the I-Team, municipalities, the development community, and the public, three pilot sites were selected. The selection process began with analysis of transit areas within the entire Somerset County transit network, then focused on five study areas within ½ mile of a transit stop, and finally identified three specific sites within the five study areas. Selection of the five study areas and subsequently the three pilot sites was based on the following criteria:

Criteria 1. Land Availability

Criteria 2. Environmental Suitability

Criteria 3. Institutional Support

Criteria 4. Market Potential

Criteria 5. Transit Service

The following five study areas were selected because they were determined to have best met the five criteria:

- North Branch Station (relocated)
- Somerville Station
- Bound Brook Station
- Proposed Belle Meade Station
- Route 22-28 Bus Corridor
- Route 27 Bus Corridor

Within the five study areas, the following three sites were selected as pilot TOD sites:

Bound Brook Station Area – Downtown Bound Brook Borough

This site was selected because of its proximity to Bound Brook Station and the proposed Raritan River Greenway, status as a designated Transit Village, recent redevelopment activity such as the Brooks Theater, other redevelopment opportunity sites, interest from the development community in response to a recent redevelopment RFP, redevelopment activity in neighboring South Bound Brook, underutilized sites such as the NJ Transit commuter parking lot, overall strong market potential for TOD development, and municipal support for TOD.

Somerville Station Area – Former Somerville Landfill, Somerville Borough:

The former Somerville Landfill site was selected as a large, publicly owned parcel with significant redevelopment potential. The landfill site has a history of redevelopment planning and conceptual plans that have not been implemented for various reasons. This TOD study presents an opportunity to revisit the site with fresh ideas generated by the Borough and the Somerville community for a plan that will encourage transit use and complement the existing downtown. Its ideal location near the Somerville Station, proximity to downtown and the Raritan River, and high growth market make it a primary candidate for TOD implementation.

Relocated North Branch Station Area – Route 22/28 Industrial Area, Branchburg Township:

The opportunity to relocate the underutilized North Branch Station to the industrial area south of Route 22 is supported by Branchburg Township's recent award of a County grant to explore TOD opportunities and a mixed use center in the Township. The extent of large underutilized parcels, the presence of major employers, proximity to the Raritan Valley Community College, the strong real estate market, and the need for an identifiable town center provide significant potential for TOD implementation.

After careful analysis, discussions with the I-Team, input from the selected municipalities, and a community design charrette, the following key TOD planning recommendations were made for each of the pilot sites:

Bound Brook Borough:

- Strengthen downtown as a mixed-use Transit Village
- Reinforce the role of the station in the downtown
- Take advantage of the waterfront

The overall concept for Downtown Bound Brook is to create a vibrant historic downtown that serves the residents and visitors with places to live, work and play, while ensuring an economically viable mix of uses integrated with existing assets of the area. The concept includes a strategic expansion of the core of Bound Brook's downtown area both to the north and south, concentrating key services and amenities near the station, and providing a framework for a new 'front door' onto the Raritan River.

Somerville Landfill:

- Maintain environmental integrity
- Promote mixed-use development
- Create strong connections to surrounding neighborhoods
- Provide access from Route 206

The Somerville landfill development will emerge as the new front door to Somerville bringing new uses and amenities to downtown and surrounding communities. Its successful development will extend and reinforce the urban, pedestrian-oriented character of downtown, enveloping the rail station within a dense and vibrant transit village. The concept plan for Somerville is envisioned to respect and enhance open space on-site, reserving at least 40 acres for storm-water management, passive open space and trails, recreation facilities, and small parks and plazas.

North Branch Station:

- Concentrate mixed-use near the new station
- Integrate natural/environmental conditions into development approach
- Integrate Raritan Valley Community College with the station area
- Develop new neighborhoods to support TOD
- Reinforce research and development market niche
- Create strong connections to surrounding areas
- Strengthen the Route 22 Corridor

A new North Branch rail station is the catalyst for transforming 325 acres of underutilized land into a vibrant, mixed-use and sustainable transit village. The overall development approach reinforces the markets and assets that are already present in the area by building strong physical and programmatic connections and allocating space to a range of uses and densities. NJ Transit, local industries, Township officials and State agencies must all work in concert to bring the vitality and diversity of uses to the site.

Common Initiatives

Somerset County has a deep involvement in this TOD Initiative. Apart from the specific station area recommendations, the following common initiatives and guidelines for TOD development are recommended for future transit-oriented development in Somerset County.

1. *Density and Mix of Uses*

- For a TOD to optimize critical mass for transit ridership, walkable distances, and support for retail and other non-residential uses, densities of 20 units per acre or higher are recommended.
- Recommended Mix of Uses
 - Small scale service retail, restaurants, entertainment facilities
 - Civic uses
 - Public activity centers
 - Office
 - Recreation
 - Residential
- Recommended Mix of Housing Types
 - Apartments
 - Townhouses / Twins
 - Single family detached on small lots
 - Senior housing

2. *Parking*

- Parking is a critical issue in all three station areas. In each case, there are two key questions that need to be resolved: how much parking is required, and how it may be managed among different uses.
- Parking Capacity - there are several indications that less parking needs to be provided in station areas, compared to other parts of the three municipalities, and that there is a substantial market for housing with less than traditional amounts of dedicated parking. If there are concerns that the parking supply may be inadequate, one useful option is to create landscape reserves.
- Parking Management - the way in which parking is managed is just as important as the quantity of supply. There are two key principles that may be usefully applied in the station areas:
 - Share parking between multiple uses
 - Price parking to maintain availability

3. *Access from Major Roadways*

When a TOD site borders a major arterial, access to and from denser, more urban development becomes a challenge. There are two alternative approaches for dealing with this issue, and the choice will depend on the community's vision of the long-term character of the streets:

- Arterial as a means to carry a large volume of high-speed traffic - access will either be from a side street, or a parallel roadway buffered from the main arterial. While the adjacent uses may still be visible from the main arterial, it is recommended that the main entrance not front on to it.
- Arterial as a gateway to the community – where the arterial marks the transition to a more urban area, a multi-way boulevard that allows the arterial to carry through traffic, while enabling development to address the street with good access by vehicle, foot or bicycle, is desirable.

Regardless of which option is pursued, intersections must be carefully designed to give cues to motorists that they are leaving the arterial and entering a more urban area, where slower speeds are appropriate and where they can expect to encounter pedestrians and cyclists. For this reason, jug-handles are to be avoided in favor of left-turn pockets with tighter turn radii, which force motorists to slow. Gateway treatments and reduced lane widths also provide appropriate cues.

4. *Performance Measures*

Performance measures allow a community to identify project success based on tangible evidence. In the case of TOD, performance measures generally relate to the effectiveness of the transportation system, including vehicular, transit, and pedestrian circulation, and the economic and social impacts of associated development.

Transportation Measures

Transportation performance is generally measured in terms of "Level of Service" and "Trip Generation" and includes specific measures for automobile, transit, pedestrian, and bicycle mobility.

- Automobile Level of Service - automobile LOS estimates the average seconds of delay a motor vehicle will experience. Most local jurisdictions use a letter scale from A (less than 10 seconds of delay) to F (more than 80 seconds of delay), but others add additional letters (G, H) to denote further delay.
- Bicycle Level of Service - the Bicycle Compatibility Index (BCI), developed for the Federal Highway Administration is the best established measure of bicycle level of service. The BCI requires the

following inputs, many of which will need to be estimated at the pre-development stage:

- Geometric and roadside data
- Traffic operations data
- Parking data
- Pedestrian Level of Service - the Pedestrian Level of Service methodology uses a formula to take into account various relevant characteristics and expresses results on a scale of A through F. It requires the following inputs:
 - Presence and width of sidewalk
 - Lateral separation of pedestrians and motor vehicles
 - Widths of outside lane and any shoulder or bike lane
 - Presence of on-street parking
 - Presence and width of buffers between sidewalk and travel lane (e.g. trees)
 - Motor vehicle volume and speed
 - Motor vehicle traffic volume
 - Number of through traffic lanes
 - Average motor vehicle speed
- Transit Level of Service - Several good indices for assessing transit service have been developed. They take into account factors such as service frequency and span, loadings, reliability and travel speed. However, none of the proposed concept plans will significantly alter transit service. Rather, they will add riders to existing service, and help develop the market for longer-term frequency, and other enhancements.
- Vehicle Trip Generation - A successful TOD will generate significantly fewer vehicle trips per unit of development compared to standard Institute of Transportation Engineers' trip generation rates. Trip generation rates are affected by several factors inherent to the development itself, including: density, mix of uses, the density of the street grid, sidewalk and bicycle lane completeness, transit service, and Transportation Demand Management measures such as parking charges.

Economic and Social Measures

The economic and social performance of a TOD can be gauged through increased private investment, increased tax revenue, increased property values, and community perception.

- *Private Investment* – Using Certificate of

Occupancy records, the amount of new or substantially rehabilitated retail/office space and housing units can be a benchmark for measuring private investment. The value of this investment can be gathered from the building permit application.

- *Tax Revenues* - The increase in tax ratables on new and rehabilitated properties can be tabulated from tax rolls and the change in assessed values.
- *Property Values* - Nationwide studies show that properties within a ¼-mile from a transit station generally have higher values compared to similar properties located more than ¾ of a mile from the station. Retail and office buildings experience lower vacancy rates and increased rental rates. A portion of the premium is due to the comparative density, but a portion is also due to the desirability of these areas and the amenity value of transit. Tax assessment data can be used to measure change in property values related to TOD development.
- *Community Perception* – Household and commercial surveys can be used to gauge changes in residents' and business owners' attitudes about the TOD projects. Improvements in shopping, restaurants, entertainment, walkability, and transit access should garner positive responses from the community if the TOD is successful.

Since the plans are still conceptual in nature, it is premature to calculate the actual impacts with these measures. However, they will be extremely useful when assessing individual development proposals. They will show the degree to which the proposed projects improve conditions for pedestrians, cyclists, transit riders, residents, business owners, and the community as a whole.

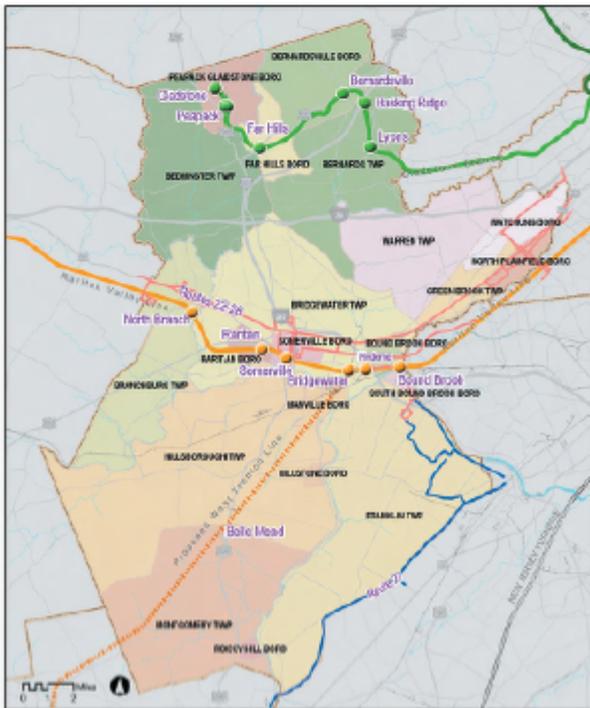
With the three pilot TOD communities of Bound Brook, Somerville, and North Branch leading the way, Somerset County is now poised to become a model community for showcasing the benefits of sustainable growth through transit oriented development. Each pilot community has now established a conceptual design framework upon which to create viable development and redevelopment opportunities based on individual community goals and objectives.

Part I - Introduction



Somerset County Location

Figure 1. Somerset County Transit Network



A. BACKGROUND AND PURPOSE OF STUDY

In 2003, the Somerset County Planning Board completed an update to the County Circulation Plan, entitled “Somerset County Transportation Profile and Background Report: Transportation Choices.” The Transportation Choices plan includes new transportation goals, guiding principles, and implementation strategies to address changes in the transportation planning environment since the last County Circulation Plan was adopted in 1994. Among the key issues identified in the update was the need to advance the County’s Smart Growth planning initiatives through policies that enhance the critical linkage between land use and transportation planning by encouraging persons to utilize travel modes other than the single occupant automobile. One of the most effective methods of enhancing alternative transportation choices is through Transit Oriented Development (TOD).

TOD is defined as higher density mixed-use development located within half a mile of transit facilities and routes. Such development allows sites to realize maximum benefits because of their proximity to public transit. TOD is one of the Smart Growth planning concepts highlighted in the State Development and Redevelopment Plan, by the State Smart Growth Office and the State Planning Commission. The Somerset County Planning Board is undertaking the Transit Oriented Development (TOD) Opportunities in Somerset County Study to advance Smart Growth planning at the municipal level by enhancing the existing linkage between high-density areas with mixed uses and a transit, bicycle and pedestrian friendly transportation network.

The TOD Study is intended to be a working document and guide for municipalities to effectively implement TOD planning at the local level, focusing on design, regulatory, policy, and financial strategies to facilitate implementation on specific sites. As such, the primary purpose of the Study is to narrow the focus and identify a few key sites in Somerset County that have the most potential for being developed or redeveloped as a successful TOD. These key sites, or “pilot sites” will provide a model to encourage and facilitate TOD in the rest of County.

Somerset County is fortunate to have an extensive transit network (see *Figure 1*) and consequently a multitude of possible sites. Narrowing the choices for potential pilot sites, therefore, required a selection process based on criteria carefully developed to yield sites with the most likelihood for implementation as a successful TOD. This process and associated criteria are explained in depth in *Part II*.

B. THE TOD CONCEPT

Transit-oriented development (TOD) is compact, mixed use development within an easy walk of a transit station. Its pedestrian-oriented design encourages residents and workers to drive their cars less and ride mass transit more. These “transit villages” are usually moderate to high density, matching the existing scale of development, and can be new construction or redevelopment. Mixed uses include residential, commercial, and office, or some combination.

Uses that are transit supportive include those that cater to convenience goods and service needs of residents, employees, and transit stop users. These can include food markets, restaurants, salons, dry cleaners, newsstands, bookstores, hardware stores, and other retail uses. Uses that entertain, such as movie or professional theatres, uses that create activity on the street, such as sidewalk cafes, and uses that attract day and night activity are all transit supportive.

A system of TODs along a rail corridor can produce multiple categories of benefits, including transportation, environmental, economic, and quality of life.

What makes a TOD successful depends on a variety of characteristics. Simply locating development next to a transit stop does not necessarily qualify as TOD. TOD is development designed to create connections between communities and transit in a way that encourages transit use, walking and bicycling instead of creating dependence on the automobile. A well designed TOD will display the following physical characteristics:



River Line, Camden, NJ.

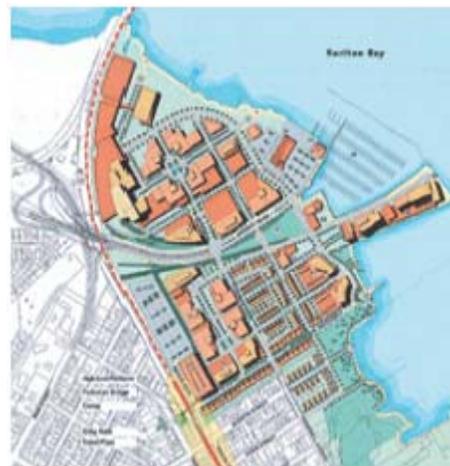
- Mix of uses
- Compact, higher densities than typical development
- A transit stop or station serves as a center of activity
- Easily accessible via all modes of transportation
- Pedestrian and bicycle friendly
- Provides a center and public place of activity in the community

Quality design is not the only element necessary for successful TOD. If the market for TOD is not in place or if the transit infrastructure is not adequate, success for development is limited.

In general, the success of TOD in a particular community will depend on the following elements being in place:

- Supportive real estate market
- Quality transit system design
- Community partnerships
- Planning for growing smart
- Right mix of incentives

TOD also needs to be judged on its success in achieving transportation goals and helping the County move towards a less automobile-dependent pattern of development. TODs vary enormously in their reliance on transit; some might be best considered simply “transit adjacent” if their parking ratio, roadway capacity and auto usage are similar to any other development. From this perspective, the most successful TODs have increased transit ridership and lowered automobile dependency through a range of decisions, including parking, highway infrastructure and the assumptions used in detailed traffic studies.



South Amboy, NJ.

C. THE BENEFITS OF TOD

TOD success of course also depends on the benefits it brings to a particular community. Each community has different goals and objectives for transportation and land use planning. Whether promoting reinvestment in older towns or reducing traffic congestion in rapidly growing suburbs, TOD in general provides the following benefits:

- Accommodates growth while preserving natural resource lands;
- Accommodates growth while reducing traffic congestion;
- Enhances accessibility to non-drivers (elderly, disabled, youth, low income residents);
- Improves the local economy;
- Improves air quality;
- Reduces infrastructure costs associated with sprawl;
- Increases tax ratables for the municipality;
- Increases in real estate value of surrounding community;
- Encourages more socialization and community interaction;
- Enhances pedestrian and bicycle circulation around station area; and
- Provides civic focal point.

D. NEW JERSEY TOD POLICY

Compared to most of the country, New Jersey is positioned at the forefront of the national TOD agenda. With the State's extensive transit network, major employment centers and historic towns, New Jersey is poised to be a national TOD leader. Somerset County in particular has significant potential to expand opportunities for TOD. The County's central location in the State, proximity to major employment and education centers



Morristown, NJ.

such as Trenton, Princeton, New Brunswick, Newark, and Manhattan, the high growth real estate market and extensive transit network, all make it ideal for promoting and expanding TOD opportunities.

The New Jersey Department of Transportation (NJDOT) and New Jersey (NJ) Transit have recognized the potential for advancing smart growth initiatives through TOD by establishing the Transit Village Initiative. The Transit Village Initiative is a multi-agency Smart Growth partnership that promotes redevelopment and revitalization of communities around transit facilities. Being designated a Transit Village provides a municipality with the following benefits:

- State of New Jersey commitment to the municipality's vision for redevelopment;
- Coordination among the State agencies that make up the Transit Village task force;
- Priority funding from some State agencies;
- Technical assistance from some State agencies; and
- Eligibility for grants from the annual \$1 million in NJDOT's Transit Village funding.

Several communities in New Jersey have been designated as Transit Villages, including Bound Brook Borough in Somerset County.

In addition to the Transit Village Initiative, NJ Transit has sponsored a statewide Transit-Friendly Planning Assistance Program. The goal of this program is to provide eligible transit-oriented communities with specialized planning, design and marketing services with the intent of creating station area vision plans for designated study areas within walking distance of transit facilities. These "vision plans" have served as a model for new transit-oriented development adjacent to the transit facilities and also jump started development efforts in several downtowns, resulting in reinvestment in the surrounding neighborhoods.



E. TOD AND REGIONAL CENTERS

The Regional Center of Somerset County consists of Raritan and Somerville Boroughs and part of Bridgewater Township. The Regional Center Vision Plan Initiative was completed in November 1999. Cosponsored by the Regional Center Partnership of Somerset County, the Regional Plan Association and the Lincoln Institute of Land Policy, the plan was designed to connect and complete a center that serves the region; one that will be vibrant, easily accessible (via public transit), pedestrian-friendly and diverse, economically and culturally.

While the center is to provide a regionally hub for surrounding communities, the TOD Initiative will help make the connections, transit and greenway, through the region linking the sub-centers, and providing complementary facilities and uses for residents and visitors.

F. TRANSIT ORIENTED DEVELOPMENT IN SOMERSET COUNTY

An important role of the County Planning Board is “Smart Growth Advocacy” which means promoting well-planned and well managed growth in a way that enhances the communities in the County without requiring higher taxes, compounding our traffic congestion problems, consuming valuable open space and farmland or polluting our environment. New Jersey Future points out that Smart Growth is about “where” and “how” places grow.

“Where” is about encouraging development in places that can take advantage of the public investments already made, such as public water and sewer systems, highway improvements and transit availability and public facilities and services centrally located within walking distance of most users, while at the same time not creating adverse impacts to the environment.

The “how” is about looking at the capacity of infrastructure and the natural environment to accommodate development and making sure that new development is respectful of community character and that adding new homes, offices or businesses in the community also begins to expand choices, housing variety, places to walk, or use public transit, proximity to daily shopping and services needs and more choices to meet neighbors in common places.



Raritan Station



Bound Brook Station

The County has been advancing its smart growth efforts to reduce traffic congestion, and promoting center based development and redevelopment projects. By locating development and redevelopment projects near out existing transit facilities, the County hopes to improve mobility options for our residents while assisting communities with their revitalization activities.

At the municipal level, the County initiated planning grants that have been awarded through the County Economic Development Incentive Program (EDIP). Planning grants have been awarded to municipalities to conduct planning studies leading to the construction of streetscape improvements within downtown areas and main streets. Many of the improvements involve pedestrian and bicycle connections and facilities projects such as sidewalks, crosswalks, pedestrian crossing signals, signage, which improve the overall connectivity between residential neighborhoods, transit facilities and downtowns.

In Somerville Borough, the County worked with the Borough to replace sidewalk, crosswalks, traffic signals and signage connecting the downtown with existing bus and rail facilities. The County has also awarded a grant to Somerville Borough to undertake a landfill closure plan that will advance development plans for the landfill site for a mixed-use TOD site linked to the train station, the existing main street, nearby residential neighborhoods and bus service.

The County continues to partner with Bound Brook Borough in advancing redevelopment plans for its downtown. The County recently completed construction of a new rotary and pedestrian and bicycle improvements within the downtown area. In 2003 Bound Brook Borough was identified as a Transit Village and the Borough has been working with the statewide Transit Village task force to advance planning work for developing a downtown transit village plan.

The County recently awarded a planning grant to Branchburg Township to advance planning work involving the relocation of the North Branch station and development of a new mixed-use transit oriented development located along the Raritan Valley line and Route 22. In Montgomery Township, the County awarded a planning grant to advance work on a potential Transfer Development Rights (TDR) site located adjacent to Route

206 and the West Trenton rail line. NJ Transit is currently finishing an EIS for the reactivating passenger service on the West Trenton line. Montgomery Township continues to advance planning work on developing the TDR site into a mixed-use transit oriented development node. Montgomery Township also has been awarded State funding to advance TOD planning for this site and has included TOD language changes within its latest master plan and zoning ordinance updates.

The County also has been working with Hillsborough Township to update their master plan and circulation element to include the proposed Hillsborough bypass and location of a new train station within the proposed town center. The train station location planning will include pedestrian, road and bicycle connections to the town center station location and adjacent neighborhoods. Development of mixed use station area plans for a Belle Mead and Hillsborough train stations will be explored in an up coming County planning study.

G. THE PLANNING PROCESS

The identification of three pilot sites from the vast network of transit areas in Somerset County required a thorough planning process that included substantial public and stakeholder participation, transit system analysis, physical site analysis and an understanding of market conditions. The overall planning process is divided into the following subsections:

- Public Participation Process
- Site Selection Process

The study area and site selection processes are integral to the overall planning process. Because these elements require in depth explanation and graphic representation, they are discussed in detail in *Part II*.



Vacant land near potential West Trenton line in Bell Meade

H. PUBLIC PARTICIPATION PROCESS

The overall TOD study process was guided by the Implementation Team (I-Team), a steering committee comprised of the following program partners:

- Somerset County Planning Board
- New Jersey Transit
- New Jersey Department of Transportation (NJDOT)
- North Jersey Transportation Planning Authority (NJTPA)
- New Jersey Office of Smart Growth
- New Jersey Future
- Somerville Borough Planning Board
- Ridewise
- Regional Planning Partnership
- Somerset County Business Partnership
- Somerset County Engineering Division
- Municipal Land Use Center at the College of New Jersey

The consultant team met with the I-Team on a semi-monthly basis to elicit feedback on the key issues and goals of the TOD study, the criteria and process used to identify potential station study areas and pilot TOD sites, consensus on study area and site selection, public and municipal outreach, review of design concepts, and review of the full planning document.

In addition to meeting with the I-Team throughout the process, the consultant team also consulted with representatives from municipalities, the development community, and the general public.

In order to gain community support for TOD in Somerset County, municipal officials were notified of the purpose and scope of the project and invited to participate. At the project kick-off, each municipality received a questionnaire, or Potential Pilot Site Identification Information Form (see *Appendix C*), asking them to identify potential TOD sites, offer details about the sites' environmental context and ownership, and provide additional information regarding plans, programs, or regulations that might support or deter TOD development in their communities. Responses to the questionnaire were reviewed with the I-Team to initiate the study area selection process.

The consultant team also met with municipal officials and representatives from Bound Brook and Somerville Boroughs, each of which have applied for Transit Village designation, and local developers who have had experience with TOD's, Transit Villages, or similar types of higher density mixed use development in New Jersey to discuss issues related to marketability, political acceptance, and potential for TOD implementation. The results of these interviews are summarized in the Appendix and discussed further in the Study Area Selection Process on the following pages.

Input from the general public was also a critical factor in the TOD planning process. Two public meetings were held at key moments in the process to inform County residents and stakeholders about the TOD study, to elicit feedback on potential study areas and pilot sites, and to engage the public in generating ideas for TOD conceptual designs. A public kickoff meeting was held in April, 2004 to inform the public and elicit feedback on the TOD planning process. In addition, a community design charrette was held in July, 2004 after the pilot sites were selected to involve the communities in generating ideas for TOD conceptual design.

Part II – Site Selection Process



Somerset County Transit Network

A. SITE SELECTION BACKGROUND

Transit Network

Somerset County's extensive transit network, including commuter rail and bus service, historic boroughs with redevelopment potential around rail stations, and opportunities for new development in the less developed townships provide ample opportunity to expand Transit Village designation in the County. Although a community does not require Transit Village designation to create a successful TOD, designation does provide significant technical and financial assistance to advance the TOD concept.

Several historic towns in the County, including Raritan, Somerville, Bound Brook, South Bound Brook, Peapack, Gladstone, Far Hills, and Bernardsville originally developed around rail stations and have retained most of the infrastructure and development patterns consistent with the TOD concept. However, changes in the modern landscape, including disinvestment in older communities and adapted land use patterns that favor the automobile have diminished the connections between existing development and pedestrian and transit facilities in many of these communities. The Transit Village Initiative and the TOD Study can provide the impetus for reinvestment in these areas by creating a plan for reestablishing connections to transit, identifying specific sites for development or redevelopment, prioritizing capital investments, and identifying implementation mechanisms for achieving TOD.

The TOD Study is not limited to application in existing downtowns. Several suburban townships with direct access to rail stations, bus service, or, in the case of Hillsborough and Montgomery Townships, potentially new rail service along the proposed reestablishment of the West Trenton Line, have substantial land availability to create new transit centers.

Of the 21 communities that comprise Somerset County, 15 communities encompass stations or stops along the primary transit routes of the Raritan Valley Rail Line, the Gladstone Branch of the Morris and Essex Rail Line, the Route 27 bus line, and the Routes 206, 27, and 22-28 bus lines. An additional three communities encompass the proposed reestablishment of the West Trenton Rail Line. In total, there are 12 existing rail station areas, four proposed rail station areas, and approximately 52 miles of bus route from which to choose three pilot TOD sites. Stations and transit route areas within the 18 "transit" communities were included in the planning process to identify TOD opportunities in Somerset County.

Transit Use

Transit oriented development in Somerset County has to be seen in the context of a highly auto-dependent setting. Both rail and bus transit services are focused on trips to Newark and Manhattan. Rail service terminates in Newark, where transfers are available to New York Penn Station and PATH. The highest frequency bus service is destined for the Port Authority terminal in Manhattan. However, these markets represent a small proportion of all trips in the County. Less than 4% of work trips are destined for Manhattan, and the vast majority of trips (63-70%) are within the County. Less than 3% of trips in Somerset County are made by transit.

This means that TOD cannot be seen as a “magic bullet” for solving traffic congestion in Central New Jersey. Rather, it should be seen as a strategy for ensuring that population and employment growth minimizes the generation of new traffic, and helps to “raise the bar” for use of transit, walking and cycling. Moreover, TOD gives residents and employees additional choices in how they get around, and helps to generate the ridership to make transit service enhancements feasible.

Sidewalk availability and condition are essential factors in encouraging transit use, and the sidewalk network along County and State highways is incomplete at best. Current Somerset County policy is not to build or maintain sidewalks along County roads. However, the County engineer is willing to review each project on a case-by-case basis and construct sidewalks as long as the municipality is willing to pay for installation and maintenance. The County has planning grants for streetscape improvements, including installation and improvement of sidewalks, and will replace old sidewalks as part of a County road reconstruction project.

West Trenton Passenger Restoration Project

Commuter rail service operated on the West Trenton Line in Somerset and Mercer Counties until 1982. The line skirts the northern edge of the historic New York to Philadelphia transportation corridor originally defined by the Raritan and Delaware Canal on the northern side and south to the Camden and Amboy Railroad. The prospective commuter shed for the line includes the villages of West Trenton, Pennington and Hopewell in New Jersey as well as sections of Bucks and Montgomery Counties in Pennsylvania. This commuter shed has

experienced significant residential and office development. As a result, traffic congestion has become far more pervasive on area roadways. The restoration of passenger service on the West Trenton Line has been proposed as a tool for mitigating local congestion, as well as boosting rail ridership.

Commuter service on the West Trenton Line is proposed to operate onto NJ Transit’s Raritan Valley Line west of Bridgewater Station. Twenty-one miles of rail line are proposed between Bridgewater and West Trenton with the addition of four new stations between these two stops. Preliminary operations planning has indicated that the proposed line plan should be able to operate 14 trains daily, in addition to projected growth in the current freight operations.

NJ Transit has been awarded a contract for the conceptual design and Environmental Assessment of the West Trenton Line. If determined feasible by this study, the project will then be eligible for public funding.

Electrification & One-Seat Ride to New York City

At present, rail service on the Raritan Valley line terminates in Newark, where passengers must transfer to reach New York City. This is a significant deterrent for passengers and could affect the attractiveness of station area housing. Many passengers traveling from station area communities prefer to take NJ Transit’s bus services, which offer a one-seat ride to New York.

The lack of electrification along the Raritan Valley Line between Newark and High Bridge stations is one of two main barriers to establishing one-seat service from Somerset County to New York Penn Station (NYP). The diesel engines serving the County cannot operate on the electrified tracks between Newark and NYP. Thus, passengers passing through Newark must change trains to reach their destination. The second barrier to one-seat service is trans-Hudson tunnel capacity at NYP. The present set of tunnels can accommodate a maximum of 20 trans-Hudson trains per hour. These tunnels are already at capacity, requiring expansion for additional one-seat service into NYP. The “Access to the Region’s Core” plan, sponsored by the Federal Transit Administration (FTA) and NJ Transit (NJT) in partnership with the Port Authority of New York and New Jersey (PANYNJ), addresses both of these barriers. Its primary objective is to expand trans-Hudson tunnel capacity by up to 100 percent.

If the plan is approved, the use of dual-mode engines along non-electrified rail segments is proposed to address the electrification barrier. This is an economical alternative to expanding the electric infrastructure out from Newark. These dual-mode engines would be converted between diesel and electric at Newark, allowing through passengers to maintain their seats.

Raritan River Greenway

In 1994, the Somerset County Park Commission and County Planning Board realized that the County was poised at the beginning of a new era. With the enactment of the County's dedicated open space trust fund, the County began to plan accordingly.

These plans were formalized in the 1994 "Somerset County Parks Recreation, and Open Space Master Plan". One of the Master Plan initiatives is the protection of greenways along rivers. The Raritan River is one of the main rivers in Somerset County; the greenway extends from the confluence of the North Branch and South Branch of the Raritan River to the confluence of Millstone River and the Raritan River, for approximately eight miles.

The purpose of the Raritan River Greenway is to create a series of nodes and linked trails along the river corridor, with the nodes providing parking and access to trails, as well as providing information about the Raritan River system, its history, culture and ecology. The trails will provide pedestrian and bicycle paths connecting neighborhoods, towns and the rest of the open space and park system of Somerset County.



Bike path along the Raritan River Greenway

B. STUDY AREA SELECTION PROCESS

The study area selection process started at the County wide scale, narrowed to areas and then to specific sites. The team conducted a scan of the entire County with the purpose of identifying transit areas within which TOD might be feasible. These were defined as areas within ½ mile of a transit station or bus corridor. The most promising areas were selected for further analysis with the goal of identifying specific sites in which pilot TOD projects might be carried out. The three most promising of these were selected for further analysis. The more detailed analysis and plans for these three are presented in the body of this report. The initial study areas are listed below.

Gladstone Branch

- Basking Ridge Station, Bernards Township
- Peapack Station, Peapack-Gladstone Borough
- Far Hills Station, Far Hills Borough
- Gladstone Station, Peapack-Gladstone Borough
- Bernardsville Station, Bernardsville Borough
- Lyons Station, Bernards Township

Raritan Valley Line

- North Branch Station, Branchburg Township
- Raritan Station, Raritan Borough
- Somerville Station, Somerville Borough
- Bridgewater Station, Bridgewater Township
- Bound Brook Station, Bound Brook Borough (includes portion of South Bound Brook Borough in the study area)

Proposed West Trenton Line

- Bell Meade, Montgomery Township
- Amwell Road, Hillsborough Township

Bus Corridors

- Route 22/28: Green Brook Township, Franklin Township, Bridgewater Township, Branchburg Township, Bound Brook Borough, Watchung Borough, Warren Township, South Bound Brook Borough, Somerville Borough, Raritan Borough, North Plainfield Borough
- Route 206: Hillsborough Township, Montgomery Township
- Easton Avenue: South Bound Brook and Franklin DASH
- Route 27: Franklin Township

The initial study area selection involved choosing five study areas based on specified criteria within which three specific sites were chosen as pilot TOD sites. The consultant team worked with the I-Team to establish the following set of Initial TOD Area Selection Criteria:

Criteria 1. Land Availability

- Total acreage of vacant parcels within ½ mile of a transit hub or major bus corridor. Vacant parcels are undeveloped properties that do not include parks, cemeteries, working farms, or natural heritage priority sites.
- Total acreage of under-utilized parcels within ½ mile of a transit hub or major bus corridor. Under-utilized parcels include properties with vacant buildings or buildings that are assessed at a significantly lower value than the value of their location would suggest.
- Number of designated brownfield sites.

Criteria 2. Environmental Suitability

- Total acreage of vacant land within ½ mile of a transit hub or major bus corridor that does not contain surface water, floodplain, wetlands, threatened or endangered species, or contaminated sites.
- Total acreage of under-utilized land within ½ mile of a transit hub or major bus corridor that does not contain surface water, floodplain, wetlands, threatened or endangered species, or contaminated sites.

Criteria 3. Institutional Support

- Location of a transit station or major bus corridor within a municipality that supports TOD based on the Potential Area Identification Information Form and municipal interviews.
- Location of a transit station or major bus corridor within Planning Areas One and Two and/or Designated Centers.
- Location of a transit station or major bus corridor within a zoning district or municipal planning area that supports TOD development patterns.

Criteria 4. Market Potential

- Assessed the market potential for residential, office, and retail development based on socioeconomic data.

- Assessed the market potential based on interviews with knowledgeable real estate interests and review of other studies and planning documents. Station areas are identified as having a strong, moderate, or weak market potential.

Criteria 5. Transit Service

- Transit stations/stops with high ridership based on 2003 average weekday passenger boarding by station and bus stop.
- Transit routes with frequent service based on number of trips per day.
- Transit stations/stops in good condition based on the physical condition of the station and platform structure and sidewalk and shelter conditions at bus stops.
- Availability of commuter parking based on the number of parking spaces at transit station.
- Location on a route with plans for service expansion or new service.
- Presence of multi-modal service.

An overall map of potential study areas is depicted on *Figure 2*. Each potential study area was analyzed according to the aforementioned criteria. The results of the analysis for each study area are displayed in *Table 1* on the following page entitled “Initial TOD Planning Areas

Figure 2. Somerset County Potential TOD Study Areas

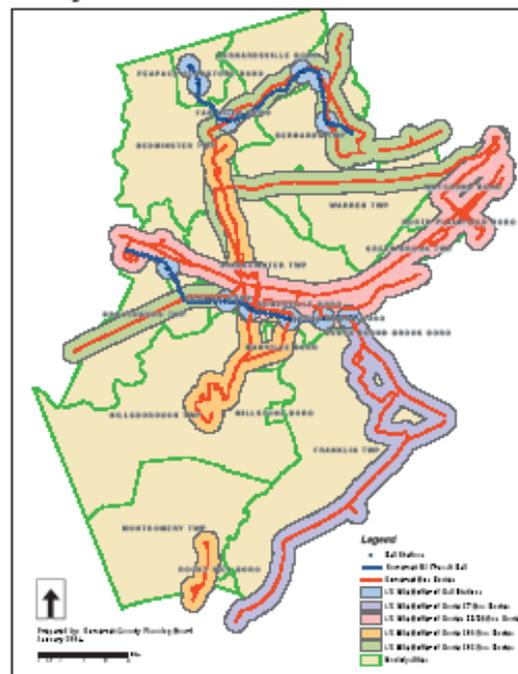


Table 1. Initial TOD Planning Areas - Selection Criteria Matrix

Station Area	Combined Vacant & Underutilized Land		Underutilized & Unconstrained Land		Brownfield Sites		Planning / Center Designation		Municipal Response		Local Zoning or Plan Support		Market Potential		Transit Ridership		Transit Frequency		Station Condition		Commuter Parking		NJ Transit or Municipal Parking Expansion Plans		Multi-Modal Potential	
	Acres	Acres	Number of Sites	Number of Sites	Planning Area or Center Designation	Yes or No	Yes or No	Strong, Moderate, Weak	Yes or No	Yes or No	Number of Boardings	Number of Daily Trips	Good, Fair, Poor	Number of Spaces	Yes or No	Yes or No										
Existing Stations																										
Gladstone Line																										
Basking Ridge*	299	33	1	1	Metro	N	N	Str	113	46/39	G	83	N	N	Y											
Peapack *	637	182	1	1	ESPA/DV	Y	N	Mod	55	44/39	G	50	N	N	Y											
Far Hills	281	162	0	0	ESPA/DV	N	N	Mod	146	44/39	G	132	N	N	Y											
Gladstone *	637	143	0	0	ESPA/DV	Y	N	Mod	147	42/39	G	153	N	N	Y											
Bernardsville	230	82	3	3	Metro/DT	N	N	Mod	180	46/39	G	192	N	N	Y											
Lyons *	299	33	1	1	Metro	N	N	Str	402	46/39	G	427	N	N	Y											
Raritan Valley Line																										
North Branch	231	81	0	0	ESPA	Y	Y	Str	59	13/0	P	50	N	N	Y											
Raritan	140	63	5	5	Metro/ RC	N	Y	Mod	536	54/38	G	243	N	N	Y											
Somerville	410	158	8	8	Metro/ RC	Y	Y	Str	587	54/38	F	398	N	N	Y											
Bridgewater	988	44	3	3	Metro/RC	N	N	Str	322	49/38	G	455	N	N	Y											
Bound Brook	233	99	5	5	Metro/DT	N	N	Mod	579	52/38	F	340	Y	Y	Y											
South Bound Brook Borough	99	99	5	5	Metro/DT	Y	N	N/A	579	52/38	F	340	Y	Y	Y											
Proposed Stations																										
West Trenton Line																										
Bell Meade	155	135	0	0	Rur/IH	Y	Y	Str	225-300	10/12 daily	N/A	200-300			Y											
Hillsborough	1,952	598	1	1	Sub	Y	Y	Str	225-300	10/12 daily	N/A	200-300			Y											
Manville	95	598	1	1	Metro/DT	N	N	Wk	N/A	10/12 daily	N/A	N/A			N											
Branchburg		282	1	1		Y	Y	Str	59	13/0	N/A	N/A			Y											
Bus Corridors																										
22/28 Corridor																										
Green Brook Township	837	3,520	19	19	Metro/Sub/ESPA	N	N	Mod	Zone 9 - 315	86/96	G	N/A	N	N	Y											
Franklin Township	665	3,520	19	19	Sub	Y	Y	Mod	Zone Based	12 M-Su	G	N/A	N	N	Y											
Bridgewater Township	3,250	3,520	19	19	Metro/RC	N	N	Str	Zone 10 - 461	88/80	G	N/A	N	N	Y											
Branchburg Township	1,178	3,520	19	19	Metro	Y	Y	Str	Zone 10 461	29/0	G	60	N	N	Y											
Bound Brook Borough	296	3,520	19	19	Metro/DT	N	Y	Mod	Zone 9 - 315	62/90	G	N/A	N	N	Y											
Watchung Borough	850	3,520	19	19	Sub/ESPA	N	N	Mod	Zone 7 - 383	23 M-F	G	N/A	N	N	Y											
Warren Township	63	3,520	19	19	Sub/ESPA	N	N	N/A	Zone 7 - 383	N/A	G	N/A	N/A	N/A	N/A											
South Bound Brook Borough	105	3,520	19	19	Metro/DT	Y	Y	N/A	Zone 9 - 315	N/A	G	N/A	N	N	Y											
Somerville Borough	461	3,520	19	19	Metro/RC	Y	Y	Str	Zone 10 - 461	88/89	G	N/A	N	N	Y											
Raritan Borough	85	3,520	19	19	Metro/RC	N	N	Mod	Zone 10 - 461	55/89	G	N/A	N	N	Y											
North Plainfield Borough	222	3,520	19	19	Metro/Sub/DT	N	N	Mod	Zone 8 - 938	109/110	G	20	N	N	Y											
206 Corridor (HB/MG)																										
Hillsborough Township	131	NA	NA	NA	Sub/PT	Y	Y	Str	125	22	G	100	N	N	Y											
Montgomery Township	155	135	0	0	Sub/Fri	Y	Y	Str	Zone 418	20/29	G	N	N	Y												
27 Corridor																										
South Bound Brook DASH	84	2,660	6	6	Metro/DT	Y	Y	N/A	150	7	G	N	N	N	Y											
Franklin Township	4,879	2,660	6	6	Metro/Sub/Kings/DV/Rur/RESPA	Y	Y	Mod	3,335 **	115/98	G	80	N	N	Y											
Franklin Township DASH	part of 4,879	2,660	6	6	Metro/Sub/Kings/DV/Rur/RESPA	Y	Y	Mod	150	12	G	N	N	N	Y											

Notes:
 * = Denotes total acres encompassing two rail stations that will be divided between two stations at a letter date
 ** = Denotes daily intrastate passenger trips
Planning Area / Center Designations:
 RESPA = Rural Environmentally Sensitive Planning Area
 Rur = Rural
 ESPA = Environmentally Sensitive Planning Area
 DV = Designated Village
 DT = Designated Town
 Sub = Suburban Planning Area
 Metro = Metropolitan Planning Area
 IH = Identified Hamlet
 RC = Regional Center
 FRI = Fringe Planning Area

- Selection Criteria Matrix”.

The consultant team worked with the I-Team to review the study area criteria analysis in more detail, eventually selecting the five TOD study areas within which three pilot TOD sites would be identified subsequently. It should be noted that an early decision was made that the Route 206 bus corridor would not be analyzed further because of low ridership numbers. Therefore, Routes 22-28 and 27 are the only bus routes discussed for TOD study area potential. *Figures 3a to 3m* depict each transit area and include commentary as to why the location was or was not

Figure 3a. Gladstone & Peapack Stations

TRANSIT ROUTE: Gladstone Branch
 MUNICIPALITY: Peapack Gladstone Borough

SUMMARY AREA SELECTION CONCLUSION:
 Institutional support was not strong enough to justify selection of this station area as a TOD candidate.

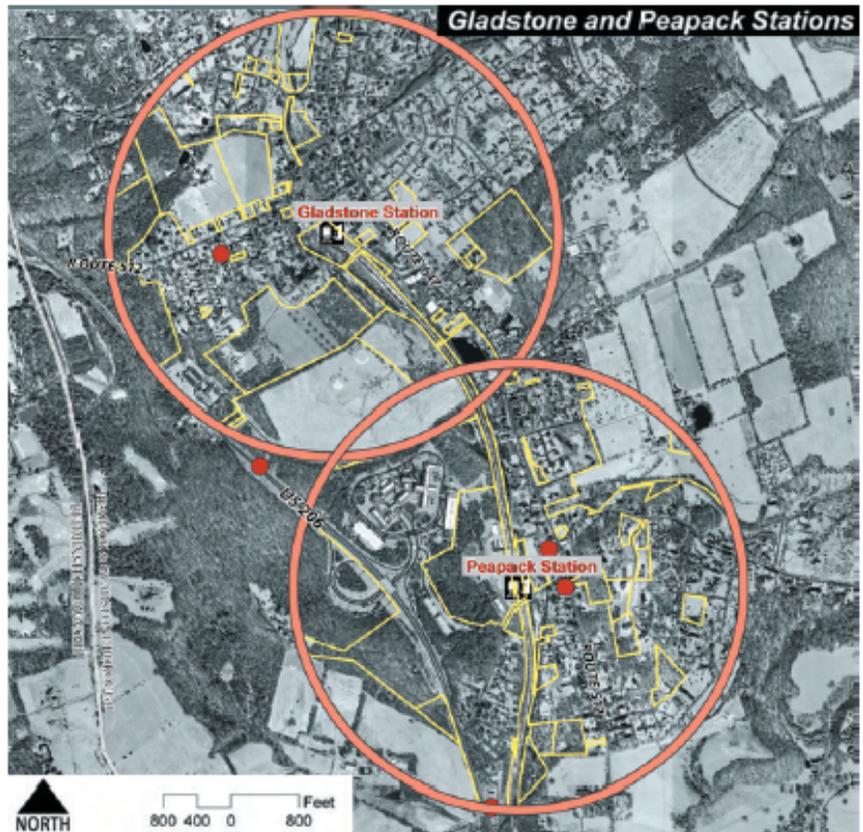
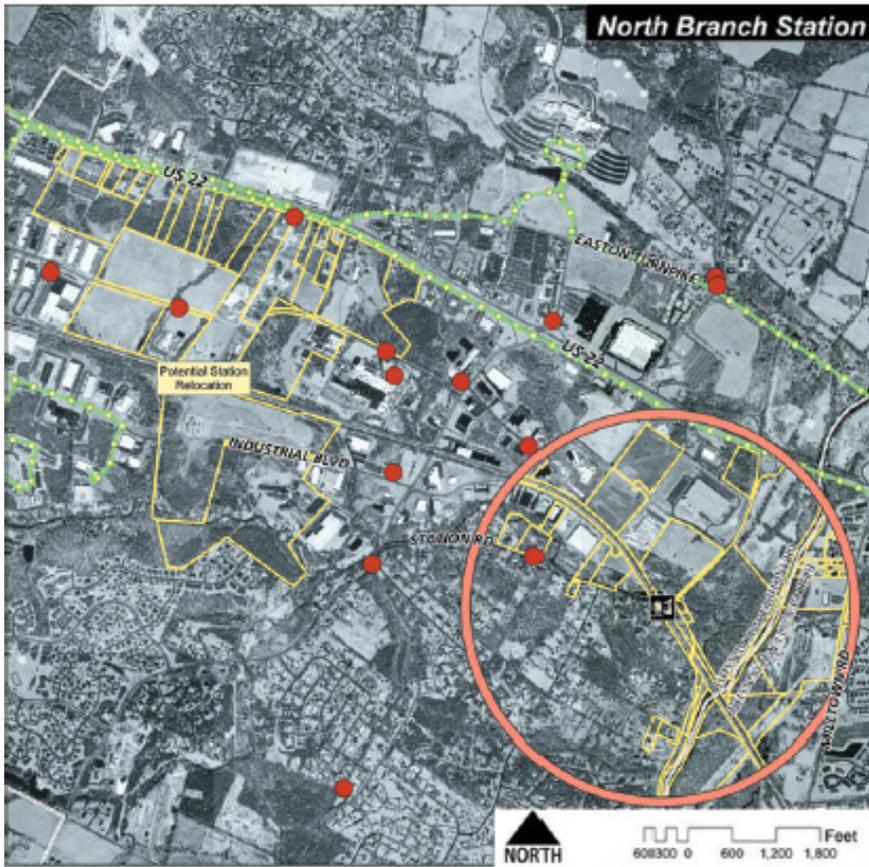


Figure 3b. North Branch Station

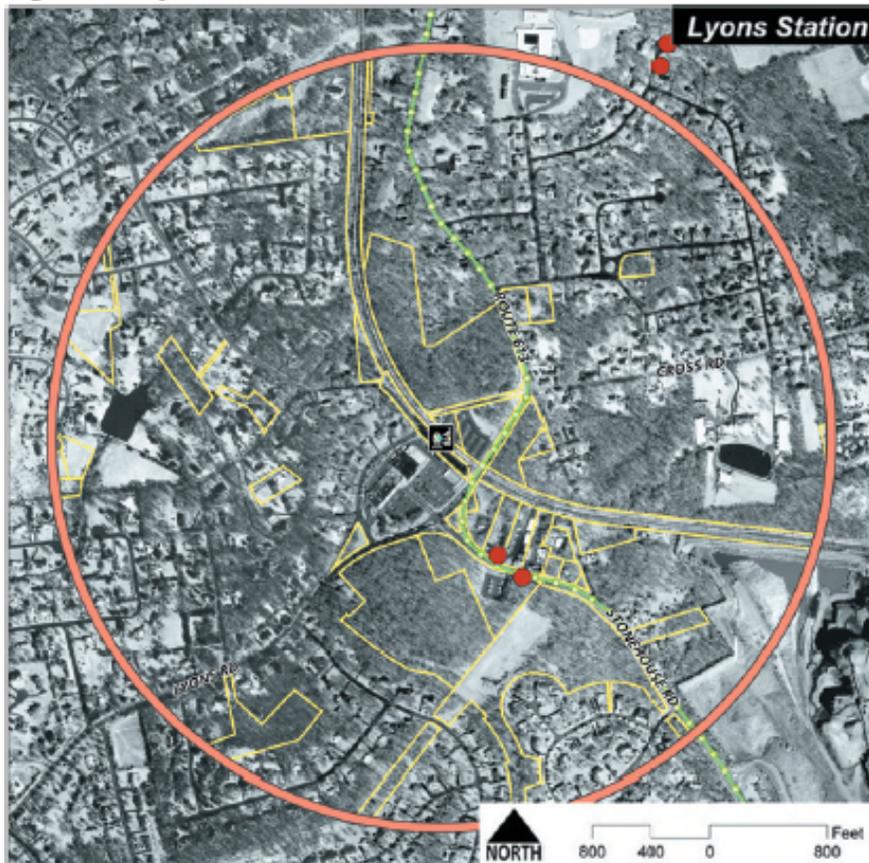


TRANSIT ROUTE: Raritan Valley Line
 MUNICIPALITY: Branchburg Township

SUMMARY AREA SELECTION CONCLUSION:
 Study area selected based on strong institutional support, availability of land, and strong market.

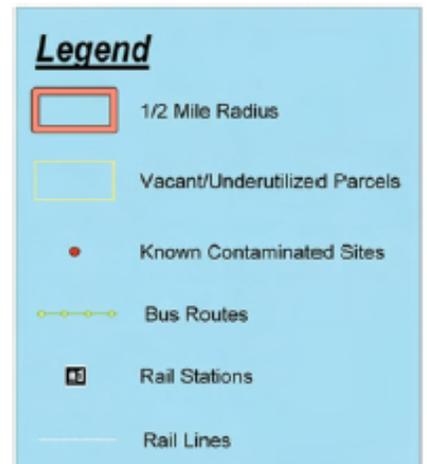
This site was selected depending on the relocation of the North Branch Station to the east of this station.

Figure 3c. Lyons Station



TRANSIT ROUTE: Gladstone Branch
 MUNICIPALITY: Bernards Township

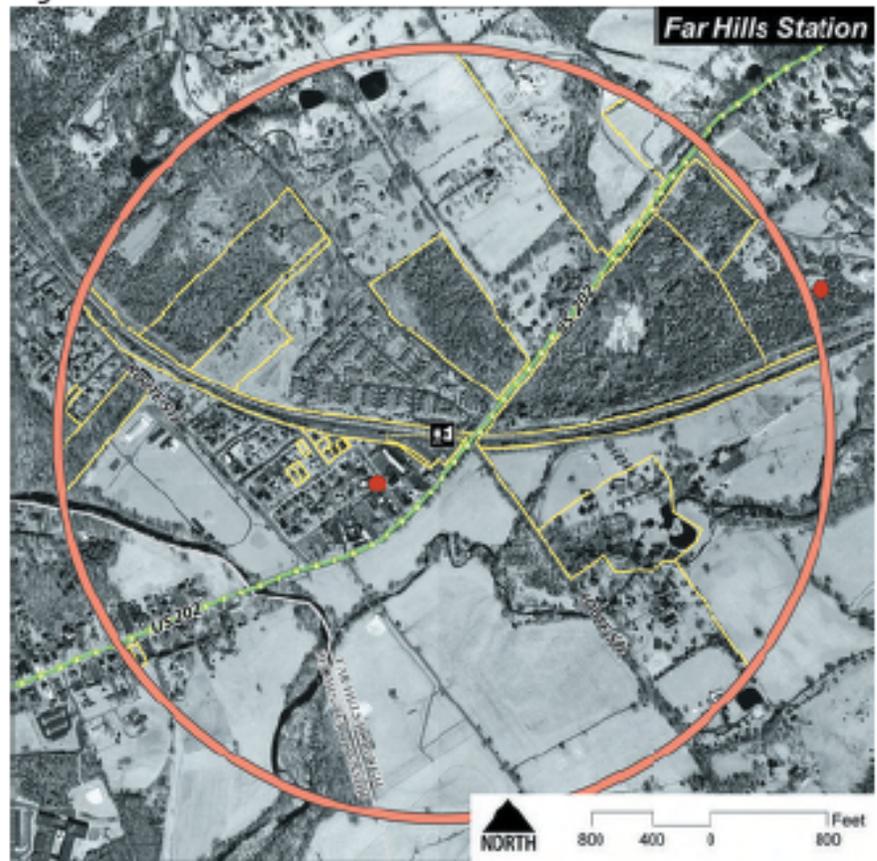
SUMMARY AREA SELECTION CONCLUSION:
 Institutional support was not strong enough to justify selection of this station area as a TOD candidate.



TRANSIT ROUTE: Gladstone Branch
 MUNICIPALITY: Far Hills Borough

SUMMARY AREA SELECTION CONCLUSION:
 Institutional support was not strong enough to justify selection of this station area as a TOD candidate.

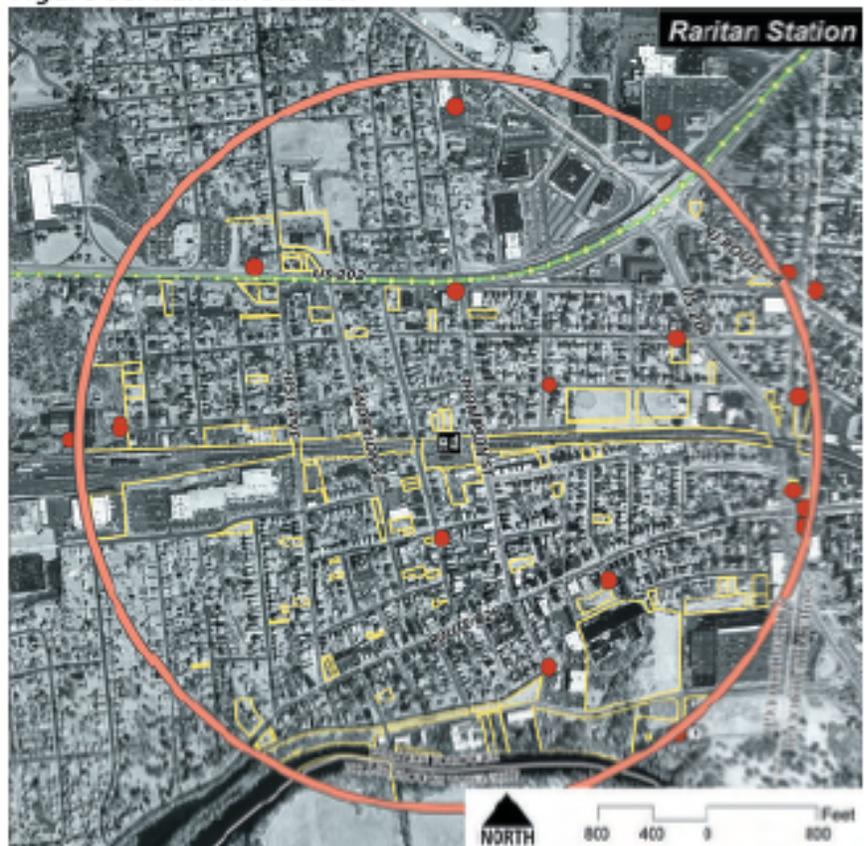
Figure 3d. Far Hills Station



TRANSIT ROUTE: Raritan Valley Line
 MUNICIPALITY: Raritan Borough

SUMMARY AREA SELECTION CONCLUSION:
 Study area not selected due to lack of potential development sites.

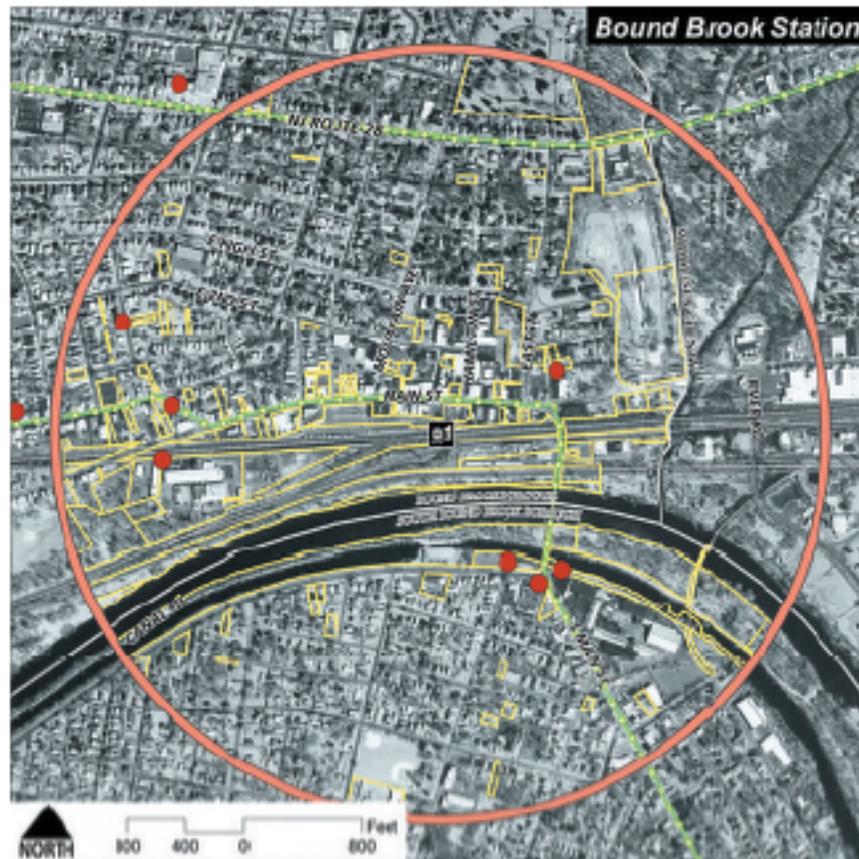
Figure 3e. Raritan Station



Legend

-  1/2 Mile Radius
-  Vacant/Underutilized Parcels
-  Known Contaminated Sites
-  Bus Routes
-  Rail Stations
-  Rail Lines

Figure 3f. Bound Brook Station



TRANSIT ROUTE: Raritan Valley Line
 MUNICIPALITY: Bound Brook, (includes portion of South Bound Brook in study area).

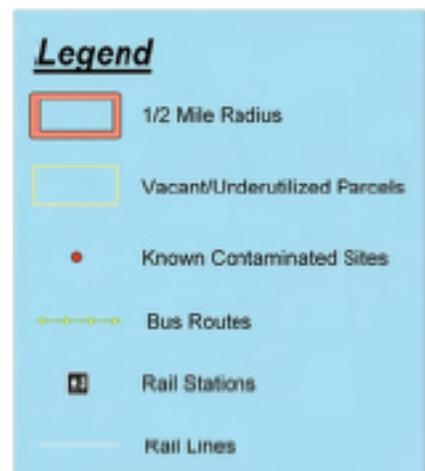
SUMMARY AREA SELECTION CONCLUSION:
 Study area selected based on strong institutional support, designation as a Transit Village, and multiple site opportunities.

Figure 3g. Somerville Station



TRANSIT ROUTE: Raritan Valley Line
 MUNICIPALITY: Somerville Borough

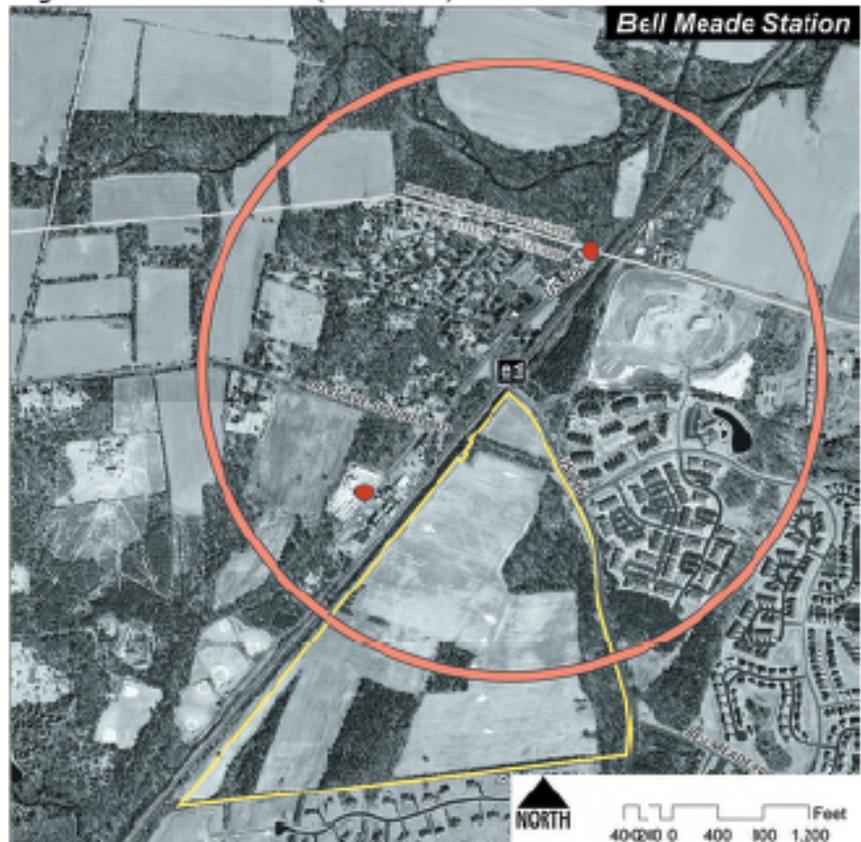
SUMMARY AREA SELECTION CONCLUSION:
 Study area selected based on strong institutional support, availability of land, and strong market.



TRANSIT ROUTE: Proposed West Trenton Line
 MUNICIPALITY: Montgomery Township

SUMMARY AREA SELECTION CONCLUSION:
 Although local interest and support for TOD is strong, the study area was not selected because the rail line is currently not in operation. However future planning studies should be pursued.

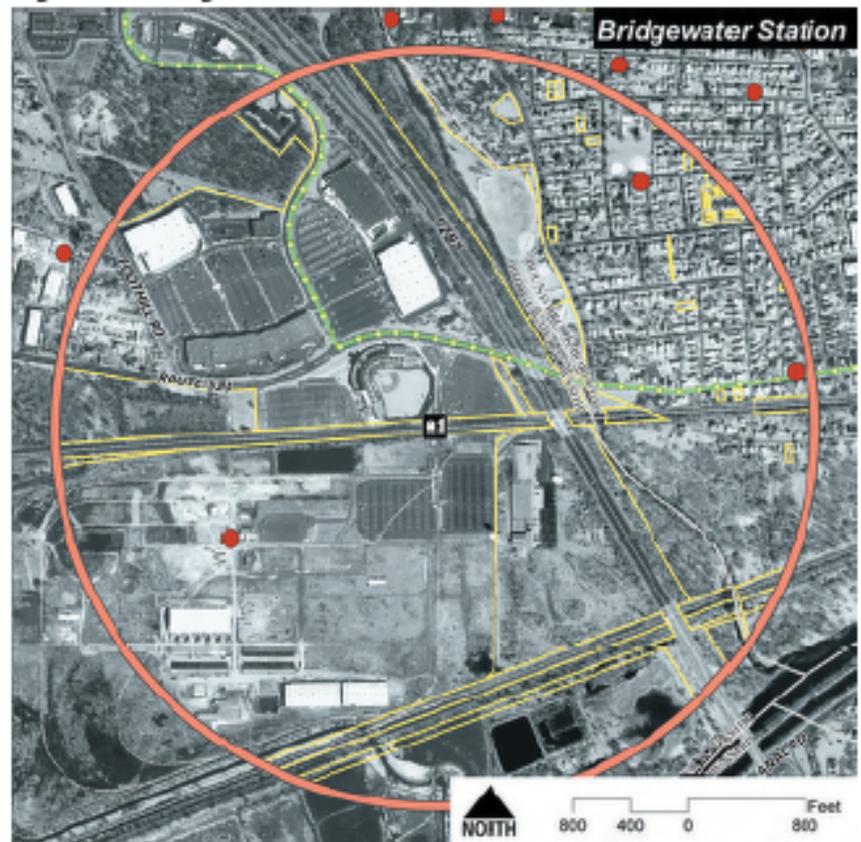
Figure 3h. Bell Meade (Potential) Station



TRANSIT ROUTE: Raritan Valley Line
 MUNICIPALITY: Bridgewater Township (includes portion of Bound Brook in study area).

SUMMARY AREA SELECTION CONCLUSION:
 Institutional support was not strong enough to justify selection of this station area as a TOD candidate.

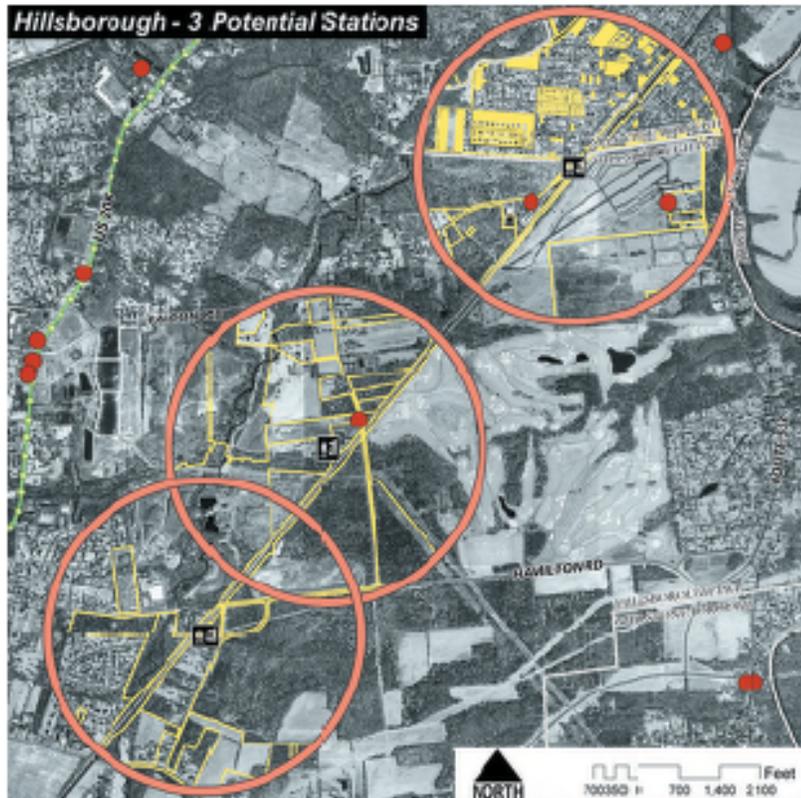
Figure 3i. Bridgewater Station



Legend

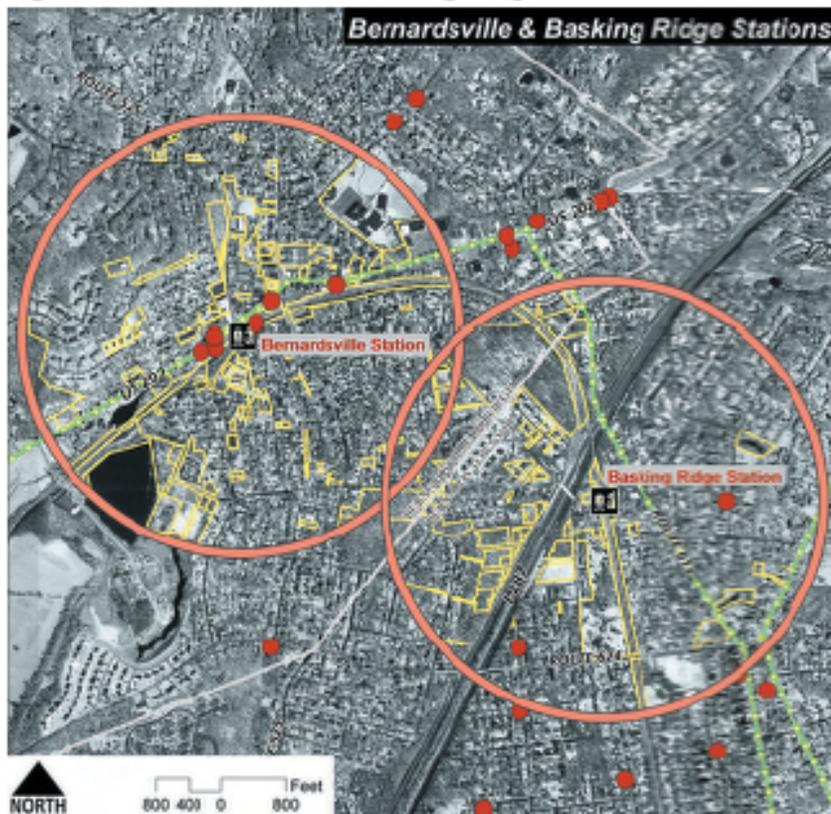
-  1/2 Mile Radius
-  Vacant/Underutilized Parcels
-  Known Contaminated Sites
-  Bus Routes
-  Rail Stations
-  Rail Lines

Figure 3j. Hillsborough (Potential) Stations



TRANSIT ROUTE: Proposed West Trenton Line
MUNICIPALITY: Hillsborough Township, Menville Borough
SUMMARY AREA SELECTION CONCLUSION:
 Although there is local interest for TOD, the study area was not selected because the rail line is currently not in operation. However future planning studies should be pursued.

Figure 3k. Bernardsville & Basking Ridge Stations



TRANSIT ROUTE: Gladstone Branch
MUNICIPALITIES: Bernardsville Borough, Bernards Township
SUMMARY AREA SELECTION CONCLUSION:
 Institutional support was not strong enough to justify selection of this station area as a TOD candidate.

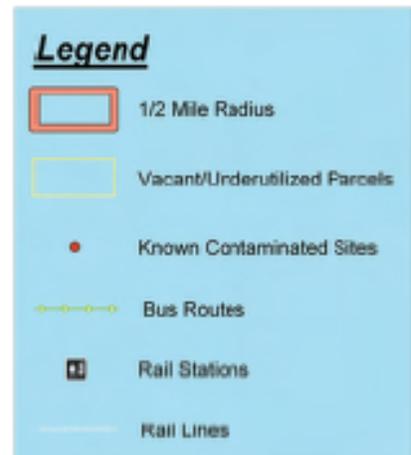


Figure 3l. Route 27 Bus Corridor

TRANSIT ROUTE: Route 27 Bus Corridor
MUNICIPALITIES: Franklin Township, South Bound Brook Borough

SUMMARY AREA SELECTION CONCLUSION:

These study areas were not selected because the nature of the bus corridor stops is not conducive to the site specific analysis involved with this TOD study. Although the bus routes have data supporting high ridership numbers, activity at individual bus stops is minor compared to commuter rail stations. The number of boardings at individual stops is not large enough to support a site specific transit oriented development project. However, transit ridership activity within bus corridors provides important opportunities for transit-oriented development. It is recommended that a follow up TOD study be pursued to identify key development opportunities at the corridor level and develop a TOD zoning overlay.

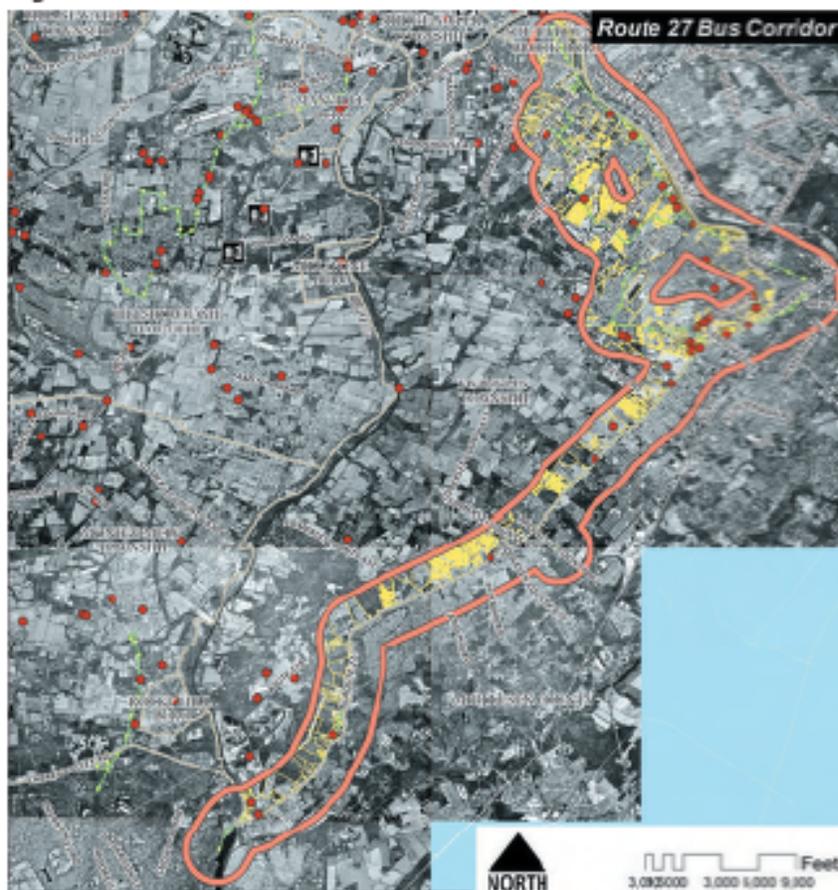
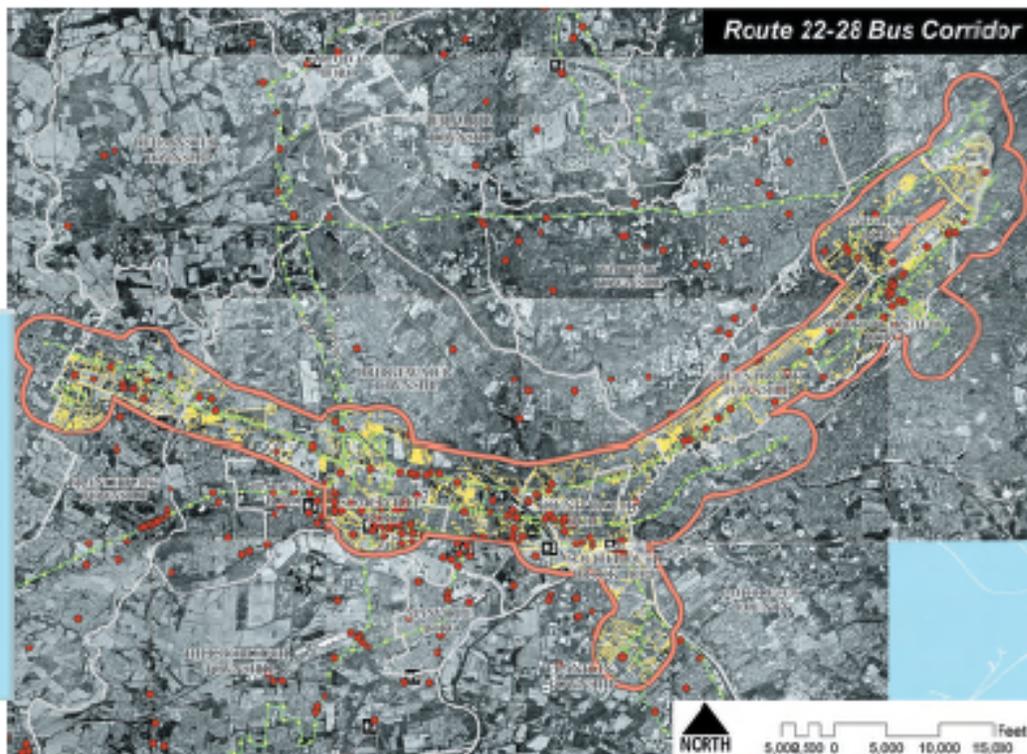


Figure 3m. Route 22-28 Bus Corridor

TRANSIT ROUTE: Route 22-28 Bus Corridor

MUNICIPALITIES: Branchburg, Bridgewater, Raritan, Somerville, Bound Brook, South Bound Brook, Green Brook, North Plainfield, Watchung, Franklin Townships and Boroughs



selected as an initial TOD study area.

Of the criteria established to determine the highest potential for TOD implementation, the I-Team felt that institutional support was the most important from a policy perspective. To create a successful TOD, there must be a commitment at the local level to accept growth and encourage mixed uses and higher density. From a physical standpoint, it made the most sense to place importance on the availability of land, particularly land that has potential for brownfield redevelopment to be consistent with the State’s smart growth goals. To summarize, the following five study areas were selected because they were determined to have best met the five criteria, particularly for receiving significant municipal support and having land available for development or redevelopment as a successful TOD:

- North Branch Station (relocated)
- Somerville Station
- Bound Brook Station
- Proposed Belle Meade Station
- Route 22-28 Bus Corridor

Figure 4. Bound Brook Station Area



- Route 27 Bus Corridor

C. TOD PILOT SITE SELECTION PROCESS

The next step for the I-Team was to review the properties identified as having development potential with the five study areas and select up to three sites to serve as “pilot sites” for TOD implementation in Somerset County. The properties were analyzed using more refined criteria, including the presence of specific brownfield or infill opportunity sites, large parcels unencumbered by multiple ownership and environmental constraints, marketability and assets, recent development or redevelopment plans, proximity and accessibility to transit stations and stops, and municipal support for particular sites. After thorough deliberation with the I-Team, the following pilot TOD sites were selected:

- Bound Brook Station Area (Figure 4);
- Somerville Station Area (Figure 5); and
- North Branch Station Area (Figure 6).

Bound Brook Station Area – Downtown Bound Brook Borough

This site was selected because of its proximity to Bound Brook Station and the proposed Raritan River Greenway, status as a designated Transit Village, recent redevelopment activity such as the Brook Theatre, other redevelopment opportunity sites, interest from the development community in response to a recent redevelopment RFP, redevelopment activity in neighboring South Bound Brook, under-utilized sites such as the NJ Transit commuter parking lot, and overall strong market

potential for TOD development.

**Somerville Station Area –
Former Somerville Landfill, Somerville Borough**

The former Somerville Landfill site was selected as a large, publicly owned parcel with significant redevelopment potential. The landfill site has a history of redevelopment planning and conceptual plans that have not been implemented for various reasons. This TOD study presents an opportunity to revisit the site with fresh ideas generated by the Borough and the Somerville community for a plan that will encourage transit use and complement the existing downtown. Its ideal location near the Somerville Station, proximity to downtown and the Raritan River, and high growth market make it an

excellent candidate for TOD implementation.

**Relocated North Branch Station –
Route 22/28 Industrial Area, Branchburg
Township**

Realization of the potential for TOD in Branchburg Township will necessitate relocation of the train station due to site constraints and limited opportunities for growing ridership at its current location. The opportunity to relocate the under-utilized North Branch Station to the industrial area south of Route 22 is supported by Branchburg Township's recent award of a County grant to explore TOD opportunities and a mixed use center in the Township. The number of large under-utilized parcels, presence of major employers, proximity to the Raritan Valley Community College, strong real estate market, and need for an identifiable town center provide significant

Figure 5. Somerville Station Area

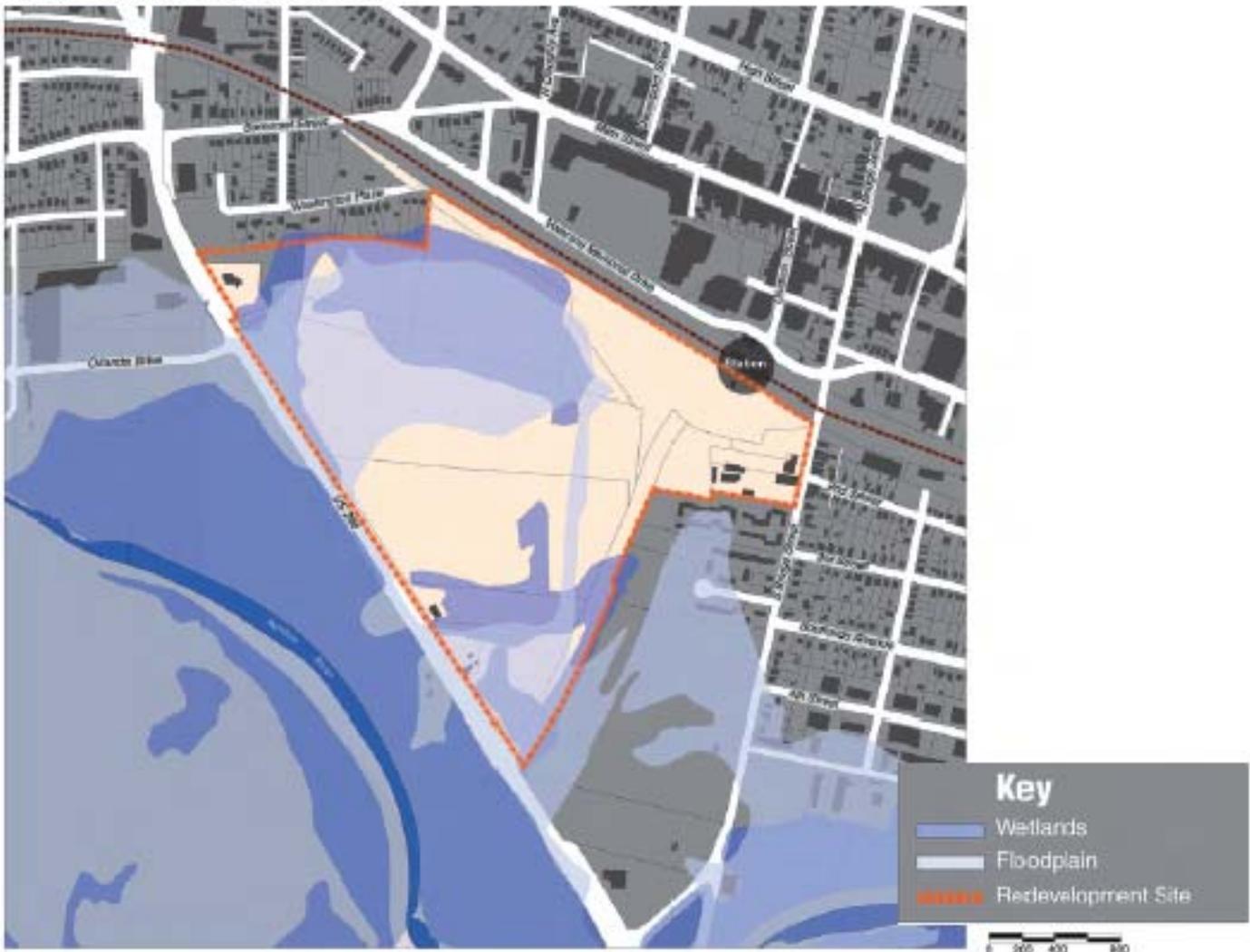
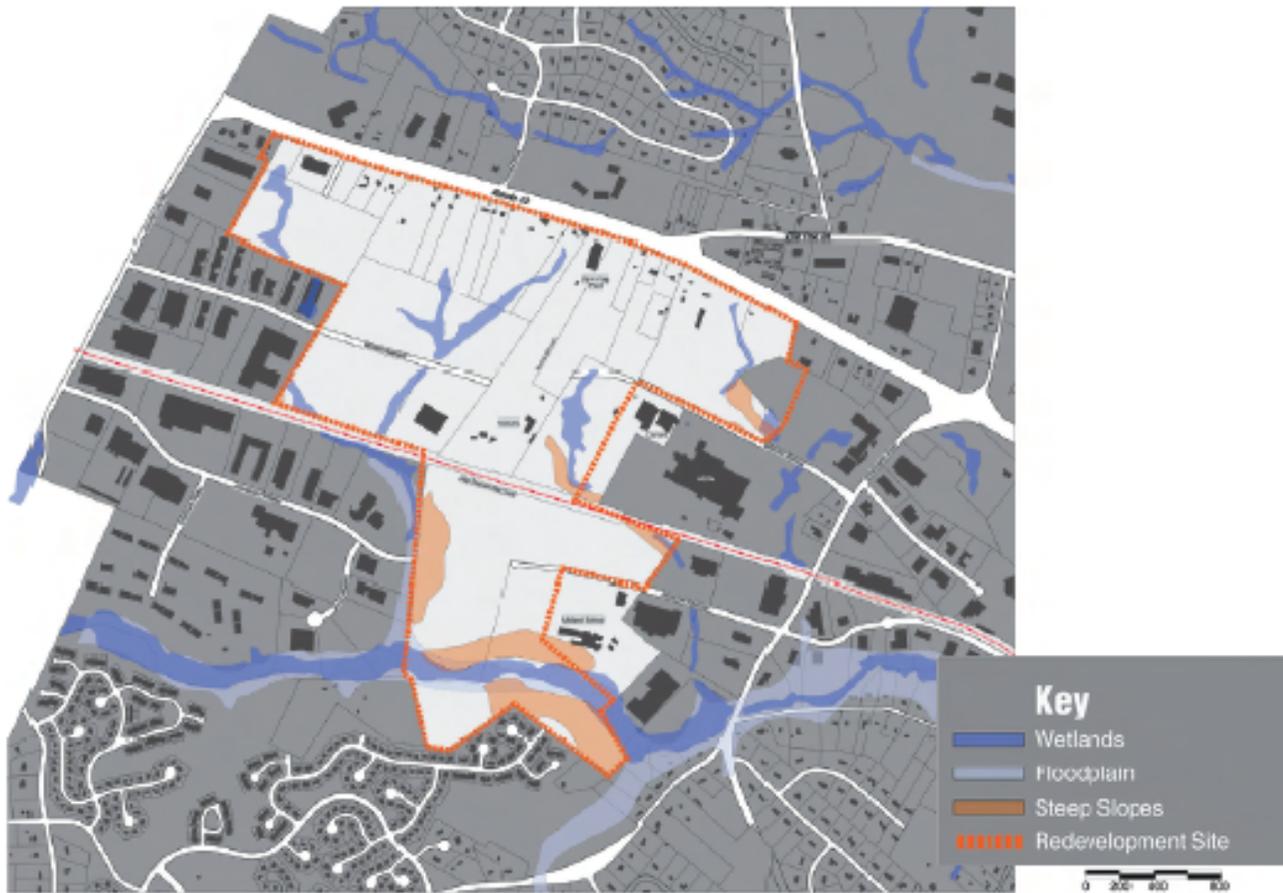


Figure 6. North Branch Station Area



potential for TOD implementation.

Each of the aforementioned sites provides significant potential for TOD, however, these sites may contain obstacles to development that need to be addressed in further detail. The following section describes both the opportunities and constraints to TOD on each site and also recommends specific design concepts and strategies for

achieving implementation.

D. TRANSPORTATION PROBLEM STATEMENTS

A significant part of the TOD implementation process will include capital investments to improve and enhance the existing transportation and transit networks in the three study areas. Early identification of the necessary transportation improvement projects associated with TOD plans will jump start the implementation process. Transportation projects in New Jersey are initiated by submitting a Transportation Problem Statement to NJDOT's Bureau of Capital Program Development. The purpose of the Transportation Problem Statement is to identify needs which may be suitable to be addressed by capital improvement projects implemented by NJDOT. A full set of Transportation Problem Statements for transportation projects identified through the TOD planning process for each TOD study area is provided in Appendix A.

A. BOUND BROOK STATION AREA

1. Site Context

Bound Brook is a picturesque, historic town that already exhibits many of the qualities of transit oriented development, including mixed uses, a variety of residential housing types, civic facilities, and a pedestrian friendly grided street pattern. Downtown Bound Brook and the train station are also situated along the Raritan River, a natural asset with significant recreation potential.

Bound Brook is fortunate to have a central location in Somerset County that has seen explosive growth and high incomes for its residents. Prosperity is not shared by all, however. The challenge for Bound Brook is to tap into the regional market and extract economic benefits for the community. Restoring a diverse tax base through a coordinated planning process will create the momentum needed to make Bound Brook a regional destination.

The Borough has been identified and selected to participate in the NJ Transit Villages Project allowing it to diversify its economic base, create a more vibrant and successful downtown area and encourage transit-oriented investment and development, making it a desirable location in which to live, work, play and invest.

As illustrated in *Figure 4*, the Bound Brook study area is located in the eastern portion of Bound Brook Borough, directly surrounding the station and located just north of the Raritan River.

2. Site Analysis

Existing Land Use

As illustrated in *Figure 7*, the predominant land uses in downtown Bound Brook are commercial, including retail and office uses, and residential. Most of the buildings are two- to four-stories, mixed-use, with retail space on the first floor and office or residential above. Recreation and a number of institutional uses can also be found in the downtown area. Public spaces in downtown have recently been improved with streetscape and street furniture to strengthen the appearance of Main Street and adjacent side streets. Just a few blocks north and west of downtown are Bound Brook's residential neighborhoods, which include single and multi-family housing, along with some institutional uses. Industrial and storage facilities are located south of downtown, along the NJ Transit and freight rail lines that run between downtown Bound Brook and the Raritan River.



Downtown Bound Brook Borough.

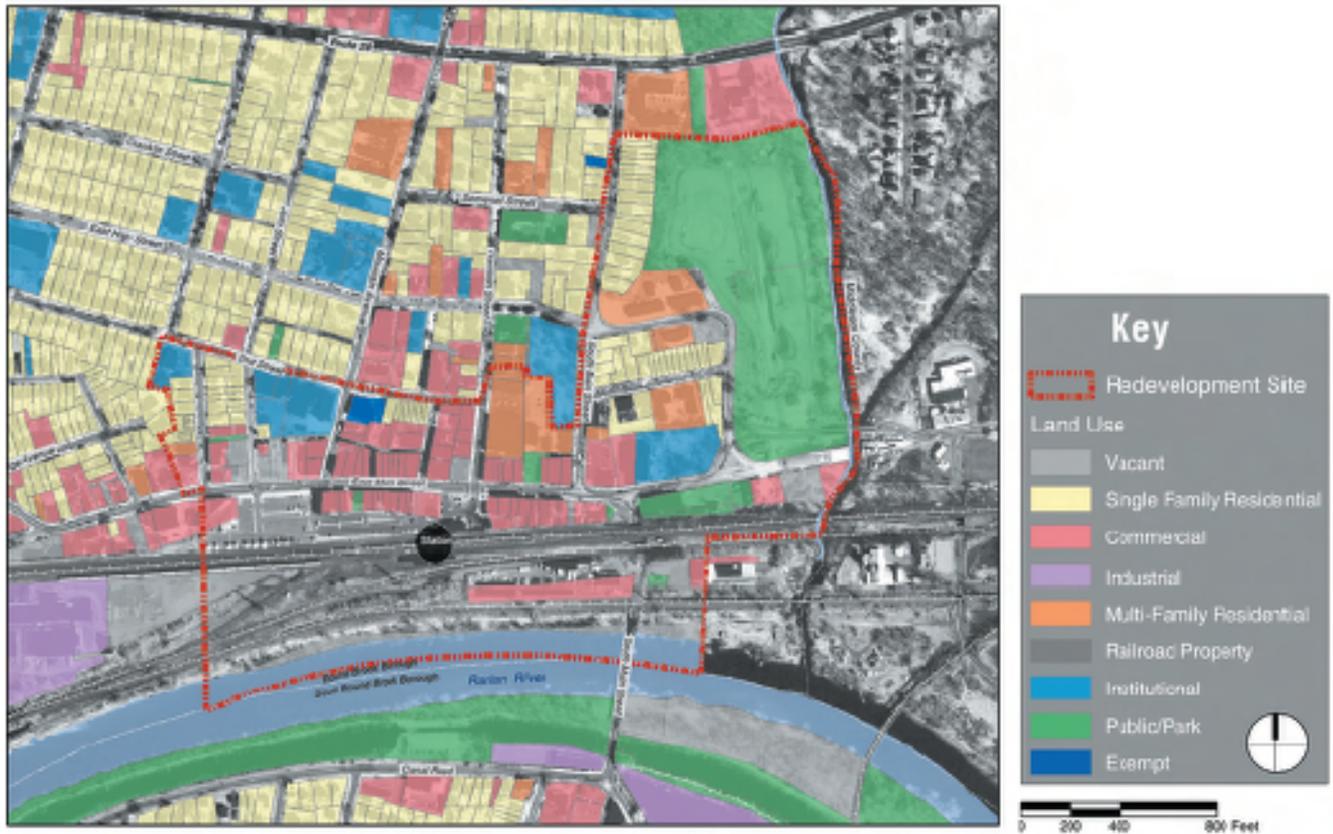


Bound Brook Station.



Main Street in Bound Brook Borough.

Figure 7. Existing Land Use - Bound Brook Station Area



The center of Bound Brook is noted as a historic district in Somerset County. A study conducted by Clarke and Caton, in 1985, documents historic assets within Bound Brook downtown area. Some of the more prominent structures include the Pillar of Fire, Bound Brook Hotel, the Voorhees Building, St. Joseph's Church, the Palace Theatre, and Brook Theatre.

An historic stone bridge lies just east of the downtown area, currently buried near the rail lines and Raritan River. Originally marking the boundary line between Somerset and Middlesex Counties, this arched stone bridge was constructed over the old channel of Bound Brook sometime prior to the Revolutionary War period. Built as part of the York Road, a main highway across New Jersey in the 18th Century, it is believed to be the oldest unaltered stone bridge in New Jersey. The Bound Brook Community Development Association has produced a report to address the potential of unearthing and preserving the bridge, perhaps as a heritage area.



Historic buildings along Main Street in Bound Brook.



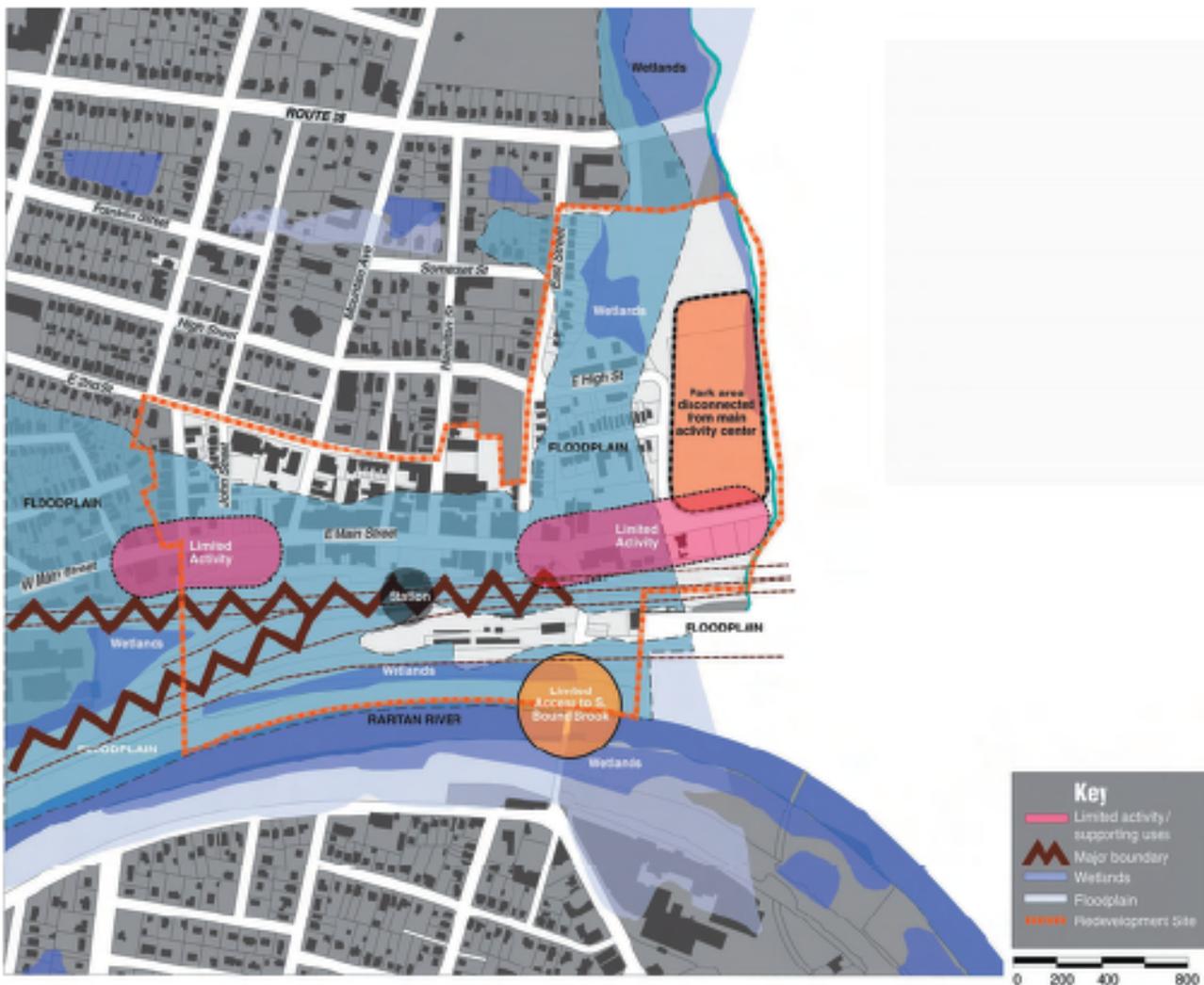
Effects of Hurricane Floyd in downtown Bound Brook, 1999.

Environmental Factors

As indicated on *Figure 8*, Downtown Bound Brook lies entirely within the floodplain of the Raritan River. The Borough has a history of flooding, the last major flood, brought by Hurricane Floyd in September 1999, submerged most of downtown and surrounding neighborhoods. However, a new levee project, to be completed in 2007, will help reduce the potential of flooding in the downtown.

Other environmental features in the study area include some natural wetlands located in parkland in the northeast part of the study area. The location of wetlands within parkland is likely to have a limited impact on development opportunities to the south in the downtown.

Figure 8. Environmental Features and Key Issues - Bound Brook Station Area





Pocket park in downtown Bound Brook.



Restricted access to the Raritan River.

Recreation and Open Space

The Borough of Bound Brook is well served with parks and open space. Several active and passive recreation areas are located throughout the Borough, including Billian Park, Tea Street Park, Battlefield and Rock Machine Parks, Middlebrook Park, Green Brook Park, Codington Park, and Lamont Park. In addition, the Green Acres preserved lands south of Route 22 near Kathleen Court provide accessible open space to Borough residents.

Billian Park provides a significant recreation facility for the TOD study area. However, while the lower part of the park along Main Street is connected to the downtown via sidewalks, there are substantial sections of the park at the fringes that feel disconnected from the rest of the Borough. The study area also lacks a centrally located civic space for public gathering.

Bound Brook has been unable to capitalize on its most significant natural asset, the Raritan River, for recreation purposes. Between South Bound Brook and Bound Brook, the river offers a serene environment for bike rides, bird watching and canoeing. Direct access to the river from downtown Bound Brook, however, is restricted by the rail lines. Access is limited to Queens Bridge which has limited capacity for automobile traffic and was not designed to adequately accommodate pedestrians.

Existing Circulation

Bound Brook benefits from a traditional neighborhood street grid of small walkable blocks linking downtown with surrounding neighborhoods. In general, the existing circulation pattern, as illustrated in *Figure 9*, works extremely well for all modes. The key issues are as follows:

Vehicle Circulation

The existing road network consists of major roads and local streets, forming a grid pattern, feeding Route 28 to the north and I-287 to the west. Main Street along the southern edge of Bound Brook connects the downtown to the neighboring boroughs, and across the river to South Bound Brook via the rotary and bridge.

Public Transit

Bound Brook lies along NJ Transit's Raritan Valley rail line and is a designated Transit Village. The train frequency is hourly for most of the day. Existing bus routes 65/66 and 114 connect Bound Brook to the surrounding neighborhoods along Route 28.

DASH, Somerset County's public transit shuttle, operates two routes in this area. One of these serves Bound Brook, and functions primarily as an employer shuttle linking Davidson Avenue employees with Bound Brook Station. It runs along Queen's Bridge to South Bound Brook. The second DASH line runs between New Brunswick and Davidson. Both shuttles run on weekdays only.

Bound Brook has one of the highest ridership stations on the Raritan Valley Line, with more than 600 daily boardings. NJ Transit feels that parking expansion will increase ridership further. Compared to the private automobile, however, transit captures only a small share of riders, which in turn influences service frequencies, particularly for bus service. The challenge is to increase ridership, which will in turn increase the frequency of service, in order for downtown Bound Brook to thrive as a center, and as a transit oriented development. Further details regarding Bound Brook's transit service are described in *Tables 2a to 2c*.

Figure 9. Existing Circulation - Bound Brook Station Area

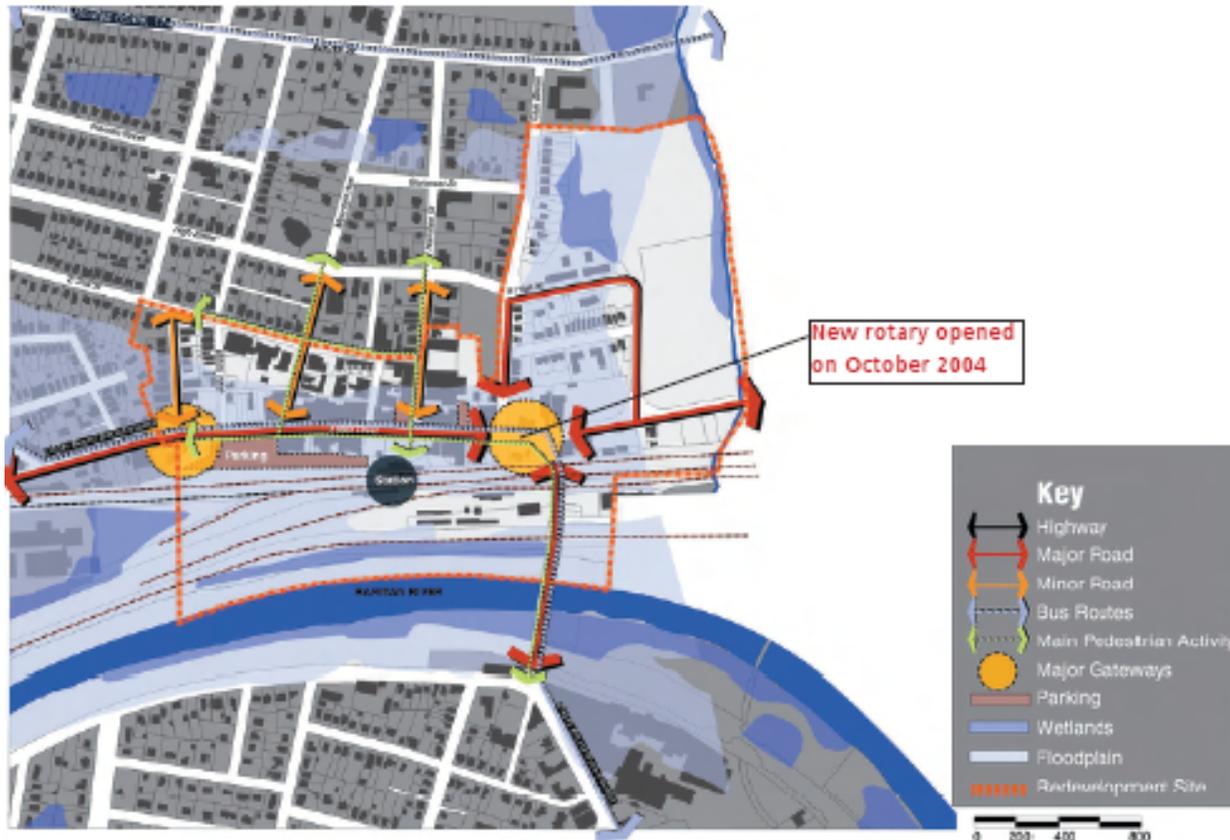


Table 2a. Bound Brook Station Characteristics

Parking Occupancy (FY03)	Average Weekday Boardings (FY03)	Change from FY02	Local Bus service	Access Mode Share – Drive Alone/Park (96/98)	ADA Station
78%	579	3.02%	Newark 65,66 NTPA 114, 117 DASH Couch USA- 60/135 to NY	58%	No



Drop-off area at Bound Brook Station.

Table 2b. Bound Brook Station Average Weekday Rail Boardings, 2004

1992	1995	1999	2000	2001	2002	2003
523	627	589	609	640	562	579

Table 2c. Bound Brook Station Area Mode Split Data

Private Vehicle	Drove Alone	Public Transport	Bus	Rail	Bike	Walk
83.4%	64.1%	4.9%	2.4%	2.2%	1.0%	4.1%

Parking and Kiss-and-Ride

There is ample curb space for passenger pick-up and kiss-and-ride (drop-off area), directly outside the station in the plaza. This is also available space for taxis and bus layovers as needed.

There is a plentiful supply of parking in the station area, with a mixture of municipal and private surface lots, and curb parking on both sides of most streets. While most street parking is metered, the charge is only 10 cents per hour, indicating that there is little shortage. However, much of the off-street supply is housed in private lots, which are reserved for the customers of specific businesses.



Transit interchange at Bound Brook Station.

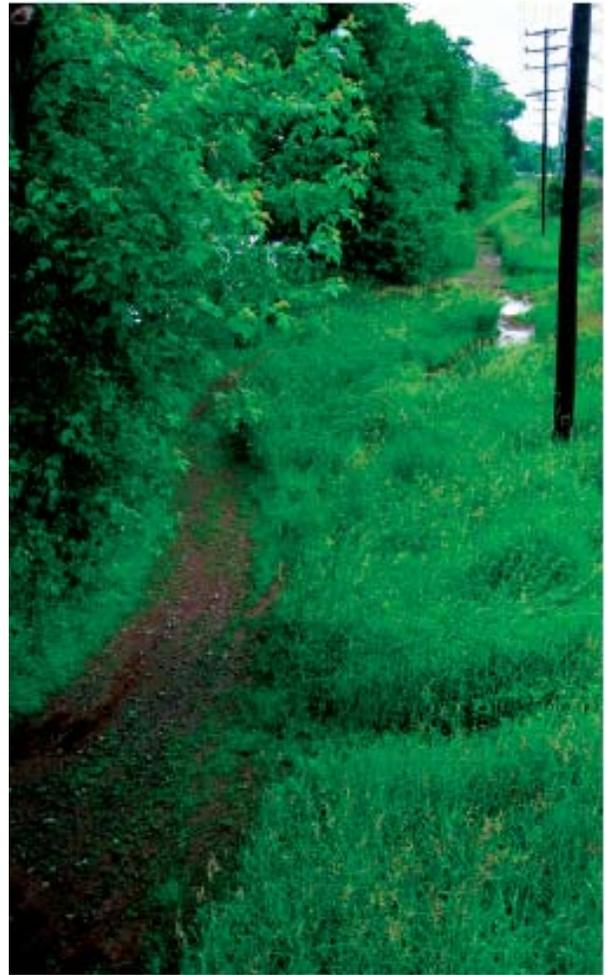
Pedestrian and Bicycle Access

There has been substantial investment in streetscape improvements on East Main Street, around the station, although those west of Mountain Avenue have yet to be completed. On most of the remaining streets north of the station, there is good access for pedestrians, with wide sidewalks on both sides, curb parking, street trees, retail, and amenities such as benches.

Pedestrian access to the station from the south is more limited. Pedestrians and cyclists traveling from South Bound Brook can only access the station via the Main Street entrance. There is no direct access to the eastbound rail platform at present, forcing pedestrians and cyclists to take a circuitous route. Meanwhile, the pedestrian tunnel that provides access to the eastbound platform is uninviting and not ADA accessible. Queens Bridge poses an additional barrier, although a planned bridge improvement project will provide increased side path width and railings to accommodate cyclists safely.

The Raritan River has the potential to be a major local amenity, but access is constrained at present. Although an informal path parallels the north bank, the only way to get to it is from South Main Street. The south bank, however, offers an important recreational walking and biking amenity, the multi-use D and R Canal path.

Even with limited on-street facilities for cyclists, the number of parked bicycles indicates strong demand for bicycle travel, particularly on Main Street as workers commute from Bound Brook to industrial areas of Middlesex. However, at present there is limited provision for bicycle travel on the roadway, and bicycle parking mainly consists of free-standing racks, which are not the most secure option.



Unimproved pedestrian/bikeway along river bank.

3. Recent Redevelopment Activity

After Hurricane Floyd, a number of redevelopment studies were conducted by various organizations to help economically and physically revive downtown Bound Brook. The most significant of these include:

- "The Redevelopment Plan", commissioned by the Planning Board of Bound Brook, published in February 2000, and;
- A report published by the Urban Land Institute (ULI) in March 2000, following the flooding caused by Hurricane Floyd. The Borough of Bound Brook and Somerset County, with some State funding, commissioned a ULI Advisory Panel to provide analysis and recommendations to revitalize downtown Bound Brook.

Following these studies, a number of initiatives are currently underway in the Borough to revitalize the downtown, bring economic diversity to the area, and create a lively and successful transit village near the Bound Brook NJ Transit Station. Recent Borough planning initiatives include:

- Several streetscape projects along East Main Street;
- Improvements to Eastbound Train platform;
- Improvements to Hamilton Street;
- RFP for Bolmer Building including residential use - preferred developer has been selected by the Council;
- RFP for train station - developer interviews and recommendations in process; and
- Department of Public Works Building and Bolmer Building vacated so DPW will no longer be located in the heart of the TOD area.

These studies helped analyze and establish redevelopment issues and focus the conceptual design:

South Bound Brook

South Bound Brook is separated from Bound Brook by the Raritan River, which is viewed as a barrier. South Bound Brook is currently involved in evaluating certain areas and the revitalization and establishment of new uses including aquatic-based activities. South Bound Brook is revitalizing its northern waterfront area with new development, facade improvements, a greening project and connecting the open space system to the Raritan River. Most of the new developments are located close to the river corridor,

strengthening the link between South Bound Brook and Bound Brook's TOD opportunities.

Raritan River Greenway

The Raritan River Greenway, a County Planning and Park Commission initiative, is an ongoing project of NJDEP's Green Acres Program to protect areas of natural diversity and historic resources along the river, preserve and maintain them as recreation and open space, and create an extensive open space system throughout the County and State. The Greenway project is already in place along the southern bank of the river, in South Bound Brook, in the form of the Delaware and Raritan Canal State Park.

Redevelopment RFP

In June of 2004, the Bound Brook Redevelopment Advisory Committee (RAC) issued a Request for Proposals (RFP) on behalf of the Borough of Bound Brook. The RFP seeks to encourage the redevelopment of portions of Downtown Bound Brook through a combination of new development projects that reflect the community's existing scale and character. In late 2004, the RAC recommended a preferred developer for the NJ Transit commuter lot site, located south of Main Street between Johnson and Hamilton Streets. The plan proposes the following development program:

- Mixed-use development: 126 residential units, 35,000 square feet of retail;
- Public Square;
- Community Plaza; and
- A parking structure: 361 commuter spaces, 171 residential spaces.

The RAC also recommended a preferred developer for the Bolmer site. The plan includes 70 units of residential development and associated parking.

Levee Control Project

A levee project has been under construction to the eastern boundary along the Green Brook. In the meantime, the Borough has declared a pre-levee development restriction requiring the current elevation for construction of habitable space to be at least one foot above the base flood elevation. With respect to most sites within the downtown, the flood height elevation ranges from 7 feet to 9 feet above the existing grades.



Brook Theatre

The Brook Theatre in downtown Bound Brook is a dilapidated historic structure that has been slated for restoration. Since flooding caused by Hurricane Floyd in September, 1999, the main auditorium has been closed to the public. The Brook Arts Center, Inc. purchased the building in 2003 with funding provided by the New Jersey Economic Development Administration (NJ EDA), which is providing \$2.4 million for renovations set to begin in 2004. The theatre will reopen late in 2005 with 475 seats, and will be re-seated to approximately 1,000 seats in the next few years. The renovated Brook Arts Center has the potential to become a destination activity and contribute significantly to the success of the Bound Brook TOD.

Rotary Improvements

Using a grant from the NJ EDA, a road reconstruction project was completed by Somerset County. The purpose was to provide easy access to downtown Bound Brook, unlike the old indirect route onto Main Street, via a more convenient roundabout. East Street was realigned to meet the roundabout and therefore create a direct north-south route from the river crossing to Route 28.

This direct route to downtown created better access and improved the redevelopment potential of downtown sites for new and more appropriate uses. The project has been developed consistent with the Borough's streetscape improvements to establish a strong "gateway" into Bound Brook, while having a positive effect on the local and regional communities. The rotary improvement is now complete and is functioning smoothly.

Also included in the rotary project are streetscape improvements to South Main Street linking downtown South Bound Brook with downtown Bound Brook, and new pedestrian facilities along all roadways within the project area providing access to Billian Park and the D and R Canal Park.



Brook Theatre



New Bound Brook Rotary - opened in October 2004.

4. Key Challenges of TOD

The key challenges to redevelopment of downtown historic Bound Brook include:

- Integrating all current and future plans into the concept design plan
- Identifying key sites for redevelopment as catalytic projects
- Reducing automobile dependence in the downtown area and its neighborhoods, and increasing transit ridership
- Linking all existing and proposed open spaces via pedestrian paths and bikeways
- Diversifying the economic base while place-making in a flood-prone area

5. Recommendations

The diverse attributes Bound Brook possesses provide a strong foundation from which to create a unique and sustainable transit village. As documented above, a number of important redevelopment projects are currently underway and many infrastructure issues, especially with regard to flooding, are being addressed. With a strong market interest, a sustainable mix of uses and committed municipal leadership, now is an opportune time to strategically and creatively guide Bound Brook's future.

The TOD concept plan was based upon three objectives developed through the consultant's discussions with the key stakeholders and local and regional leadership. They represent the critical guiding principles around which a comprehensive strategy for the downtown may be conceived:

- Strengthen downtown as a mixed-use transit village;
- Reinforce the role of the station within downtown; and
- Take advantage of the waterfront.

Strengthen Downtown as a Mixed-Use Transit Village

Downtown Bound Brook contains a number of different uses in close proximity to the rail station. These include a few restaurants, specialty shops, convenience stores and small offices. To fully capitalize on proximity to the rail station and draw more residents and commuters to downtown, a greater diversity of uses is necessary. The key to accomplishing this objective is, rather than investing in wholesale redevelopment, to strategically



Example of a mixed-use transit node.

redevelop vacant sites to accommodate a mix of uses that will reinforce existing uses. The Borough's Request for Proposals (RFP) for redevelopment of downtown sites is a major step toward accomplishing this task. The Borough's Redevelopment Advisory Committee (RAC) is leading the selection and negotiations with potential developers, the result of which may bring new retail and housing to Downtown over the next few years. Continued involvement of the public will ensure greater community support and success.

To fully meet the State's objectives for becoming a transit village, an emphasis must be placed on intensifying activity close to the station. A key component of this is a dense residential neighborhood. Increased residential use will encourage dense development around the station and help provide a more diverse economic base. A variety of housing types may be considered to accommodate a range of income levels and family types. The proposal approaches this objective by suggesting 3 to 4 story buildings along East Main Street with retail on the first level and housing above. Strategic sites have been identified in addition to those to be considered for redevelopment over the long-term period due to their current use or proximity to the station. The total potential redevelopment includes over 80,000 square feet of retail and over 390 housing units along East Main Street. Of these, the Bolmer Building and NJ Transit commuter lot development are underway.

Further actions to meet this objective include the following:

Undertake an Infill and Rehabilitation Initiative

Downtown is currently linearly organized along Main Street's east-west corridor. While higher density uses are better suited for Main Street, the area to the north between Main and High Streets, is a potential location for additional small offices and other supporting businesses. To increase building density of downtown around the rail station, it is recommended that the Borough undertake an infill and rehabilitation initiative to maximize the use of this area and expand downtown to the north between East Main, High, John and South Main Streets. Current zoning allows for a mix of uses in the downtown and the Borough has already recommended, as part of the Redevelopment Plan, a Transit Overlay District, which includes accommodation for mixed-uses, shared parking, streetscaping, and design guidelines to help implement the TOD study and the Transit Village Initiative. Some incentives for encouraging infill and rehabilitation efforts in the downtown may include property tax abatements for new or rehabilitated housing and housing density bonuses. The Borough is currently studying eliminating the limit on the number of units permitted in the downtown if Redevelopment Committee approval is received for facade improvements.

Create a Civic Plaza within Downtown

While adding new uses and providing more housing closer to the station and within downtown will bring benefits, a Transit Village must also reflect the shared values and civic identity of the local population. The Bound Brook Transit Village must reflect its heritage in terms of history and cultural assets while providing the people living here now a place to live, work, and play. It is important to create a civic space(s) for the community, an area that can be the 'heart' of Bound Brook. This proposal reinforces the recommendation for the creation of a downtown plaza from the Urban Land Institute (ULI) study. Downtown plazas are extremely important amenities providing a shared, public space for festivals and outdoor markets as well as a day-to-day centerpiece for the community. The existing parking lot across from the rail station is an ideal location for a small plaza. Strategically located, the plaza will be highly visible and central to many activities along Main Street.



Example of infill development.



Example of a civic plaza.

Reinforce the Brook Arts Center

Plans for renovation of the Brook Theatre into an arts center, will provide a key asset for redevelopment of downtown Bound Brook.

The Somerset County Cultural Arts Center has established New Jersey's first arts incubator program of which the Brook Arts Center is the first action. The arts incubator will offer emerging performers and artists performance space, as well as clerical, business, financial, and technical assistance. The plan for the theater and its surroundings should take advantage of this non-profit venture to attract businesses to the downtown.

To connect the theater with the neighborhood and downtown, one recommendation that the Borough has already explored is to extend East 2nd Street through the convenience store's current parking lot behind the theater between Hamilton Street and East Street. This would

allow more street frontage for other activities and supporting uses. Any loss in parking from the store lot will be at least partially replaced with on-street and perhaps back-in angled parking.

A second option is to create a pedestrian-only connection in this location. This would be an important part of a pedestrian network around downtown as well as encourage small retail uses to locate along this path, keeping it a safe and active area.

For this proposal to move forward, ability to work with the existing topography and use of or circumventing the adjacent cemetery must be further evaluated. Two key issues also will need to be addressed: ownership and funding. The Borough will need to begin discussions with the owners of convenience store, cemetery, and owners of the two houses that may need to be demolished if the road circumvents the cemetery about right-of-way acquisition for a road extension. Acquiring the right-of-way and road construction would entail a significant capital expenditure. The Borough could apply for funding through the Local Scoping/Local Lead Program, a competitive program that gives the NJTPA county and city subregions the opportunity to apply for federal funding to advance locally significant projects. Staff from both the NJTPA and NJDOT provide technical assistance and guidance for projects funded by these two programs. The Local Scoping program provides federal funds to subregions to advance proposed projects through preliminary engineering and federal environmental reviews. The Local Lead program provides funding to advance projects through final design, right-of-way acquisition, and construction.

Another funding approach may include coordinating with the Brook Arts Center to apply for economic development funding from previous donors US EDA and the New Jersey Economic Development Authority to provide funds for the road improvement to further the success of the Brook Arts Center. This will need to be a long term approach since the donors have recently provided substantial funding for the theater renovation.

Link Community Nodes

The Borough was recently awarded a \$200,000 grant from Somerset County to continue streetscape improvements along Hamilton Street, linking the library to Main Street. There is an opportunity to support and strengthen this

plan through analysis of the potential for linking other community nodes in the Borough, including the library, a new civic plaza, the municipal building and the train station. The ULI study recommended moving the municipal building from its current location on Hamilton Street north of High Street, south to the TOD transit center, which would strengthen the civic center concept near the station.

Develop a Downtown Marketing Strategy

Downtown areas in cities and town centers across the country are recognizing the value in marketing and branding. South Bound Brook has already hired a marketing firm to create a branding approach for their redevelopment efforts. Downtown Bound Brook and the rail station need a consistent message to reinforce the positive steps private and public leaders have taken in visioning a new future for the area. Any marketing strategy should seek to coordinate with South Bound Brook given that revitalization efforts in both locations are mutually reinforcing.

Bound Brook and South Bound Brook could coordinate on a website marketing strategy that promotes the redevelopment efforts and the attractiveness of their downtowns. The website could help in promoting existing and attracting new businesses, attracting residents and visitors, and promoting social activities.

- Information provided on the website should include:
- Promotion of positive aspects of the towns (transit, schools, cost of living, walkability, neighborhoods, parks)
- New redevelopment projects
- Available properties for redevelopment or development, including incentive policies (façade improvements, etc.)
- Homes for sale and apartments/commercial properties for lease
- Entertainment events (Brook Arts Center, etc.)
- Free advertising for local businesses
- Promotion social events (picnics, parades, festivals, markets, restaurant openings etc.)

Reinforce the Role of the Station within the Downtown

The rail station is a unique and valuable public service that increases the attractiveness of Bound Brook for residents and businesses. The station itself is set back from East Main Street and is surrounded by parking and under-utilized land. The Developer's RFP already targets many of these sites for new development and so the Borough must ensure that active uses that reinforce this potential are placed within view of the station to optimize the station's use.

Parking

Bound Brook's existing uses, future development and the rail station will all generate considerable demand for parking. At the same time, parking needs to be carefully managed and provided in appropriate amounts, if Bound Brook is to capitalize on its potential as a transit village, and if the market for transit ridership is to be expanded. The downtown is set to make a difficult transition from a suburban-type center where front-door parking is unlimited and free or extremely cheap, to an environment where motorists may have to pay higher charges, and "Park Once" and walk several blocks to their final destination.

Parking is a common theme in all the station areas, and is discussed in detail in Appendix D. However, Bound Brook's parking situation warrants special study. It is recommended that the Borough undertake a parking management study that includes the following:

- *Shared Parking.* Downtown Bound Brook has an ample parking supply, but ownership is fragmented with many private and reserved lots. Shared parking will allow more efficient use of this supply, allowing the same availability to be achieved with a larger number of users. An organization such as the Borough or Merchants' Association is well placed to negotiate shared use agreements, and work to open up private lots for public use. Potentially, the same organization may take a lead role in managing downtown's parking, including setting meter rates, allocating revenue and managing new garages. The new parking structure serving New Jersey Transit provides a particular opportunity, and should be open for all users at an appropriate rate. In particular, it can help satisfy residential demand and parking peaks caused by

evening Brook Arts Theatre events.

- *Parking Charges and Permits.* Meter rates are currently set at a nominal 10 cents per hour, and with the exception of New Jersey Transit commuter parking, most off-street facilities are free. Changes to pricing strategies offer the best potential to manage demand to ensure that visitors perceive parking to be ample and available. Meter rates and other charges should be set to ensure 85% occupancy, with hours of enforcement extended if necessary. Free short-term parking may be provided off-street for shoppers and other visitors, but employees should be charged an appropriate rate to ensure that parking is available for other users. In practice, it may be beneficial to divert employees to more peripheral lots, through either pricing, time limits or direct regulation. In the medium term, residential permit parking may become desirable to manage any spillover onto residential streets.



NJ Transit parking in Bound Brook.



On-street parking in downtown Bound Brook.

- *Parking Information.* Good information will be key to make charges and shared-use arrangements work well. Good signage can ensure motorists are aware of all their options, helping them to find lots that are hidden behind buildings, for example. Parking and transportation information should be integrated into any marketing website or other promotional materials.

Retain Drop-Off Areas

The existing drop-off area at the main station entry is well placed and designed to meet its function. It is recommended that new development and other public improvements seek to retain a similar amount of flexible curb space that can be used for auto pick-up and drop-off, bus layovers, and taxis. Any surplus curb space can be used for short-term metered parking.

Create Strong Pedestrian and Bicycle Connections

The streetscape improvements along East Main Street have improved the quality and character of existing pedestrian connections to the station. The proposal emphasizes that these improvements be extended east of the station past South Main Street to encompass the redevelopment sites along East Main Street. Additionally, in order to improve the safety of pedestrian crossings at intersections, “bulb-outs” may be considered along East Main Street as a traffic calming measure to perceptually narrow the cart way and slow traffic speeds, as well as reduce the distance for pedestrians to cross the street. The intersections of East Main and Hamilton Streets and East Main and John Streets are preferred locations for these bulb-outs. This was considered and rejected in 2001 because the County engineer was concerned about turning radii. A partial or modified bulb-out may be a solution.

East Main Street does not have sufficient right-of-way to permit striping for bicycle lanes. However, it is a direct, relatively low-traffic route that provides a good environment for most cyclists. For recreational cyclists and others wishing more protection from traffic, the Raritan River Greenway will provide an alternative.

Secure on-street bicycle racks are recommended to be provided along East Main Street and at the station. In contrast to the existing free standing racks, it is strongly recommended that the new racks be permanently affixed



Example of permanently affixed bike rack.

to the street¹. Bicycle lockers are also to be provided at the station for commuters, who will leave their bicycles for more extended periods and require greater security. Similar lockers can be found at Somerville Station.

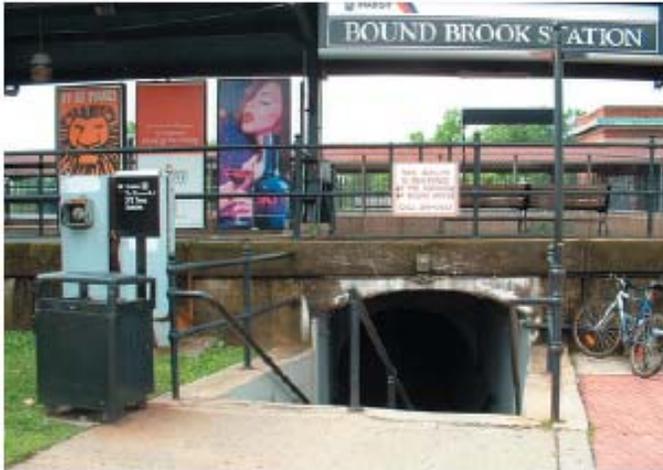
Direct access to the platforms from South Main Street, via a new set of stairs and possibly a ramp, will be particularly valuable for pedestrians and cyclists traveling from South Bound Brook, reducing the need for them to take a circuitous route via East Main Street. If stairs are used, a bike channel is desirable down the staircase, since this will also serve as the primary bicycle access from South Bound Brook. It has been noted that NJ Transit has raised contamination issues, which will need to be resolved as part of a more detailed engineering assessment.

Upgrade Pedestrian Tunnel

The existing pedestrian tunnel connecting the north and south station platforms is a dark and deteriorated passageway. Although the municipality frequently repaints and cleans the tunnel, it remains an unattractive pedestrian connection that appears unsafe.

Proposed development south of the station provides the opportunity to create an upgraded, attractive and ADA accessible facility that serves the station and provides a link between downtown, the waterfront parcels, and the river. If the ramp begins north of the platforms, it may be possible to avoid the use of stairs by taking advantage of the elevation of the tracks through Bound Brook. The new tunnel will need to be wide enough to allow for ample natural light and ventilation. The cost of this would be

1. See, for example, the guidelines from the Association of Bicycle and Pedestrian Professionals, at <http://www.bicyclinginfo.org/pdf/bikepark.pdf>.



Pedestrian-underpass at Bound Brook Station.

unlikely to be justified by the needs of the station alone, but should be considered an integral element of any plans to open up the waterfront for development, and consolidate the freight rail tracks. It is recommended that options to improve pedestrian linkages be considered in detail as part of the freight consolidation study. The feasibility for upgrading the pedestrian tunnel is included as a Problem Statement in Appendix A.

Create Public Open Spaces Adjacent to the Station

In concert with new development, ample and attractive space needs to be reserved around the station for passenger pick-up and drop-off, as well as a civic space. This space may include new paving, landscaping, street furnishings, lighting, signage and public art. A bus shelter will also be needed to provide protection for waiting



Raritan River at Bound Brook.

passengers.

Take Advantage of the Raritan Riverfront

Although the Raritan River is visible from the rail station, Bound Brook's downtown has long turned its back on the waterfront as an amenity. South of the station there are no active or public uses that draw people to the water. Much of this is due to the presence of active freight rail lines and the current ownership of specific parcels. With the development of the Raritan Greenway, the Army Corps of Engineers' Levee Control Project and a renewed emphasis on revitalizing the waterfront in South Bound Brook, it is time for Bound Brook to begin planning for a long-term strategy to transform the waterfront into an attractive and accessible amenity for downtown and the surrounding neighborhoods.

It is recommended that the freight rail lines, which are currently wide apart with "dead space" in between, be consolidated to provide space for new development linked to the station and the riverfront. Relocating one freight rail line north, in order to be parallel to an existing line adjacent to downtown, will create a larger land area that will have direct access to the river. By moving the freight lines and the existing warehouse storage facility, a larger land area is created for use in waterfront open space and development. Some links to the station and downtown may be accomplished through grade crossings, which will formalize the existing paths across the tracks. Vehicle access will be via South Main Street.

Moving the lines, however, will be an extremely expensive proposition, which will require a significant amount of development, possibly housing and related uses, in order to pay for acquisition and moving costs. A future County planning study, in coordination with NJDOT, will explore potential and associated costs. This study also should consider alternative options for an additional freight passing track, which is planned for the 'dead space' between the lines. While moving this facility to the east may involve additional impacts on Middlesex Borough it may be appropriate to reserve as much land as possible for development within walking distance of stations, and move freight facilities to areas with less TOD potential. A feasibility study for moving the rail lines is included as a Problem Statement in Appendix A of the report.

New development should allocate space for a number of strategically located pedestrian connections to and across

the river to the Raritan River Greenway. The riverfront, especially nearer the rail station, is envisioned as future open space to provide a strong recreational amenity for those in both Bound Brook and South Bound Brook.

Bound Brook Industrial Park, currently an isolated site formerly occupied by industries, is located west of downtown between the rail lines along the riverfront and has only one at-grade automobile crossing connecting it to Main Street. The current owner is interested in redeveloping the area into office space. This will require the construction of new crossings that need to be provided to ensure the land use conversion is viable. In addition, a number of other public improvements are recommended:

Improve Queen's Bridge

Queen's Bridge, replaced in the 1980's, connects Bound Brook with South Bound Brook. It has limited capacity for automobile traffic and was not originally designed to accommodate pedestrian or bicycle travel. The ULI Advisory Panel and some officials have recommended constructing a new bridge that will provide a stronger and more attractive connection between the two municipalities. The Borough has attempted to implement this project in the past and found it fiscally prohibitive. The County is currently planning a study for bridge enhancements, which may include either a new bridge or major reconstruction of the existing bridge. Whichever option is selected, the improved bridge should be designed as a strong gateway for each downtown with accommodation for pedestrians and easy access to the Raritan Greenway on either side of the river.

Undertake an Archeological Study of the Historic Stone Bridge

A survey of historic structures in Bound Brook identified an old stone bridge buried in the ground south of the freight rail tracks and east of South Main Street near the riverfront. The Army Corps of Engineers recognizes the historic value of the structure, but has made no recommendations regarding its future. The stone bridge may be excavated and restored and treated as an amenity. However, the level of restoration has yet to be determined as the condition of the bridge is unknown. It is recommended that the Borough pursue an archeological survey of the structure, potentially through a local institute such as Rutgers University, or other experts in the field. The results of the study should determine its significance, level of deterioration and possibility of restoration. If the bridge can be restored, it would be an ideal location for a cultural attraction and heritage park emphasizing the importance of Bound Brook's history and



Example of waterfront trail connection.



Queens Bridge connecting to South Bound Brook.



Example of a multi-use bridge.

its relationship to the riverfront.

5. Concept Plan

Figure 10 presents the overall concept plan for the Bound Brook Station Area. The concept plan creates a vibrant historic downtown that serves residents and visitors with places to live, work and play, while ensuring an economically viable mix of uses integrated with existing assets of the area.

Bound Brook will be a vibrant transit village. An increase in density and mix of uses in downtown, improved public space and carefully managed resources, such as parking for both residents and commuters, will help change the image of the downtown. As a mixed-use downtown served by transit, Bound Brook will play a unique role in the region, combining the historic legacy of many of its buildings with new mixed-use development that will bring a greater vitality to existing businesses and community. The concept includes a strategic expansion of the core of Bound Brook's downtown area both to the north and south, concentrating key services and amenities near the station, and providing a framework for a new 'front door' onto the Raritan River.

Proposed Land Use

A number of sites have been identified as appropriate for redevelopment. Each of them is targeted for a mix of uses. Surrounding the station, land uses are to be mixed, including commercial and retail services on ground floors with housing above, to encourage a more '24-hour' environment. There is the potential for low- and mid-rise structures to accommodate this mix of uses. Surrounding the station area, east of South Main Street and along the waterfront, housing will be the dominant land use, along with some small office spaces and retail stores oriented to major intersections. A flood control closure gate is to be located on the north side of the NJ Transit railroad bridge behind the firehouse and Bolmer Building. In any proposed first floor residential development located between the bridge and the river the first floor elevation should not show any residential living space, but only parking since this is in the flood hazard area where the railroad tracks are located. Upon flooding, the floodgate would close under the railroad bridge and the area would have limited access from emergency vehicles. An emergency response plan will have to be developed to address this issue.

Off-street parking is provided for most development sites.



Example of new mixed-use development.



Example of new mixed-use development.

Residents, employees, and visitors would also be able to use on-street parking, existing municipal lots, and the new deck on the existing NJ Transit surface lot. The new deck will be reserved for commuters and new residents, but will be made available for other users in the evenings and on weekends when commuter demand is low. It is expected that shared use of the deck will be managed by the developer of the NJ Transit surface lot site.

North of East Main Street to High Street, the municipality shall undertake an infill and rehabilitation plan. The primary land uses in this area are to include small professional offices and multi-family housing with institutional uses where appropriate. Specifically, the following uses are to be permitted within the redevelopment area:

- Residential – condominiums, apartment rentals and elderly housing;
- Office – small professional offices;
- Retail – a mix of active services, including restaurants, cafes, book stores, specialty stores; and
- Institutional – municipal offices and other functions.

Proposed Open Space

Bound Brook's Transit Village will emphasize a strong connection with existing open spaces and landscapes. The flood control project will greatly alleviate present concerns about the Raritan River. Attention also will be given to improving stormwater run-off management while transforming the downtown's appearance to be 'greener'. Bound Brook's open space network will have three main components:

Parks & Greenways

Billian Park, located at the eastern edge of Bound Brook, and vacant property located at the northwest corner of East Main Street and East High Street currently provide retention areas for heavy storms. These and other sites adjacent to the river will be maintained to ensure a sustainable storm-water management system for the area. Given the high visibility of the site at East Main and East High Streets, it is recommended to either develop a portion of the site to complete the streetscape, or, alternatively, invest in edge plantings to transform the area into a gateway to Downtown Bound Brook.

It is recommended that the Borough prepare a parks and recreation master plan for the study area to find the most



Example of downtown public open space.

feasible and accessible locations for new parkland. Significant components of the plan should include the potential for a riverfront greenway park that extends along the river throughout Bound Brook, connected to the Raritan River Greenway and new development and the most appropriate location for a central plaza.

Central Plaza

The TOD Concept Plan recommends transforming the existing parking lot at East Main and Hamilton Streets into a central plaza for the downtown. The plaza will act as a focal space that can be used for public gatherings and as a focal point of the downtown.

The parking lot site is ideal for a plaza because of its central location, but other design options may be considered as part of a parks and recreation master plan, including as an alternate use for the bank renovation on Site F.

Connections

The streetscape improvements already completed on a portion of East Main Street will be extended to include all streets within the redevelopment area. Attractive connections are proposed between downtown and the river providing multiple opportunities for commuters and residents to have access to a regional open space system. In concert with these public improvements, areas around the station will need to be upgraded to more attractive open spaces and plazas to serve the new uses.

Proposed Circulation

Streets

Downtown Bound Brook benefits from a cohesive street grid that serves all modes well. The only recommended changes to the street pattern are the extension of Second Street to East Main Street to complete the grid and creation of a wayfinding signage program to facilitate

downtown circulation.

The development sites are all on the existing street grid, and do not require any modifications to vehicle circulation, with the exception of the Waterfront parcel, which can be served via South Main Street.

Transit

The major destinations from Bound Brook – Somerville and Newark/New York – are already served by both bus and rail service, while the DASH shuttle serves the Davidson employment sites. With the exception of commuters to the Newark/New York metropolitan area, however, the market for transit is small at present, partly due to relatively low densities, good freeway access, and ample, free or inexpensive parking.

As development occurs, the market for transit can be expected to grow, particularly if parking is managed to promote ridership, and there will be opportunities to increase service frequencies on key routes.

Parking

There are three key issues related to parking in downtown Bound Brook, all of which are discussed in more detail in Appendix A:

- *Management of common parking supply.* As infill development occurs and the Brook Arts Theatre reopens, there will be increased pressure on parking resources. This means that increasing the efficiency of the existing supply will become critical – for example, through opening up private facilities for shared use, directing motorists to available parking (e.g. the NJ Transit deck for evening and weekend store or theater use), or a new deck in the grocery parking lot. These strategies should be included in a Parking Management Plan.
- *Establishing policies to maintain availability.* Pricing and time limits are two effective ways to ensure that some parking is always available.
- *Consider the amount of parking needed for new development.* Many parcels are constrained and have difficulty in accommodating large amounts of on-site parking. Rather than jeopardizing the quality of the design or reducing the developable area, parking can be provided off-site or on-street, shared with other uses. Considering the lack of available land for surface



Example of a bicycle path alongside traffic lanes and rail lines.

parking, additional parking decks may be needed to accommodate new development, particularly residential. A parking management plan should include an assessment of the amount of parking needed to accommodate new development at build-out, taking into account the potential increase in transit use.

Pedestrian and Bicycle

As mentioned in *Section 5* above, proposed pedestrian and bicycle improvements include creating strong connections through extended streetscape improvements along East Main Street, “bulb-outs” along East Main Street, direct access to the platforms from South Main Street via a new set of stairs and possibly a ramp, and upgrading the pedestrian tunnel.

Alleys

Alleys in Bound Brook are currently considered public rights-of-way and are maintained by the Borough. This treatment should continue, as the alleys are an important asset. Primarily, they allow access for loading, parking and service uses such as garbage, allowing the integrity of the main street frontage to be protected. In some cases, they also have a wider circulation role. They may provide an alternative, direct route for pedestrians, and allow access to in-law units and similar structures that do not front onto the main street.

In the longer term, Bound Brook’s alleys may even be able to support wider functions. In several communities, for example, they have found a niche as pedestrian space that supports outdoor cafes, small stores and similar functions.

Summary of Transit and Access Improvements

Table 3 summarizes the transit and access improvements

Table 3. Proposed Transit and Access Improvements - Bound Brook Station Area

Project	Description/Comments
Vehicular/Circulation	
Extend Second Street	An extension of Second St. through the convenience store parking lot would complete the street grid and provide a greater choice of travel routes. Parking loss would be mitigated by the provision of on-street parking (which is much easier to share). This improvement was recommended in the ULI and other studies.
Parking Management Study	Downtown Bound Brook has a limited parking supply, with fragmented ownership and many private, reserved lots. A parking management study should be prepared that includes an assessment of parking needs at build out, opportunities for shared parking, parking decks, and a parking management organization. This organization may include a partnership between the municipality, a merchants' association, and/or NJ Transit and the preferred developer of the commuter lot. Duties of the parking management organization include setting meter rates, allocating revenue and managing the new garage.
Transit	
Provide Bus Shelter	The existing circulation pattern provides good opportunities for bus/rail interchange at the station. A bus shelter would provide protection for waiting passengers.
Pedestrian	
Grade-Separated Crossing at Station	A new undercrossing at the station would link downtown to the riverfront and new development south of the station. It would also provide ADA access to the eastbound platform. If the ramp begins to the north of the platforms, it may be possible to avoid the use of stairs. It should be wide enough to give the sense of light and openness.
Access To Station from South Main	Direct access to the platforms from South Main St., via stairs and possibly a ramp, would be particularly valuable for pedestrians and cyclists traveling from South Bound Brook. If stairs are used, a bike channel would be desirable.
Upgraded Crossings on East Main Street	Corner or modified bulbouts are likely to be the primary tool here to make crossings easier and safer, particularly outside the station at East Main and Hamilton Streets.
Raritan Greenway	Planning and construction is already underway on many parts of the Greenway.
Bicycle	
Bicycle Parking	Secure on-street racks should be provided along East Main St. and at the station. In contrast to the existing free standing racks, they should be permanently affixed to the street. Bike lockers should also be provided at the station itself.
Borough Bicycle and Pedestrian Plan	This study would identify key pedestrian and bicycle projects to complete the Borough's network. It should also consider bicycle parking requirements.
Other	
Freight Rail Track Consolidation	Consolidating the freight rail tracks through the station, allowing the most southerly track to be moved to the north, is essential in opening up the land south of the station for development. Somerset County is planning to initiate a study to analyze the potential for this strategy.
Queen's Bridge Improvements	Several studies, including the ULI report, have already recommended gateway and other improvements to the Queen's Bridge, which should be pursued in conjunction with a County initiated study for bridge replacement or renovation.
Alleys	Alleys may provide an alternative, direct route for pedestrians, and allow access to structures that do not front onto the main street. In the longer term, Bound Brook's alleys may even be able to support wider functions, such as pedestrian space that supports outdoor cafes, small stores and similar functions.

recommended for the Bound Brook TOD station area.

6. Implementation

The concept plan presents good ideas for the development of Bound Brook Transit Village. The next step will be to develop a detailed master plan. Due to the discontinuity of sites for redevelopment and improvements, it is important to develop a strategic phasing of the plan, with continuous community involvement.

Land Use Policy / Zoning

The current zoning in the study area is commercial and residential, which already provides for a mix of uses that support the TOD concept. The Borough has also recommended a Transit Overlay District as part of the Redevelopment Plan, which promotes mixed uses, provides reduced parking with a shared parking agreement, streetscaping, and design guidelines to facilitate the development process while encouraging quality design. The Transit Overlay District will be a significant improvement for creating opportunities for and encouraging TOD development in the downtown by facilitating the development approval process. Some additional elements to include in the zoning ordinance and/or other municipal policies to further encourage TOD developers include:

- Density bonuses to encourage residential above first floor retail, conformance with design guidelines, and use of façade improvements (Borough is considering this strategy with the RAC)
- Contextual design standards that relate setbacks, bulk, and building heights to adjacent uses rather than a static dimensional requirement
- Strong sign controls coupled with the façade improvements program, include funding for sign replacement
- Fast track permitting and review process for properties located within the Transit Village Overlay
- Property Tax Abatement for new or development or redevelopment located within the Transit Village Overlay
- A wayfinding and signage plan to help visitors, shoppers, and residents navigate the town, find parking, and find points of interest (library, municipal

building, train station, restaurants, etc.)

Public Participation

Public participation has played, and will play, a major role in this project. This is especially true as the nature of the issues here require a visioning process to occur. It is vital for the success of new development projects that the community of Bound Brook helps to direct these projects towards a broader vision for the township within its regional setting. The concept proposed here may act as a foundation to formulate objectives for the township's future.

In order for transit-oriented development to be successful in Bound Brook, careful land management is necessary to ensure that the best mix of uses is incorporated into the plan. While land use is important, density of buildings is equally vital to ensure that a deliberate approach is taken towards building and accommodating new uses and new structures in the development areas recommended.

Any buildings and areas that may be recommended to be condemned need a thorough review process. In deciding these values and qualities for a renewed downtown, the local and municipal bodies need to have a dialogue with the community, throughout the entire process of redevelopment, to ensure that the needs of a range of stakeholders are heard.

It is also recommended that municipal and local organizations, such as the Merchant's Association, play a strong role in guiding the concepts and recommendations forward. Bound Brook has become more and more diverse socio-economically. Emphasis should be placed on celebrating this diversity to become a central theme for new development and public improvements, as recommended in the ULI Study. The Borough Planner has initiated efforts to embrace cultural diversity by seeking funding for teachers to provide adult education in English as a second language. Other opportunities to engage different cultural groups are to locate areas for festivals and gathering spaces in a parks and recreation master plan and reach out to neighborhood leaders to promote

community-wide ethnic festivities.

Environmental Sensitivity

Bound Brook has a long history of flooding. A levee has been proposed to help control flooding in most of downtown and, once completed, may allow for other uses to be incorporated within. With the entire downtown within the floodplain of Raritan River, it is important to understand the workings of the river, its history and how the levee will function. Prior to most new building construction, it is pertinent to ensure that the levee project and any drainage systems are in place.

Public awareness and education is therefore important for the community to know about the existing environmental conditions of their town center and neighborhoods.

A key component of transit-oriented development is to strategically develop densely near the station while allowing surrounding areas to be developed as or retained as open space. As part of this TOD project, it is recommended that the public be involved with the implementation of the open space plan. Due to the lack of parks and open space in Bound Brook, it is important for the community to participate with the local, municipal and State agencies involved in creating the open space network that will benefit the residents.

Multiple Ownership

The phasing plan will guide the development through implementation. It is recommended that once a more detailed phasing plan is prepared, parcel acquisition is also conducted in phases. The parcels vary contextually: those that are part of the Developer RFP process, parcels nearer the waterfront, and the other downtown parcels that have been recommended in the concept plan.

While the concept plan described in this report presents the approach for Bound Brook to become a vibrant center, it is the partnership of property owners with local leaders that will help to move the concept into a detailed development plan. In developing an idea, for example the block on which the Brook Arts Center is located, it is this partnership that will be able to achieve the goals set out

for the success of the concept.

Public-Private Partnership

Hence, it may be concluded that this partnership is crucial to the redevelopment of Downtown Bound Brook. It is strongly recommended that the municipality coordinate with officials across the river in South Bound Brook to implement the Raritan River open space plan. Coordination with Somerset County, NJ Transit and Middlesex County also is advised in the hope that the best uses will locate in downtown, while bringing more commuters and thus increasing ridership. Parcel acquisition may also be accomplished through coordination. Development on the waterfront parcels, involving consolidation of the freight rail tracks, and improving pedestrian access to the Raritan River will also require considerable participation from CSX.

Transit Village Designation

Bound Brook has already achieved Transit Village designation in October 2003. The Task Force will be monitoring redevelopment plans and can assist with overcoming barriers to implementation. If recommendations made in this report are pursued by the community, it will be very important to take advantage of funding opportunities reserved for Transit Villages. With all of the current planning efforts and future plans recommended in this report, it is very important for the Borough to regularly interact with the Transit Village Task Force. Many strategies recommended in this report include coordination between the Borough and the County. This cooperative effort should include regular meetings with the Transit Village Task Force and the County to implement the steps involved in the TOD plan.

Implementation Obstacles

Many of the strategies recommended in this plan have already been attempted by the Borough, but have not been implemented due to obstacles encountered with conflicting agency policies, ownership issues and funding limitations. These obstacles have been described throughout the various recommendations presented in the report, along with potential solutions for breaking through road blocks. The following *Table 4* summarizes the obstacles and potential solutions and *Table 5* summarizes

Table 4. Implementation Obstacles - Bound Brook Station Area

Obstacle	Potential Solution
Parking limitations	Prepare a parking management plan - determine build-out demand for parking, include shared parking agreements, decking, and price options for on-street parking
Upgrade Pedestrian Tunnel - NJDOT raised contamination issues	Coordinate with the County to prepare a feasibility analysis to identify alternatives and/or materials that won't raise contamination issues and present findings to NJDOT.
Move Freight Rial Lines - fiscally prohibitive and not supported by NJ Transit	The County will prepare an intermodal planning and engineering study to determine feasibility. The study may follow with an NJTPA grant.
Improve Queen Street Bridge - fiscally prohibitive	The County is planning a major renovation project for the bridge.
Extend 2nd Street to East Street - ownership issues and limited funding.	Start discussions with the owners of affected properties about acquisition for right-of-way. Apply for funding through NJTPA via the Local Scoping/Local Lead Program. Also explore opportunities with US EDA and NJ EDA to continue improvements to Brook Arts Center.

the overall implementation steps for the Bound Brook Station Area.

Whenever the Borough reaches a road block concerning a planning initiative they are investigating, they should involve the County Planning Board early in the planning process. The Borough is encouraged to reach out to the County to work as a facilitator and bring the necessary government agencies and other stakeholders together to brainstorm ideas and develop action steps to overcome

Table 5. Implementation Summary - Bound Brook Station Area

Implementation	Next Steps	Agency Involvement
Selection of Preferred Developers	Developer solicitation and negotiations.	Bound Brook Borough Council; Bound Brook Redevelopment; Advisory Committee
Land Use Policy	Zoning changes for new uses; Contextual design standards; Zoning incentives.	Bound Brook Borough
Access Standards	Sidewalk width guidelines; Turning radii guidelines; Street width guidelines; Emergency Vehicle Access guidelines.	Bound Brook Borough; Somerset County
Public Participation	Establish development program and design guidelines with the community.	Bound Brook Borough; Merchants' Association; Other community groups
Environmental Sensitivity	Public awareness and education of flooding, environmental conservation.	Army Corps of Engineers; NJ Office of Smart Growth ; NJ DEP
Multiple Ownership	Preparing detailed phasing plan.	Bound Brook Borough; Somerset County Planning Board
Public-Private Partnership	Coordination to implement Raritan River Open Space Plan; Coordination for organizing land uses in downtown; Parcel acquisition.	Bound Brook Borough; South Bound Brook Borough; NJ Transit; Somerset County; Middlesex County
Transit Village Designation	Monitoring TOD implementation.	Bound Brook Borough; NJ Transit Village Task Force

Part III – Station Area



Somerville Station, NJ.



Main Street, Somerville.



Wooded area in the northern part of the site.

B. SOMERVILLE STATION AREA

1. Site Context

Somerville and Raritan Boroughs and parts of Bridgewater Township are designated as the Somerset County Regional Center by the New Jersey State Planning Commission as part of New Jersey State Development and Redevelopment Plans. Downtown Somerville is designated as one of three core areas within the Regional Center, and the landfill has been identified as an important development site. This designation provides expedited approvals and priority status from State agencies for projects within the Regional Center.

The landfill itself is located in the southwest of the Borough. Triangular in shape, it is bounded by the NJ Transit Raritan Valley rail line on the north, US Route 206 on the southwest and roughly by South Bridge Street on the east. The site is the largest redevelopment site in the Somerset County Regional Center. The Landfill Redevelopment Area was established in February 1998 and amended in 1999. The redevelopment area is comprised of 20 properties totaling 115 acres, of which the Borough owns 58 acres.

2. Site Analysis

Existing Land Use

Figure 11 documents the existing land uses in the Somerville landfill and surrounding areas. Somerville Borough purchased the landfill site in the 1940's; prior to that the land was primarily used for agricultural purposes. The Borough used the site as a sanitary landfill until it was closed by NJ DEP in the 1980's. The northwest part of the site (containing wetlands) is also owned by the Borough and is adjacent to the Washington Place neighborhood; this area was not part of the landfill operation. The former Flemington NJ Transit Line lies along property owned by both the Borough and NJ Transit. This rail line was removed and the land is currently vacant.

The rest of the site has six other property owners including:

- Richards Fuel Oil Company, a fuel oil delivery service.;
- SJS Holding Company owns some vacant property previously used as a landfill;
- Private owners of a parcel that was also used as landfill area suspected to have been contaminated by asbestos;
- Sarah Jane's Restaurant along Route 206

Figure 11. Existing Land Use - Somerville Station Area



- The New York Diner
- P.C. Liquidation Trust owns the sixth parcel.

There are some existing small businesses still operating along the periphery of the site including a fuel oil delivery service, restaurants, and the NJ Transit parking lot. Within the site, there are two distinct landfill mounds separated by a small creek or drainage swale that crosses to the southern point of the site.

Environmental Factors

Environmental conditions within the study area are illustrated on *Figure 12*. The landfill site, located just north of the Raritan River, is partially located in the Flood Hazard Zone.

Existing wetlands are also present in the northwest portion of the site. The wetlands make up approximately 13 acres and extend along a drainage swale to the southeast corner of the site. The wetlands are categorized as ‘ordinary wetlands’ by the New Jersey Department of Environmental Protection (NJ DEP), and are regulated, but not necessarily protected. State regulations do require

that when disturbing over one acre of wetlands, there be two acres provided elsewhere in the development. It is important to note that the wetlands are beneficial to the community as they help clean the groundwater, regulate stormwater, and provide habitat for the local flora and fauna.

The fact that the site was operated as a sanitary landfill as recently as 1984 is a significant environmental issue. According to a study conducted by Malcolm Pirnie, NJ DEP documented an oil spill on the site in 1980. There was no documentation of remediation of the spill. The Pirnie study also indicates lead contamination in the ground water and recommends further investigation of contamination levels.

The vegetation cover on the landfill mounds ranges from sparse weed growth on the west mound to heavy weed growth on the east mound. Trees and dense brush are present along the full length of the central portion of the drainage swale separating the two landfill mounds, as well as along the site perimeter along the north, northwest and southeast parts of the site.

Figure 12. Environmental Feature - Somerville Station Area



Recreation and Open Space

Route 206 separates the site from the Raritan River Greenway, creating a significant barrier between the river, the landfill site, and downtown Somerville. The site is also separated from an existing driving range by Route 206. Consequently, there currently is a lack of open space and recreation opportunities accessible from downtown Somerville.

Existing Circulation

Figure 13 depicts the existing circulation network for the Somerville Station Area, including roads, transit, and pedestrian activity.



Wooded areas on the Somerville landfill site.

Figure 13. Existing Circulation - Somerville Station Area



Roads

Surrounding development has adequate roadways to serve the community. These are arranged in a grid pattern to the north, east and northwest of the site. There is no direct road access onto the landfill site. However, some of the properties surrounding the site could provide opportunities to connect through the site from major access roads, including Veteran’s Memorial Drive, South Bridge Street, and Route 206.

Public Transit

Existing mass transit includes bus routes 65/66, 114 and the Express 117 along Main Street; Wheels Route 884 connecting Clinton’s NJ Transit Park-and-ride facility to the Lebanon and Somerville train stations; and the SCOOT which also operates through the downtown area. The Somerville station is located along NJ Transit’s Raritan Valley line, running approximately hourly for most of the day and picking up most of its passengers during peak hours. Further information about Somerville’s transit operations are summarized in *Tables 6a to 6c*.

Parking

Parking is currently provided along most streets, as well as in the large surface lot that is currently part of the Landmark Mall. The NJ Transit Station has a large surface lot. There are two parking garages: one across Veteran’s Memorial Drive from the station and one that is not well-connected to the train station via walkways. It is not clearly visible from the station. Thus, there is ample existing parking within downtown for the existing uses, and there is potential with the introduction of new uses to provide additional parking while improving the access to existing parking.



NJ Transit Park-and-Ride.

Table 6a. Somerville Station Characteristics

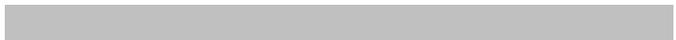
Parking Occupancy (FY03)	Average Weekday Boardings (FY03)	Change from FY02	Local Bus Service	Access Mode Share - Drive Alone/Park (96/98)	ADA Station
65%	587	-10.79%	Newark 65 NYPA 114,117 Wheels 884	69%	No

Table 6b. Somerville Station Average Weekday Rail Boardings, 2004

1992	1995	1999	2000	2001	2002	2003
457	616	772	706	723	658	587

Table 6c. Somerville Station Area Mode Split Data

Private Vehicle	Drove Alone	Public Transport	Bus	Rail	Bike	Walk
87.88%	77.62%	3.24%	1.51%	1.46%	1.18%	5.06%



Pedestrian and Bikeways

Downtown Somerville has a very good sidewalk network, although its condition starts to deteriorate to the south of downtown. Sidewalks along Veterans Memorial Drive, for example, are narrow and have no links to the river or to the landfill site. There is a multi-use unpaved path on the north side of US 206 which is underutilized and the pedestrian tunnel under the tracks at the station is unpleasant and not ADA accessible.

3. Redevelopment Activity

Within downtown Somerville, several redevelopment and improvement projects have been initiated or have recently been approved. These are described below.

West Main Street Redevelopment

In February 2004, the Borough's Planning Commission adopted the West Main Street Redevelopment Plan (see References Section) that includes two properties to be developed as mixed-use and downtown's "western anchor". One of the two sites is the Landmark Mall, which recently received approval from the Borough Planning Board for 136,000 square feet of retail, 73,000 square feet of office space, and 265 luxury apartment units.

Eastern Central Business District

The Somerville Borough Council designated the eastern portion of the Borough's CBD an area in need of redevelopment. The redevelopment plan is intended to help diversify the tax base of downtown Somerville while integrating the existing and future uses in the downtown area by improving the existing development pattern and streetscape. A proposal for the redevelopment was prepared by the Somerville Planning Board, along with a consultant group, in May 2004².



Pedestrian path off Main Street in Somerville.



Landmark Mall entrance from Main Street in Somerville.



East Main Street in Somerville.

2. Borough of Somerville Planning Board, et al. Redevelopment Plan – Eastern Central Business District. Borough of Somerville, May 2004.

4. Key Challenges to Redevelopment

As a vibrant historic downtown, Somerville requires few improvements to attract new development. However, the challenges that do exist are primarily related to the landfill site, including:

- Identifying the contaminants on site;
- Remediating the site adequately to accommodate new uses;
- Preserving the wetlands and some floodplain areas for open space;
- Providing the right mix of uses and site development phasing to complement those that exist in downtown Somerville, as well as those planned for the new redevelopment projects;
- Efficiently providing circulation through an irregular-shaped site that lies between a downtown area and a major state route; and
- Integrating the site with the downtown and the Eastside residential neighborhood.

Figure 14. Key Issues - Somerville Station Area



5. Recommendations

The 104-acre landfill site represents a significant economic and environmental opportunity for Somerville. It is the last large redevelopment site in Somerville and represents approximately 7 percent of the Borough's total land area. Redeveloping the site should entail a sustainable, committed approach based on publicly endorsed objectives. The following recommendations are based on objectives established by local officials and representatives and the I-Team.

Environmental Integrity

Much of the landfill site contains wetlands and lies within the Raritan River 100-year floodplain. The wetlands in the northwestern portion of the site provide necessary stormwater management 'services' and should be retained. The recommendations for development, therefore, include accommodating new uses without disturbing existing wetlands and utilizing "green infrastructure" approaches to enhance these resources.

Of critical importance will be the results of an environmental and water and soils study of the landfill site currently underway. The study will identify the level of contamination on site and the cost of remediation. This will impact not only the final development plan, but also the architectural approach for different portions of the site depending upon the types of uses that can be located on the first floor.

The areas within the floodplain also need to be addressed, particularly those adjacent to the wetlands that extend towards Route 206. Landscape treatments including natural bio-swales as well as specific engineered designs need to be considered in this area to address the impact



Wetlands area within floodplain.

of potential flooding.

Within this fabric of preserved land, the plan illustrates opportunities for new recreation space and trails throughout the landfill site. These will be critical assets to serve not only the new residents, businesses, and workers that will eventually occupy the site, but also the surrounding communities that have expressed a strong need for attractive and accessible open space. Recreation fields require flat, dry land in close proximity to a recreation center. A recreation center is proposed based upon a framework of streets and blocks as a first phase in developing the landfill site. Trails are also envisioned to connect to existing and new streets within the landfill site, extending north and south into downtown, Route 206, and to the Raritan River Greenway.

The system will traverse the wetlands through the proposed construction of elevated trails to enable pedestrian and bicycle access from neighborhoods to the north and west.

Respecting the environmental constraints and providing amenities for the new development and Somerville Borough results in approximately 40 acres of open space on the landfill site.

Mixed-use Development

The landfill's proximity to both downtown Somerville, Route 206 and diverse neighborhoods provides a strong opportunity to connect them socially, environmentally, and economically. Dense development with a diverse mix of uses is needed to optimize the opportunity the rail station provides. Along with supporting services and amenities, it will increase ridership, creating a unique and walkable environment for residents, merchants and commuters.

Future development of the landfill will strike a balance in providing retail and commercial services to the area while complementing, not competing with, the existing Main Street retail district. The concept plan recommends focusing retail and commercial uses in the station area, defined predominantly by a ten-minute walking circle, and along Route 206 in a dense street grid. All commercial uses will be integrated within mixed-use buildings preventing low density strip commercial uses that are dependent on automobile use. Higher density development in the station area, ranging from four to seven story buildings, will contain ground floor retail with housing and office space above.

Further actions to meet this objective include the following:

Negotiate Shared Parking Agreements

To build a dense, urban transit village while accommodating the park-and-ride passengers that use the rail will require a comprehensive parking strategy for the area. Many under-utilized parking facilities, such as Post Office Plaza, are close to the station and may be used by park-and-ride commuters. It is strongly recommended that the municipality, NJ Transit and/or another agency negotiate shared parking arrangements as they will greatly reduce the amount of new parking that will be necessary. Shared parking is a common theme between all the station areas, and is discussed in detail in Appendix A.

Create a "Station Park" adjacent to the Rail Station

The concept plan proposes a new open space to serve as a central gathering place for the station area and surrounding neighborhoods. The park will have views to the station from buildings and streets in the landfill site and will be surrounded by active retail and entertainment. Pick-up and drop-off for the station, bus shelters, bicycle racks, decorative paving, landscaping, lighting and signage will all be an integral part of the park, its access and its amenities. Depending on the level of necessary excavation of the existing NJ Transit parking lot, there may be opportunities for including parking below the square.

Enhance the Visibility from Downtown and Route 206

Somerville Station is currently not located on the busy Main Street corridor, but two blocks beyond downtown and has limited visibility from the surrounding areas. The concept plan proposes a landmark building or structure to be part of the new development to enhance the visibility of not only the station but also the development on the landfill site from Main Street and Route 206. The structure may be a tower element, a mixed-use building or a free standing public art element. The intent is to create a distinctive and visible image of Somerville for residents, businesses, commuters and visitors.

Entertainment venues as well as a new civic building will be located within this area. Retail and commercial uses along Route 206 will be designed to exhibit the urban character that presently exists in Somerville, containing housing and offices above. A hotel and conference center will also be located along Route 206 within the proposed urban street grid.



Mixed-use development in downtown Somerville.



Mixed-use in downtown Somerville.



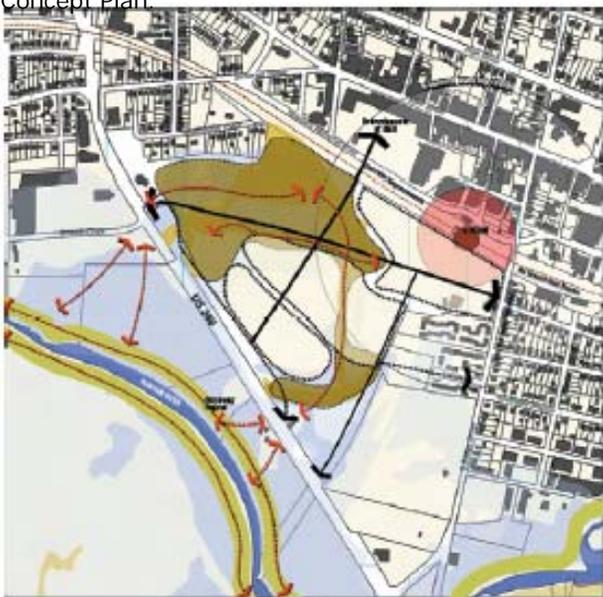
Example of a station plaza.

The exact mix and phasing of retail and office space may be determined by a comprehensive market study as part of the next major task of site planning. The concept plan creates a framework for development opportunities, the most appropriate being determined by economic research, local objectives, public participation and private investment.

A diverse mix of housing is proposed throughout the site to attract new residents that see the economic, social, and environmental benefits of a walkable downtown environment served by transit. Because of the site's downtown location, the proposal recommends a variation in housing densities and types with the overall objective of promoting concentrated high density development that financially supports environmental remediation, infrastructure investment and a pedestrian-oriented network of streets and services. The housing types include attached homes, apartment buildings, condominiums, live-work units and elderly housing.

Create Strong Connections to Surrounding Neighborhoods

The layout of the landfill site development is contingent upon its ability to effectively link to the surrounding context. The concept plan is to design a circulation system that connects with surrounding streets while creating an internal grid pattern of major and minor streets to serve the new development. Specific street connections are discussed under the Proposed Circulation section of the Concept Plan.



Recommended connections through the study area.

Create a Boulevard or Local Access way on the north side of Route 206

One important question relates to the character of US 206 as the design of the adjacent development will depend on how the community sees the role of this arterial. If its function is purely to speed traffic past the site, then a more substantial buffer between US 206 and the parallel street with fewer access points serving the development is desirable. If, however, the arterial is to serve as a gateway to Somerville and mark the transition to a more urban area, particularly if more urban redevelopment is sought in the long-term for the strip commercial uses to the west (around Washington Mutual), then a multi-way boulevard or similar design should be considered. This would involve the construction of a local, two-way access way to the north of US 206, separated from the through-traffic lanes by a planted median. *Table 7* on the following page provides some examples of the contrasting approaches.

Regardless of the precise design of the facility, it is critical to engage NJDOT early and often in this design process. The locally preferred option may well include a vision of Route 206 as a slower-speed street that provides a transition to the more urban fabric of Somerville. This might conflict with NJDOT's concerns with regional traffic flow. Early discussions may help to identify ways in which these approaches can be mitigated.



Existing character of Route 206 along the landfill site.

Table 7. Approaches for Local Access on the North Side of Route 206 - Somerville Station Area

	Major Function of Route 206	
	<i>High-Speed Regional Traffic</i>	<i>Gateway to Urban Community</i>
<i>Access</i>	<ul style="list-style-type: none"> • Aim is to maximize vehicle throughput posted speed • Left turns prohibited • Jug-handles and flyovers used to limit impact of turning movements on highway capacity • Access consolidated at one or two points 	<ul style="list-style-type: none"> • Aim is to slow vehicles and give drivers visual cues that they are entering an urban area. • Left turn pockets preferred; these consume less land than jug-handles, have less visual impact, and slow vehicles turning into the site. • Multiple access points for both northbound and southbound traffic, to increase connectivity and reduce flows on individual streets
<i>Buffer</i>	<ul style="list-style-type: none"> • Wide, dense buffer between Route 206 and adjacent development, to minimize noise and visual impacts 	<ul style="list-style-type: none"> • Development addresses US 206, providing an urban gateway to Somerville. Pedestrians, bicyclists and local traffic use a local access road, with a planted median to separate from regional traffic

Introduce Traffic Calming

Traffic calming measures, along with the provision of multiple access points, will protect adjacent neighborhoods from spill-over and thru-traffic. These include physical measures, such as sidewalk bulb-outs at intersections, while turn restrictions (right in, right out) can be equally effective.

Improve South Bridge Street

Redevelopment of the light industrial uses on South Bridge Street will help to improve pedestrian conditions. Streetscape improvements such as widening sidewalks, corner bulb-outs and trees will further improve the pedestrian environment and connections throughout the downtown area and into the landfill site. It is strongly recommended that Somerville consider a comprehensive approach to improving South Bridge Street between Route 206 and downtown. The street's current character is comprised of narrow sidewalks, few pedestrian amenities and a mix of properties that may be considered for redevelopment with uses more supportive of a pedestrian-oriented environment. Lighting, signage and traffic calming at key intersections are an ideal first phase to begin a long-term transformation of the corridor that addresses the existing conditions noted above. Intersection improvements may also be warranted based on the final landfill development plan.

Redesign of Veterans' Memorial Drive

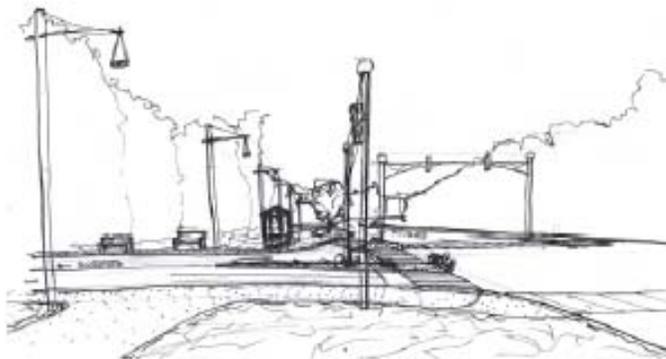
Veterans' Memorial Drive is a major barrier between the station and new development to the south, and between the station and the Main Street retail corridor. Four lanes of traffic may be more than necessary given the present volumes. A traffic study will determine the feasibility of reducing it to the suggested 2 lanes of traffic, with wider ADA compliant sidewalks, 10-hour metered parking on both sides, bulb-outs at crosswalks, and bike lanes. This area should incorporate the same attention to streetscape and facade detail as Main Street. An improved crosswalk at the station entrance should also be provided to strengthen links to downtown. The redesign of Veterans Memorial Drive is included as a Problem Statement in the Appendices.

Shuttle Service

The future Raritan-Somerville-Bridgewater shuttle is planned to skirt along the site, entering Somerville along Somerset Street. Its diversion via US 206 through the development site via the Orlando Drive intersection will add to travel times, and is not recommended initially. However, this connection is likely to be more efficient and convenient once a critical mass of community-serving uses is built adjacent to the station. It is recommended that major streets through the site be designed to accommodate transit vehicles.

Provide access from Route 206

Route 206 is a major thoroughfare traversed by over 24,000 vehicles per day. Thus, the ultimate success of the landfill site development will depend upon access to the site from both northbound and southbound traffic on Route 206. Access points from Route 206 must be carefully designed as the character of this frontage will represent not only the new development but Somerville as a whole. Landscaping, lighting and public art must be considered as integrated components to tying into Route 206. More detail on specific connections to US 206 is provided in the “*Proposed Circulation*” section below. Any proposed access from Route 206 will need to be coordinated with NJDOT.



Proposed east access road to Route 206.

6. Concept Plan

Figure 15 presents the overall concept plan for the Somerville Station Area. The Somerville landfill development will emerge as the new front door to Somerville bringing new uses and amenities to downtown and surrounding communities. Its successful development will extend and reinforce the urban, pedestrian-oriented character of downtown, enveloping the rail station within a dense and vibrant transit village. Where currently the landfill obstructs local connections, the new transit village will provide a network of automobile, transit, pedestrian and bicycle links that will facilitate easy access to downtown, the rail station, local neighborhoods and to the green corridor along the Raritan River. New residents living in a denser, more urban fabric will build a demand for new retail services, entertainment and other amenities, all within close proximity to the rail station. The concept plan for Somerville is envisioned to respect and enhance open space on-site, reserving at least 40 acres for storm-water management, passive open space and trails, recreation facilities, and small parks and plazas.

Proposed Land Use

The land use concept includes a mixture of uses. The heaviest concentration of retail and commercial space is recommended in two areas: along US 206 and within the core station area. A variety of housing is proposed throughout the site including units above commercial spaces, attached townhouses, live-work spaces or stacked flats, apartments, and elderly and condominium developments. The uses are nested within a network of open spaces throughout the site. Consideration should also be given to encouraging “green building” design based on LEED criteria³.

From a workshop held with stakeholders as a part of this process, a wide range of potential uses was suggested that is consistent with mixed-use development. Of critical concern at the workshop was the desire to allow dense development, progressively decreasing with distance from the station, to avoid automobile-oriented, single-use development.

The following list includes preferred land uses for the landfill site identified by workshop participants:

- Offices
- Municipal court

3. LEED: Leadership in Energy and Environmental Design Registered Project Checklist: https://www.usgbc.org/Docs/LEEDdocs/LEED-NC_checklist-v2.1.xls

- Community services
- Community serving retail
- Restaurants
- Entertainment
- Open Space
- Recreation center
- Mix of residential types and densities
- Live/work Housing
- Elderly Housing
- Hotel and conference center

Additional uses recommended by the 2004 New Jersey Mayor’s Institute on Community Design (MICD) include a new emergency services facility on Veterans Memorial Drive and promotion of commercial development along Franklin Street to complement the landfill redevelopment.

Open Space

An integrated open space network offers a setting within which to develop the mixed-use concept plan, and provide green spaces for passive and active recreation, within the station area and the rest of the site.

Retaining wetlands and utilizing green infrastructure design elements will allow for a stormwater management approach that will support new development. The open space concept is derived from the existing wetlands, streams and drainage pattern currently on site, and takes advantage of proximity to the Raritan River. The open space network also buffers development from heavy traffic, while providing adequate green space for recreation.

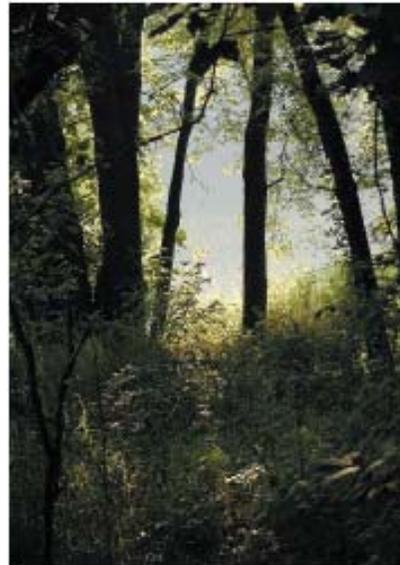
Ample space also has been proposed for new parks and plazas, providing numerous locations for outdoor activities and gatherings. The concept plan emphasizes working with the environmental constraints, and translating them using ‘green’ approaches, while investing in public improvements that utilize appropriate landscaping and eco-friendly materials.

Parks & Wetlands

Large open spaces are located in the northwest and southeast portion of the landfill site where existing wetlands are located. A large portion of these open spaces will be used for stormwater retention. Adjacent to these areas and along proposed streets, the concept plan illustrates opportunities for recreation space and practice fields.



Example of a public plaza.



Wooded area in northwest section of the landfill site.

Small plazas and parks are integrated within the development. The main plaza, or “Station Park”, is located at the entryway to the rail station and is surrounded by retail and office uses. Smaller neighborhood parks are recommended within the central portion of the development to provide amenities for new housing while retaining the smaller wetlands network throughout the floodplain area. The exact location and design of these parks will be determined after further environmental and cost assessment.

Greenways

A trail system is proposed to take full advantage of the proposed development and open space network. Pedestrian and bicycle trails are proposed along all streets and within green spaces creating a network that links the rail station, downtown, surrounding communities and the Raritan River Greenway. In addition, the 2004 New Jersey MICD recommends a Davenport Civic Green Corridor along Davenport Street to create a visual link between Peters Brook, Somerville Middle School, the downtown mall redevelopment site, and the landfill site via the Davenport Street tunnel extension.

Proposed Circulation

Streets and Boulevards

Major connections to the surrounding grid are illustrated on *Figure 15* and described as follows:

- *South Bridge Street.* Distributing traffic to and from South Bridge Street is an important part of the plan. Both Second Street and Holly Glen Road may be extended into the landfill site across South Bridge Street. They will link the neighborhood street and block pattern into the landfill area, while at the same time being designed to discourage through traffic into the Southside Park neighborhood.
- *Davenport Street Underpass.* Davenport Street is planned to be extended as part of the Landmark Mall redevelopment. The intention is to continue the street via a rail under-crossing into the landfill site to provide a north-south link. The tracks are already elevated, allowing a grade-separated crossing to avoid steep roadway gradients. The Davenport Street underpass is included as a Problem Statement in the Appendix B.
- *Orlando Drive and Route 206 Intersection.* The existing intersection is signalized with a jug-handle for



Example of a greenway trail.

northbound traffic to turn left onto Orlando Drive. There are two options for providing access to the site: 1) left turn pockets may be provided for both northbound and southbound traffic in order to slow vehicles turning into the site, reduce the amount of land required, and transition to a more urban environment (provided there is sufficient capacity to accommodate all turning movements); 2) access to the site for southbound traffic may be provided through a reverse jug-handle south of Orlando Drive.

- *Between Orlando Drive and South Bridge Street.* A new signalized intersection between Orlando Drive and South Bridge Street is important for two reasons: (1) to provide additional access for southbound traffic on US 206, while alerting motorists that they are entering a more urban area; and (2) to provide access for pedestrians and cyclists to the Raritan Greenway. The concept illustrates a potential location for this intersection in the hope that it will become a main gateway to Somerville.

Concerns have been raised about the feasibility of completing this new signalized intersection. A second option is to build an urban type flyover bridge for southbound traffic to enter the site from US 206 in that same location, and to allow pedestrians and cyclists to access the Raritan River Greenway.

This option is not the preferred recommendation for reasons of cost, aesthetics, and land consumption. In addition, the flyover will not give drivers physical cues that they are entering an urban area where slower speeds are appropriate. If a signalized intersection is not deemed feasible, a pedestrian and bicycle-only bridge is preferable, leaving southbound vehicles to enter via Orlando Drive. However, if it is pursued, the bridge must reflect the best in contemporary design to serve its function as a gateway marker. Public art, lighting, signage and attractive materials should be integrated in its design.

Between these connections outside the site, the design overlays a grid network of streets including alleys for rear parking access. This grid will need to be adjusted based upon further information regarding the condition of the soils on site. The concept illustrates areas where designated wetlands intersect with the grid and require specific design attention in terms of landscaping and storm-water management.

Public Transit

Main Street will continue to be the main bus transit spine of Somerville, with services running north to Bridgewater Commons and east to Bound Brook, Plainfield and Newark/New York. Provided good pedestrian connections are made via South Bridge Street, Davenport Street and at the station itself, these will be easily accessible from the development site. A limited number of routes will continue to serve the station directly, as at present. It is undesirable for all routes to detour to serve the station, due to the impact on travel times.

In the long-term, additional service may be provided via the planned Raritan-Somerville-Bridgewater shuttle. While most local bus service is designed around regional commuting patterns, the community shuttle will provide service designed to meet demand for local transit trips. The route is currently proposed to skirt the site, entering Somerville along Somerset Street. Diversion via US 206 and entering the development site via the Orlando Drive intersection will add to travel times, and is not recommended initially. However, this is likely to make sense once a critical mass of community-serving uses is built adjacent to the station. Key streets, particularly the continuation of Orlando Drive to Second Street, should be designed to accommodate transit vehicles.

Parking

NJ Transit currently has more than 400 park-and-ride spaces in a surface lot on the development site. This can be reconfigured as follows:

- A shared-use structure on Veterans Memorial Drive, backing on to the rail right-of-way;
- Negotiated shared-use agreements at the two parking decks north of the tracks. NJ Transit may seek to lease excess space from the facility owner; and
- The addition of eight-hour meters on Veterans Memorial Drive as part of the roadway redesign.

It may be appropriate to re-examine the parking at other stations, such as Bridgewater, where there is less potential for transit-oriented development. At present, permit parkers at Somerville drive from a wide geographic area, including Raritan Borough, Hillsborough Township, Skillman Montgomery Township, Bridgewater Township, Metuchen Middlesex County, Bernardsville Borough, and Branchburg Township, as well as Somerville. This indicates that there is great potential to move the parking supply between various stations.

Parking is a common theme among all three station areas and is discussed in detail in *Appendix A*.



NJ Transit Park-and-Ride at Somerville Station.



NJ Transit bus.

Pedestrian and Bicycle Access

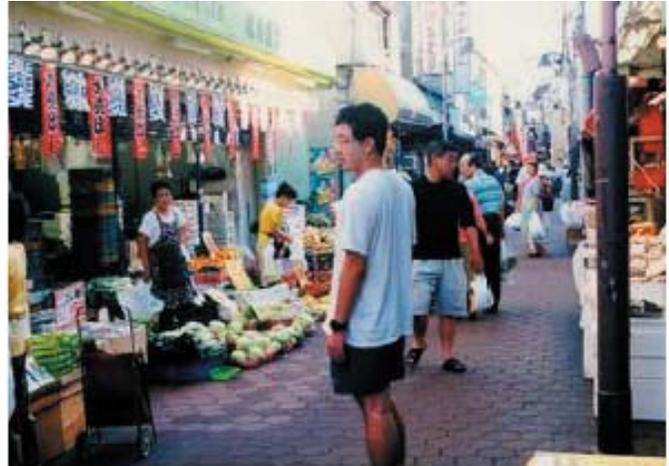
Two specific projects will increase access to the site for pedestrians and bicyclists:

- *Washington Place link.* There is an existing informal pathway to the station along the rail right-of-way from Washington Place, providing direct access from the neighborhoods to the north. This may be formalized into a pedestrian-bicycle path, and should be considered part of a broader link to the station from Somerset Street.
- *Raritan River Greenway link.* A new US 206 signalized intersection is the best opportunity to link the planned Greenway to both the landfill site and downtown. Appropriate provision for cyclists will also need to be made within the development site; as part of the Davenport Street extension/underpass; at a new US 206 signalized intersection; and within the development site itself. At the rail underpass, it may be appropriate to separate the bicycle lane and sidewalk from the traffic lanes, reducing the grade for non-motorized users.

It is recommended that bicycle links be considered as part of broader planning efforts, with particular attention to links between the regional centers of Raritan, Somerville and Bridgewater Commons. Most likely, Somerset Street will provide the best link for experienced cyclists, with recreational or novice riders preferring the Greenway.

The station has good bicycle parking facilities already, including lockers, and it is important to ensure that these are retained following development of the parking and drop-off area.

The concept proposes a grid network of streets that includes residential alleys. It may be necessary to adjust the grid following a recommended soils analysis. Where the conceptual street grid lies over wetlands, precautions also need to be taken in terms of drainage of roads, landscaping and stormwater run-off. More importantly, if the wetlands disturbance area exceeds one acre, a mitigation strategy should provide compensation by doubling the wetlands area elsewhere on site.



Example of a pedestrian plaza.



Example of pedestrian friendly roadway design.

Proposed Transit and Access Improvements

Table 8 summarizes the transit and access improvements recommended for the Somerville TOD station area.

Table 8. Proposed Transit and Access Improvements - Somerville Station Area

Project	Description/Comments
Vehicular/ Circulation	
Reduce Tavel Lanes on Veterans Memorial Drive	Veterans Memorial Dr. is a major barrier between the station and new development to its south and downtown to the north. Four lanes are unlikely to be required given the present volumes, except perhaps at intersections. A traffic study should determine the feasibility of reduction to 2 traffic lanes with wider ADA compliant sidewalks, 10-hour metered parking on both sides, bulbouts at crosswalks, and possibly bike lanes.
Create a Boulevard or Local Access Way Along the North Side of US 206	A local access way along US 206, with a densely planted median strip, would provide access and visibility while buffering development from the arterial. It would help demarcate the gateway to Somerville, particularly if the municipality is to seek longer-term redevelopment of commercial strip uses to the north.
Add a New Signalized Intersection on US 206	A signalized intersection between Orlando Dr. and South Bridge St. is essential for two reasons: (1) to provide access for southbound traffic on US 206 while alerting motorists that they are entering a more urban area; and (2) to provide access for pedestrians and cyclists to the Raritan Greenway.
Traffic Calming East of South Bridge Street	Traffic calming measures and multiple access points will protect adjacent neighborhoods from spillover traffic. These may include turn restrictions (right in, right out) and sidewalk bulbouts at intersections.
Negotiate Shared Parking Agreements	Many underutilized parking facilities, such as the Post Office Plaza, are close to the station and could be used by park-and-ride commuters. The municipality, NJ Transit or a merchants' association should negotiate shared-use arrangements that would reduce the amount of new parking needed.
Transit	
Consider Planned Shuttle Service	The future Raritan-Somerville-Bridgewater shuttle is planned to skirt the site, entering Somerville along Somerset St. Diversion via US 206 and entering the development site via the Orlando Dr. intersection would add to travel times, and is not recommended initially. However, this is likely to be desirable once a critical mass of community-serving uses is built adjacent to the station. Streets should be designed to accommodate transit vehicles.
Pedestrian	
Multi-Use Path from Washington Place	There is an existing informal pathway to the station along the rail right-of-way from Washington Place, providing direct access from the neighborhoods to the north. This should be formalized into a pedestrian/bicycle path.
Upgraded Crosswalk over Veterans Memorial Drive	An upgraded crosswalk at the station entrance would strengthen links to downtown. This should be introduced as part of the Veterans Memorial Dr. redesign. A signal may not be necessary if bulbouts and a median refuge are provided. In contrast to the existing crosswalk, it should be on the pedestrian desire line (which is currently blocked by a guard rail).
Bridge Street Streetscape Improvements	Redevelopment of the light industrial uses will help to improve pedestrian conditions along Bridge St. Streetscape investments such as sidewalk widenings, corner bulbouts and trees would add to this.
Bicycle	
Consider Bicycle Route to Raritan	Bicycle links between Somerville and Raritan should be considered as part of wider planning efforts. It may be desirable to provide two routes: a more direct route along Somerset St. for more experienced cyclists, and an alternative route via the Greenway and through the development site for other cyclists. This means that appropriate provisions are required as part of the Davenport St. extension/undercrossing; at a new US 206 signalized intersection; and within the development site itself. At the rail undercrossing, it may be appropriate to separate the bicycle lane and sidewalk from the traffic lanes, reducing the grade for non-motorized users. This means that sufficient width must be provided in the undercrossing.

7. Concept Phasing

Securing a NJDEP landfill closure permit is the first step in the master planning process for the landfill site. The next step should include a market assessment to identify cost and market limitations that will determine a feasible phasing approach and identify key early action projects. Discussions must begin on all aspects of the development beginning with collaborative catalytic projects such as potential shared parking arrangements with NJ Transit. The framework outlined in the concept plan is a grid pattern that is flexible enough to implement the overall vision ideas, and is strong enough to guide short and long-term actions.

The station area provides an ideal location for short-term development activity focused on transforming the existing surface parking lot into a larger mixed-use district. It will be necessary to secure and finance potential infrastructure and public improvements in the form of street network and connections. This is particularly important with regard to South Bridge Street and Veteran's Memorial Drive, not only to provide for future development, but to attract new businesses. It is also recommended that streetscape design and redevelopment options be explored as soon as possible to facilitate stronger connections between downtown and the site. Major infrastructure investments should be considered in the Borough's Tax Increment Financing Plan.

8. Implementation

Many challenges lie ahead in moving this concept forward; environmental contamination, soil conditions and the commitment of local, regional and State agencies must be understood up front. Further, a true public process is required to further refine the desired potential development program and density, and identify other public improvements required to minimize impacts on surrounding neighborhoods.

Land Use Policy / Zoning

The Somerville landfill site is currently zoned B-6 Shopping Center, which is not consistent with the goals of the TOD plan. The current zoning encourages large scale, automobile oriented uses rather than the tighter, walkable development concept envisioned for the site.

The Borough may want to consider changing the zoning to B-1 or B-2 (downtown zoning) and, rather than create a new zoning district, apply a TOD overlay zone to not only the landfill site, but the downtown area as well. The TOD overlay zone should include the following:

- Allow mixture of uses, including higher density residential
- Allow higher building heights of 4 to 6 stories
- Provide incentives for shared parking
- Required sidewalks and other pedestrian connections to the transit station
- Apply contextual design standards to maintain community building character

Zoning for mixed use and design standards to accommodate TOD can be an effective tool for achieving desired development patterns and types of uses. The Borough may also consider strengthening the implementation of development goals through new Transfer of Development Rights legislation (TDR). TDR's can be used to transfer higher density residential development from single family and historic neighborhoods to the Landfill and other redevelopment areas to minimize potential community opposition to new housing. The Borough should begin by undertaking a build-out analysis to determine the demand and capacity for new development in the Borough.

Public Participation

Public participation has played a major role in this project. It is vital for the success of new development on the landfill site that the community helps in its direction. To successfully implement the concept plan and develop it further into a detailed master plan, community agreement on the vision, goals and objectives, and physical development plan must be carried out.

A decision on optimal building and land use densities needs to be reached, concurrent with conduct of a market analysis to assess the nature of the local economy and predict future growth in housing, retail and industry. Working with private developers and other interested stakeholders at this stage will help shape an investment strategy develop a detailed and strategic phasing plan.

Environmental Sensitivity

The Somerville landfill covers a large part of the site. Therefore it is recommended that immediate environmental action be taken to prepare the site for new development. Although most of the site is covered by landfill, a large portion of the remaining land is wetlands.

The implementation of the final plan for the Somerville landfill heavily depends on the environmental treatment of the site. It is recommended that a detailed site analysis, including a soils study and water quality study, be carried out to identify the extent of remediation necessary to accommodate the proposed uses. Similar due diligence should be conducted for the NJ Transit portion of the site.

A large portion of the site is also within the floodplain of Raritan River. Although this segment of the river does not flood as much as others, it is important to take into account the possibility of flooding when locating uses.

A drainage swale that runs through the site, although probably created due to the landfills, is now a part of the site ecosystem. It is recommended that it be protected and enhanced by integrating it into the open space plan.

Environmental conditions are most often not in the forefront of discussions on development. In the case of Somerville's landfill site, it is imperative to acknowledge the site conditions, treat them effectively with techniques that are cost-efficient, and encourage the public to get involved in the process through education and awareness efforts.

Multiple Ownership

While the concept plan described in this report shows the approach necessary for Somerville to become a vibrant complement to the activity along Main Street, it is the partnership of property owners with local leaders that will help to move the concept into a detailed development plan. It is this partnership that will be able to achieve the goals set out for the success of the businesses and amenities located in this zone.

The Borough may consider purchase of some small parcels, if necessary, to create a more integrated and comprehensive land use pattern than may be achieved by

only private action.

Public-Private Partnership

Collaboration with the NJ DEP (Department of Environmental Protection) is important to ensure that all wetlands regulations are followed, to include buffers where needed, to carefully introduce new wetlands if compromising parts of existing wetlands, and to foster best management practices.

It is strongly recommended that the municipality coordinate with the officials across the river to implement the Raritan River open space plan and link it to the open space system on site, while coordinating with NJ Transit and Somerset County to attract more commuters and thus increasing ridership.

Community Support

There is a need to build community support in Somerville for this project. Although it appears to be remote from Main Street, the site is large and will play an important role in bringing businesses to Downtown Somerville. It is strongly recommended that community groups and leaders, along with those of neighboring areas, play a role



in shaping the development.

Transit Village Designation

Somerville was not approved for Transit Village designation in the last round of applications. However, it has most of the necessary features desired in a Transit Village. As this report points out, the case for reuse of the landfill is comprised of many exciting options. If Somerville accepts the idea of housing and commercial expansion on the vacant land near the train station, another application for TV designation would appear to have a greater chance of success. The access to more funding opportunities and expertise offered within the Transit Village Initiative would significantly aid Somerville in pursuing its redevelopment goals.

Table 9. Implementation Summary - Somerville Station Area

<i>Implementation</i>	<i>Next Steps</i>	<i>Agency Involvement</i>
Landfill Closure	Verify onsite conditions and secure a NJDEP Landfill Closure Permit.	Somerville Borough; NJDEP
Land Use Policy	Zoning change from B-6 to B-1 or B-2 or create a TOD overlay zone; Explore potential for TDR's.	Somerville Borough
Public Participation	Visioning process with community; Establish density, building height, and guidelines with the community.	Residents and community groups; Somerville Borough Planning Board
Environmental Sensitivity	Detailed soils study; disseminate information to community about site creating public awareness.	Army Corps of Engineers; NJDEP; Somerville Borough
Modify Redevelopment Plan	Incorporate vision and site conditions in revised Redevelopment Plan.	Somerville Borough Planning Board
Multiple Ownership	Parcel acquisition by the Borough; Prepare a detailed phasing plan.	Somerville Borough; Somerset County Planning Board
Public-Private Partnership	Funding landfill detailed study; landfill analysis and treatment; Implement the Raritan River Open Space Plan.	Somerville Borough; NJDEP; NJ Transit; Somerset County Planning Board
Community Support	Hold visioning sessions to refine plan and garner community endorsement.	Somerville Borough Planning Board
Transit Village Designation	Submit a new application for designation based on a community endorsed plan; Apply for Transit Village funding to implement the plan.	NJ Transit Village Task Force; NJ Office of Smart Growth; NJDOT
Access Standards	Develop the following Access guidelines using the recommendations in Appendix B as a guide: Sidewalk width guidelines Turning radii guidelines Street width guidelines	Sommerville Borough; Somerset County Planning Board; NJDOT

Part III – Station Area



View of the North Branch study area from the Midland School.



Existing North Branch Station.

C. NORTH BRANCH STATION AREA

1. Site Context

Branchburg Township is a suburban community with a variety of uses, including residential, large corporate campuses, and strip retail development. Branchburg is also the home of Raritan Valley Community College, a 250 acre campus with nearly 5,000 full and part-time students.

The potential new location for the North Branch Station and proposed development area for the TOD study lies within the northwestern portion of Branchburg Township, just south of the US 22 and Old Route 28 intersection, between County Line Road and Readington Road. The site is a growing center for innovative technology and biotechnology businesses, but lacks associated uses to support these activities or amenities for the employees. Almost invisible while driving, the site holds great potential for a vibrant successful transit-oriented development.

However, relocation of the existing North Branch station is a substantial investment and will be challenged by limited public and transit agency funds. A new station at this location could only occur through public/private partnership funding between the Township, NJ Transit, state and federal sources, and private developers. Station relocation would also be dependent on an Environmental Assessment to determine whether a station at this location is feasible. Feasibility would involve an evaluation of environmental, operational, cultural and historical concerns, traffic and social impacts on the surrounding community, and a demand forecast to determine the need for the new station. This process will also require ongoing community outreach to build consensus around a new station. Further details on implementing the station relocation are discussed in subsequent sections and a Problem Statement detailing the costs and benefits associated with station relocation is provided in the Appendix A.

2. Site Analysis

Existing Land Use

Figure 16 illustrates the existing land use pattern within the North Branch Station Area. The study area contains much vacant or underutilized land. The primary active uses on the site include the Midland School, Clariant Corporation, a shooting range, and small businesses located along Route 22. The land use pattern mostly consists of office/commercial and light industrial. Most of the buildings within the study area and its surroundings are large pharmaceutical and research office structures, similar to many suburban corporate campuses, as well as some manufacturing-oriented uses in buildings.

Figure 16. Existing Land Use - North Branch Station Area



Environmental Factors

The North Branch TOD area is located north of the Raritan River. The large area has a drainage path, running north-south on the east side of the site between Route 22 and the rail line. With the stream corridor of Chambers Brook just south of the site, a number of small wetland areas exist near the periphery of the site. Along the drainage path are clusters of large healthy trees. The land slopes gently down from Route 22 towards the rail line and Chambers Brook. A small wooded area lies on the other side of the brook along the southeast edge of the site, separating it from an existing residential neighborhood. Apart from the wooded area and the tree corridor, only shrubs and brush exist in the open space on site. Some wetlands areas exist on the periphery of the site.

Recreation and Open Space

While large portions of the site could be developed as part of the TOD plan, a significant area may be retained as open space, including the drainage corridor and the wooded area across the rail line on the southeast portion of the site.



Wooded area along Chambers Brook at southern edge of the study area.

Existing Circulation

Figure 17 illustrates the existing transportation network surrounding the North Branch Station Area. Elements of the circulation network are described below.

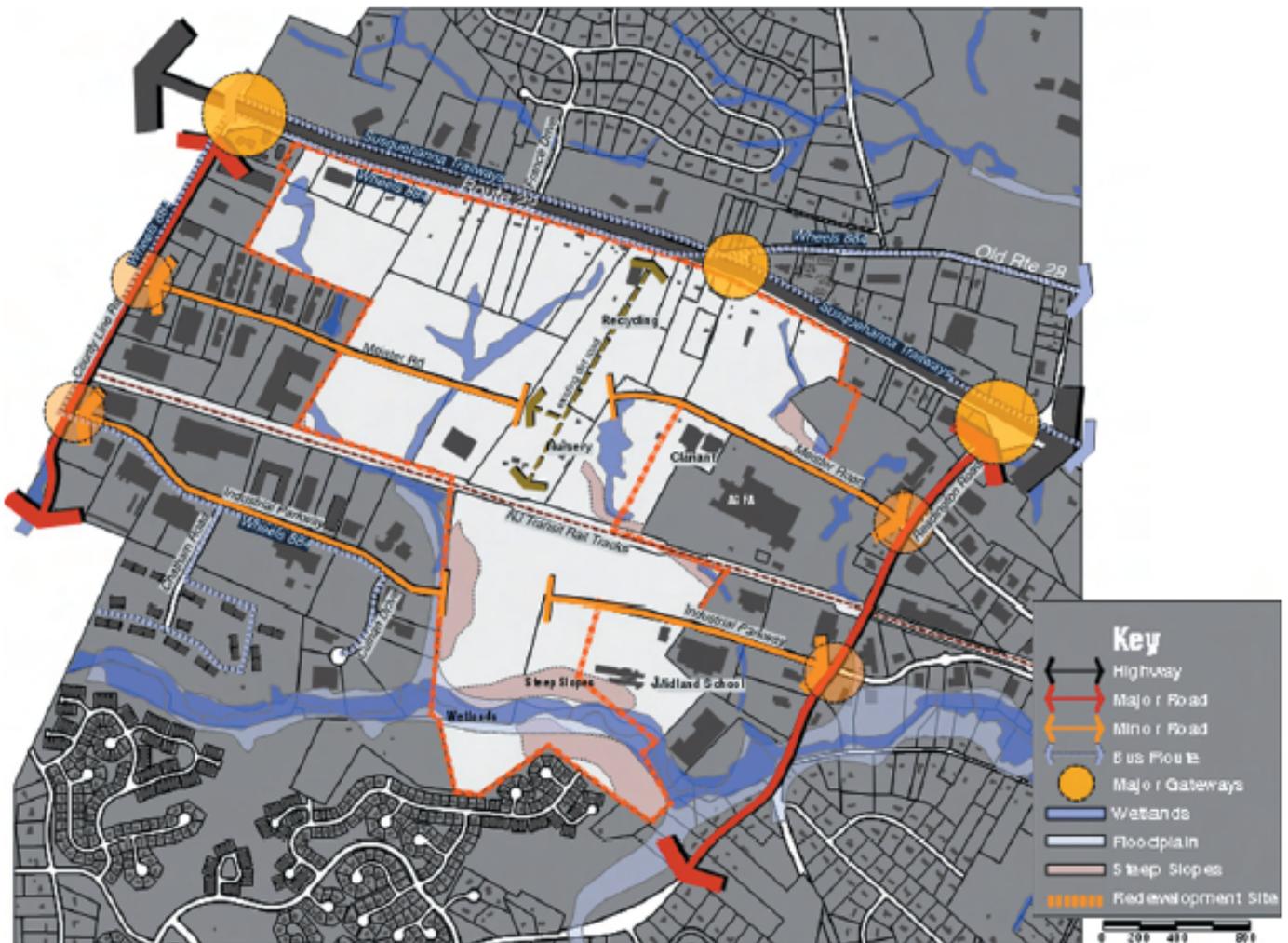
Roads

Bounded by Route 22 to the north, the NJ Transit rail line to the south and access points from Industrial Parkway and Meister Avenue from the east and west, the site currently does not have a connected road network. Both Industrial Parkway and Meister Avenue, the primary roads providing access to the site's industrial businesses, do not connect within the site. The only access to the site from US 22 is a dirt road that ends near the rail line on the east side of the site. No other roads exist on site.



Meister Avenue dead-ends both east and west of the site.

Figure 17. Existing Circulation - North Branch Station Area



Public Transit

At the existing North Branch Station, rail headways are long and most services on the Raritan Valley Line terminate at Raritan Station. Only four trips per day run from North Branch to Newark, one of which provides reverse commute service. Bus service is also infrequent. The Wheels 884 runs along Route 22 and Route 28, providing approximately hourly service, and travel times are long due to several deviations from the main highway. About half of all trips deviate to serve major employers in the adjacent Branchburg Industrial Park. Further details regarding existing transit service at North Branch Station are presented in the Tables 10a to 10d.

Parking

The businesses on the site occupy large parcels of land, most of which is dedicated to employee parking. Other uses on the site, particularly the Midland School, are also adequately served with parking.

Pedestrian and Bikeways

Pedestrian and bike paths do not exist on the site. However, the North Branch Raritan River Greenway currently being implemented will provide a basis for a connection to the greenway and throughout the site.

Table 10a. North Branch Station Characteristics

Parking Occupancy (FY03)	Average Weekday Boardings (FY03)	Change from FY02	Local Bus Service	Access Mode Share – Drive Alone/Park (96/98)	ADA Station
85%	59	-18.06%	Newark 65 Wheels 884	80%	No

Table 10b. North Branch Station Average Weekday Rail Boardings, 2004

1992	1995	1999	2000	2001	2002	2003
33	45	63	68	82	72	59

Table 10c. North Branch Station Area Mode Split Data

Private Vehicle	Drove Alone	Public Transport	Bus	Rail	Bike	Walk
93.60%	90.30%	2.55%	0.40%	2.15%	-	0.71%

Table 10d. North Branch Station Transit Service Frequencies

Services	Weekday Trips	Weekday Headways				Weekend Headways		Span*	Major Route Destinations
		AM Peak	Midday	PM Peak	Late Night	Sat. Midday	Sun. Midday		
East	NJT Rail	5	60	none	1 trip	none	none	9/5	New York City (Penn Station), Newark
	Wheels 884	7	1 trip	120	60	none	none	10/5	Bridgewater Commons Mall, Raritan Valley College, North Branch Industrial Pkwy
West	NJT Rail	9	1 trip	120	30	1 trip	none	14/5	New York City (Penn Station), Newark
	Wheels 884	2	none	none	2 trips	none	none	2/5	Bridgewater Commons Mall, Raritan Valley College, North Branch Industrial Pkwy
* Span is measured as weekday operating hours over weekly operating days.									

3. Redevelopment Activity

While North Branch is considering participating in the Transit Village Initiative, other projects that create more focused development around the station area are underway:

Raritan Valley Community College

Raritan Valley Community College (RVCC) is growing rapidly and expanding. It has been awarded a \$1.8 million grant from the U.S. Department of Education to support a comprehensive program aimed at assisting at-risk students in achieving academic success. The College is partnering with Kean University, which is also located along the Raritan Valley Rail Line.

The expansions include programs and services throughout the community and municipality targeted to broaden the student base and community activities.

Route 22 Sustainable Corridor Plan

The long-term goal of the corridor plan is to transform a diverse suburban area into a center with a greater sense of place and a capacity for sustained growth. Somerset County developed the "Route 22 Sustainable Corridor Plan" to change the corridor into a safe, comfortable, landscaped highway that connects employment and mixed-use centers and provides multi-modal options without drastically impeding the traffic capacity within the Sustainable Corridor Regional Center. The Regional Center is located just east of the study area.

Among the many elements of development in this area, plan focus is on addressing and improving transit, trip reduction, pedestrian linkages, open space and landscaping, bicycle compatibility, land use strategies, highway improvements and traffic calming. These initiatives fully support the Transit Villages program to be implemented at the North Branch station. The integration of these elements, along with planning strategies for the development site, will determine the success of the North Branch TOD and the adjacent Route 22 Corridor.

Research & Development

The various research and development facilities in this area, along with other light industries, have spurred similar projects in vacant sites in the vicinity. The North Branch station area has much to offer in terms of developable land. Existing access and infrastructure will support more development that will transform this area into a research and development center.



Raritan Valley Community College.



Clariant Corporation.

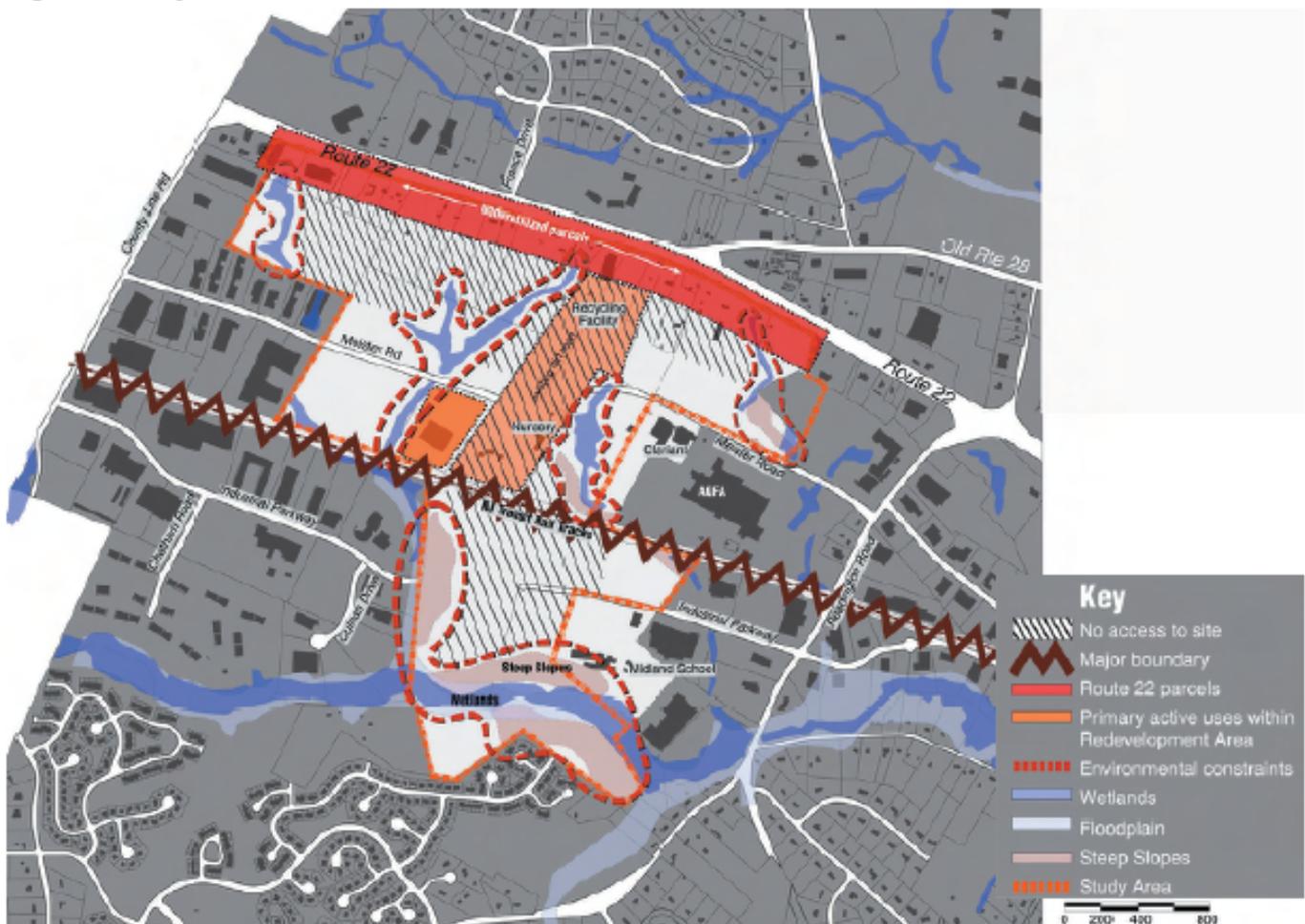
4. Key Challenges of TOD

With the relocation of the station, the underdeveloped North Branch site has great potential to become a center for Branchburg Township. Some of the major challenges to develop the North Branch site include:

- The outcome of an environmental assessment undertaken by NJ Transit;
- The ability to receive funding for a new station;
- Developing residential neighborhoods that may be incompatible with existing industrial uses;
- Parcelization – efficiently managing the land to accommodate best uses while attaining optimal density and allowing for adequate open space;

- Concentrating development nearer the station to avoid sporadic development or sprawl on site;
- Integrating existing infrastructure in the surroundings into the site and its uses and amenities;
- Developing and integrating activities along Route 22; and
- Establishing greater coordination with the College on complimentary land uses and shuttle connectivity.

Figure 18. Key Issues - North Branch Station Area



5. Recommendations

The North Branch transit village is predicated on the decision to move the station from its current location along Station Road. The lack of space surrounding the station makes it impossible to provide adequate park-and-ride facilities, drop-off and pick-up zones, or the opportunity to develop supporting uses and amenities.

The proposed location for the new North Branch Station lies on the south side of Route 22 between County Line Road and Readington Road. This location provides strong development potential with approximately 325 acres of vacant and/or underutilized land. The recommended development strategy is derived from a detailed analysis of the site context, as well as the unique opportunity of locating a denser mixed-use transit village in the core of a predominantly industrial and residential district. Specific plan elements required to justify the cost of moving the station include:

- A concentrated development of “mixed-use” – although the predominate land uses surrounding the area are industrial and office facilities, development around the station will reflect State-wide goals for transit villages that include living, working and play facilities; and
- Development densities will be high enough to justify moving the station. The concept proposes to create a pedestrian oriented transit village as recommended by the Transit Village Initiative.

Due to the large area of the site, the Township will need to develop a strategy to implement transit-oriented principles and provide pedestrian-friendly elements to attract future development. Proposed development, however, will likely have impacts on the surrounding community and the public must be engaged to create an endorsed long-term strategy that maximizes the benefits of this opportunity for the entire community.

The following recommendations represent the primary objectives agreed upon with local representatives, County staff and the I-Team:

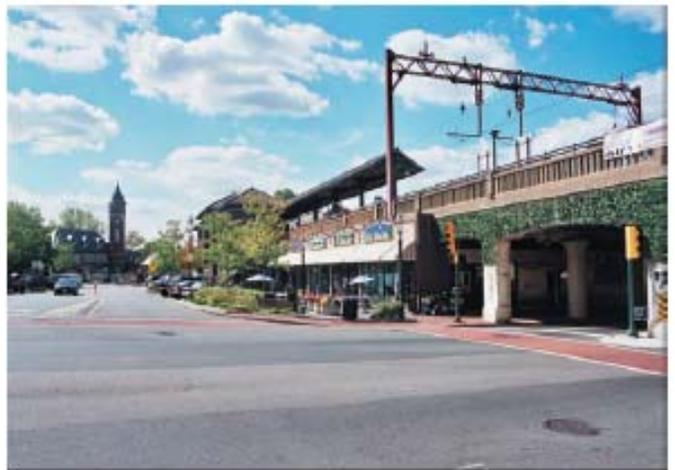
- Concentrate mixed-use near the new station;
- Integrate natural/environmental conditions;
- Integrate Raritan Valley Community College into plan;
- Create new neighborhoods to support TOD;
- Develop R&D market niche;
- Create strong connections with surrounding areas;
- Strengthen the Route 22 corridor.

Concentrate Mixed-Use near the New Station

The new North Branch TOD will be a compact, densely developed environment that provides a mix of retail, institutional, office and residential uses. Initial recommendations envision new development of three to six stories to ensure adequate density to capture land values, offset the cost of acquisition and site preparation, and, most importantly, create a walkable, pedestrian-oriented environment around the core station area. The dense development areas are organized on both north and south sides of the rail tracks between Meister and Industrial Boulevards and include almost 70 acres of land. The concept plan illustrates a mix of uses located within the development area. The development area is divided into zones that differ not only in distance from the station, but also in land uses, density and development guidelines.



Westfield Station, Raritan Valley Line - creating a transit node at the new station location.



Example of mixed use concentrated near a station - South Orange, NJ.

Neighborhood retail uses may be located closest to the station serving both new residents and commuters, as well as existing residents and employees in surrounding areas. In the core station area, it is recommended that a mix of small offices and residential be located above retail to create a more active and 24-hour environment, predominantly in 3 to 4 story mixed use buildings. Special consideration should be given to provide adequate housing for the elderly around the station given the current and forecasted increase in residents over the age of 65, and the need for housing to allow them to age in place.

New institutional uses are proposed as important elements in the North Branch transit village, due to the proximity to the Raritan Valley Community College, and the potential for incubator and research facilities in this industrial area. They include a new branch library and potential Raritan Valley Community College facilities. A new library will capitalize on the rail station and the adjacent Midland School, providing new and existing residents with a new service.

The Community College itself has recently been expanding its facilities due to large government grants for education. Located a short distance north of development site, the College may play a strong role in creating a unique center and bringing a different and more diverse population to the station area. Supporting services like a shuttle route between the College and the rail station will promote a greater linkage between the two and provide opportunities for students to commute by public transit.

There may be an opportunity for an office development near the station provided there is a market demand to locate near a train station. While this may bring employees close to public transit, it is important to ensure that the architecture and development program be carefully considered to reinforce the activity proposed around the station.

As a centerpiece for the transit village, two small plazas on either side of the rail tracks are proposed in the concept plan. These plazas maintain views toward the station and provide green public space for residents, workers and commuters. The main plaza on the north will be located at the end of the north-south street that connects to Route 22 from the station. The street will incorporate traffic calming measures while providing a

front door for potential college facilities, retail and housing.

Due to cost and the current frequency of train service, both sides of this dense, mixed-use transit village across the rail tracks are to be connected by one at-grade crossing, a common feature for stations along this portion of the NJ Transit line.

Integrate Natural/Environmental Conditions into Development Approach

Much of the site consists of vacant, flat land. There are environmental conditions that need to be viewed as an asset within the overall development approach: existing wetlands, watershed, wooded areas, steep slopes as well as areas that may be contaminated by existing or former uses.

The site contains a number of designated wetlands and areas with steep slopes. A floodplain borders a creek at the southern edge of the site. The areas where these environmental conditions are prevalent are also some of the most attractive in terms of native landscape and scenery. It is possible to preserve these environmental features and make them an integral characteristic of the overall development. A buffer of at least 100 feet around all of environmental features is proposed, enabling the protection of these spaces as well as providing passive and usable open space along these buffers. It is also recommended that, where possible, public access be maintained to these areas allowing them to be used frequently and enjoyed by existing and new residents. The largest area recommended for preservation is the wooded area of approximately 20 acres that stretches south from



Existing forested areas in the North Branch Station Area.

the creek to the residential neighborhood beyond the woods. This is a spectacular natural area; the concept ensures that the only changes to this area will include a walking trail to connect to the station.

Integrate Raritan Valley Community College with the Station Area

Nearby Raritan Valley Community College is a valuable resource for the station area. The College has continued to expand its student base and academic programs, offering an excellent opportunity to contribute to the new development with a unique mix of services and programs.

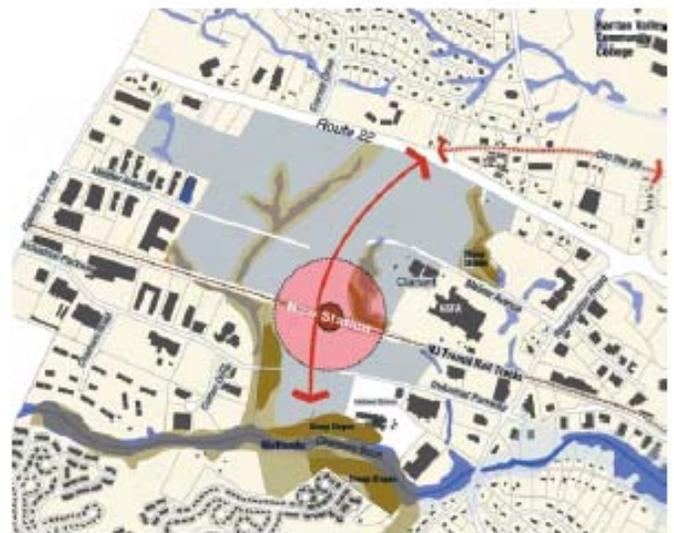
One of the main access roads to the College is the Easton Turnpike (Old Route 28) which intersects with Route 22 north of the proposed development site. There are currently a number of small retail uses along this main road that serve college students and local residents. It is essential that a main north-south boulevard be created as the primary access to the development site directly connecting Easton Turnpike and Route 22 to the new station area. The boulevard should narrow as it reaches the transit village core and the circulation system diversifies into roads, bicycle paths and pedestrian pathways closer to the station area. Branchburg Township and the County should also consider an overall design and access management plan for Easton Turnpike to integrate the TOD site, the College, and North Branch Village.

Beyond providing a strong linkage between new investment and an existing institutional asset, the north-south boulevard will also create a strong gateway at its intersection with Route 22. The current intersection is only partially signalized for westbound traffic and left turns. Full signalization may be required if the new road into the development site meets Easton Turnpike at a regular four-way intersection. A traffic consultant will be needed to thoroughly study the necessary changes to the existing intersection and estimate associated costs.

Coordinating with the college is recommended to determine the best pattern in which potential facilities may be integrated within the transit village. These facilities may include academic and educational spaces, research areas, offices and/or other supporting uses that will contribute to a vibrant station area.



Raritan Valley Community College.



Providing connections to Raritan Valley Community College.

To capitalize on these recommendations it may be necessary for Branchburg Township, the community college and other partners to pursue the possibility of creating a dedicated shuttle service for the college. The service may run along the north-south boulevard and onto Easton Turnpike directly linking the rail station with the college. Alternatively, the Wheels 884 shuttle may be re-routed to accomplish similar tasks provided the headways are short enough to promote ridership.

Develop New Neighborhoods to Support TOD

The transit core will provide an economically strong and attractive environment in Branchburg Township that will capitalize on potential investment in the new rail station. However, the area must not be isolated from major roads or adjoining developments. Careful consideration should also be given to potential conflicts between existing and proposed residential neighborhoods and existing industrial uses.

It is recommended that development occur both north and south of the transit core, each zone to have distinct characteristics that will attract diverse users. The zones will provide additional residents with supporting uses and will encourage greater use of the rail station in the future. The layout of these zones should maximize a pedestrian-oriented environment where residents can walk to the station and surrounding services. Approximately 95 acres of land is currently identified for these neighborhoods.

Of critical importance for these zones are their development densities. The traditional pattern of residential construction in Branchburg is single family detached homes on large lots. To replicate this pattern on the development site will be highly inefficient, squandering an excellent opportunity to reinforce the rail station, minimizing land utilization and creating a strain on natural resources. The zones, therefore, should be developed at higher densities with a mix of attached homes, stacked flats, live-work units and potentially semi-detached units on small lots. Opportunities for condominium and apartment buildings may also be explored at important intersections and closer to the transit village core. These types of housing units can result in densities significantly higher than traditional development in Branchburg, creating a unique product that creates a strong bustling integrated center of activity. Two to four story development is proposed, with a mix of unit types varying from block to block; however, it is important to test these recommendations against a comprehensive market study. A market study completed in concert with physical planning will help to determine the types of units, price points and sizes appropriate for the development, as well as associated community impacts.



New residential neighborhoods located near the transit node.

To support a higher density of housing, the concept illustrates a grid pattern of streets with alleyways to accommodate parking requirements. This block system has great flexibility in terms of the type of housing that can be developed.

Reinforce Research and Development Market Niche

Growth of the research market niche within Branchburg has been consistent and focused near the development site. Large companies such as AGFA and Clariant have facilities along Meister Avenue east of the site. Taking a mixed-use approach to the overall development, some area on site may be allocated for expansion of this sector of the economy. Recognizing that larger industrial, research and development, and manufacturing uses are not compatible with a dense residential and retail core due to environmental concerns, traffic congestion and the scale of facilities, the concept plan illustrates preferred locations for research facilities that are buffered from the transit village core and surrounding neighborhoods. Using the existing environmental features of the site as a guide and buffering system, the western and eastern ends of the site north of the rail tracks are proposed to accommodate these uses.

Create Strong Connections to Surrounding Areas

The site is currently isolated from surrounding streets. There are no access points from Route 22 and the two major roads, Meister Avenue and Industrial Parkway, dead end from the east and west of the site. As these roads connect to feeder roads to Route 22, connecting them through the site is a critical first step in improving connections to the surrounding area. Connections to Route 22 also need to be provided, as discussed in the *Proposed Circulation* section of the *Concept Plan*.

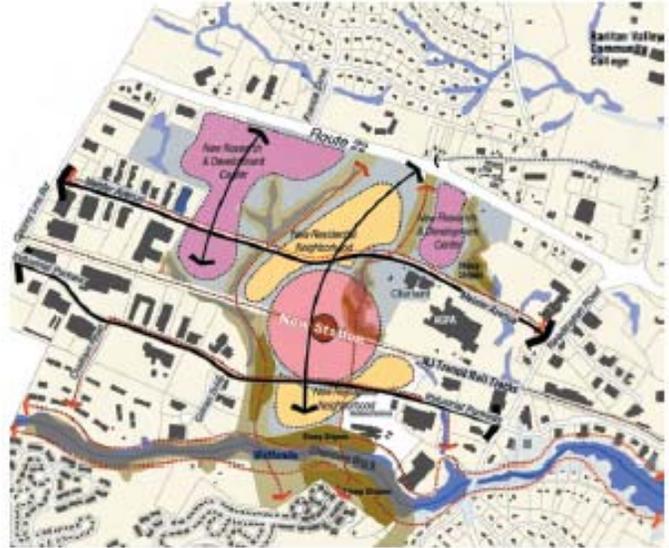
Between these major connections, a grid network of streets ensures that the entire development is accessible and that traffic is distributed among many streets efficiently.

Strengthen Route 22 Corridor

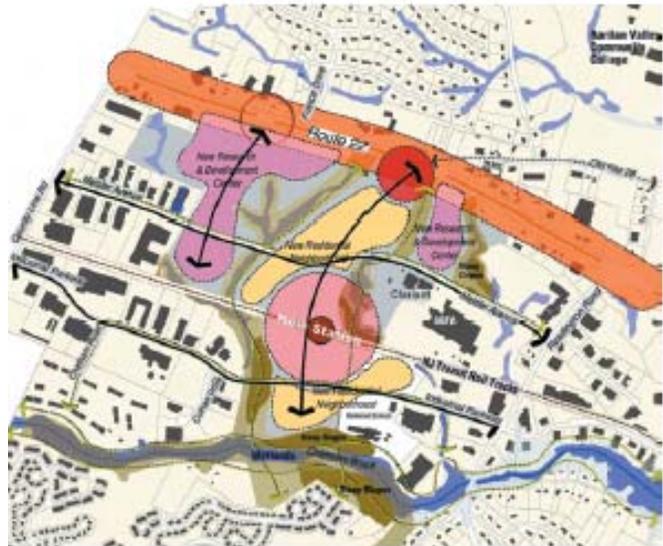
Route 22 is currently under-utilized with numerous vacant properties and little recent investment. The majority of new investment along Route 22 has occurred primarily to the east of the site or bordering westbound traffic only. The development approach must have a strong and attractive presence along Route 22 as it is the main road adjacent to the site. This includes adequate access and strong gateways.

To further support the development of the site, it is recommended to extend the proposed 'boulevard' treatment that is proposed along Route 22 to the east, through the construction of a local access road. This will ensure that new development is visible from the highway, while segregating through traffic from local access traffic, and avoiding strip commercial types of development. The Route 22 boulevard will extend across the north of the entire development site, providing access to new research and development uses as well as to the mixed-use project at the intersection with Old Route 28.

The *Route 22 Sustainable Corridor Plan* (2001) details plans to redefine Route 22 from a high-speed arterial into a boulevard or parkway design within the Sustainable Corridor Regional Center. This plan incorporates a multiuse trail along both sides of the road, and space for a future transit lane. The study area for the plan was limited to east of the Raritan River, and did not extend to the present study area. However, the concept may be easily extended east, to incorporate a reduced speed limit and a local roadway for access for new development to the south. This is likely possible within the existing right of way.



Linking the village to surrounding areas.



Strengthening the Route 22 Corridor.

6. Concept Plan

The overall concept plan for the North Branch Station Area is presented in *Figure 19*. A new North Branch rail station is the catalyst for transforming 325 acres of under-utilized land into a vibrant, mixed-use and sustainable transit village. The overall development approach reinforces the markets and assets that are already present in the area by building strong physical and programmatic connections and allocating space to a range of uses and densities. A dense transit village core is proposed surrounding the new station. It will be the base of services and activities for the new development and surrounding communities. Extending from this core are new neighborhoods and an open space network that will provide a unique array of recreational opportunities currently missing in the area as well as buffer housing from nearby industrial uses and traffic. Approximately 115 acres of open space is proposed as a part of the plan.

Private-public partnerships will drive the implementation and success of the effort. NJ Transit, local industries, township officials and state agencies must all work in concert to bring the vitality and diversity of uses to the site. The Raritan Valley Community College represents a wonderful opportunity to bring college students, faculty and, potentially, new research and development facilities to the transit village.

Proposed Land Use

North Branch's transit-oriented development is proposed as a mix of uses including residential, retail, office, commercial, institutional, and industrial. It is the organization of these uses on the site that allows great flexibility while achieving a livable environment.

The site is divided into zones, packaging the parcels into manageable areas to phase development:

- *North TOD Zone* is located on the north side of the station. This area, currently part of the nursery, is to be developed with institutional uses near the station, with open space, commercial/retail further north, and residential to the west. The institutional land use may include a library, learning centers, incubator space, or community and/or faith-based institutional activities.
- *South TOD Zone* will have more neighborhood retail and services, some institutional as well as a small park area, surrounded by residential.

- *North Zone* is further along the north-south axis from the station, close to Route 22. This area is predominantly residential with a proposed concentration of commercial activity at the intersection of this axis with Route 22, creating a node of activity.
- *South Zone* extends south and east of the South TOD Zone and is all residential.
- *West Zone* lies along the western edge of the site and north of the rail line. This zone will accommodate office and light industrial spaces.
- *East Zone* is a much smaller area east of the North Zone, and is similar in land use to the West Zone.

The land use pattern takes advantage of natural features like the wetlands and steep slopes to concentrate uses near the station while providing substantial landscape buffers between this part of the development and the light industrial areas in the east and west of the site. This eliminates potential problems from land use incompatibilities.

High density residential development is recognized as an essential element of TOD success. At this time, however, the Township has reservations about the proposed residential component, but recognizes that the County needs to complete the study without committing the Township to any specific levels of residential development. The study allows the Township to investigate different development scenarios, including some with a residential component. Any additional work after completion of this study will advance only after additional Township review.



New mixed use development in the South Orange, NJ Transit Village.

Proposed Open Space

An important component of the land use concept is the open space network proposed for North Branch. It acts as a buffer between the zones described above, works as part of the stormwater management system, and provides large and connected open spaces from Route 22 to the creek south of the site. Pedestrian paths and bikeways are proposed throughout the site to connect from the train station to the proposed residential areas and to the parks and open space network.

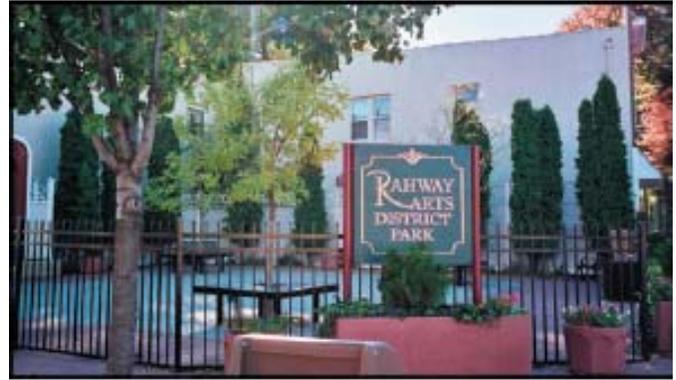
Public Parks

Small public parks are proposed in the station area as civic spaces and to serve as transition areas between other uses. It is recommended that they be located near active areas to provide public space for recreation and relaxation where they will be visible and well used.

Wetlands and Connections

Existing wetlands are located east and west of the site, as well as through the site, all running north-south between Route 22 and the creek. They should be retained for their importance in the ecosystem of the site. In addition to serving as part of the stormwater management system, they act as buffers between land uses and development districts. The wetlands and buffer zones also provide continuous open spaces and parklands for passive and active recreation for the new population of North Branch.

As seen in the Concept Plan, the wetlands and steep slopes connect on the west side of the site from Route 22 across the rail tracks and south to the preserved creek greenway. On the east side, the open space network extends from Route 22 along the steep slopes and buffer areas towards the rail tracks. Pedestrian and bike connections across the rail tracks are recommended to extend a continuous network to the creek along this corridor.



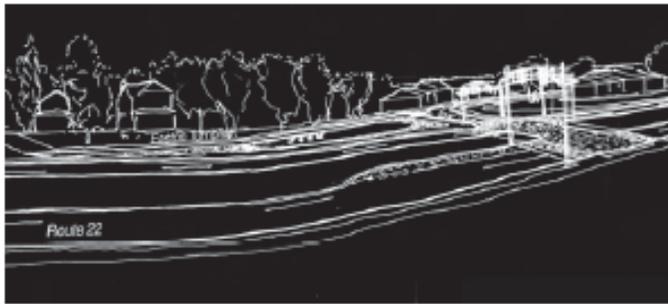
Public park in Rahway, NJ Transit Village.



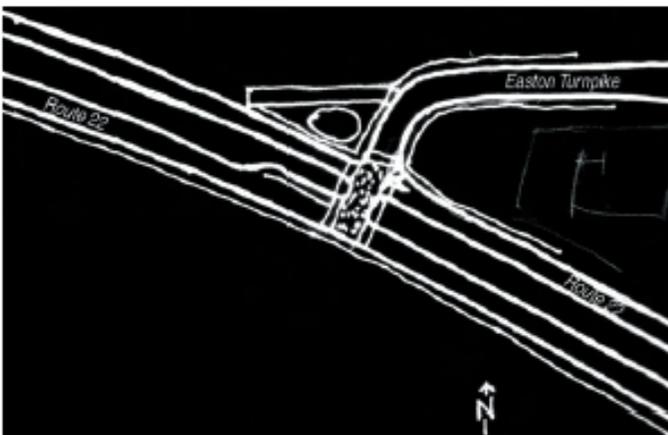
Example of connections along waterways.



Existing intersection of Route 22 and Easton Turnpike.



Proposed intersection of Routes 22 and Easton Turnpike.



Detailed plan of Route 22 and Easton Turnpike intersection.

Proposed Circulation Streets

East-west circulation is provided by linking Meister Avenue and Industrial Parkway. To the north, access to Route 22 is proposed as follows:

- Extending Easton Turnpike into the site, creating a four-way signalized intersection. (The existing 3-way intersection is signalized only for westbound traffic and left-turn movements; additional signals will need to be installed). This will be the main gateway to the site, and as such requires particularly careful landscaping, signage and lighting to create a memorable entrance.
- An unsignalized entrance between County Line Road and Easton Turnpike where industrial uses are proposed. If possible, left turn pockets should be provided in the median, allowing access from both eastbound and westbound traffic.

Between these major connections, the concept plan illustrates a grid network of streets, ensuring that the entire development is accessible and that traffic is distributed among many streets.

Transit

Both bus and rail transit at North Branch will have three main functions:

- *Providing access to jobs for residents of existing and new development.* This will be primarily attractive to residents commuting to Newark and New York City, but will also provide an option for commuters to Somerville and other destinations. Rail service will be the primary mode for this group.
- *Providing access to jobs for employees.* The Wheels shuttle already serves many of the industrial uses, with some riders transferring at Somerville station. A relocated rail station, with good street connections, will provide additional commute options, although the current schedule provides only one reverse commute trip per day. The majority of the existing light industrial uses are within 0.5 miles of the station, meaning that the emphasis may be placed on improving pedestrian and bicycle access. In the longer-term, however, shuttle service might be considered, particularly if reverse commute headways are improved.
- *Serving non-commute trips.* Connections to Bridgewater Mall and Somerville are of primary importance here, via Wheels from rail stations.

For the rail station to truly function as a centerpiece of a mixed-use transit village, the frequency of service must be improved to serve the new population and provide a competitive alternative to driving. Since most service terminates at Raritan, rail headways are currently very long and in the morning there is only one train that provides reverse commute service. Shorter headways – including reverse commute – will be essential if the new development is to function as a true transit village. These will be enabled by NJ Transit’s planned Whitehouse siding project to increase morning to High Bridge.

West of Raritan, the line is single track. In order to preserve future operational flexibility, right-of-way for an additional track may be reserved in the station as development moves forward.

Shuttles

Besides rail service, local bus and shuttle service may be improved to better serve existing communities and the new development. The Wheels 884 shuttle provides some limited service to the light industrial uses, partly because of the additional travel time caused by the lack of a complete street network. Once the proposed street grid is complete and a critical mass of land uses (particularly college facilities) has opened, most or all Wheels 884 trips may be routed through the site, since this can be accomplished with minimal travel time impacts for through passengers. The shuttle may enter via the continuation of Old Route 28, exiting via Meister Avenue or Industrial Parkway and rejoining Route 22 at County Line Road. Additional short-line trips between the new development and Somerville, via Raritan Valley College and Bridgewater Commons, may be justified depending on ridership.

Initially, at least hourly frequencies should be provided between North Branch and Somerville, particularly if rail service enhancements have not yet been implemented. Existing travel time ranges from 25 to 50 minutes, depending on time of day and the exact route, and at least two vehicles will be needed to provide half-hourly service. Opportunities should be taken to streamline the route so that a more attractive service is provided not just through enhanced frequencies, but also through shorter travel times.

In the long term, Route 22 is the logical core transit spine, and so it is important to create as many north-south street connections to it as possible and ensure that

development addresses not just the rail station to the south but the Route 22 corridor to the north.

Parking

North Branch is always likely to have relatively limited park-and-ride demand. Stations to the west are a more logical intercept for motorists along Route 22, while Raritan or Somerville will tend to intercept trips from Route 202, particularly given limited headways west of Raritan.

This means that the station catchment area is localized, and limited parking and roadway capacity are needed. Instead, the emphasis should be on providing good pedestrian and bicycle connections to the station. While parking can be replaced at the station, it does not need to be immediately adjacent, and can be shared between transit and other neighboring uses.



Local connections - Fanwood Station, Raritan Valley Line.



South Orange, NJ Jitney service.



Crosswalks in South Orange Transit Village.



An example of trail connections.

This also means that transit trips generated from new development will be critical in justifying the relocation of the station, as increased ridership will be drawn from a limited catchment area.

Parking is a common theme among all the station areas, and is discussed in more detail in Appendix A.

Pedestrian and Bicycle Facilities

A critical component in creating strong connections to the surrounding area is the provision of pedestrian and bicycle trails through the site. Apart from providing adequate facilities for these recreational activities along local and major streets, it is recommended that opportunities for additional trails be explored within the existing natural features of the site to provide a recreational resource for residents and employees. This includes a multi-use path and bridge over the creek to provide pedestrian and bicycle access to the station, school and commercial development from the residential neighborhoods to the south. The proposed trail network includes links to local industrial uses, particularly AGFA and Clariant, to provide more direct access to the station and retail facilities.

In addition to new trails, existing roadways may be renovated to accommodate wider sidewalks and bicycle lanes. Meister Avenue and Industrial Parkway are key streets to implement this improvement project as they were originally designed to carry automobile traffic only and have no pedestrian-friendly amenities. Sidewalks along these streets will make it easier for employees in the industrial uses to commute by train. It will also allow them to walk to restaurants and shops in the new TOD Zone.

With sufficient right-of-way, bike lanes will be beneficial in addition to sidewalks on Industrial Parkway and Meister Avenue. They will be important in narrowing effective lane widths, in turn reducing speeds and reducing the potential for cut-through traffic seeking to avoid congestion at the County Line Road intersection.

Also, if college facilities are provided at the station, bike lanes or a path along Route 28 and its extension will provide an invaluable link.

Pedestrian and bicycle facilities also need to be provided to the north to create a strong link between the station and Raritan Valley College. Good pedestrian connections to both sides of US 22 will also provide access to transit services that run along this corridor.

To the south, the paths will also need to connect to the planned “Riverwalk” bikeway and trail system. This 13-mile facility would run along the river between North Branch and Neshanic Station.

Retrofitting Industrial and Meister Avenues with sidewalks, bike lanes, a multi-use path and creek crossing is included as a Problem Statement in Appendix B.

Traffic Study

Once development plans are more concrete, a traffic study will need to consider the detailed impacts of new vehicle trips and connecting Meister Avenue and Industrial

Parkway. The following intersections will need to be analyzed in detail: Meister Avenue and County Line Road; Industrial Avenue and County Line Road; County Line Road and Route 22; Readington Road and Route 22; and Easton Turnpike and Route 22.

Proposed Transit and Access Improvements

Table 11 summarizes the proposed transit and access improvements recommended for the North Branch TOD station area.

Table 11. Proposed Transit and Access Improvements - North Branch Station Area

Project	Description/Comments
Vehicular/Circulation	
Traffic Study	Once development plans are more concrete, a traffic study will need to consider the detailed impacts of new vehicle trips and connecting Meister Ave. and Industrial Pkwy. The following intersections will need to be analyzed in detail: Meister Ave. & County Line Rd; Industrial Pkwy. & County Line Rd.; County Line Rd. & Rte 22; Readington Rd. & US 22; and Easton Turnpike & US 22.
Create a Boulevard or Local Access Way along the South Side of US 22	A local access way would allow dense development to continue north to US 22, and provide access while maintaining the arterial function. It would essentially continue the treatments recommended for US 22 east of the Raritan River.
Fully Signalize the Intersection at Old Route 28	The current intersection is only partially signalized, for westbound traffic and left turns. Full signalization would be required if the new road to the development site meets Old Route 28 at a regular 4-way intersection.
Transit	
Consider Rerouting Shuttle Service	The Wheels 884 shuttle provides some limited service to the light industrial uses, partly because of street network constraints. Once the grid is complete, and a critical mass of uses (particularly college facilities) have opened, more or all trips should be diverted through the site. The shuttle should enter via the continuation of Route 28, exiting via Meister Ave. or Industrial Pkwy. and rejoining US 22 at County Line Rd.. Additional short-line frequencies between the new development and Somerville, via Raritan Valley Community College, may be justified depending on ridership.
Increase Rail Headways	Only a handful of trips currently continue past Raritan. Increased headways, including reverse commutes, will be essential if the new development is to function as a true transit village. These will be enabled by NJ Transit’s planned siding project.
Reserve Right-of-Way for Additional Track	To preserve future operational flexibility, right-of-way for an additional track should be reserved in the station.
Pedestrian	
Multi-Use Path and Bridge to Residential Neighborhoods	A multi-use path and bridge over the creek would provide pedestrian and bicycle access to the station, school and commercial development from the residential neighborhoods to the south.
Retrofit Industrial Parkway and Meister Avenue with Sidewalks	Sidewalks would enable employees in the light industrial uses to commute by train, should reverse commute service be expanded. More importantly, it will allow them to walk to restaurants and shops in the new TOD, e.g. at lunch.
Pathways from Station to Industrial Uses	A trail network to light industrial uses, particularly AGFA and Clariant, would provide more direct access to the station and retail facilities.
Bicycle	
Add Bike Lanes to Industrial Parkway and Meister Avenue	If there is sufficient right-of-way, bike lanes would be beneficial in addition to sidewalks on Industrial Pkwy. and Meister Ave. They would be important in narrowing effective lane widths, in turn reducing speeds and reducing the potential for cut-through traffic seeking to avoid congestion at the County Line Rd. intersection.
Bike Route to Raritan Valley Community College	If college facilities are to be provided at the station, bike lanes or a path along Easton Turnpike and its extension would provide an invaluable link.

7. Concept Phasing

The first step in the concept phasing is to prepare a community impact analysis and fiscal testing of this proposal and any other conceptual design scenarios for the North Branch TOD. The development of a publicly endorsed master plan is the immediate next step and must include a market analysis, as well as environmental assessment. Cost and market limitations will help to shape the development in the East and West Zones.

Road connections and public improvements to existing infrastructure are necessary prior to any major development carried out on site, due to existing lack of access. It is recommended that a strategic site with potential for a catalyst project be chosen to spur further development and attract additional investment.

8. Implementation

Land Use Policy / Zoning

The North Branch study area is located entirely within the I-1 Industrial (3 acre) zoning district, which is consistent with the existing land uses and character of the site, but generally inconsistent with the proposed TOD concept. Although the concept includes areas that may be allocated for light industrial or research and development use, the overall intention is to encourage a mix of uses, including residential.

Any potential incompatibilities between land uses are avoided in the concept by locating these uses such that there are buffers, visual and physical, between them.

The Township has already begun to study the potential for creating mixed use zoning on the study site; this work was complemented by the onset of this study.

While it is somewhat premature to recommend land regulations for the site based on a very general land use concept, the Township could begin to explore the idea of a TOD overlay zone with similar standards as those described for Somerville. The overlay zone would protect the existing industrial zoning status for current landowners, while opening up new possibilities for more marketable residential and mixed use development.

The Township should also explore the use of Transferable Development Rights legislation to implement the TOD plan.

Public Participation

Continued public participation will play a significant role in this project. It is vital for the success of new development that the community helps guide and feel vested in its direction. To successfully develop the concept plan into a detailed master plan, the articulation of a public vision, goals and objectives is critical.

A decision on optimal building and land use densities needs to be reached in concert with market analysis. Working with private developers and other interested stakeholders can assist in development of an investment strategy.

Environmental Sensitivity

Although the North Branch site has few environmentally sensitive features, the existing wetlands, natural slopes and vegetation must not be ignored. Careful planning and development of a detailed master plan should be sensitive to the existing natural features and help preserve and enhance them. It is suggested that the Township coordinate with State and private officials to implement an integrated open space plan within which the development will occur.

Multiple Ownership

At present, the site ownership lies with multiple property owners. An integrated development is difficult to achieve in this situation. Therefore, property acquisition or agreements are recommended for key sites that will help to establish the TOD center. Subsequently, it is suggested that the Township work with property owners, along with interested developers, to establish a set of guidelines within which to make improvements to their properties or to start new development.

Public-Private Partnership

Due to limited public and transit agency funds, relocation of the North Branch station could only occur through public/private partnership funding. A public/private partnership would enable Branchburg Township, Somerset County, and the Transit Village Task Force to partner with NJ Transit to move the station by facilitating development around the station and leveraging the private sector's desire to develop TOD projects. Private developers, businesses and investors can provide an important source of revenue for enhanced transportation services. Effective public-private partnership planning requires careful promotion of the project benefits to the private sector.

Support can take the form of capital contributions, matching capital grants, cost sharing, or joint development of transit facilities. In addition, the private sector can provide management and marketing support to public transit operations.

Branchburg Township will also need to coordinate with NJ Transit to prepare an environmental assessment to determine that a station at this location is feasible. Feasibility will involve an evaluation of environmental, operational, cultural, traffic, and social impacts on the surrounding community, and a demand forecast to determine the need for the station. This forecast should incorporate increased ridership associated with proposed TOD development.

Collaboration with the NJ DEP (Department of Environmental Protection) is important to ensure that all wetlands regulations are followed, including buffers where needed, and to carefully introduce new wetlands when consuming parts of existing wetlands.

Coordination with NJ DEP will also be necessary to implement the Raritan River open space plan and extend it to the creek south of the site, linking it to the open space system on site. Coordination with Raritan Valley Community College and Ridewise will be required regarding proposed shuttle service.

Community Support

There is a need to build community and business support in Branchburg Township to build consensus for moving the station to the new location. Although it appears to be remote, the new location is central to a potentially large employment center. The site is expansive and will play an important role in bringing a greater variety of businesses to Branchburg Township. It is strongly recommended that community groups and leaders, along with those of neighboring areas, play a role throughout the duration of the development.

Transit Village Designation

In Branchburg Township, the proposed new North Branch Station would be the first “new town” transit-oriented development project in New Jersey. This is an unparalleled opportunity to incorporate the design features of compact, mixed-use development with walkability and pedestrian access into an auto-dominated, dispersed built environment. If the community decides to pursue such a vision and adopt a redevelopment plan along the lines suggested in this report, achieving the Transit Village designation would strengthen its case with NJ Transit for moving the current station to a new site. In order to strengthen the case for relocating the station, high quality mixed-use development will need to take place since vehicular access is limited and the proposed TOD site would not be suitable for a regional park and ride location.

As discussed previously, Transit Village Designation brings the benefits of more funding opportunities and access to expertise and assistance at the State level.

The overall implementation steps for the North Branch Station Area are summarized in *Table 12*.

Table 12. Implementation Summary - North Branch Station Area

<i>Implementation</i>	<i>Next Steps</i>	<i>Agency Involvement</i>
Community/Fiscal Impact Testing	Evaluate various land use scenarios.	Branchburg Township Planning Board
Visioning	Undertake additional visioning sessions to determine preferred land use mix.	Branchburg Township Planning Board
Land Use Policy	Create mixed zoning areas; explore TOD overlay zone.	Somerset Planning Board; Branchburg Township
Access Standards	Sidewalk width guidelines; Turning radii guidelines; Street width guidelines.	Branchburg Township
Public Participation	Establish density and building height guidelines with community.	Community groups and organizations; Branchburg Township
Environmental Sensitivity	Public awareness and sensitive design regarding flooding and environmental conservation.	Branchburg Township; NJ Office of Smart Growth
Multiple Ownership	Property acquisition or agreements by Township; Prepare detailed phasing plan.	Branchburg Township; Somerset County Planning Board
Public-Private Partnership	Coordination to ensure wetlands regulations followed; introduce wetlands and wetland buffers; Coordinate on implementation of Greenway / Open Space Plan.	Branchburg Township; NJDEP; NJ Transit
Community Support	Spur station relocation efforts; Begin efforts to attract businesses.	Community groups and leaders; Business leaders in the area; Branchburg Township
Transit Village Designation	Monitoring TOD development; Apply for funding to implement TOD.	NJ Transit Village Task Force; NJ Office of Smart Growth; NJDOT

CONCLUSIONS / NEXT STEPS

Somerset County is in an advantageous position to make use of the various New Jersey smart growth policies and programs that support Transit Oriented Development, in addition to the Transit Village Initiative. The TOD study and the Transit Village Initiative can provide all Somerset County communities with the tools and programs needed to implement TOD planning.

NJ Department of Transportation (NJDOT) and NJ Transit need to collaborate to make this TOD project, and those to follow, efficient and successful. There is also a need for these agencies, along with Somerset County, to secure funding for implementing the initiative, including design work for local projects that propose to improve some of the station areas.

Another important step is to have cooperation among the municipalities and County to pursue bus TOD along Routes 27 and 28 corridors. This will help achieve a more sustainable region in terms of transit, traffic, pollution and consumption, while promoting Smart Growth as defined by NJ State Planning Board.

With the three pilot TOD communities of Bound Brook, Somerville, and North Branch leading the way, Somerset County is now poised to become a model community for showcasing the benefits of sustainable growth through transit oriented development. Each pilot community has now established a conceptual design framework upon which to create viable development and redevelopment opportunities based on individual community goals and objectives. The next logical step is to take the conceptual plans to the public and build consensus for how the refinement of the TOD concept should occur while seeking to leverage private sector investment.



Bound Brook Station Area.



Somerville Station Area.



North Branch Station Area.

- A. Implementation and Funding
- B. Problem Statements
- C. Potential Pilot Site Information Form
- D. Public Meeting Summary
- E. Design Charrette Summary
- F. Municipal interview Summaries
- G. Development Community Focus Group Summaries
- H. References

APPENDIX A

IMPLEMENTATION AND FUNDING

Somerset County has a deep involvement in this TOD Initiative. Apart from the specific station area recommendations, some overarching guidelines for TOD development in the County need to be established for success, and for the project to act as a model for future transit-oriented development.

The following are common issues relevant to all three TOD sites. They include density and mix of uses, parking, access from major roadways, and performance measures.

1. Density and Mix of Uses

While there is no formula for the *right* mix of uses and density required in a TOD, there are some general guidelines that can be followed to maximize the likelihood for TOD success.

In general a good mix of uses may include smaller scale service retail, civic uses and/or public activity centers, offices, restaurants, entertainment facilities such as theaters, and even recreation use. However, one thing that is essential for TOD success is residential development at densities higher than traditional suburban subdivisions. Station area development should also include a mix of housing types to accommodate a variety of consumer needs, including apartment buildings, townhouses, twins, single family detached units on small

lots, and senior housing. Senior, or age-restricted housing, including assisted living units, congregate care facilities, and active adult communities, is an ideal element of TOD, providing increased mobility options for the elderly.

The precise density required depends on the individual vision and goals of a community. In general, however, for a TOD to achieve critical mass for transit ridership, walkable distances, and support for retail and other non-residential uses, it is important to have a relatively dense residential base.

2. Parking

Parking is an important issue in all three station areas for both passenger use and to support development. In each case, there are two key questions that need to be answered: how much parking is required, and how it may be managed and shared among different uses.

Parking Capacity

Determining the optimum parking capacity involves complex trade-offs, as shown in *Table 13*. On the one hand, parking provides access for park-and-ride rail users, and eases development financing and marketing.

Table 13. Trade-Offs of On-Site Parking

Positives

- Generates NJT ridership
- Eases development financing
- Development is easier to market
- Some parking lot sites have no other feasible use
- Parking can provide buffers, e.g. against rail tracks

Negatives

- Generates traffic on constrained local streets
- Parking competes with amenities for scarce funds
- Loss of developable area that may be used for ridership and tax generating development, or open space
- Design impacts
- Can reduce attractiveness of TOD development

On the other hand, ample parking can exacerbate traffic impacts, take land from primary uses, and make the development less transit-oriented. Reduced parking ratios signal that many residents, employees and visitors will be riding transit; if parking is provided in standard ratios, by definition it is not transit-oriented.

Table 14 provides data for vehicle availability per household for each station area. These figures indicate a substantial market for housing near TOD areas, with less demands for traditional dedicated parking and more dependence on mass transit and interconnected sidewalks/trails:

- In Transit Villages across the State, there are 36% more households with no vehicles, compared to the surrounding municipality. In addition, 27% more workers use transit to get to work.
- Some park-and-ride commuters who live close to the station, but still drive and park, for example, at North Branch, 17% live within 1/2 mile, but only 6% walk/bike to the station due to the lack of sidewalks. There is considerable scope to free up parking spaces for other users by improving pedestrian conditions.
- Bound Brook and Somerville station areas in particular have many households with no vehicle. More than 20% of rental households have no vehicle, together with 6% of owner-occupiers. However, transit mode shares are still low – only 3-5% of station area residents take transit to work in the two municipalities.

In addition, it may not be necessary to replace all of the NJ Transit commuter parking, for several reasons:

- Stations on the Raritan Valley line are relatively closely spaced, and many drivers can easily reach two or more stations. It may be desirable to concentrate commuter parking at stations that have less potential for transit-oriented development, and which have good highway access, such as Bridgewater.
- Some of the parking can be provided through shared-use agreements (see below).
- It may be more cost-effective to invest in alternative access strategies to increase ridership, such as feeder transit, pedestrian and bicycle improvements. Particularly if structured parking is used, the capital cost alone can reach \$30,000 or more per net new space (i.e., once the number of existing surface spaces is subtracted).
- The transit-oriented development proposals will generate a significant amount of ridership, which may produce a net increase in ridership even without full parking replacement.
- If there are concerns that the parking supply may be inadequate, one useful option is to create landscape reserves. These can be converted to parking at a later date if required. This approach has been successfully used in cities throughout Oregon, and others such as Carmel, CA; Cleveland, OH; and Iowa City, IA.

Table 14. Vehicle Availability for Station Area Households

Vehicles Available(%)	Bound Brook		North Branch		Somerville	
	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied	Owner Occupied	Renter Occupied
None	5.696	19.996	3.196	4.696	6.296	22.096
One	26.096	42.796	24.496	33.196	31.396	49.296
Two	48.196	29.696	54.196	43.496	43.896	22.796
Three	15.869	5.496	13.696	14.596	13.296	4.496
Four+	4.596	2.496	4.896	4.696	5.696	0.996

Source: US Census (2000)

Parking Management

The way in which parking is managed is just as important as the quantity of supply. There are two key principles that may be usefully applied in the station areas:

Share Parking Between Multiple Uses

Shared parking allows for the most efficient use of parking supply by serving different land uses that have different times of peak demand. For example, a park-and-ride lot or office use with demand peaks during the day can share parking with restaurants, where demand is greatest during the evenings, and/or residential uses, where demand peaks are in the evenings, nights and on weekends. Shared parking also allows the supply to be used more efficiently, since peaks in demand are smoothed out by the larger number of users. Spreading high utilization throughout the day can improve cash flow for operators as well.

Shared parking works with any number of different types of parking – on-street (ideal), public off-street (simple), and private parking (where success depends on physical access, design, and the willingness of the owners). There are several considerations that need to be addressed to promote shared parking in the three station areas:

- Design parking so that it can be shared. This means that there may be pedestrian entrances directly on to the street, and vehicle and pedestrian access may be designed so that there are no security issues with multiple users.
- Maximize the amount of on-street parking. This is the easiest type of parking to share, since there are no access or ownership restrictions.
- Identify an organization to manage the common parking supply. This might be the municipality, a Business Improvement District, a dedicated Parking District, or other organization. As well as managing new public garages, it will seek to lease surplus parking from private owners at designated times of day, assuming operational and liability responsibilities.

Price Parking to Maintain Availability

While parking is often provided at no charge to the user, it is never free. As well as the capital costs of construction and operational expenses such as security and maintenance, the opportunity cost of the land needs to be taken into account. Parking prices can be used to recover

at least some of these costs, and also achieve a range of local goals. For example:

- By increasing prices when facilities reach 90-95% capacity, availability can be maintained. This strategy may also be useful for NJ Transit commuter parking, using prices as a signal to direct commuters to stations with under-utilized facilities.
- Prices can discriminate between different users. For example, free or low-cost short-term parking can attract shoppers, while charges for all-day parking mean that employees and rail commuters will be encouraged to walk or bike.
- Higher prices can be charged for premium spaces, such as reserved, non-shared spaces or those closer to a destination. Many residents prefer dedicated, reserved spaces – these can be offered, but at a higher price to encourage the sharing of parking.

“The right price for curb parking is the lowest price that keeps a few spaces available to allow convenient access. If no curb spaces are available, reducing their price cannot attract more customers, just as reducing the price of anything else in short supply cannot increase its sales. A below-market price for curb parking simply leads to cruising and congestion. The goal of pricing is to produce a few vacant spaces so that drivers can find places to park near their destinations. Having a few parking spaces vacant is like having inventory in a store, and everyone understands that customers avoid stores that never have what they want in stock. The city should reduce the price of curb parking if there are too many vacancies (the inventory is excessive), and increase it if there are too few (the shelves are bare).”⁴

Underpricing curb parking cannot increase the number of cars parked at the curb because it cannot increase the number of spaces available. What underpricing can do, however, and what it does do, is create a parking shortage that keeps potential customers away.

4. Kolozsvari, Douglas and Shoup, Donald (2003), “Turning Small Change into Big Changes,” *Access*, Fall 2003, pp 2-7.

3. Access from Major Roadways

Two of the station areas – Somerville and North Branch – have particular access challenges, since major arterials border the sites. There are two alternative approaches for dealing with this issue, and the choice will depend on the community's vision of the long-term character of the streets.

If they are seen solely as a means to carry a large volume of high-speed traffic, then a greater buffer is necessary between the development and the arterial. Access will either be from a side street, or a parallel roadway buffered from the main arterial. While the adjacent uses may still be visible from the main arterial, it is recommended that the main entrance not front on to it.

If, however, the arterials are seen as a gateway to the community, marking the transition to a more urban area, then a different approach is desirable. This can take the form of a multi-way boulevard, as recommended for Route 22 east of the Raritan River. An access road, with parking on one or both sides, will be constructed immediately adjacent to the arterial, separated by a planted median. The best regional examples of this approach are perhaps Eastern Parkway and Ocean Parkway in Brooklyn, NY. The multi-way boulevard allows the arterial to carry through traffic, while enabling development to address the street with good access by vehicle, foot or bicycle.

Regardless of which option is pursued, intersections should be carefully designed to give cues to motorists that they are leaving the arterial and entering a more urban area, where slower speeds are appropriate and where they can expect to encounter pedestrians and cyclists. For this reason, jug-handles are to be avoided in favor of left-turn pockets with tighter turn radii, which force motorists to slow. Gateway treatments and reduced lane widths also provide appropriate cues.

4. Access Standards

The widths of other streets will depend on their function. The need to easily accommodate transit and truck traffic needs to be balanced against the detrimental impact of wide streets on pedestrian comfort and safety. There is a growing body of literature that associates wider lanes with higher speeds and crash rates.

The following should be considered when determining appropriate widths:

- The County Traffic Road and Bridge Handbook, which should be used for County roads.
- The AASHTO "Policy on Geometric Design of Highways and Streets" recommends that lanes on local urban streets should be 9'10" to 10'10" wide.
- The NJDOT publication, "Flexible Design of Main Streets," recommends 11' wide lanes, or 14' for shared lanes, although these are for State highways with higher traffic volumes and more truck traffic.
- *Bicycle Accommodations.* Communities with an ideal grid system can accommodate on-street bicycle lanes with no need to design separate off-street paths. On-street bicycle lanes should be provided on busy streets – generally those that have traffic volumes of 2,000 or more vehicles per day. A minimum bike lane width of 5 feet is required, provided that any adjacent parking lane is at least 8 feet wide. On-street bike lanes should be designed to connect with the Raritan River Greenway and other regional bike path systems.
- *Emergency Vehicle Access.* For emergency vehicles, the most important element of street design is the accessibility afforded by a well-connected network of streets. The street pattern should provide at least two routes to any street within the community, reducing the risk that an emergency vehicle will find its access blocked. A street pattern composed of a single entry/exit spine with all destinations located on dead-end branches of the spine presents difficult challenges for emergency vehicle access.

5. Performance Measures

Performance measures allow a community to identify how successful a project is based on tangible evidence. In the case of TOD, performance measures generally relate to the effectiveness of the transportation system, including vehicular, transit, and pedestrian circulation, and the economic and social impacts of associated development.

Transportation Measures

Transportation performance is generally measured in terms of "Level of Service" and "Trip Generation" and includes specific measures for automobile, transit, pedestrian, and bicycle mobility.

Since the post-War era, most cities have adopted Automobile Level of Service (LOS) as their primary transportation system performance measures. Auto LOS is highly useful since it is easy to measure, and it can effectively estimate auto congestion, a factor of great concern to most municipalities and citizens. At intersections, Auto LOS estimates the average seconds of delay a motor vehicle will experience. Most local jurisdictions use a letter scale from A (less than 10 seconds of delay) to F (more than 80 seconds of delay), but others add additional letters (G, H) to denote further delay.

Similar measures are available for street segments in between intersections, using both a letter scale as well as a numerical volume-to-capacity (v/c) ratio. V/C ratios take the total number of vehicles on a given stretch of roadway and divide by the capacity of that road to handle cars. A v/c ratio of 0.80 or lower represents free-flow conditions, while a ratio of 1.20 represents very congested conditions.

While useful for estimating the effects of congestion on motorists, Auto LOS and v/c ratios do not offer the full picture of a transportation network in places such as Somerset County. First, by focusing on spot locations, they say nothing about the ability of the overall transportation network to carry traffic. For example, they do not allow planners to estimate actual average travel time – the factor that motorists care most about – among various destinations.

Secondly, and more importantly, these measures estimate delay only to vehicles, not people. A bus with 50 passengers on board is counted the same as an automobile with one passenger. In order to improve Auto LOS at a given intersection, for example, traffic engineers can remove bike lanes or transit priorities in order to give more accommodation for cars. The result may be that the intersection can handle more vehicles but fewer people. While this result may present short-term benefits for those who drive, it will contradict the County's goals for transit-oriented development. In the long-term, moreover, as population and employment grow, managing the transportation system with an exclusive focus on auto congestion paradoxically results in more auto congestion than an approach that considers all modes.

Instead, a wider set of transportation performance measures is recommended for use in the three station areas, and possibly in the wider County. These are calculated as described below.

Bicycle Level of Service

Recent research has resulted in two emerging national standards for bicycle level of service:

- Bicycle Compatibility Index, developed for the Federal Highway Administration
- Bicycle Level of Service, developed for the Florida Department of Transportation

Both are similar, in that they employ a formula to take into account various roadway design features and traffic characteristics, and express results on a scale of A through F. Grade "A" represents the best conditions for bicycles. The Bicycle Compatibility Index (BCI) is the best established of the two measures, and is recommended for use here to assess quality of service on key bicycle routes. The BCI requires the following inputs, many of which will need to be estimated at the pre-development stage:

Geometric and roadside data

- Number of through lanes
- Curb lane width
- Bicycle lane or paved shoulder presence and width
- Area character (residential or non-residential)

Traffic operations data

- Posted speed limit
- 85th percentile speed of motor vehicles
- Average Annual Daily Traffic volume
- Percentage of traffic constituted by trucks
- Percentage of vehicles turning right into driveways or minor intersections

Parking data

- Presence of on-street parking
- On-street parking occupancy
- Parking time limit

Pedestrian Level of Service

As with bicycles, there are numerous, interwoven factors affecting the quality of the pedestrian environment. The Pedestrian Level of Service measure described in the Highway Capacity Manual primarily focuses on the capacity of sidewalks and other facilities; in other words, an empty, hostile suburban sidewalk can score better than a busy, vital, urban commercial street.

Fortunately, a number of cities, such as Fort Collins, CO, have developed their own measures for pedestrian quality. The Fort Collins methodology takes into account five criteria: directness of routes; continuity of routes; street crossings; visual interest; and amenity and security.

Another useful standard results from Florida Department of Transportation Research. Similar to the Bicycle Compatibility Index, the Pedestrian Level of Service methodology uses a formula to take into account various relevant characteristics, and expresses results on a scale of A through F. It requires the following inputs:

- Sidewalks
- Presence and width of sidewalk
- Lateral separation of pedestrians and motor vehicles
- Widths of outside lane and any shoulder or bike lane
- Presence of on-street parking
- Presence and width of buffers between sidewalk and travel lane (e.g. trees)
- Motor vehicle volume and speed
- Motor vehicle traffic volume
- Number of through traffic lanes
- Average motor vehicle speed

Transit Level of Service

Several good indices for assessing transit service have been developed. They take into account factors such as service frequency and span, loadings, reliability and travel speed. However, none of the proposed concept plans will significantly alter transit service. Rather, they will add riders to existing service, and help develop the market for longer-term frequency, and other enhancements.

Automobile Level of Service

It will still be important to calculate expected impacts of additional traffic at key intersections, several of which are already congested. However, the traffic studies will need to adjust trip generation rates to reflect the fact that many trips will be made on transit, bicycle and foot (see below).

Vehicle Trip Generation

One of the most fundamental measures of the performance of a TOD in generating transit riders, and minimizing automobile usage, is vehicle trip generation. A successful TOD will generate significantly fewer vehicle

trips per unit of development compared to standard Institute of Transportation Engineers' trip generation rates. Trip generation rates are affected by several factors inherent to the development itself, including: density, mix of uses, density of the street grid, sidewalk and bicycle lane completeness, transit service, and Transportation Demand Management measures such as parking charges.

Since the plans are still conceptual in nature, it is premature to calculate the actual impacts on these measures. However, these indicators will be extremely useful when assessing individual development proposals. They will show the degree to which the proposed projects improve conditions for pedestrians, cyclists and transit riders, or are oriented to the automobile.

Economic and Social Measures

The economic and social performance of a TOD can be gauged through increased private investment, increased tax revenue, increased property values, and community perception.

- *Private Investment* – Using Certificate of Occupancy records, the amount of new or substantially rehabilitated retail/office space and housing units can be a benchmark for measuring private investment. The value of this investment can be gathered from the building permit application.
- *Tax Revenues* - The increase in tax rates on new and rehabilitated properties can be tabulated from tax rolls and the change in assessed values.
- *Property Values* - Nationwide studies show that property values within a ¼-mile from a transit station are generally higher than similar properties located more than ¾ of a mile from the station. Retail and office buildings experience lower vacancy rates and increased rental rates. A portion of the premium is due to the comparative density, but a portion is also due to the desirability of these areas and the amenity value of transit. Tax assessment data can be used to measure change in property values related to TOD development.
- *Community Perception* – Household and commercial surveys can be used to gauge changes in residents' and business owners' attitudes about the TOD projects. Improvements in shopping, restaurants, entertainment, walkability, and transit access should garner positive responses from the community if the TOD is successful.

6. Funding Opportunities

Funding for TOD implementation can be obtained from various sources, including the New Jersey Department of Community Affairs (NJCA), the New Jersey Office of Smart Growth and the Tri-State Transportation Campaign. The following is a partial list of programs or agencies that provide funding to assist with TOD implementation:

- NJTPA Support Task Grants
- NJTPA Technical Studies Grant Program
- NJDOT Discretionary Aid Program
- NJDOT Local Planning Assistance
- NJDOT Local Bicycle / Pedestrian Assistance
- NJDOT Corridor and Regional Planning Studies
- NJDOT Local Aid for Centers of Place
- NJDOT Transit Village Initiative
- NJDOT Transportation Enhancement Grant
- NJCA Smart Growth Grants
- NJCA Neighborhood Preservation Grant
- Somerset County EDIP Program
- Somerset County Municipal Planning Partnership Grants
- Somerset County Community Development Block Grants
- USDOT Federal Transit Capital Investment Grants
- Fannie Mae Smart Commute Mortgages

APPENDIX B

TRANSPORTATION PROBLEM STATEMENTS

A series of transportation projects have been proposed to support the TOD development process in each of the three study areas. Transportation projects in New Jersey are initiated by submitting a Transportation Problem Statement to NJDOT's Bureau of Capital Program Development. The purpose of the Transportation Problem Statement is to identify needs which may be suitable to be addressed by capital improvement projects implemented by NJDOT. The following projects have been identified as having the highest priority for the proposed TOD plans:

Bound Brook Station Area

- Pedestrian and Bicycle Improvements
- Second Street Extension
- Freight Rail Track Consolidation

Somerville Station Area

- Davenport Street Extension
- Redesign of Veterans Memorial Drive

North Branch Station Area

- Station Relocation
- Pedestrian / Multi-Use Paths on Meister Ave. and Industrial Parkway

The full problem statement forms are provided on the following pages.

New Jersey Department of Transportation

Transportation Problem Statement

PLEASE SEND THIS COMPLETED FORM TO MARK STOUT, CAPITAL PROGRAMMING & FUNDS MANAGEMENT

The following information is to be completed by the Division of Capital Programming & Funds Management

DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: Downtown Bound Brook, between Route 28 and the Raritan River

County(s): Somerset

Municipality(s): Bound Brook

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

_____ Capacity problem

_____ Operational problem

_____ Physical condition problem

Safety problem

Other (specify) Pedestrian and bicycle access problem

Existing Bridge

_____ Capacity problem

_____ Physical condition problem

_____ Safety problem

Corridor/area Capacity Problem

_____ Need for corridor study

_____ Possible highway on new alignment

_____ Possible new transit line

_____ Need for park and ride development

DESCRIBE THE PROBLEM:

This problem statement identifies strategies to improve pedestrian and bicycle access and amenities in downtown Bound Brook, particularly to the NJ Transit rail station and Raritan River. The improvements will help to create a more comfortable walking and biking environment; provide continued mobility in the face of parking and street network constraints; and allow for growth in NJ Transit ridership through access on foot, with less need for new parking.

There has already been substantial investment in streetscape improvements on East Main Street, west of the station. On most of the remaining streets north of the station, there is good access for pedestrians with wide sidewalks on both sides, curb parking, street trees, retail and amenities such as benches. However, there are additional opportunities to enhance the pedestrian environment in other areas of downtown Bound Brook as follows:

- **Additional streetscape improvements:** complete the streetscape improvements on East Main Street and extending them to South Main Street.
- **Crossings:** improve crossing facilities on East Main Street through providing corner bulb-outs – particularly outside the station at East Main and Hamilton Streets.

- **Raritan River access:** provide direct, safe connections between a potential riverside multi-use trail and the station, and providing a safe trail crossing at South Main Street
- **Station access from South Main Street:** provide direct access to both platforms from South Main Street, via a new set of stairs and possibly a ramp. This will be particularly valuable for pedestrians and cyclists traveling from South Bound Brook. If stairs are used, a bike channel is desirable down the staircase, since this will also serve as the primary bicycle access from South Bound Brook. It should be noted that NJDOT has raised contamination issues, which will need to be resolved as part of a more detailed engineering assessment.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board’s Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature) _____

Date of Concurrence _____

Attachment 1

Information required on Transportation Problem Statements

- Concise statement of need
- Proposed concept and/or scope of work of a capital improvement project to address the identified need where appropriate
- Statement of the extent to which the proposed capital improvement project or removal of the identified deficiency would advance the Department's objectives as identified in the Capital Investment Strategy.
- Current traffic counts and accident rates, with respect to the following program categories: Bridge Rehabilitation and Replacement, Highway Rehabilitation and Reconstruction, Safety Intersection Improvements.
- Identification of individuals or groups who may be sponsoring or supporting the proposed project.
- Summary of identified environmental issues within the probable footprint of the proposed project, especially including the identification of any historic or potentially historic properties, historic or potentially historic structures, historic districts, and wetlands.
- To assure proper quality control, all Transportation Problem Statements must be signed by a division director.

NOTE: In the case of a Transportation Problem Statement originating from outside the Department, the Bureau of Capital Program Development may request the Department unit which transmitted the problem statement, and/or any other appropriate unit within the Department, to complete the necessary information.

The Bureau of Capital Program Development may return a Transportation Problem Statement to the initiator with a request to complete missing or inadequate items of information.

The Bureau of Capital Program Development may request the Division of Design Services to undertake an environmental screening to identify pertinent environmental issues involving Transportation Problem Statements, as appropriate.

New Jersey Department of Transportation

Transportation Problem Statement

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DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: Second Street, between Hamilton Street and East Street

County(s): Somerset

Municipality(s): Bound Brook

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify) Pedestrian access and local circulation problem

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development

DESCRIBE THE PROBLEM:

Bound Brook Borough was awarded Transit Village designation in October 2003, and the redevelopment of downtown Bound Brook is integral to creating a vibrant transit village. A logical, comprehensive street grid is an essential part of these plans. Extension of Second Street would complete this downtown street grid, helping to improve connectivity and circulation for all modes.

Extending Second Street will also facilitate the planned renovation of the Bound Brook Arts Theater. This theater was once the main attraction in Downtown. Its closure negatively impacted Bound Brook and the vibrancy of its downtown. With plans for its renovation into an arts center, the theater is poised to become a major local attraction once again.

To rejuvenate the theater's relationship with the neighborhood, it needs to be more visible and attractive. The recommendation to extend Second Street (through the grocery store's current parking lot behind the theater between Hamilton and East Streets) will allow for more street frontage for other theater-related activities and supporting uses. Any loss in parking from the grocery store lot will be at least partially replaced with on-street, perhaps back-in angled parking. On-street parking brings the additional advantage of being shared between all users, including the Brooks Arts Theater and the grocery store.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board's Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders. An extension of Second Street was also recommended in a 2000 study by the Urban Land Institute (ULI), which examined ways to revitalize downtown Bound Brook.

Other comments (if any) by initiator:

For this proposal to move forward, the existing topography and use of the adjacent cemetery must be further evaluated.

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature)_____

Date of Concurrence _____

Attachment 1

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New Jersey Department of Transportation

Transportation Problem Statement

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DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits:

County(s): Somerset

Municipality(s): Bound Brook

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify)

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development
- Other (Rail freight technical study)

DESCRIBE THE PROBLEM:

Although the Raritan River is visible from the rail station, Bound Brook’s downtown has long turned its back on the waterfront as an amenity. Much of this is due to the presence of active freight-rail lines, which are wide apart with “dead space” in between. Consolidation of the tracks would open underutilized land for development – 300 units of transit-oriented housing are possible on this site – and connect Bound Brook’s waterfront area to the planned Raritan River Greenway. A technical study is therefore recommended to investigate the costs and operational feasibility of consolidating the freight-rail tracks so that they run through the station.

This technical study will explore the potential and associated costs, working with NJDOT. It would consider:

- Costs of track relocation and/or consolidation. In turn, this will establish whether new housing on the opened-up land will be able to fund these costs.
- Physical and operational feasibility.
- Future expansion plans, including alternative options for an additional freight-passing track which is planned for the “dead space” between the lines. While moving this facility to the east may involve additional impacts on Middlesex Borough, it may be appropriate to reserve as much land as possible for development within

walking distance of stations, and direct freight facilities to areas with less Transit-Oriented Development potential.

If an outside group actively supports this problem, please identify:

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- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature) _____

Date of Concurrence _____

Attachment 1

Information required on Transportation Problem Statements

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New Jersey Department of Transportation

Transportation Problem Statement

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The following information is to be completed by the Division of Capital Programming & Funds Management

DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: Davenport Street, south of West Main Street

County(s): Somerset

Municipality(s): Somerville

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify) Requirement for new grade-separated crossing

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development

DESCRIBE THE PROBLEM:

The Somerville landfill and the Landmark mall sites both represent major opportunities for transit-oriented development. One of the key constraints is access over the train tracks, which is currently limited to the existing crossings at Somerset St. and South Bridge St.

A new grade-separated crossing at Davenport would provide the connectivity necessary to link the two sites, and tie future development on the landfill into downtown. This route would also become the main corridor for pedestrians and bicyclists between downtown, the new civic and residential uses planned for the landfill, and the Raritan River Greenway.

The rail tracks are already elevated, allowing a grade-separated crossing to be constructed without steep roadway gradients. The gradient could further be reduced for pedestrians and bicyclists since the sidepaths require less clearance; they should be wide enough for shared use. To maintain good light and air for pedestrians and cyclists, it may be possible to remove excess right-of-way on either side of and between the rail tracks.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board's Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature)_____

Date of Concurrence _____

Attachment 1

Information required on Transportation Problem Statements

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- Current traffic counts and accident rates, with respect to the following program categories: Bridge Rehabilitation and Replacement, Highway Rehabilitation and Reconstruction, Safety Intersection Improvements.
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Somerville Station Area: Redesign of Veterans Memorial Drive

New Jersey Department of Transportation

Transportation Problem Statement

PLEASE SEND THIS COMPLETED FORM TO MARK STOUT, CAPITAL PROGRAMMING & FUNDS MANAGEMENT

The following information is to be completed by the Division of Capital Programming & Funds Management

DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: Veterans Memorial Drive, between Somerset Street and South Bridge Street

County(s): Somerset

Municipality(s): Somerville

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify)

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development

DESCRIBE THE PROBLEM:

Veterans Memorial Drive is currently the main barrier between the transit-oriented development opportunity site on the Somerville landfill and downtown; and also between the rail station and downtown Somerville. In its present configuration, it already presents a constraint on rail ridership, and will prevent the landfill site from realizing its full TOD potential.

Currently, the road has four travel lanes (more at intersections), narrow sidewalks that fail to meet ADA standards, and some parking on one side. The main crossing from the station towards downtown consists of an unsignalized crosswalk, which is offset from the main pedestrian desire line, which has a guardrail to prevent jaywalking. There is no provision for bicyclists.

Preliminary observations suggest that four travel lanes are more than are required to accommodate existing and future traffic volumes. This creates an opportunity to redesign the street to give greater space to other modes. The following improvements are provisionally recommended:

- Reduce Veterans Memorial Drive to two travel lanes
- Widen sidewalks to at least 5 feet effective width on both sides, and ensure that they are ADA-compliant
- Install bulb-outs and median refuges at crosswalks, particularly outside the entrance to the station where the crosswalk should be moved to the pedestrian desire line

- Stripe bike lanes. Other improvements could include an upgraded crosswalk at the train station entrance, which would strengthen links to downtown.
- Add parking on both sides of the street. Initially, eight-hour parking meters are likely to be the most appropriate, since they can partially replace NJ Transit commuter parking lost as part of the landfill redevelopment, and reduce the need for expensive structured parking. As development progresses, time limits may need to be adjusted to cater to shoppers and other short-term users.

A traffic study is required to consider the feasibility of these improvements in detail, in particular taking account of plans for Davenport Street extension and the mall redevelopment.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board’s Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature)_____

Date of Concurrence _____

Attachment 1

Information required on Transportation Problem Statements

- Concise statement of need
- Proposed concept and/or scope of work of a capital improvement project to address the identified need where appropriate
- Statement of the extent to which the proposed capital improvement project or removal of the identified deficiency would advance the Department's objectives as identified in the Capital Investment Strategy.
- Current traffic counts and accident rates, with respect to the following program categories: Bridge Rehabilitation and Replacement, Highway Rehabilitation and Reconstruction, Safety Intersection Improvements.
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New Jersey Department of Transportation

Transportation Problem Statement

PLEASE SEND THIS COMPLETED FORM TO MARK STOUT, CAPITAL PROGRAMMING & FUNDS MANAGEMENT

The following information is to be completed by the Division of Capital Programming & Funds Management

DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: North Branch station

County(s): Somerset

Municipality(s): Branchburg

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify)

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development
- Other (Need to relocate rail station)

DESCRIBE THE PROBLEM:

The current North Branch station location along Aspen Hill Road is extremely constrained by a steep cutting, and there is minimal potential for ridership growth. There is no space around the station to increase parking, add drop-off and pick-up zones, or, most importantly, accommodate future transit oriented development. This will become particularly significant following completion of the planned Whitehouse siding project which will allow increased frequencies on this segment of the line.

The Somerset County Planning Board's Transit-Oriented Development Study has identified a site south of Route 22 between County Line Road and Readington Road as the optimal site to relocate the North Branch station and develop a transit village. The new location was chosen due to the surrounding development potential, which includes approximately 325 acres of vacant and/or underutilized land. The new station will also be better located to integrate with the existing Wheels 884 shuttle service, and future transit enhancements.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board's Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature)_____

Date of Concurrence _____

Attachment 1

Information required on Transportation Problem Statements

- Concise statement of need
- Proposed concept and/or scope of work of a capital improvement project to address the identified need where appropriate
- Statement of the extent to which the proposed capital improvement project or removal of the identified deficiency would advance the Department's objectives as identified in the Capital Investment Strategy.
- Current traffic counts and accident rates, with respect to the following program categories: Bridge Rehabilitation and Replacement, Highway Rehabilitation and Reconstruction, Safety Intersection Improvements.
- Identification of individuals or groups who may be sponsoring or supporting the proposed project.
- Summary of identified environmental issues within the probable footprint of the proposed project, especially including the identification of any historic or potentially historic properties, historic or potentially historic structures, historic districts, and wetlands.
- To assure proper quality control, all Transportation Problem Statements must be signed by a division director.

NOTE: In the case of a Transportation Problem Statement originating from outside the Department, the Bureau of Capital Program Development may request the Department unit which transmitted the problem statement, and/or any other appropriate unit within the Department, to complete the necessary information.

The Bureau of Capital Program Development may return a Transportation Problem Statement to the initiator with a request to complete missing or inadequate items of information.

The Bureau of Capital Program Development may request the Division of Design Services to undertake an environmental screening to identify pertinent environmental issues involving Transportation Problem Statements, as appropriate.

North Branch Station: Pedestrian / Multi-Use Paths on Meister Ave. and Industrial Parkway

New Jersey Department of Transportation

Transportation Problem Statement

PLEASE SEND THIS COMPLETED FORM TO MARK STOUT, CAPITAL PROGRAMMING & FUNDS MANAGEMENT

The following information is to be completed by the Division of Capital Programming & Funds Management

DB Number:

Legislative District:

Congressional District:

CIS Text and CIS No.:

Program Category:

Information contained on this form has been verified by _____

LOCATION (To be completed by initiator)

Route (if applicable):

Mileposts (if applicable):

Structure number (if applicable):

Limits: Meister Avenue and Industrial Parkway, between Readington Road and County Line Road.

County(s): Somerset

Municipality(s): Branchburg

DESCRIPTION OF PROBLEM (to be completed by initiator)

NOTE: Please attach related correspondence, map of the area, and other appropriate support material.

Check those items that best describe the problem:

Existing Highway

- Capacity problem
- Operational problem
- Physical condition problem
- Safety problem
- Other (specify) Pedestrian and bicycle access problem

Existing Bridge

- Capacity problem
- Physical condition problem
- Safety problem

Corridor/area Capacity Problem

- Need for corridor study
- Possible highway on new alignment
- Possible new transit line
- Need for park and ride development

DESCRIBE THE PROBLEM:

The Somerset County Planning Board's Transit-Oriented Development Study has identified the area south of Route 22 between County Line Road and Readington Road as having significant potential for transit oriented development. However, there is almost no provision for pedestrians and cyclists on the existing street network.

Retrofitting Meister Avenue and Industrial Parkway, and constructing new multiuse paths to the south, will bring several benefits:

- Allow a relocated North Branch station to capture a greater share of commute trips to the industrial park, by enabling employees in the light industrial uses area to commute by train. This will be particularly important once the Whitehouse siding project increases rail frequencies and makes the service more useful for reverse commute trips
- Reduce midday vehicle trips, through allowing employees to access the restaurants, shops and civic uses in the new transit village on foot or by bicycle
- Enable access to the rail station and transit village from the residential neighborhoods to the south of the creek.

As traffic volumes are relatively low, there is more than sufficient right-of-way to add sidewalks and bicycle lanes, and possibly on-street parking. New streets planned for the transit village, including connecting the two “dead ends” of Meister Avenue and Industrial Parkway, will incorporate these facilities. The key recommended improvements include:

- **Sidewalks.** Meister Avenue and Industrial Parkway should be retrofitted with sidewalks.
- **Bike lanes.** With sufficient right-of-way, bike lanes will also be beneficial on Industrial Parkway and Meister Avenue. They will be important in narrowing effective lane widths, in turn reducing speeds and reducing the potential for cut-through traffic seeking to avoid congestion at the County Line Road intersection. Also, if college facilities are provided at the station, bike lanes or a path along Route 28 and its extension will provide an important link.
- **Multi-use paths and a southerly creek crossing.** No roadway connection exists between the train station and neighborhoods to the south. A multi-use path and bridge over the creek could provide access, while avoiding any traffic impacts. This path would provide pedestrian and bicycle access to the station, school, and commercial development from the residential neighborhoods to the south. The multi-use path will also be important in connecting the transit village to the Raritan River Greenway, and the planned “Riverwalk” bikeway and trail system – a 13-mile facility which would run along the river between North Branch and Neshanic Station.

If an outside group actively supports this problem, please identify:

The recommendation described here sprung from a community planning process that informed the Somerset County Planning Board’s Transit-Oriented Development (TOD) study. The study was guided by the Implementation Team (I-Team), comprised of:

- **County agencies** - Somerset County Planning Board, Somerset County Engineering Division
- **State agencies** – New Jersey Transit, New Jersey Department of Transportation, North Jersey Transportation Planning Authority, New Jersey Office of Smart Growth
- **Other organizations** – New Jersey Future, Ridewise, Regional Planning Partnership, Business Partnership of Somerset County, Municipal Land Use Center at the College of New Jersey.

The TOD Study Team also consulted with municipal representatives and local developers; and the plans incorporated input from three public workshops. The plan therefore has the support of a large range of city groups and stakeholders.

Other comments (if any) by initiator:

Initiator (Please print or type):

Division:

Date of Initiation:

Signature _____

Concurrence by Division Director (Signature) _____

Date of Concurrence _____

TRANSIT ORIENTED DEVELOPMENT OPPORTUNITIES
IN SOMERSET COUNTY STUDY

Potential Pilot Site Identification Information Form

1. *Please identify any vacant sites within the municipality that are located within ½ mile of a transit hub or major bus corridor by street address or intersection. If possible, please also attach a location map. A vacant site is a site that is completely undeveloped, but is not used for recreation, farming, or is permanently protected open space.*

2. *Please identify any underutilized sites within the municipality that are located within ½ mile of a transit hub or major bus corridor by street address or intersection. If possible, please also attach a location map. Underutilized sites include sites with vacant buildings or buildings that are assessed at a significantly lower value than the value of their location would suggest. Underutilized sites may also include sites that are not developed to the capacity permitted by the zoning district.*

3. *Please indicate the owner(s) of the above sites if known.*

4. *Are there any plans for the above sites? If so, please indicate below.*

5. *Are there any known environmental constraints associated with the above sites, including open water, floodplain, wetlands, steep slopes, contaminated soil, etc.? If so, please indicate below.*

6. *Please indicate if the municipality contains any Designated Centers or State Planning Areas One and/or Two.*

7. *Does the municipal Comprehensive Plan include areas designated as Transit Oriented Development?*

8. *Does the municipal zoning ordinance include areas zoned for Transit Oriented Development?*

**SOMERSET COUNTY TOD STUDY
SUMMARY POINTS FROM THE PUBLIC MEETING
APRIL 29, 2004**

- The question was raised as to how the climate in New Jersey will impact the feasibility of TOD, that is, in colder weather, will people be willing to walk to and from transit stops? In response, a comparison was made with the Netherlands, which has an extremely cold climate and high levels of transit use and farther walking distances to transit stops. The key to promoting walkability is in the design of TOD.
- TOD has to do as much with economic development as it does with transit.
- Other economic factors that can be used to promote TOD include the impact of rising gasoline prices on the daily traffic commute.
- Another criterion that should be incorporated into the TOD study is the extent to which a community embraces the pedestrian environment as evidenced through community sidewalk, pathway and trail plans.
- There is a need to think regionally about TOD, the analysis has been too focused on political boundaries. The study area for Bound Brook Station extends into both Bound Brook and South Bound Brook Boroughs. The study areas for bus corridors also cross jurisdictional boundaries.
-
- The question was raised as to how Montgomery Township, which has a potential station at Bell Meade on the proposed West Trenton Line, fits into the market study when there is no existing ridership data. In response, the consultant team explained that, although the Township has no existing transit stations, demographic trends indicate some the highest growth rates and income levels in the County, and therefore the market potential for future TOD is high.
-
- A developer in the audience asked how long the process takes to implement a TOD plan. In response, the consultant and County recommended that developers need not wait for the planning process to end before getting a head start and talking to interested municipalities about TOD.

**Somerset County TOD
Community Design Workshop Notes
July 1, 2004**

Somerville

Issues:

- Examine wetlands
- Consider stormwater
- Geotechnical issues
- 206 Improvements
- Existing pedestrian path along 206 ROW
- Orlando Drive gateway

Land Use:

- Office/ratable/professional offices
- Municipal court/civic uses/community services
- No big box – community serving retail - define size of retail tenants
- Restaurants
- Be sensitive to existing retail, new development should compliment the downtown
- Need entertainment – possibly a theater, traditional theater walkable to downtown
- So strip development
- 206 possible for higher intensity ratables
- Integrate recreation –active and passive – link to greenways and back to downtown
- Recreation on southern part of the site

- Teen/adult recreation center/indoor recreation – base on regional center needs (Somerville, Raritan, Bridgewater)
- Residential – mix of residential types in neighborhood fabric that are represented throughout the site
- Live/work opportunities
- Hotel/conference center – requires increase in entertainment/cultural activities in town

Other:

- Design the site like a town – minimize separation of uses
- Architecture should be compatible, not out of character with existing
- Focus on making this site recognizable as Somerville, even from 206
- Make it walkable, comfortable for pedestrian activity, mainstreet feel
- Look at wetlands as an asset
- Take advantage of two most prominent assets – train station and river
- Create a village green – does not have to be big – create a focal point surrounded by varied uses – not isolated
- Minimize retail along 206
- Green strip along 206 – activity should be focused internally, not externally
- Redefine 206 – green gateway
- Create multiple pedestrian connections to downtown and surrounding areas
- There are plans to scale back Veterans Memorial to be more pedestrian friendly

Bound Brook

- River front needs to be accessed
- New age restricted development on Talmadge (90+ units) reinforces Transit Village concept
- Specialty small stores – make downtown a food destination
- Factory outlet destination
- Use historic events to promote downtown
- Developers/tenants – market forces should determine uses
- Use housing to drive redevelopment
- Bound Brook Theater to be a huge draw
- TDR from Highlands – impact fees assessment for infrastructure
- The Borough has infrastructure problems – 100 year-old sewers, services at limit
- Create incentives for property consolidation
- Need amenities to support new residential –need mix of residential and commercial uses
- Need to make the Borough more livable with open space and recreation – quality of life issues vs. the quick buck
- Need neighborhood preservation programs
- Increase retail and residential – retail on 1st floor, residential above
- Need parking facility with walkways (remove tunnel)
- Encourage visual interest – make it unique
- Army Corps needs to finish levee
- Mid-rise residential with amenities – take full advantage of the train station

- Put residential on south side of Main St. – play upon historic architecture
- Have mix of different types of residential – high end residential
- Plan needs balance with a marketing strategy (Somerville just hired a marketing expert)

Branchburg

- Reconsider town center name
- Minimize Route 22 development
- Main Street theme into station
- Age-qualified/active adult housing
- Biotech building/Community College
- Transit Village hub
- TDR
- Specify housing type
- Public/community uses

Somerset County TOD
Stakeholder Interview Summary
March 9, 2004

Group 1: Municipal Officials

Attendees:

Bernard Navatto Jr., Borough of Somerville
Frank Vuoso, Borough of Somerville
Mayor Frank J. Ryan, Borough of Bound Brook
Scarlett Doyle, Bound Brook Planner
Jim Kyle, Branchburg Township Planner

Bound Brook:

- Bound Brook has received Transit Village designation.
- Bound Brook's redevelopment plan proposes approximately 25 units per acre and an affordable housing component. Density and school impacts are not the largest concern for Bound Brook – largest concern is potential traffic impacts on Route 202.
- The existing town center, located within ¼ mile of the train station, has a significant amount of underutilized space in the second stories of downtown buildings.
- The Borough is currently working with a developer group and a Redevelopment Advisory Committee on the redevelopment plan. They hope that the Advisory Committee can become a redevelopment agency that can implement the redevelopment plan.
- A market analysis has been done for the Bound Brook redevelopment plan, however, it is no longer valid. A new market study may hold up the process and there is a need to get started as soon as possible.
- The Bound Brook plan is constrained by the levy and there are serious flooding issues.
- Bound Brook has a SID that encompasses a portion of the downtown that was adopted in 1994. The stores in the downtown are failing and opportunities associated with the SID has diminished.
- Bound Brook has not yet signed on for a Transportation Improvement District (TID), which requires an assessment on developers to contribute to infrastructure improvements associated with new development. They are waiting for more facts before signing. They feel that the formula for the TID is too complicated and should be revised. In municipalities that have signed on for the TID, the developers

have been hit hard. There are also disparities in the age of the infrastructure and therefore unequal costs to developers in some municipalities. It was suggested that there be a built in credit in the TID formula for Transit Oriented Development.

- Bound Brook's overall goals for TOD are to improve the overall vitality of the downtown and stimulate daytime and nighttime activity by encouraging more office and residential development.

Branchburg:

- Branchburg has received a planning incentive grant to look at TOD at the potential North Branch station relocation site. They are looking to get more funding from the Office of Smart Growth and are planning to apply for Transit Village designation.
- There is significant frontage on Route 22 for industrial office and ample opportunity to connect into the adjacent higher density neighborhoods, increasing direct access to the proposed relocated North Branch Station. The Township is looking for one large employer to serve as an anchor.
- Biggest concerns about TOD in Branchburg are the traffic impacts on Route 22.
- Branchburg's overall goals are to create an identity and an established town center for the Township and to create more transit opportunities.

Somerville:

- The attitude toward TOD in the Borough has changed, it is becoming more acceptable, however potential impacts need to be analyzed.
- Currently there are three designated redevelopment areas:

- *Landfill*

The original development plan for the landfill is no longer viable and will need to be reexamined. The Borough is now considering mixed use development at approximately 30 units/acre. This site may be identified by municipal officials as a priority for the TOD project.

An extensive market analysis is planned for the landfill site. The proposed mix of uses has not been established yet. The intent for the site is to design it so that it is seamless with the town, including a tunnel under the tracks.

- *West End Shopping Center Site*

The Borough is currently working with Edgewood properties on the 14 acre site. The plan calls for maintaining 140,000 sq. ft. of existing commercial, plus 70,000 additional sq. ft. of office space, 265 new residential units, and 2 parking structures. The Borough is currently reassessing the parking needs for the site.

- *East End Business District*

The Borough recently approved a new office building and the borough plans to build a 700-car parking deck in the area.

- There is significant resistance to more residential development in Somerville. The next biggest concern is traffic.
- The Mayor of Somerville has stated a preference for owner occupied units over rental units.
- Somerville has a Special Improvement District (SID) that encompasses the downtown and two redevelopment areas. It was adopted in 1988 and is functioning well. Somerville also has a TID.
- The overall goals for TOD in Somerville are to pick up the tax base by increasing ratables, promote better use of underutilized properties, and create a destination. The redevelopment plans would propose a 25% increase in the existing housing stock, which conflicts with opposition from residents and the school board regarding increased housing.

Group 2 : Local Developers and Redevelopment Specialist

Attendees:

Steve Goldin, The Columbia Group

John Maddocks, Somerset County Business Partnership

Brian Silbert, Silbert Realty & Management Company

Obstacles to TOD:

- The biggest obstacle to TOD in Somerset County is lack of education on the part of local officials on the benefits of TOD. Local governments tend to want to focus redevelopment on retail and elderly housing when the market calls for high density residential.
- The local development group is aware the most towns in Somerset are concerned that TOD will promote growth in school age children and put pressure on the public school system. Mr. Goldin discussed a recent survey of ten TOD's in New Jersey, which concluded that there was only a 1.7% increase in school age children associated with TOD. The opinion of the local development group is that families with young children are unlikely to locate near a train station.
- Local towns are working too independently. The local boroughs are supporting the County Plan rather than the Office of Smart Growth. The County is also working too independently from the state and should ask for more analysis from the Office of Smart Growth.
- Another obstacle for TOD and redevelopment in Somerset is the lack of local staff to manage the projects. Somerville is hiring a project manager for their redevelopment plans and South Bound Brook has also hired a project manager.

Market Potential:

- When asked about the market for TOD in Somerset County, the response was that the market will be there, but not by choice. The New Urbanist and TOD patterns are forced on developers by New Jersey Smart Growth regulations.
- Demographics play an important role in successful TOD. The primary indicators are income and the daytime population from within a minimum of a five-mile radius. Other important indicators include proximity to major transit stops, existing density, and the timing of road and infrastructure improvements.

Potential TOD Sites:

- Mr. Maddocks stated that the designated brownfields sites in the County are the best choices for the TOD project.
- Mr. Silbert and Mr. Goldin feel that Raritan and Somerville have good potential for TOD success. Silbert is the developer of the Raritan Woolen Mills site, which is located just outside the ½ mile radius of the station. The development caters to people who will use transit.

Other Comments:

- There is concern that the 15-month long TOD study will take too long and the development opportunities will pass the County by. The general opinion is that TOD will happen on its own and a study is not necessary.
- The developer group also feels that there is too much time spent on the site suitability selection process of the TOD study when the real issue is opposition from the towns.
- The County Planning Board needs to take a leadership role in educating local officials on redevelopment. Some suggestions include online training courses or coordinating with Raritan Valley Community College to offer training courses.
- It was recommended that local officials be given grants to take a course on market demand and transit villages that is given at Rutgers University. The course is currently required for redevelopment authorities but not for redevelopment agencies. When a community adopts a redevelopment plan, the redevelopment agency involved usually has no formal experience with the redevelopment process.
- Local officials also need to be educated on the successes of TOD to understand the benefits.
- It was recommended that criteria for choosing TOD sites should include public ownership and the identification of NJ Transit owned property that the boroughs could lease.
- Mr. Maddocks brought up the issue of future sustainability of TOD. The County needs to take a leadership role in studying the sustainability of TOD by analyzing the financial impacts on communities. There needs to be agreement between the County and communities on statistics for school age children, the infrastructure improvements required for TOD, and amendments to local redevelopment plans that will support and sustain TOD.

Group 3: Transit Village Developers

Attendees:

Steve Ludlow, K. Hovnanian
George A. DeMartino, K. Hovnanian
Glenn Ward, The Matzel & Mumford Organization
Ian R. Jones, Baker Residential
Anthony L. Marchetta, LCOR, Inc.
Joel Schwartz, Landmark Companies LLC
George Kruse, Forest City Enterprises

Existing or Planned TOD projects:

- Matzel and Mumford is just finishing a very successful urban infill townhouse project in Morristown within walking distance to the train station.
- Landmark has developed the Franklin Square project in Metuchen, an all residential infill project with condominiums and stacked flats at 18 units per acres. Metuchen did not want mixed use because they did not want competition with the downtown. The project was finished three years ago and has been very successful. Landmark is also working on a mixed-use project in downtown Rahway, including residential with first floor retail at about 60 units per acre.
- Forest City Enterprises is working on a project in the Bloomfield Transit Village, a 14 acre redevelopment project with 500 market-rate apartments and 200,000 square feet of retail. The developer is currently moving ahead with condemnation.
- LCOR has completed several TOD projects in New Jersey and New York, and is also working on projects in Jamaica, New York and Bethesda, Maryland. LCOR completed the Gaslight Commons, a luxury residential complex with 200 rental units. The project has been very successful. Over half of the residents take transit to work.
- LCOR also developed the Bank Street Commons project in White Plains, NY, a 500-unit luxury residential complex with some mixed use located adjacent to the Metro North rail station. This project has also been very successful.
- LCOR is currently working on a 500,000 square foot office complex, part of a redevelopment plan near Jamaica Station on the Long Island Railroad in Jamaica, NY. Another TOD project is planned at the White Flint Metrorail station in Bethesda, MD. This mixed use plan includes 1.2 million square feet of office space, 200,000 square feet of retail space, and 1,400 multi-family housing units.
- Baker Residential completed the Lighthouse Bay project in the South Amboy, NJ Transit Village, a residential development of 79 single family and 115 townhouses next to the light rail station and the ferry to Manhattan. The project has been a large contributor to the revitalization of South Amboy.

Factors for TOD Success:

- Town support is vital to successful TOD. Most towns say they want TOD and Smart Growth, but are not willing to accept the whole package, primarily the higher densities. Town officials are also concerned about the perceived threat to the school system, however experience among the developer group has shown that TOD has attracted very few families with school age children.
- Proximity to transit is an added bonus, not necessarily a factor in choosing a development location.
- Parking is a big issue in mixed developments with a retail component. Shared parking works well in TOD.

Market Potential:

- The developer group agreed that there is very strong market potential for TOD in Somerset County and they would work anywhere in the County.
- Key sites for TOD in Somerset County are in Somerville and Raritan. Developers are even willing to look at more suburban areas like Gladstone, despite probably local opposition to density.
- Single family homes do not work in TOD, development has to fit the demographic. The choices for single family homes are more desirable in the suburbs.
- Local communities typically want too much retail with TOD. The market won't support more retail than residential. Retail is usually an afterthought to the success of residential.

Obstacles to TOD:

- The state generally applies the same development regulations to urban areas as to greenfields.
- There seems to be no coordination towards a common objective between the state, county, and local governments, creating delays that can kill projects.
- The concept that developing in urban areas is less expensive because the infrastructure is already in place is a fallacy. Urban infrastructure is older and it is more expensive to improve existing systems.

- Stormwater management is also more expensive and complex in urban areas, especially in Somerset where there are serious flooding issues. The Delaware and Raritan Canal Commission has strict stormwater regulations because the canal is used as a drinking water source.
- Site contamination and brownfields are not major issues, developers are not afraid of clean up costs.
- Control over large tracts of land is key to attracting developers. Communities must be willing to use condemnation powers and get access to money to assemble properties. Control over properties will bring developers in droves.

Other Comments:

- There is a need for more strategic regional planning, TOD cannot be developed at every station in the County.
- The mayors from towns with successful TOD projects should make presentations to Somerset communities about the benefits of TOD. In particular, they should discuss specific figures on increased investment and actual figures on the number of school age children associated with the developments.

APPENDIX H

PROJECT REFERENCES

GENERAL PROJECT RESEARCH

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2005

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Kenneth Scherer, Deputy Director
Denise Coyle, Freeholder
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Eric A. Lips, Planner
Tatiana Kika, Principal Draftsperson
Andrew Phillips, Principal Draftsperson
Lillian M. Zuza, Office Manager
Patrice Thomas, Administrative Assistant
Melissa Harvey, Administrative Assistant
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