



Delaware Valley
Regional Planning
Commission



Managing Change

Along the US 322 Corridor:
Land Use & Transportation Issues,
Policies & Recommendations

Volume 2: Framework Plan

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DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, inter-county, and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties, as well as the City of Philadelphia, in Pennsylvania; and Burlington, Camden, Gloucester and Mercer counties in New Jersey. DVRPC provides technical assistance and services; conducts high priority studies that respond to the requests and demands of member state and local governments; fosters cooperation among various constituents to forge a consensus on diverse regional issues; determines and meets the needs of the private sector; and practices public outreach efforts to promote two-way communication and public awareness of regional issues and the Commission.

Our logo is adapted from the official DVRPC seal, and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole, while the diagonal bar signifies the Delaware River. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey.

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EXECUTIVE SUMMARY

Improving the linkage between land use and transportation is essential for the future of the US 322 corridor.

Inappropriate land uses coupled with inadequate infrastructure and transportation access will continue to have negative impacts on the entire road network and quality of life, as well as have significant effects on the future economic growth of the corridor.

Working with the New Jersey Department of Transportation (NJDOT) and the Gloucester County Planning Department, the Delaware Valley Regional Planning Commission (DVRPC) is conducting this study to assess land use and access management policies and to evaluate the area's growth potential. The goals of the study include: promoting multi-modal transportation in order to alleviate congestion and forecasted growth; furthering the goals of coordinated land use and transportation between municipalities and multi-municipal corridors; determining a policy rationale for future priority transportation improvements; encouraging Smart Growth principles for future development; and implementing the goals of the State Development and Redevelopment Plan, the adopted DVRPC long-range plan, Destination 2030, and the Gloucester County Master Plan.

This document, *Managing Change along the US 322 Corridor: Land Use and Transportation Issues, Policies, and Recommendations, Volume 2 Framework Plan* is the final part of an 18-month two-volume study. Completed in June 2006, Volume One: *Baseline Conditions* incorporated baseline information of demographics, land use and development, and transportation conditions. A municipal and corridor-wide zoning analysis was also completed. Building upon the conditions identified in Volume I, this second volume provides the rationale for the US 322 Corridor Framework Plan, which contains the following chapters:

Chapter One contains a general introduction of the framework plan process and growth within the US 322 corridor;

Chapter Two discusses the character and different perspectives of each corridor community and unites them with a proposed corridor-wide vision;

Chapter Three provides corridor residents with two different perspectives of growth for US 322. The growth scenarios are illustrated and documented through a transit score process;

Chapter Four outlines the principles of the framework plan – land use, development, and access management. Examples and techniques are also illustrated;

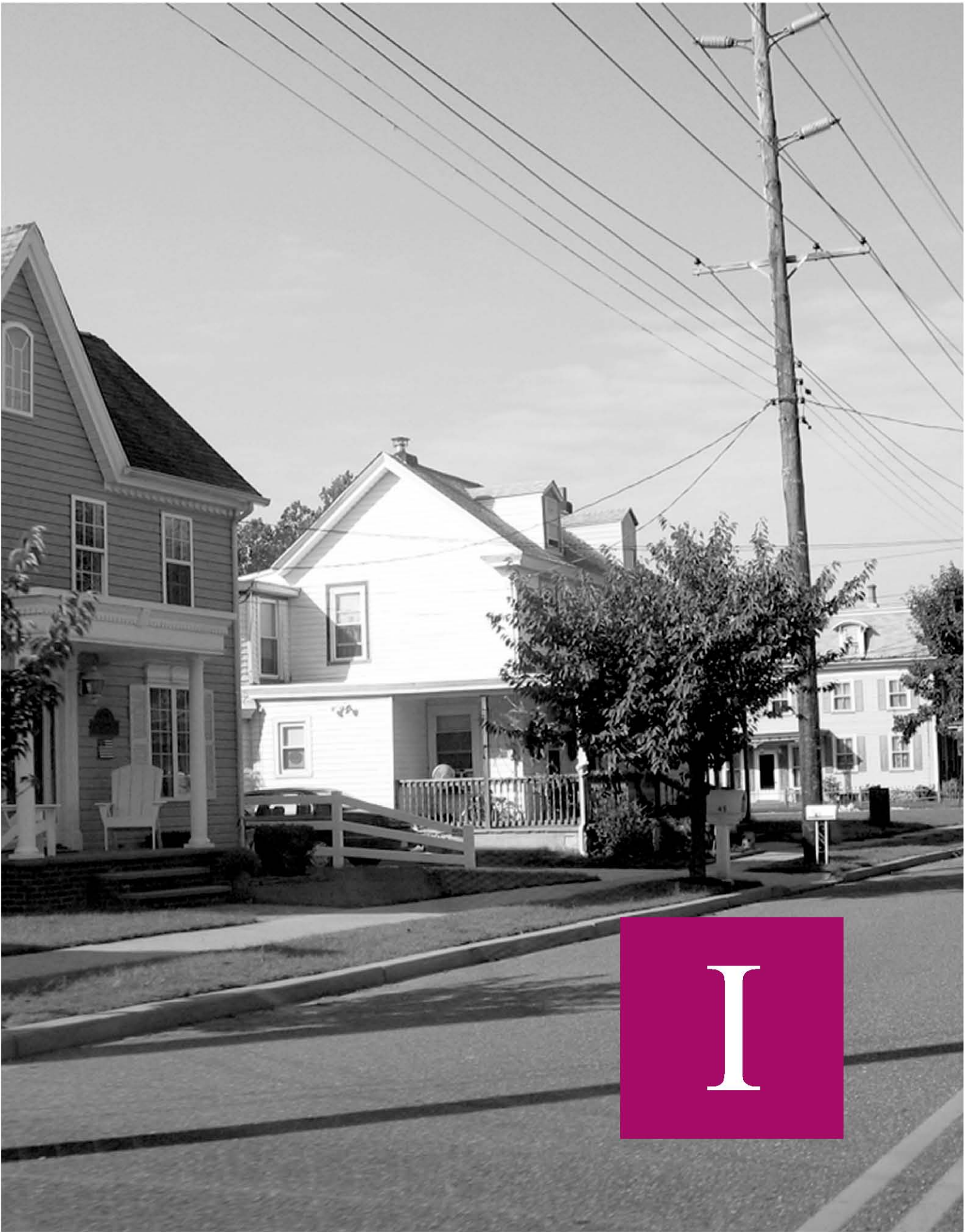
Chapter Five discusses the goals for the US 322 corridor;

Chapter Six details municipal and corridor-wide transportation and land use recommendation for the sustainability of the US 322 corridor; and

Chapter Seven identifies implementation tools and provides a matrix that defines the lead agency responsible for implementation.

Appendices I and II are examples of various zoning ordinances. Appendix III lists the study advisory committee.

In May 2007, Gloucester County and NJDOT announced alternate plans and funding to help alleviate the congestion and capacity issues that have been a long-standing issue for US 322. The proposed improvements include a bypass around the Village of Mullica Hill and widening of US 322 through the Richwood Area of Harrison Township. While these improvements were separately developed by NJDOT and Gloucester County and are not recommendations of this study, they reflect recommendations in previous study efforts prepared by NJ DOT, Gloucester County and DVRPC. Any roadway improvements that will be constructed on US 322 should involve the smart growth and sustainable recommendations presented in this study. The proposed investment by NJDOT and Gloucester County should be complemented by changes to the land development pattern by each of the study area communities in order to create a sustainable transportation network for both the US 322 corridor and the region. ❖





Introduction

This document, *Framework Plan for the US 322 Corridor: Land Use and Transportation Policies and Recommendations*, is the final part of an 18-month two-volume study. Completed in June 2006, Volume One incorporated baseline information of demographics, land use and development and transportation conditions. A municipal and corridor-wide zoning analysis was also completed.

The emphasis...is to recognize the corridor communities' assets and opportunities, while addressing ways and means to minimize and mitigate the negative consequences of rapid change and new growth and development.

Building upon conditions identified in Volume One, this second volume provides the rationale for the US 322 Corridor Framework Plan. The study area extends along US 322 from the Route 130 interchange in Logan Township through Woolwich Township and Harrison Township to the Route 55

Expressway interchange. A portion of US 322 in the vicinity of Mullica Hill, Harrison Township, is not part of the study corridor, while an extension along Kings Highway and other local roads was added to include Swedesboro Borough. Mullica Hill is currently being studied by NJDOT.

WHAT IS A FRAMEWORK PLAN?

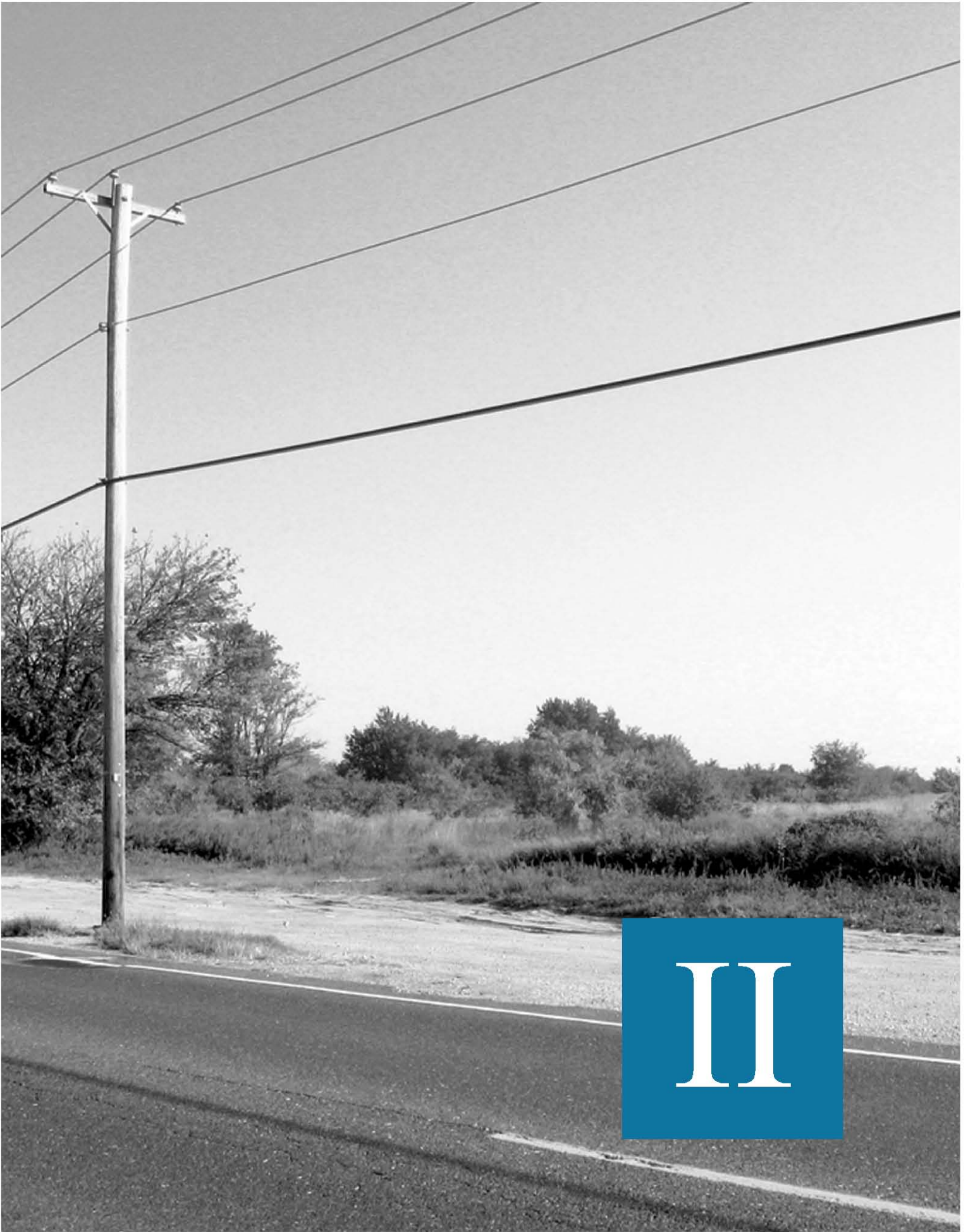
The Framework Plan is intended to provide state, county, and local officials and the public with a corridor vision, goals, policies, principles, and illustrated examples of smart growth techniques to manage future corridor growth and development. The Framework Plan and its components will provide a solid foundation and supporting principles for the four study area communities. The resulting plan and its overall vision, however, must also recognize the different character and needs of each community and the actions that each must take to achieve the vision. The Framework Plan's time frame is initially aimed at the next five years, although it could serve as the basis for county and local master plan amendments that extend for the next 20 years and beyond.

A PERSPECTIVE ON GROWTH IN THE US 322 CORRIDOR

The baseline conditions assessment and the zoning build-out analysis, undertaken during the initial phase of the study,

revealed the changing nature of the US 322 corridor communities. These looming changes will have dramatic consequences on traffic growth, land use patterns, and (with the exception of Swedesboro) provide a clear shift from a semi-rural to a suburban lifestyle. The pressures for new commercial and retail uses, as well as single-family detached and multi-family residential complexes, are growing and offer a challenge for county and local officials and, particularly, the transportation system.

On the one hand, it is clear that the US 322 corridor is a booming real estate location in Gloucester County and in South Jersey. New tax ratables and residents are positive signs of prosperity and economic opportunity, which would be welcomed by most communities anywhere in the State. The proposed non-residential ratables, in particular, offer the prospect of a more balanced tax base and lowered property taxes for current residents. But, these expected positive indicators of change will not occur without some costs. These costs have the potential to overwhelm current roads, sewer and water facilities, and other local infrastructure, while threatening the community character and environment that make the area so attractive for growth. The emphasis of the Framework Plan is to recognize the corridor communities' assets and opportunities, while addressing ways and means to minimize and mitigate the negative consequences of rapid change and new growth and development. ❖





Corridor Vision

Map 1 shows the US 322 corridor from the perspective of the Delaware Valley Region and South Jersey. What is clear is that US 322 serves as the primary east-west gateway between Pennsylvania, South Jersey and the southern shore communities, while also serving as a crossroads, intersecting with major north-south arterial highways (Route 130, I-295, the NJ Turnpike and NJ 55) that traverse the study area. This high level of accessibility is relatively unprecedented for an area that remained relatively undeveloped for so long. Until recently, a strong agricultural economy, extensive natural areas and environmental features, and the absence of significant sewer and water facilities forestalled extensive growth. The high level of access to the interstate system, including markets in Pennsylvania, Delaware and the Northeast Corridor, provided the rationale for the location of the 3,000-acre Pureland Industrial Park (the largest in New Jersey) and the nearby Commodore Industrial Park in Logan Township. It also brings a mix of commuters and trucks during peak hours, which conflict with local and intra-corridor trips. With new demands for residential and commercial development, as well as more extensive infrastructure, the US 322 corridor is poised for explosive growth and the resulting impacts and conflicts that come with that growth.

LOCAL VISION

Creating a unified vision for the corridor begins with each community's master plan. Each of the townships have laid out the future for US 322 with mixed use development that incorporates commercial, retail, residential, office, and civic uses. At the same time, the preservation of open space and semi-rural character remains vital to maintaining the quality of life that so many residents desire.

...it is expected that the US 322 corridor will face continued growth pressure, development proposals and community impacts. The corridor vision...recognizes the need for different perspectives among the four study area communities.

While the corridor communities have outlined higher densities and sustainability within their planning documents, the development patterns that have taken place have been independent of each other and continue to support sprawl. As development has occurred with little transportation

improvements, land use decisions along US 322 have placed tremendous pressure on the road network. For example, while traffic may move efficiently in Logan where US 322 is 4 lanes, it will inevitably back up in Harrison Township where the road slims down to 2 lanes and historic features dominate the landscape. There are planning techniques that can help the corridor to flow more efficiently and still meet the vision and goals laid out by each community.

HARRISON TOWNSHIP

Harrison Township will continue to experience development pressure in the future. Although development potential is constrained in portions of the township by the limited capacity of sanitary sewer and water systems, the township's sprawling land use pattern continues into all areas.

The Harrison Master Plan attempts to tie the economic activity in the private sector with those public improvements that would be necessary to adequately serve the new residents and businesses of the township by "providing for the continued scenic and low-density nature of the township." The goals outlined in the master plan support continued sprawling development, which can be seen by the new residential development that has blanketed the township as well as pending preliminary plans for development. Although the master plan "recognizes that open space preservation must become the responsibility of the township and that the agricultural community will not be able to assure that open space will remain in the township forever," the plan has not provided a mechanism by which to do so. Mixed uses are planned for identified centers of the township – Mullica Hill and Richwood. The township is moving forward with a new development proposal that would include a mixed-use Towne Center in the Richwood area.

LOGAN TOWNSHIP

Logan Township's unique position within the study area – access to two major highways - has aided in the development of large scale commercial and industrial parks. Logan Township also has environmental constraints with large areas of wetlands and streams. The township's master plan establishes goals to preserve the character of the Village of Bridgeport and enhance the environmental quality within the township while accommodating the required residential needs



US 322 through Logan Township

of COAH, sustainable commercial growth and sound fiscal management. The goals in the master plan support mixed uses and the conservation of the rural nature of the community. The township's zoning ordinance does not support this. In particular, the large lot zoning – one and five acre lots – will encourage sprawling residential development that will increase the burden on the road network. The master plan, as well the Delaware Valley Regional Planning Commission's Long-Range Land Use and Transportation Plan, identifies the need for 4 continuous lanes on US 322 from the Commodore Barry Bridge to the NJ Turnpike entrance in Woolwich Township. Logan Township's circulation element has also identified widening US 322.

WOOLWICH TOWNSHIP

Woolwich Township will continue to experience development pressure in the future. The township master plan recognizes the extensive growth that will occur in the next decade and encourages smart growth principles – clustered development, a mix of uses, grid road network – to promote a quality of life for the community. The population boom within Woolwich Township has placed a tremendous burden on the infrastructure, schools, and tax base of the community. The future vision for the community is to provide a sustainable, self sufficient development pattern that promotes the community as an attractive place to live and work. The township has been working with planning professionals on a more traditional design concept for US 322 and the adjacent parcels.

SWEDESBORO

The latest master plan update was completed in December 2002 and does not address new community goals or visions. Due to the small-scale, intense development of the Borough, the existing land use pattern will most likely continue with the exception of peripheral residential development. The Borough offers a quality of life that is evident through the character of its downtown – small shops, brick sidewalks, and family owned restaurants.

PROPOSED CORRIDOR VISION

Over the next few years, it is expected that the US 322 corridor will face continued growth pressure, development proposals and community impacts. The corridor vision reflects various scales (regional, county and local) and recognizes the need for different perspectives among the four study area communities. Based on the elements of the vision, it is evident that continued development will have a tremendous impact on US 322. To illustrate this effect, Figure 1 illustrates the current development pattern, and Figure 2 illustrates how the corridor could look by implementing the proposed vision.

As developed through the US 322 steering committee and municipal planning documents, a vision for US 322 should include the following elements:

- ◆ The US 322 corridor will continue to be the primary east-west gateway and a crossroads with major north-south highways in the county and in South Jersey.
- ◆ New growth and development will be accommodated by compact sewer and water facilities in designated growth areas along and near US 322.
- ◆ Wherever possible, new growth should complement and extend from existing communities and development concentrations rather than “leap-frogging” into rural areas.
- ◆ Rather than perpetuating the formless sprawl that is typical of suburban development in other areas, the communities will strive to create defined Town Centers and Neighborhoods (or Villages) that

maximize community identity and character, building upon the area’s historic heritage.

- ◆ Concurrently, the corridor communities should strive to preserve their extensive natural areas and environmental quality through pertinent state, county and local preservation programs.
- ◆ Most significantly, the corridor communities should strive to work with the development community to attain a high level of sustainability and community design quality.
- ◆ Highway access will need to be managed through a variety of techniques, working with the NJ Department of Transportation, Gloucester County and the development community, that strive to separate through traffic, commuters and goods movement from local and intra-corridor trips.
- ◆ Opportunities for bus service, bicycling and pedestrian paths will become a component of the area’s transportation system building upon the linkage of land use and transportation in the Town Centers and Neighborhoods,
- ◆ Local master plans and ordinances should be amended to accommodate implementation of this vision.

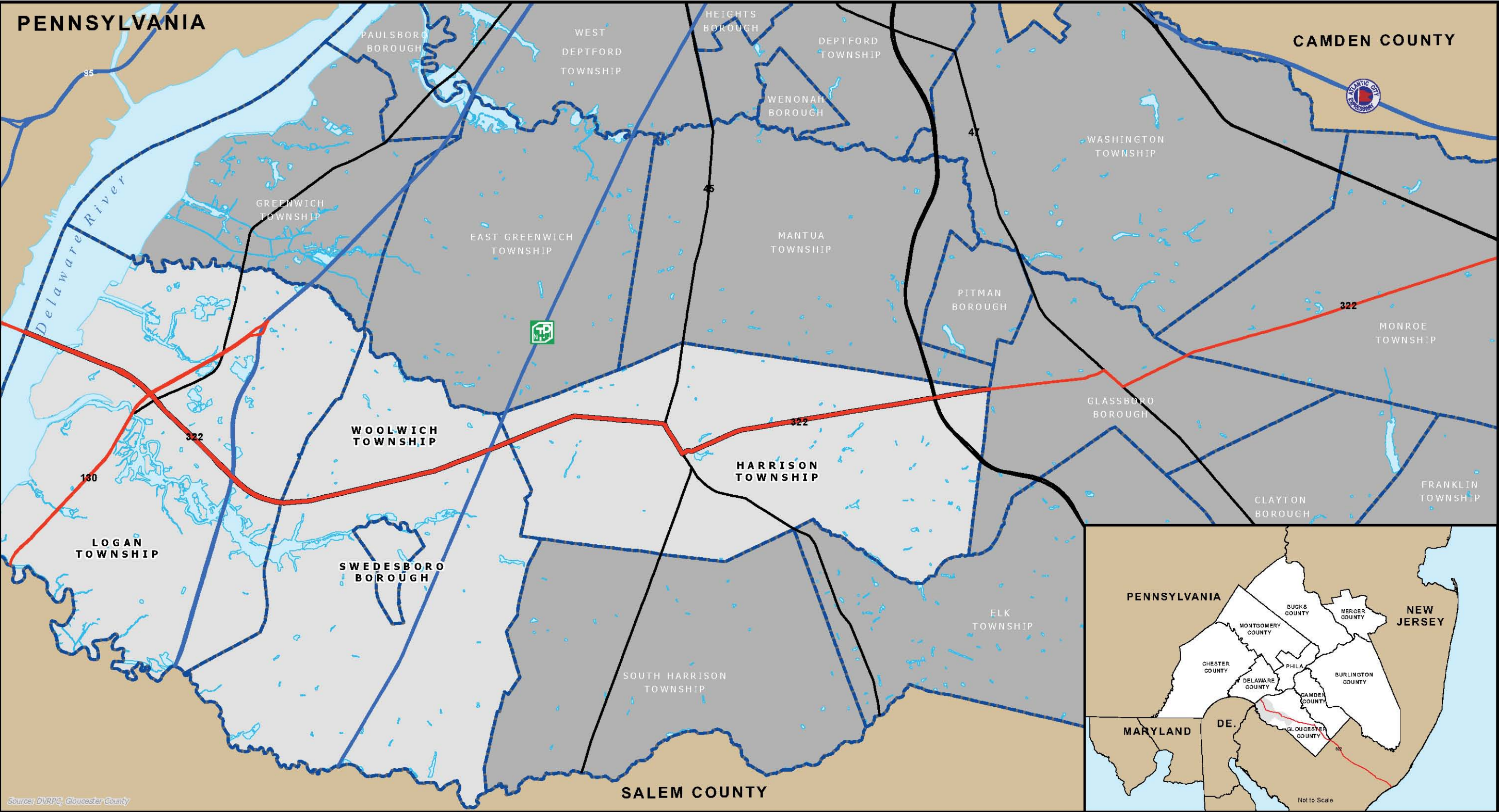
COORDINATION AMONG US 322 COMMUNITIES

Areas adjacent to the designated study area are also undergoing growth and traffic congestion. In order to make sustainable transportation recommendations for the study area, DVRPC, NJDOT, and Gloucester County met with additional municipal officials from Glassboro Borough and Rowan University to discuss the future development and expansion of university facilities.

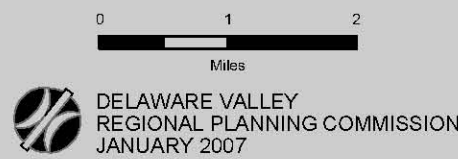
In the fall of 2006, Rowan University announced a major expansion plan that would include land adjacent to the Route 55 interchange. While our study area ends at the interchange in Harrison Township, the traffic impacts of this large development cannot be ignored. This development includes a technology park as well as new athletic facilities, student

housing, and retail. It will have a tremendous impact on the road network through this portion of Gloucester County, and Borough officials are investing in alternative transportation options such as jitney services for students and potential future rail service.

In addition to the development occurring directly on US 322, the corridor municipalities are surrounded by growth to the north in East Greenwich Township and in the south within South Harrison Township. South Harrison Township, which borders the southern part of the study area, is the second fastest growing municipality in New Jersey, behind Woolwich Township. Single-family residential development continues to be built along county routes, putting more strain on the transportation network. More importantly, alternate east-west routes for local traffic traverse South Harrison. Officials within Gloucester County should work together to minimize the impact of any future residential development on the entire transportation network. ❖



Source: DVRPC, Gloucester County



Study MCD US 322 within Study MCD Municipality

**Map 1: US 322
A Regional Perspective**

FIGURE I: EXISTING DEVELOPMENT ALONG US 322

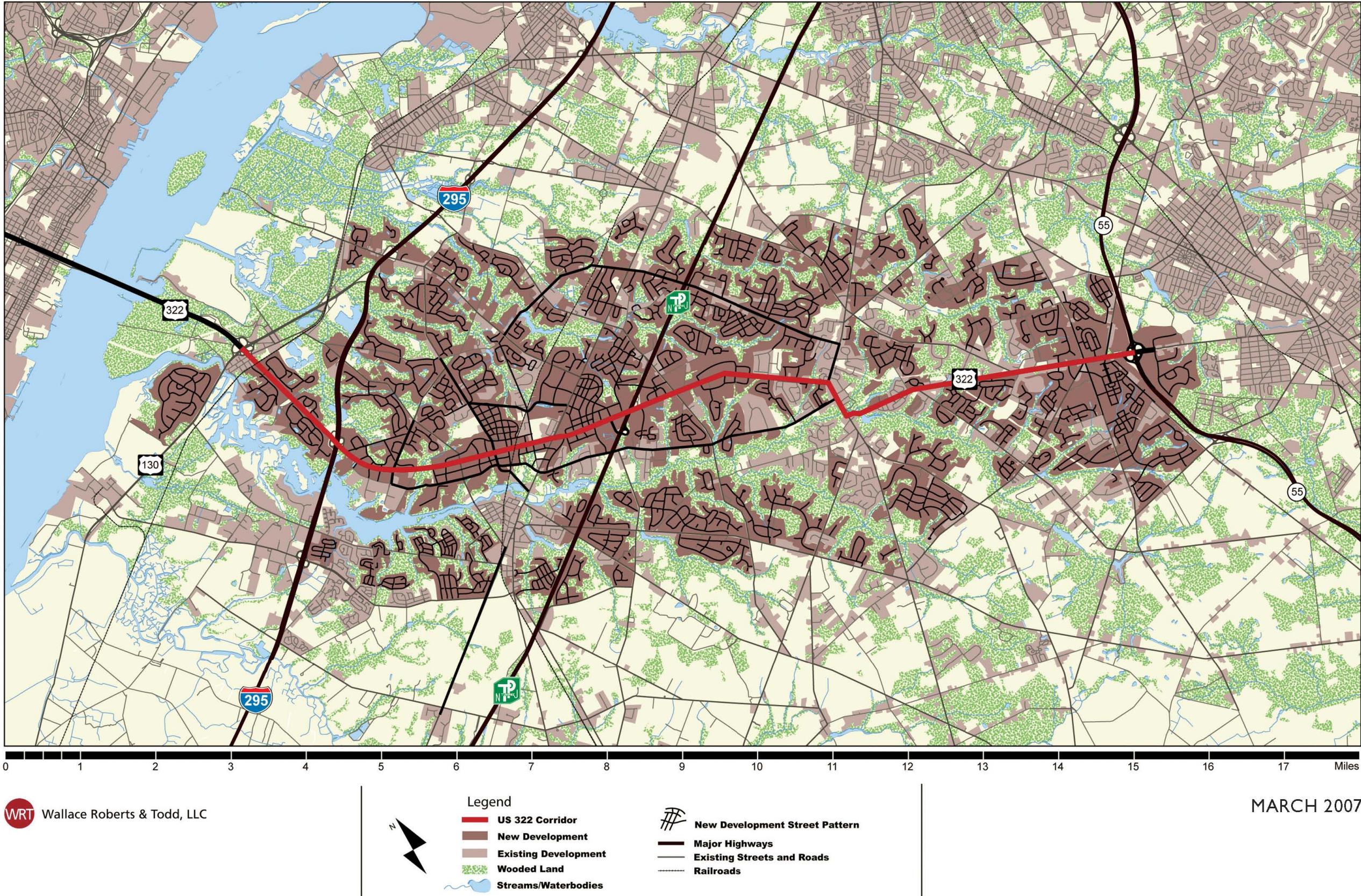
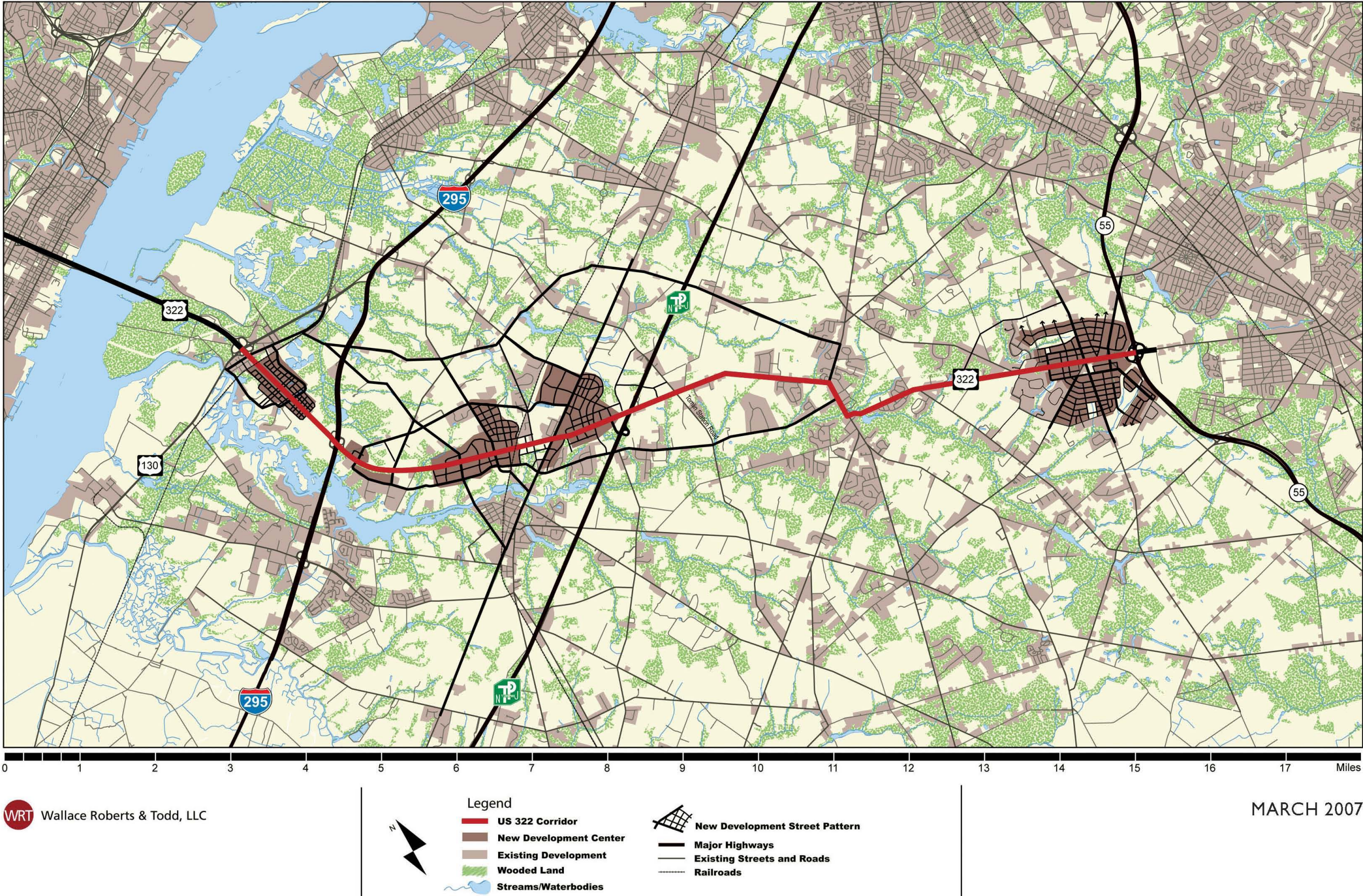


FIGURE 2:VISION for US 322







How will the Corridor grow?

The US 322 corridor is at a crossroads in terms of how future development will occur and whether it can sustain the traffic impacts and quality of life for residents. Based on the baseline conditions, zoning build out analysis, community input, and physical survey, the entire corridor will continue to experience development that will negatively impact the current road network. Each municipality may have different visions of how their individual communities will develop, but it is important to guide that individual development in a sustainable measure. As shown in Table 1, the current developed scale of the corridor communities has very low density with the exception of Swedesboro Borough. In order for these communities to relieve the overwhelming burden on their infrastructure and road network, other development scenarios must be explored.

Table 1: DENSITY BY MUNICIPALITY

MUNICIPALITY	PERSONS PER SQUARE MILE	NET HOUSING UNIT DESTINY
HARRISON	459	1.19
LOGAN	225	2.77
WOOLWICH	142	2.49
SWEDESBORO	2,683	4.25
GLOUCESTER COUNTY	756	2.30

Source: Realizing Density, DVRPC 2004

This chapter offers two different development scenarios for the US 322 corridor. *Growing with the Flow* (Figure 3), illustrates how the corridor will look if development continues to occur as currently planned. By *Growing with Places in Mind* (Figure 5), the corridor looks visibly different, with nodes of higher density development and vast areas of open space.

GROWING WITH THE FLOW

Growing with the Flow is characterized by formless sprawl and reflects the continuing development pattern of low-density residential and large scale commercial buildings that are auto-oriented. By developing according to existing zoning, the low-density residential development will continue to cause traffic congestion and uncontrolled access onto major transportation routes. Figure 4 illustrates how growth is dispersed throughout the municipality and how this pattern of development will consume all open space. By continuing this land pattern, transit will not be feasible because of the lack of density and concentrated development to support the transportation system.

GROWING WITH PLACES IN MIND

By *Growing with Places in Mind*, nodes of mixed activity are identified and targeted for higher density development.

Characterized by town centers and defined neighborhoods, communities become walkable and a better quality of life is achieved. Figure 5 illustrates how less land can be consumed, providing for open space and recreational opportunities for residents. Municipalities can plan for this type of development pattern through minor revisions in their zoning ordinances and master plans with planning techniques such as Planned Unit Development (PUD), cluster development, Traditional Neighborhood Design (TND), access management, and other techniques. (Refer to Chapter 4) In addition, NJDOT's recent initiative with PennDOT on new transportation and smart growth design guidelines should be incorporated to ensure sustainability of the road network and transit facilities.

EVALUATING DEVELOPMENT

By *Growing with Places in Mind*, future transit service may be feasible. In order to compare the benefits of the preferred development pattern, *Growing with Places in Mind*, to the existing pattern of development, a transit score analysis was conducted for the corridor. Using the two different development scenarios - *Growing with Places in Mind* and *Growing with the Flow* - this analysis indicates how concentrating growth in nodes (places) can provide the density needed to have a transit system beyond existing but limited bus routes.

WHAT IS A TRANSIT SCORE?

DVRPC's transit score methodology uses technical criteria to assess the appropriateness of various modes and levels of transit service throughout a region. In a 1989 DVRPC report, *Transit Potential in Suburban Growth Corridors*, zones were identified as being viable for transit service based on three factors: total work destinations, density of work destinations, and total work origins. The method originally used recognized that residential and employment density impact transit

Based on the current zoning and baseline conditions...a majority of the US 322 corridor has a medium to medium-high probability of receiving any type of future transit service beyond what currently exists.

viability solidifying the likelihood that more employment centers and mixed use centers are more likely to sustain transit service than exclusively residential areas. Building upon the existing transit score methodology that is utilized by New Jersey Transit, DVRPC is currently involved in a project that has refined the criteria that are used for the DVRPC region.

Table 2: APPROPRIATENESS OF TRANSIT SERVICE

MODAL INVESTMENT	TRANSIT SCORE				
	HIGH	MEDIUM-HIGH	MEDIUM	MARGINAL	LOW
HEAVY URBAN RAIL	A	N	N	N	N
LIGHT RAIL TRANSIT (LRT)	A	A	C	N	N
COMMUTER RAIL	A	A	C	C	N
BUS RAPID TRANSIT	A	A	C	N	N
BUS LANES	A	A	N	N	N
BUS PRIORITY TREATMENT	A	A	C	N	N
FIXED ROUTE BUS SERVICE	A	A	A	C	N
EXPRESS BUS	A	A	C	C	C
LOCAL CIRCULATOR BUS / SHUTTLE	A	A	A	A	A

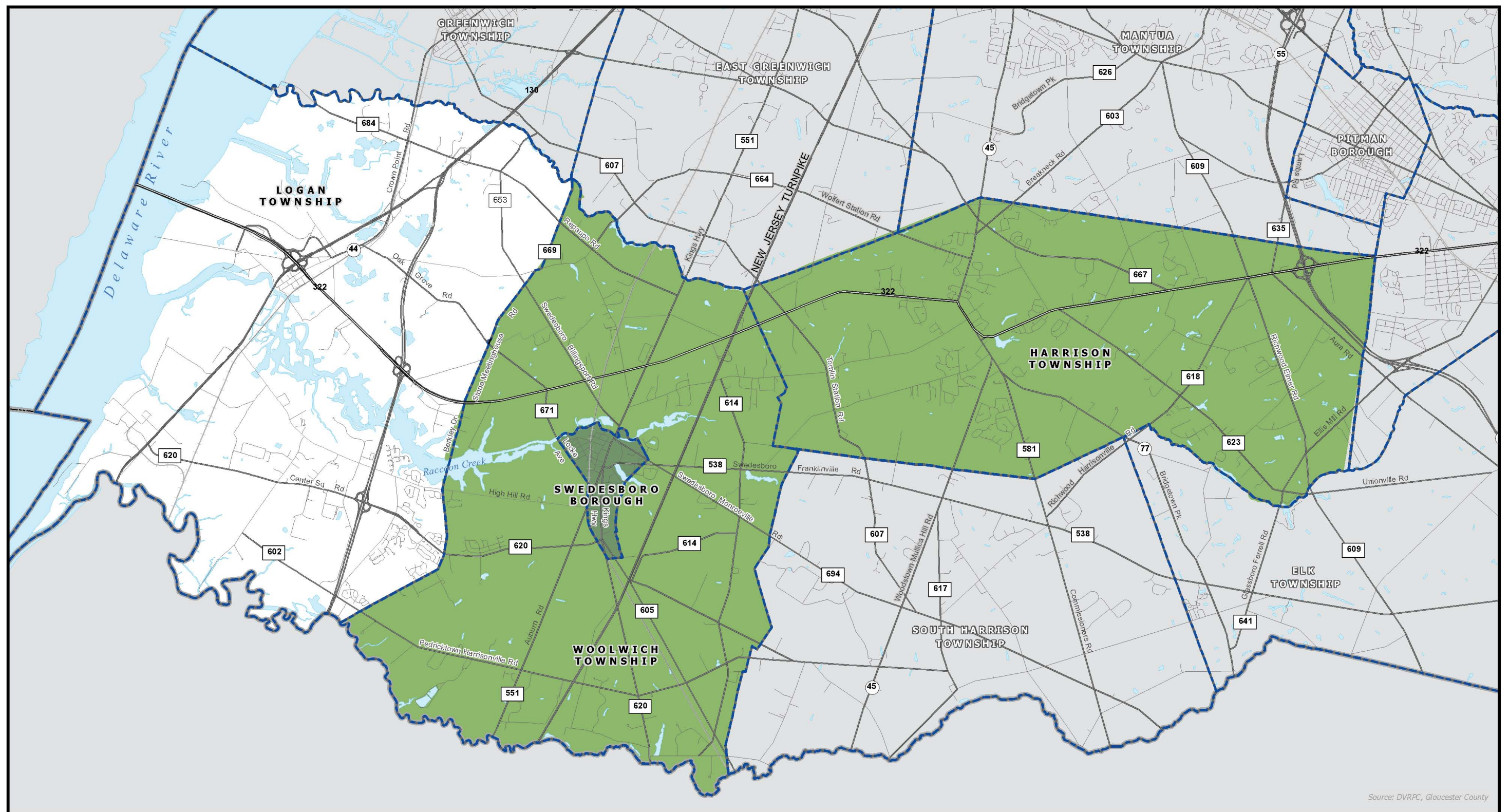
A = APPROPRIATE | C = MAY BE APPROPRIATE, DEPENDING ON CONDITIONS | N = NOT APPLICABLE

FIGURE 3: CORRIDOR VIEWS – GROWING WITH THE FLOW



FIGURE 4: CORRIDOR VIEWS – GROWING WITH PLACES IN MIND





 DELAWARE VALLEY REGIONAL PLANNING COMMISSION JANUARY 2007	DVRPC Transit Scores <table border="0"> <tr> <td> Low (< 0.60)</td> <td> Medium (1.01 - 2.50)</td> <td> High (> 7.50)</td> </tr> <tr> <td> Marginal (0.60 - 1.0)</td> <td> Med.-High (2.51 - 7.50)</td> <td></td> </tr> </table> Transit scores shown here reflect full build-out for each municipality as calculated in the Baseline Conditions report (June 2006). Predicted growth is distributed evenly across each MCD. The buildout density of 0-car households is increased from the 2000 density at the same rate as 2000 population is projected to increase for build-out.	 Low (< 0.60)	 Medium (1.01 - 2.50)	 High (> 7.50)	 Marginal (0.60 - 1.0)	 Med.-High (2.51 - 7.50)		Map 2: US 322 <i>Growing with the Flow</i>
 Low (< 0.60)	 Medium (1.01 - 2.50)	 High (> 7.50)						
 Marginal (0.60 - 1.0)	 Med.-High (2.51 - 7.50)							

The transit score methodology for the US 322 corridor builds upon these findings and is based on population density, zero-car household density and job density. By calculating the probability of transit for the corridor, we can illustrate the desired development pattern and show that there are long-term benefits to implementing smart growth techniques – compact, mixed-use centers – along the US 322 corridor. Table 2 summarizes appropriate transit options based on the resulting transit score. The transit score is broken down into five categories – high, medium-high, medium, marginal, and low. Each transit score category has been given a rating – appropriate, may be appropriate, and not applicable. Based on the current zoning and baseline conditions that continue with no change, a majority of the US 322 corridor has a medium to medium-high probability of receiving any type of future transit service beyond what currently exists. *Growing with the Flow* is shown on Map 2.

The transit score changes to a more feasible environment for additional future transit service by using this methodology with smart growth techniques that reflect existing or planned centers or villages. There are six centers that have been analyzed for *Growing with Places* scenarios (Map 3). The growth projected in the build-out analysis (completed in Phase I) for the corridor is redirected to hypothetical “centers” located within one mile from the center point (as well as known existing centers). In municipalities where there are two or more centers, the build-out projections are distributed evenly among all of the centers. In Logan Township, these centers are reflective of those identified by the Township as Bridgeport and Repaupo. Harrison Township also has two centers indicated and they are the Village of Mullica Hill and Richwood. Woolwich Township has a center that is currently being planned and the entire Borough of Swedesboro acts as a center due to its compact development pattern. The centers within Harrison Township, Swedesboro and Woolwich Township each have a score medium-high, as Map 3 indicates. The two hypothetical centers in Logan Township each have a marginal score. This scenario illustrates that the density within Swedesboro and the future Towne Center of Woolwich and Harrison Township’s center would be able to support additional transit service. Additional smart growth techniques in Logan Township should be employed to ensure densities that can support transit in the Village of Bridgeport

and Repaupo. A comparison of the two scenarios strongly reveals that by concentrating growth in centers or villages rather than distributed throughout the townships, an east-west transit option becomes a viable option. A future east-west transit route may be able to connect the future town centers and villages of Repaupo (Logan Township), Bridgeport (Logan Township), Woolwich Towne Center, Mullica Hill (Harrison Township), and Richwood (Harrison Township). In addition, census tracts beyond the study area boundaries in Glassboro Borough and Pitman Borough also provide transit scores above marginal that may support such a transit service. This potential east-west route would be a valuable alternative in reducing vehicular trips along the corridor. ❖





The Framework Plan

By providing policies and principles to guide sustainable growth along US 322, the corridor communities can achieve a greater quality of life. Below are major components to implementing smart growth and better design along US 322 – land use, development, and access management. These components include recommendations that will guide the framework plan and resulting strategies and should be considered by each of the corridor communities.

LAND USE

As the road network has expanded throughout the country to accommodate increased automobile and truck users, the relationship between transportation and land use has changed. Recent development patterns have generally taken the form of large-lot, decentralized, single-use districts that are connected by various roadways. Local zoning and other government regulations have created and reinforced this trend. The US 322 corridor is symptomatic of this trend.

The land use and transportation cycle begins when major road improvements improve the accessibility of land. This accessibility increases the real estate values and development occurs. The negative impacts of this cycle can be avoided with effective land use planning. Both state and local governments need to coordinate plans for these transportation corridors, such as US 322.

As the development pressure grows along US 322, communities must now reexamine land use patterns and move toward “centered communities” that can support other modes of transportation such as transit, bicycling, and walking. Municipalities can influence land use patterns, densities, and the character of their communities while improving the quality of life by reconsidering the relationship between land use and transportation. Communities can have centers of activity, improved retail service and housing choices, improved pedestrian environments, a reduction in congestion, and improved air quality. To help achieve this vision, the following land use, access management, and development principles can be incorporated into the planning strategies for the corridor communities.

LAND USE PRINCIPLES

Create Patterns of Development with Frequent Streets and Pedestrian Right-of-Way: The creation of small development blocks with sidewalks results in a system of circulation that facilitates better movement. This pattern of frequent streets and blocks allows for access to and through varying land uses while limiting “dead space” between uses on a single block and providing higher densities that will support the use of transit. Patterns of streets also allow drivers more choices; thus reducing congestion on key routes and keep local trips off regional facilities (Figure 5 next page).

Create Visual Focal Points: Provide design elements or civic uses that will serve as a focal point for pedestrians at the center of their communities. These elements help create an identity and provide people with a sense of orientation (Figure 6, below).

Utilize Open Space: Use appropriately sized public space to help define the community center. Open space locations should reinforce the activities that are generated by surrounding land uses. Residential areas have increased needs for active recreation, while commercial uses generate more demand for passive open space such as plazas or gardens.

Concentrate a Mix of Land Uses: Rather than continuing to spread out activity-generating uses over large areas and diluting their impact, these types of uses should be collected within defined areas for maximum impact. Mixing land uses such as offices, retail and services could also potentially limit the number of vehicle trips along major roadways (Figure 7).

Encourage Multiple Uses: Conventional planning has resulted in large tracts of land zoned for single uses. This leaves communities with areas that are inactive for long periods of time and forces residents to make multiple trips to conduct their daily activities. Zoning ordinances should be revised to provide for multiple use districts wherever possible and encourage the sharing of parking lots, waste management, and drainage areas (Figure 8, next page).

Create a Density Gradation: Create a physical hierarchy for development patterns where higher density uses should be encouraged in the center, with densities decreasing from the center.

Zone Areas by Building, Not by Use: Traditional zoning has relied upon the separation of uses. In order to encourage a mix of uses, zoning ordinances can be changed to regulate the building type, not the use. This allows building owners to determine the uses. Communities can adopt form-based zoning codes to implement this principle.

FIGURE 5: CONNECTED NETWORK

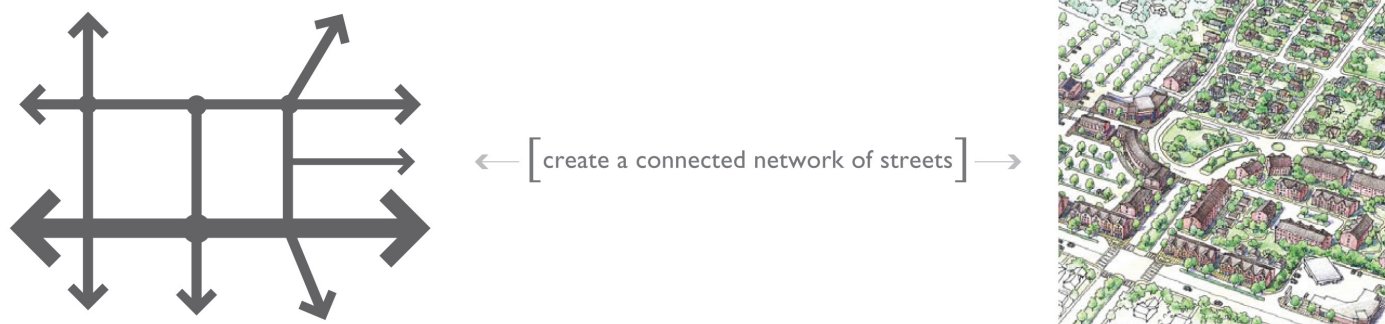
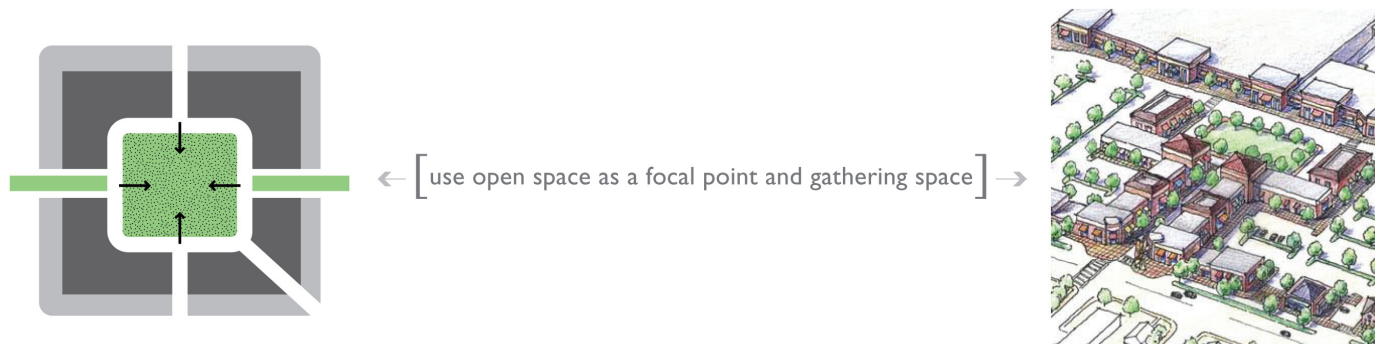


FIGURE 6: FOCAL POINT



DEVELOPMENT PRINCIPLES

“Home rule” (local decision-making) in New Jersey will continue to be a driving force for communities to compete for the next big ratable to help alleviate the tax burden on residents. While DVRPC and state agencies continue to work toward more regional approaches to development, below are principles that each corridor community can employ to help create a more sustainable development pattern.

Identify Opportunities for Focused Development: Designate specific sites along US 322 that are adjacent to travel nodes where more intense development can occur. These opportunities should be prioritized in coordination with master plans, redevelopment plans, and zoning ordinances.

Encourage Cluster Design: The clustering of independent developments into a planned and centralized configuration provides for transit access, a larger concentration of users and the potential to decrease the overall parking supply. This can also be planned with service roads to further eliminate traffic on major roadways.

Control Ground Floor Building Treatments: Require multiple entries along street level uses on key corridors. A minimum of 50 percent of all ground level building should be transparent glass to encourage storefront activity. This will also increase the level of light and visual interest along the street.

Regulate Building Height and Setbacks: Require that the profile of buildings fronting streets helps to reinforce a human-scale environment. By regulating the height of buildings and staggering building setbacks, the environment becomes inviting to the pedestrian. Buildings that are too high or set back too far do not invite pedestrian activity (Figure 9, next page).

FIGURE 7: MIXED USE

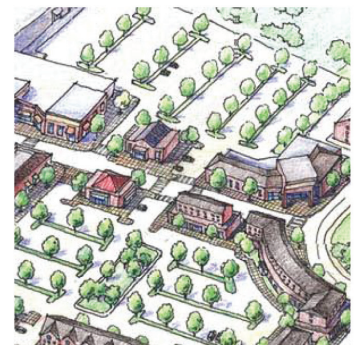
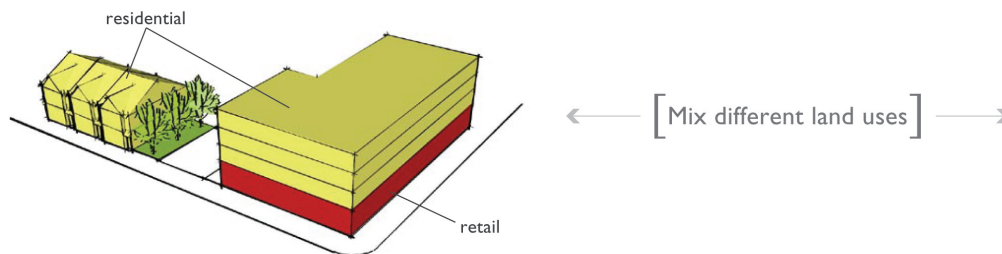
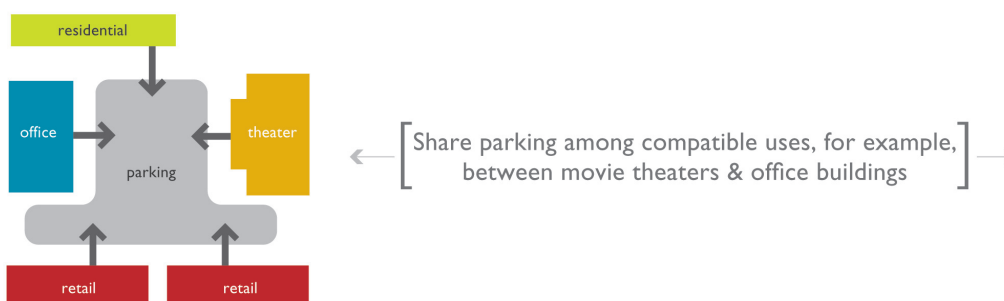


FIGURE 8: SHARED USE AND PARKING



ACCESS MANAGEMENT

Access Management provisions improve safety and efficiency on roadways by limiting and controlling access points. It entails the careful planning of how, where and when vehicles can turn onto or off a road by providing access to land development while simultaneously preserving the flow of traffic on the surrounding road system. According to the Transportation Research Board's Access Management Manual, "Access management seeks to limit and consolidate access along major roadways, while promoting a supporting street system and unified access and circulation system for development. The result is a roadway that will function safely and efficiently for its useful life, while providing for a more attractive corridor."

By managing access, government agencies can increase public safety with fewer accidents, extend the life of the roadway, reduce traffic congestion, support transportation modes, and even improve the appearance and quality of the built environment with reduced vehicle emissions.

With the increasing cost and lack of funding availability to build new roads or reconstruct existing arterials, the need for effective access management strategies is stronger than ever. This is particularly important for a major roadway like US 322 that serves both regional and local traffic. The US 322 corridor is at critical juncture with the development pattern shifting from a semi-rural to a suburban land use pattern. The increasing demand for both new retail and residential land uses along the corridor offers a challenge for the transportation system. Access management planning requires

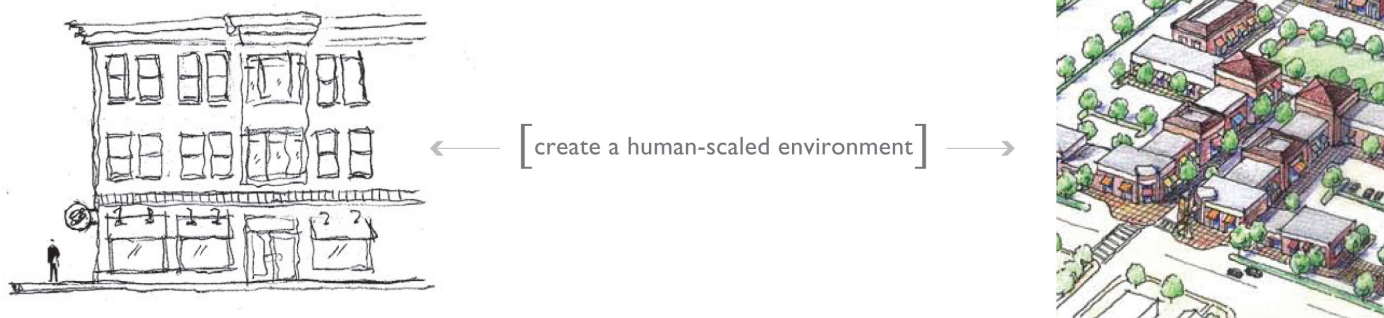
cooperation among government entities responsible for land development and transportation decisions. There is an opportunity to shape and enhance the corridor before larger access problems are created with the increased development.

Without appropriate access management measures and with the failure to appropriately manage surrounding development, the function and characteristics of US 322 can deteriorate rapidly causing an increase in vehicle crashes, increased commute times, unsightly commercial strip development and a degradation of scenic landscapes.

In the state of New Jersey, persons seeking new access or modifying existing accessways to US 322 must submit applications to the New Jersey Department of Transportation. The rules governing access to state roadways can be found in the New Jersey State Highway Access Management Code (*NJ Administrative Code, Title 16, Chapter 47*).

The Transportation Research Board has identified ten principles that help to accomplish the goals of access management. By using these techniques, access to land development can be provided in a manner that preserves the safety and efficiency of the transportation system while promoting orderly development.

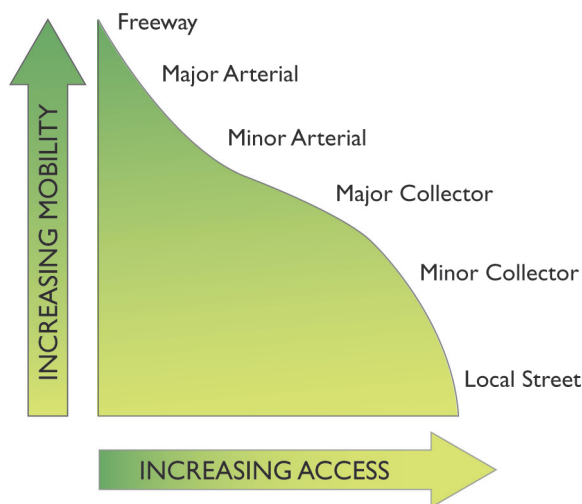
FIGURE 9: HUMAN-SCALED ENVIRONMENT



ACCESS MANAGEMENT PRINCIPLES

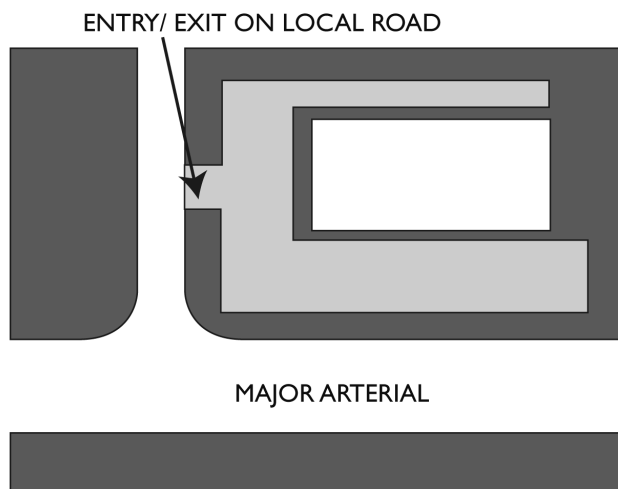
Design for Functionality (figure 10): Different roadways service different functions. It is important to design and manage US 322 according to its primary function: a regional highway.

FIGURE 10:



Limit Direct Access (figure 11): The higher volumes of regional and through traffic will increase the need for more access control. Direct property access is appropriate for local and collector roads, not regional roads, such as US 322.

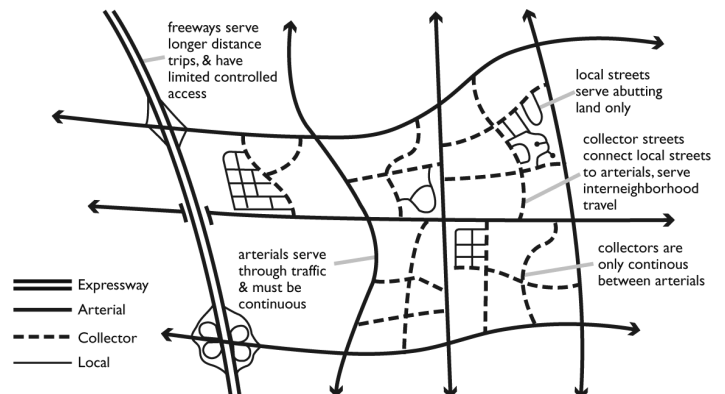
FIGURE 11:



Source: John Warbach, Planning and Zoning Center, Inc.

Promote Intersection Hierarchy (figure 12): An efficient transportation network provides appropriate transitions from one classification of roadway to another. For example, freeways connect to arterials through an interchange that is designed for the transition. This concept can be extended to US 322 through a series of intersection types that range from the junction of two major arterial roadways to transition interchanges for local and collector roadways.

FIGURE 12:



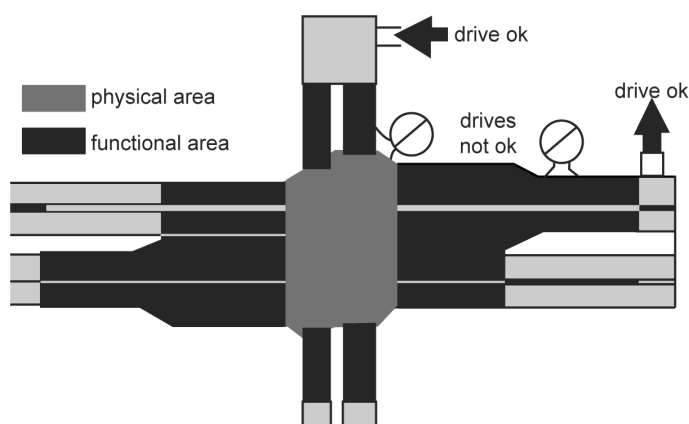
Source: Michigan DOT, The Access Management Guidebook, October, 2001

Locate Signals to Favor Through Movements: Uniform spacing of intersections and signals on roadways enhances the ability to coordinate signals and ensure continuous movement of traffic at the desired speed. Failure to carefully locate access connections or median openings can cause substantial increases in travel time.

Preserve the Functional Area of Intersections and Interchanges (figure 13 next page):

The functional area of an intersection or interchange is the area that is critical to its safe and efficient operation. This is the area where motorists are responding to the intersection or interchange by deceleration and maneuvering to stop or complete a turn. Access connections too close to intersections or interchange ramps can cause serious traffic conflicts that result in crashes and congestion.

FIGURE 13:

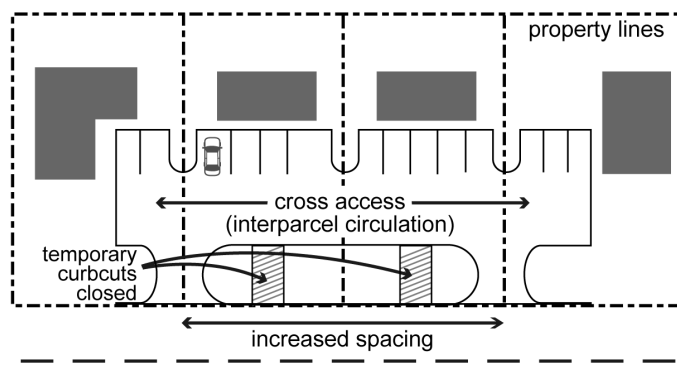


Source: Florida Department of Transportation, Effective Strategies for Comprehensive Corridor Management, October 2004

Limit the Number of Conflict Points: Collisions are more likely to happen when motorists are presented with complex driving situations created by numerous conflict points. A less complex driving environment is accomplished by limiting the number and type of conflict points.

Separate Conflict Areas (figure 14): Motorists need sufficient time to address one set of potential conflicts before facing another. The necessary spacing between conflict areas increases as travel speed increases, to allow for perception and reaction time.

FIGURE 14:

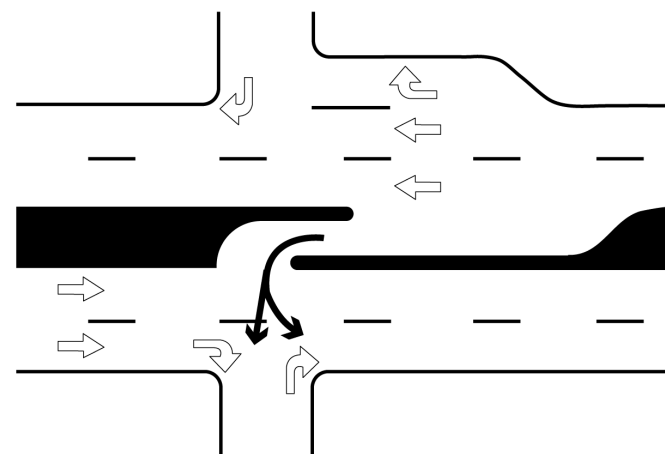


Source: Access Management Model Ordinances for Pennsylvania Municipalities Handbook, PennDOT, April 2005

Remove Turning Vehicles from Through Traffic Lanes (figure 15):

Turning lanes allow for drivers to decelerate gradually out of the through lane and wait in a protected area for an opportunity to complete a turn. This reduces the severity and duration of conflicts between turning vehicles and through traffic and improves the safety and efficiency of roadway intersections.

FIGURE 15:



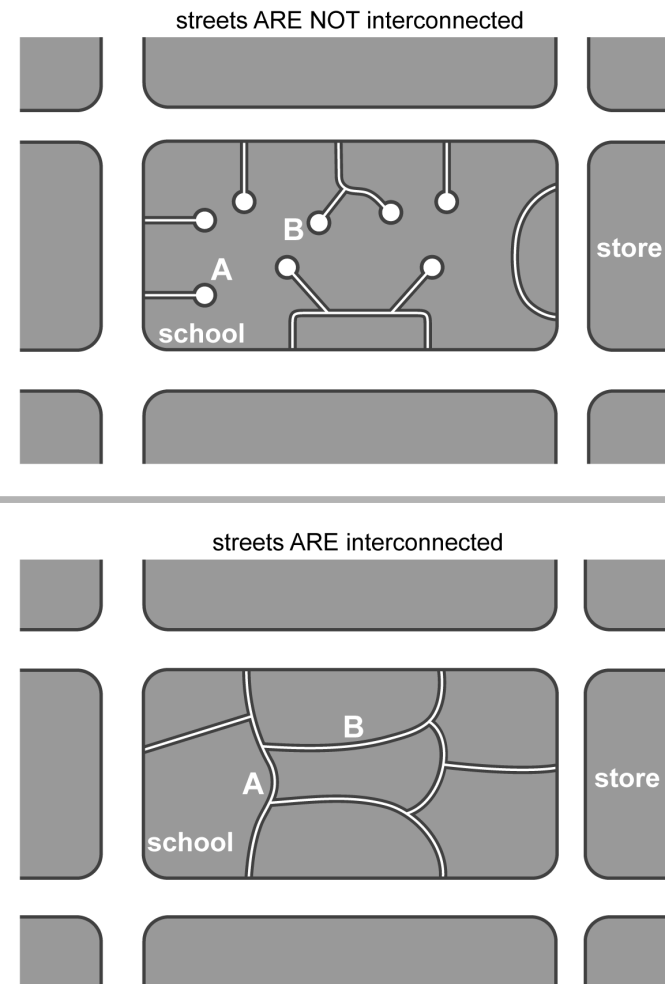
Source: Access Management Model Ordinances For Pennsylvania Municipalities Handbook, PennDOT, April 2005

Use Non-Traversable Medians to Manage Left-Turn

Movements: Channel turning movements on major roadways to controlled locations. Non-traversable medians and other techniques that minimize left turns or reduce the driver workload can be especially effective in improving roadway safety.

Provide a Supporting Circulation System (figure 16):

Well-planned communities provide a supporting network of local and collector streets to accommodate development, as well as unified property access and circulation systems. Interconnected street and circulation systems support alternative modes of transportation and provide alternative routes for bicyclists, pedestrians and drivers. Alternatively, commercial strip development with separate driveways for each business forces even short trips onto arterial roadways. ❖

FIGURE 16:

Source: John Warbach, Planning and Zoning Center, Inc. Michigan DOT, The Access Management Guidebook, October, 2001





Goals of the Framework Plan

Using the analysis of each municipality's Master Plan and Zoning Ordinance, the Volume I Baseline Condition report, as well as other resources such as open space and recreation plans and previous transportation studies, the following goals, objectives, and strategies have been identified to create the foundation of the framework plan. The goals and strategies are divided into categories – community development, housing, natural and cultural resources, circulation, community facilities, economic development, and municipal planning. The goals summarize the individual visions of the municipalities in the corridor as well as Gloucester County. Following the goals is a list of recommended strategies that may be used to implement these goals based on a time frame – immediate, short-term, and long-term.

GOALS

Community Development

Given regional trends, in order to achieve a future overall development pattern that is responsive to the economic, social, and cultural needs of residents and businesses, local governments must work with the private development community to preserve the future capacity, maximize safety, and minimize congestion along US 322. Municipalities should preserve and enhance the physical and environmental

characteristics that make Gloucester County a distinctive and identifiable place. *Development can occur in an efficient, sustainable manner that minimizes the short and long-term costs to the public and private sector as well as minimizes the degradation of the natural environment by embracing the following:*

- ◆ Amend municipal zoning ordinances to provide for the foundation for controlled access and movements within and surrounding the municipality through access management districts.
- ◆ Introduce zoning ordinances that delegate size and placement of large-scale buildings within a development to create a uniform frontage along US 322
- ◆ Locate and prioritize areas for large-scale development.
- ◆ Ensure sound land use principles to allow for balanced growth within the corridor.
- ◆ Improve consistency between zoning ordinances and zoning classifications along the corridor.

- ◆ Encourage mixed-use development that incorporates retail, office, hotel and higher density residential uses.

Housing

By providing an appropriate supply of diverse and affordable housing, in harmony with the existing and historic character of the region and its natural environment, the municipalities within the US 322 corridor can become more attractive to a variety of existing and potential residents. A mix of housing choices can often lead to less of an impact on the surrounding natural environment as less land is developed and fewer infrastructure improvements are needed.

This can be done by:

- ◆ Providing for a variety of housing types to serve the needs of a growing population and the elderly.
- ◆ Facilitating a range of housing types, sizes, and price levels to respond to changing housing needs that respond to the various life cycles.
- ◆ Accommodating alternative housing types through the use of planned developments.
- ◆ Maintaining and planning for residential neighborhoods near employment centers.

Natural Resources

The natural resources of southern New Jersey and Gloucester County are significant factors for the sustainability of the region's economic vitality, environmental health and quality of life. Farmland and forests can provide for employment as well as contribute to the tax base of a community. By enhancing the natural environment of the corridor, the rural culture and lifestyles of this area can be preserved.

It is imperative that communities embrace their natural environments by:

- ◆ Requiring the placement of lots and buildings, roads, and other structures in cluster formations leaving the maximum area for open space.
- ◆ Maintaining and retaining the existing character of floodplain and wetland areas within the corridor,

limiting disturbance and avoiding negative impacts of adjacent properties and waterways.

- ◆ Preserving scenic vistas that are parallel to the US 322 corridor along the Raccoon Creek.
- ◆ Creating design guidelines for berming, natural landscaping, and increased building setbacks along the corridor to preserve the visual amenities such as lakes, streams, and forested areas.
- ◆ Minimizing alterations to existing topography with particular attention given to steep slopes.
- ◆ Requiring subdivision and land development applications to set aside open space that is contiguous with other open space in order to create greenways for pedestrians and wildlife.
- ◆ Using creativity to overcome fiscal and maintenance restraints to preserving open space by providing an open space fee or dedication of land.
- ◆ Encouraging redevelopment of abandoned tracts before building on open space.
- ◆ Adopting measures to protect valuable natural resources and land.

Cultural and Historical Resources

The protection and preservation of the cultural and historic character of the corridor should be of high importance. These features contribute to the unique character and quality of life in Gloucester County. There are several sites throughout the US 322 corridor that have historical significance such as the Village of Mullica Hill and the Jessup Farm in Harrison Township. ***To keep these pieces part of our communities and history, municipalities should embrace the following:***

- ◆ Identify and evaluate historic and archaeological resources for significance.
- ◆ Investigate methods of encouraging the preservation of significant resources through public and private means.

- ◆ Incorporate historic patterns of development when considering land uses and retain historic landscapes whenever possible.
- ◆ Support the preservation and protection of sensitive portions of Gloucester County.
- ◆ Emphasize community preservation in the land use decision-making process.
- ◆ Preserve the aesthetics of Gloucester County and enhance the image of the communities.
- ◆ Incorporate historic structures into the design vision for future growth along the corridor.

Circulation

The US 322 corridor is a key east-west route through Gloucester County and often serves a dual purpose of carrying regional and local traffic. While US 322 is the focus of this study, the communities and county should strive to maintain a safe and efficient multi-modal circulation system throughout the corridor while safeguarding the current functionality of the transportation infrastructure, preserving capacity, and finding a beneficial relationship between land use and the circulation network. Providing continuous road facilities between Pennsylvania and New Jersey should be strived for in order to keep regional seasonal traffic moving.

This can be done by:

- ◆ Ensuring that all municipalities work together with NJDOT on implementing new transportation and smart growth roadway designs to ensure sustainability of the road network.
- ◆ Alleviating local traffic congestion along this regional highway by providing alternate parallel road networks.
- ◆ Promoting road connectivity by encouraging local traffic to use the existing road network in order to maximize use of highways for through and truck traffic through signage and upgrades to local and connector roads.
- ◆ Promoting and encouraging a connected street grid. This can have added benefits such as fewer miles traveled, decreased congestion, reduced demand on major roads, and a sense of community between neighborhoods.
- ◆ Improving the safety and efficiency of the corridor by creating a special access management overlay zone with standards that address the location and design of street and driveway connections to the roadway.
- ◆ Creating and encouraging internal connections between uses to allow vehicles to circulate between businesses without using US 322.
- ◆ Improving bottleneck locations by the removal of temporary lane reductions, substandard design elements, and other physical limitations that reduce capacity.
- ◆ Examining the current classification of each road that filters traffic to US 322 to determine if its current working status meets the definition of its functional classification.
- ◆ Encouraging traffic flow improvements through the implementation of design standards that are based on the functional classification of particular roads and surrounding land context.
- ◆ Allowing developers to provide a greater variety of street types within residential, nonresidential and mixed-use developments such as access lanes, alleys, and variations of on-street parking, shared driveways and parking lots.
- ◆ Promoting the development of a network of pedestrian and bicycle facilities that link residential, employment, shopping, schools, recreation, and transit.
- ◆ Improving the sidewalk and lighting system to provide safer conditions for pedestrians and bicyclists.
- ◆ Working with the railroads to provide for safer at-

grade crossings for vehicles, pedestrians, and cyclists.

- ◆ Establishing criteria to measure the future need for mass transit opportunities.
- ◆ Encouraging ride-sharing among local residents and identifying areas that can be used for commuter parking areas.
- ◆ Utilizing Transportation System Management (TSM), Congestion Management Process (CMP) and Intelligent Transportation Systems (ITS) as low-cost, short-term solutions to improve the efficiency of the US 322 corridor.

Utilities

The growing municipalities within the US 322 corridor should strive to provide public services, facilities and utilities in the most efficient, cost-effective manner. Corridor residents should be provided with a high quality water supply that meets the present and future demands of the residents, as well as the future needs of commercial and industrial development.

Communities should work together to find opportunities for facility sharing which will cut down on municipal costs as well as preserve the environmental features of the region by:

- ◆ Supporting efforts of water supply and wastewater companies and authorities in planning ahead for the expansion of capacities and extensions of new service areas, in accordance with growth projections and municipal and state plans.
- ◆ Reviewing and updating master wastewater facilities plans which contain the provisions for adequate sewage collection, treatment and disposal facilities.
- ◆ Assuring that all current and prospective residents and visitors have access to a water supply of sufficient quantity and quality.
- ◆ Preventing detrimental off-site impacts resulting from improperly controlled stormwater run-off through the use of on-site management and best practices.

Economic Development

The economic vitality of US 322 is important for the future of the corridor communities. Economic development not only means new commercial development, but it also involves maintaining and accommodating exiting businesses and industrial parks as well as commercial farmlands. ***The US 322 corridor communities should strive to diversify the corridor's economic base to provide additional municipal services and maintain community facilities by:***

- ◆ Augmenting the economic viability of existing local businesses in Mullica Hill and Swedesboro by encouraging retail that does not already exist.
- ◆ Providing convenience retail for residents living within 1-2 miles along the corridor.
- ◆ Creating multiple intersection central business districts such as Mullica Hill and Swedesboro.
- ◆ Locating new employment centers close to major transportation corridors and interchanges.
- ◆ Promoting new business and industries that will tap the skills of corridor residents who currently commute to jobs outside the corridor.
- ◆ Coordinating the provision of new or improved transportation facilities with the establishment of economic nodes.
- ◆ Encouraging development in existing business districts to discourage random and scattered development patterns. ❖





Recommendations

This chapter contains specific recommendations for planning activities along the US 322 corridor. These recommendations are based on the conclusions of the Baseline Conditions report and are directed to the four study area municipalities (Logan, Woolwich and Harrison Townships and Swedesboro Borough), NJ Transit, Gloucester County and NJDOT. A number of common themes run through the municipal recommendations. First, many of the recommendations attempt to address the corridor's increasing automobile-oriented land use patterns. Expanded bus service is recommended for several areas in the corridor as well as transit-supportive facilities and park and ride facilities. Sidewalks, pedestrian access and bicycle facilities are also recommended. Another common theme is the concentration of land uses along US 322. The immediate US 322 corridor has been targeted for high-density housing, employment, and commercial uses because of its accessibility to the regional highway network and the amount of undeveloped land. Many of the recommendations in this section include the intensification of land uses near highway interchanges as well as increased local network connections to help relieve congestion along US 322.

Throughout the corridor there are six improvement areas that have been identified as a high-priority that need immediate

attention due to increased development. The improvement areas were chosen because future development in these locations has the potential to impede the efficiency of the US 322 corridor. The six improvement areas (Shown on Map 4) are: US 322 Redevelopment Area, Logan Township; I-295 to Stone Meetinghouse Road (CR 669)/Berkley Drive, Logan Township; Woolwich Town Center, Woolwich Township; Tomlin Station Road (CR 607), Harrison Township; Richwood Area, Harrison Township; Locke Avenue – Auburn Road; and the Borough of Swedesboro. The recommendations seek to combine land use and transportation planning, linking NJDOT's plans for sustainability along corridors with existing development plans and promoting coordination among local, county, and state governments.

LOGAN TOWNSHIP

Logan Township will continue to grow along the US 322 corridor which will place further demands on the road infrastructure. While the Township only grew in population by approximately 14 percent from 1990 to 2000, there are large parcels of open space that have been designated as redevelopment areas. The Township's large industrial complex provides for a sound economic base but produces large amounts of congestion with trucks entering and exiting I-295 and the NJ Turnpike. A future challenge for Logan



US 322 redevelopment site, Logan Township

Township will be to balance the preservation of its rural village character with future employment and commercial development. To Logan Township's advantage, portions of US 322 have a 4-lane configuration which makes the corridor more attractive for commercial development. In addition, a truck traffic plan should be developed to minimize the impact of trucks traveling to the Pureland Industrial park on the new road network. Further study should be given to direct access to Pureland on High Hill Road from I-295. High Hill Road is south of US 322 and runs parallel to it. Recommendations for two specific areas of Logan Township – US 322 Redevelopment Area and the I-295/Stone Meetinghouse Road (CR 669) Area – are described below. These recommendations cover transportation and land use issues such as access, connectivity, zoning improvements and future transit access.

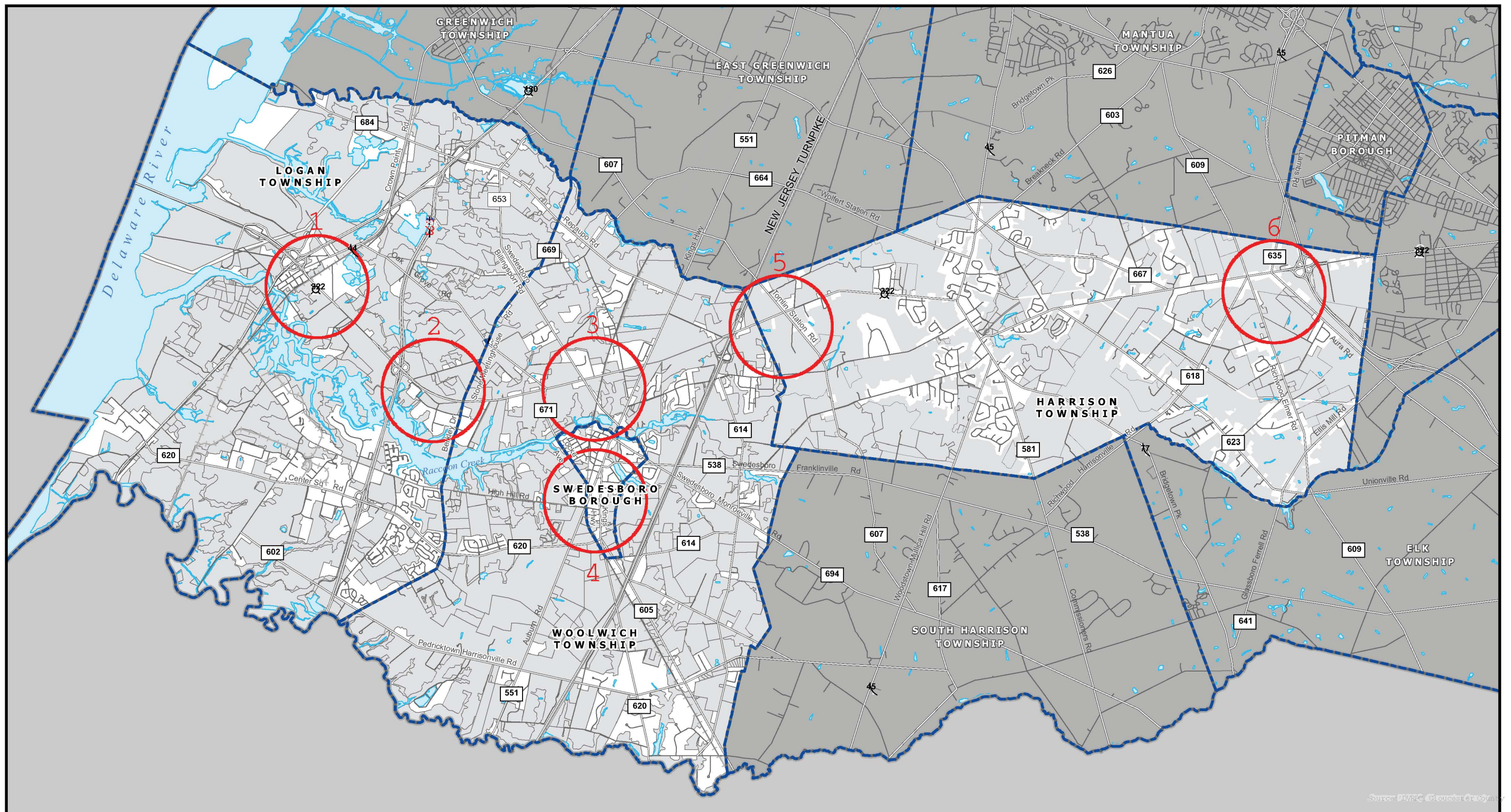
US 322 REDEVELOPMENT AREA

Logan Township's US 322 redevelopment area was chosen because of its potential as a large scale redevelopment project and its proximity to the Village of Bridgeport. The airport parcel is adjacent to the US 322 corridor with no local access roads to this site. Behind the airport are a series of unutilized lakes that have no public access. The airport is also in an approved sewer service area which will make development more attractive. While the airport site is a known contaminated site, this vision of redevelopment for the Township of Logan assumes private market development pressures and environmental clean up.

This key redevelopment location provides the opportunity to expand the existing development form of the Village of Bridgeport along US 322 while providing local access to the downtown area. Figure 17 illustrates a new concept for mixed use development within the airport area. A new network is shown with access roads that are parallel to US 322 with new connections to Main Street. By connecting this development to the Village of Bridgeport, local trips can be made without utilizing US 322. This concept also shows east-west linkages using South Bridgeport Road and Steelman Avenue and north-south linkages using Main Street, Merchant Street, and a proposed new road. To help keep local and regional traffic separate, the use of access roads has also been incorporated. Figure 18 is a cross section of the access road and how it can provide for direct access into the development, allowing traffic on US 322 to flow more efficiently. This concept also provides for the preservation of natural features in the area such as the lakes to the north and access to Raccoon Creek.

To help create a destination image for this area, a gateway treatment should be incorporated into any new development.

In order to control left hand turning movements and keep the flow traffic moving, this intersection will need to be upgraded to include the proper right and left turn lanes. In addition to southern access from Bridgeport Road, any new development should provide access to Main Street/Crown Point Road (CR 44) as another connection to the northern portion of the township. Careful consideration will need to be given to the crossing of the freight line. Because US 322 is a two-lane highway through this portion of Logan Township, it is important to keep local trips off this roadway and utilize a residential street design similar to the existing design of the Village of Bridgeport. To remain consistent through the entire Township, US 322 should be widened to 4 lanes with the median design.





DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
JANUARY 2007

Improvement Areas

1 US 322 Redevelopment Area	4 Swedesboro - Kings Highway
2 CR 669 / Berkley Drive	5 Tomlin Station Road
3 Woolwich Township	6 Richwood Area

Developed Area
 Municipality

Map 4: US 322 Improvement Areas

FIGURE 17: ROUTE 322 REDEVELOPMENT AREA

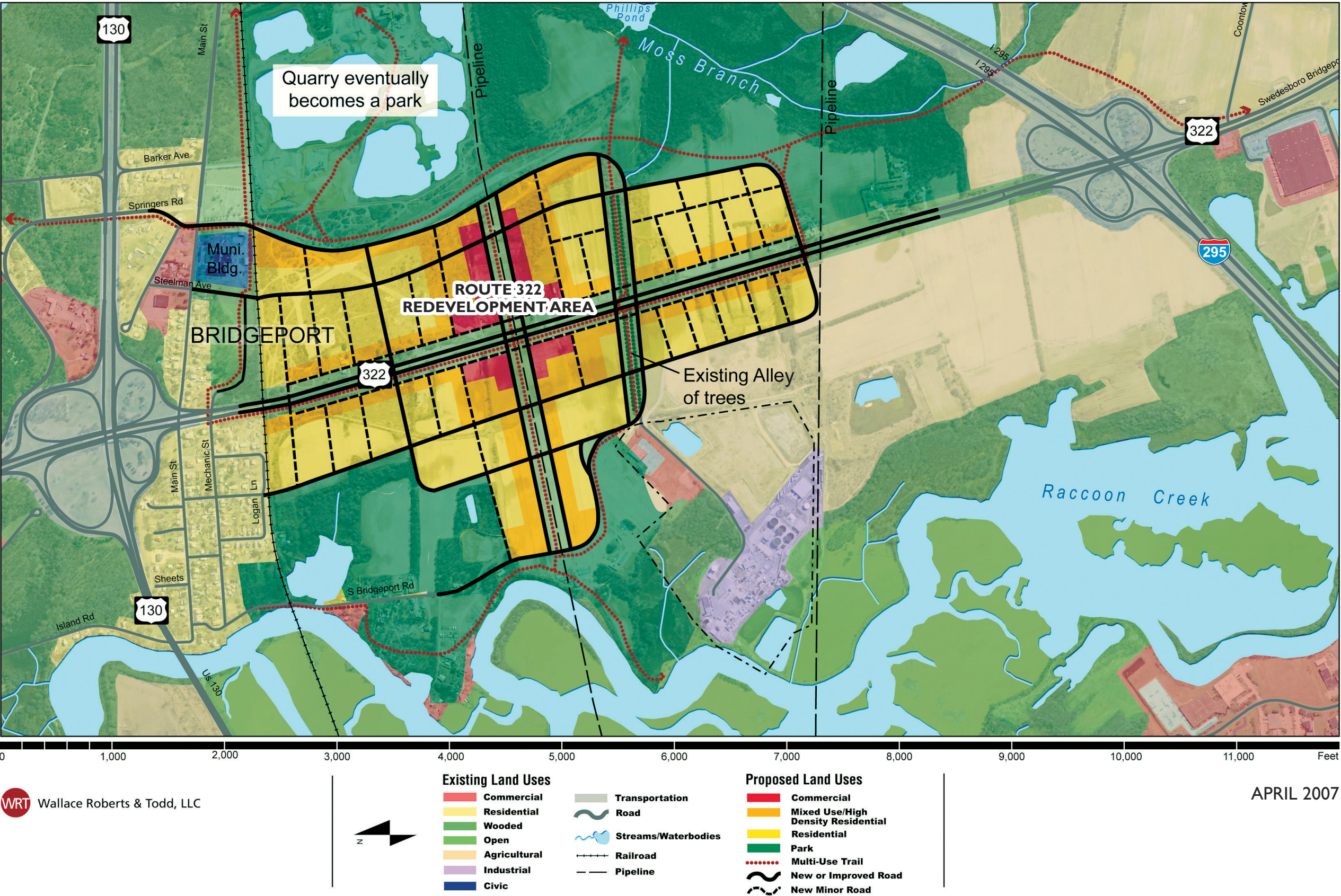
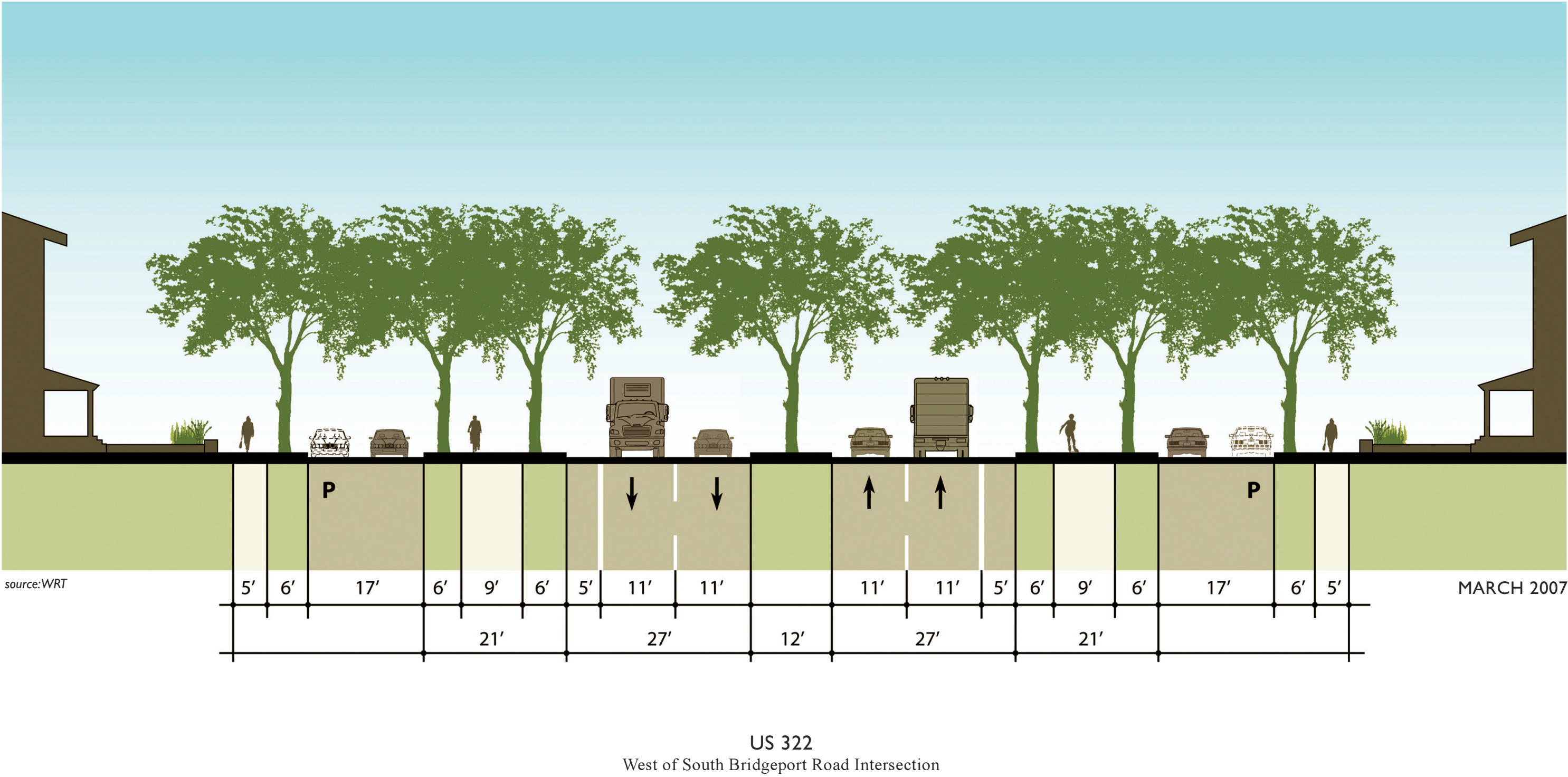


FIGURE 18: ROUTE 322 REDEVELOPMENT AREA





Street network in Bridgeport, Logan Township

The US 322 redevelopment area is currently zoned RC-Regional Commercial which allows for regional large-scale commercial and residential development. This area of Logan should be changed to VR Village Residential, which will provide a traditional neighborhood design and development patterns that are similar to the Village of Bridgeport. A transfer development rights ordinance should be considered for this redevelopment area in order to implement the type of density needed for future transit service as well as the preservation of natural resources in other portions of the Townships. To help create a destination image for this area, a gateway treatment should be incorporated into any new development. New residential development should be discouraged in areas with environmental features and encouraged along this portion of US 322 where there is better infrastructure and potential network connections. Future transit service should also be explored with NJ Transit including the development of possible bus TOD.

LAND USE AND ZONING RECOMMENDATIONS

Map 5 illustrates proposed new zoning districts for Logan Township. The following land use and zoning recommendations are based on this map.

1. To be consistent with the State's Planning Areas, a new zone should be designated that is strictly for preserved/passive recreational uses within the Township to provide scenic and recreational areas for residents along waterfront areas.

2. Rezone the western portion of the US 322 Redevelopment Area (from the edge of the airport property to the north and use Bridgeport Road as the southern boundary) to Village Residential to provide for higher density residential with service type retail. This would provide a land use pattern similar to the Village of Bridgeport and create new local road network connections within the Township.

3. Rezone the commercial areas within the US 322 Redevelopment Area along the Racoon Creek. This area should be used for passive recreation and public access to the creek should be provided. Portions of this redevelopment area include a Superfund Site (Rollins Environmental Service Inc) and should be taken under advisement. This will become part of the US 322 Center.

...officials may need to investigate the feasibility of upgrading the I-295/US 322 interchange to include all movements and should work closely with developers on these upgrades to accommodate potential future traffic.

4. Revise the 5-acre zoning district on the northern border of the Township to keep this area consistent with the State Planning Area 5-Environmentally Sensitive designation and provide for passive recreation to Township residents.

5. Reallocate the portion of the US 322 Redevelopment Area from I-295 to Stone Meetinghouse Road (CR 669) to RC Regional Commercial to accommodate the regional big-box development. This will provide consistency with recent development approvals and encourage large scale commercial to develop near the highway interchange.

6. All areas zoned for light industry (RFI) near the Delaware River waterfront should be re-designated for more environmentally-friendly development. These areas should



Intersection of US 322 and Stone Meetinghouse Road

be made available for public use and connections for greenways and trails should be made along the entire length of the Raccoon Creek.

7. Establish a Transportation Development District (TDD) in order to assess fees on property and business owners for transportation improvements. A TDD should be established along the US 322 redevelopment area/proposed center as well as other areas of the Township that may need to be improved in the future. These should be adopted by ordinance as well as placed into the Township's circulation element of its master plan.

8. Establish a Transfer Development Rights (TDR) ordinance in order to increase development density within the US 322 Redevelopment Area while preserving natural features in other portions of the Township. By concentrating



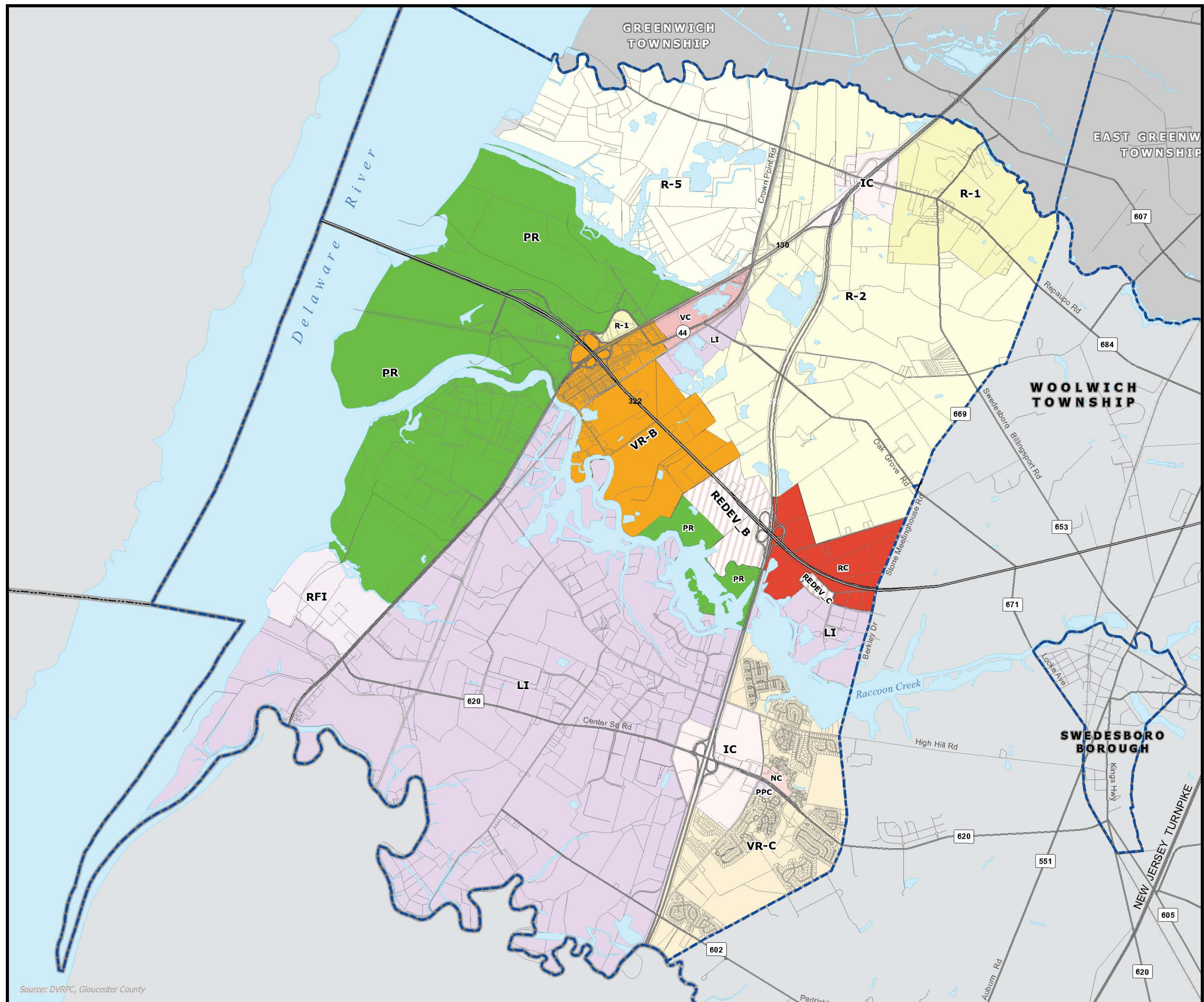
Business Park adjacent to new commercial development in Logan Township

development along US 322, a future transit system can link development nodes along the entire corridor rather than zigzagging through each of the municipalities. Future residential uses should be encouraged in this corridor where infrastructure and access currently exist.

I-295 TO STONE MEETINGHOUSE ROAD (CR 669)/BERKLEY DRIVE

This area was chosen because of the high traffic counts and the redevelopment areas that are adjacent to US 322. There are two redevelopment areas on both the north and south side of US 322 with development proposals that include big-box retail and additional professional office complexes. This portion of US 322 is currently a 4-lane configuration with a grass median. While development proposals will deal with onsite issues and circulation, there are other smart growth principles that should be incorporated here. Figure 19 illustrates how the proposed commercial development can be better integrated into the surrounding development. Future development proposals should incorporate mixed uses, as allowed in the Township redevelopment plan. Access should be controlled through the existing traffic light at Berkley Drive and access roads should be constructed within the commercial development. Intersection improvements such as adding left turn lanes and signal optimization will need to be added on Stone Meetinghouse Road (CR 669) /Berkley Drive to accommodate the new traffic. On the northern side of US 322, access and parallel roads should bring traffic to Stone Meetinghouse Road (CR 669) and to Coontown Road. This will allow local trips to use Locke Avenue as a parallel road to access shopping centers in this part of Logan Township. Logan Township has been working with developers on utilizing the existing network of streets in this portion of US 322. Figure 20 is the tentative site plan agreed upon by NJDOT and Newman Properties for new big-box commercial. It illustrates the use of the existing street network and controlled access points.

Development to the eastern side of I-295 should also incorporate access roads or build upon existing roads to connect the shopping centers through the business center. Any type of commercial development should be designed in a sustainable manner that includes a more human-scale design with shared parking. Possible new bus stops should be



Map 5: Logan Township Proposed Zoning Changes

FIGURE 19: LOGAN RETAIL CENTER

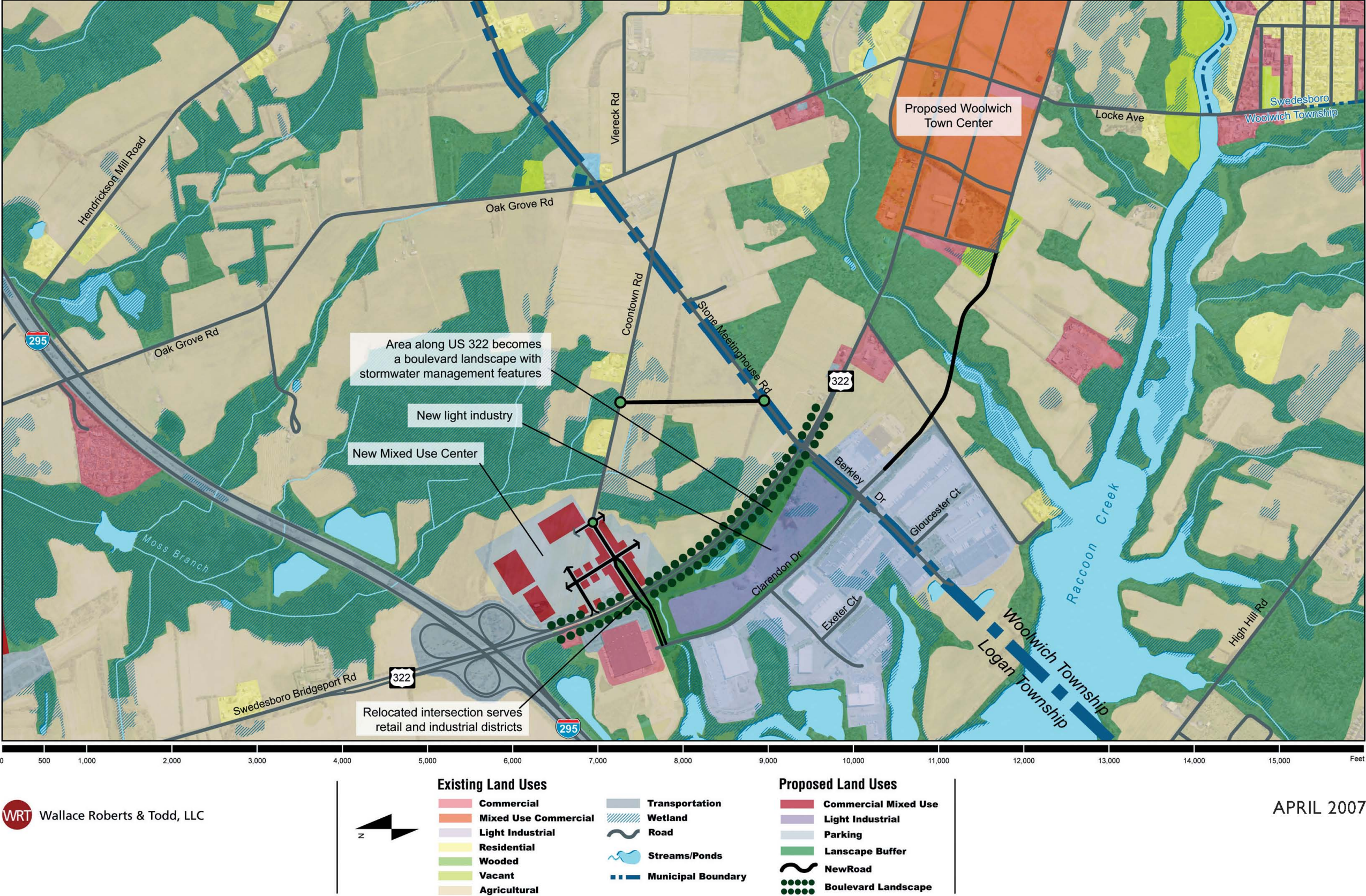


FIGURE 20: NEWMAN PROPERTIES PLAN



Source: Newman TWT

SEPTEMBER 2006

FIGURE 21:WOOLWICH TOWNSHIP LAND USE CONCEPT

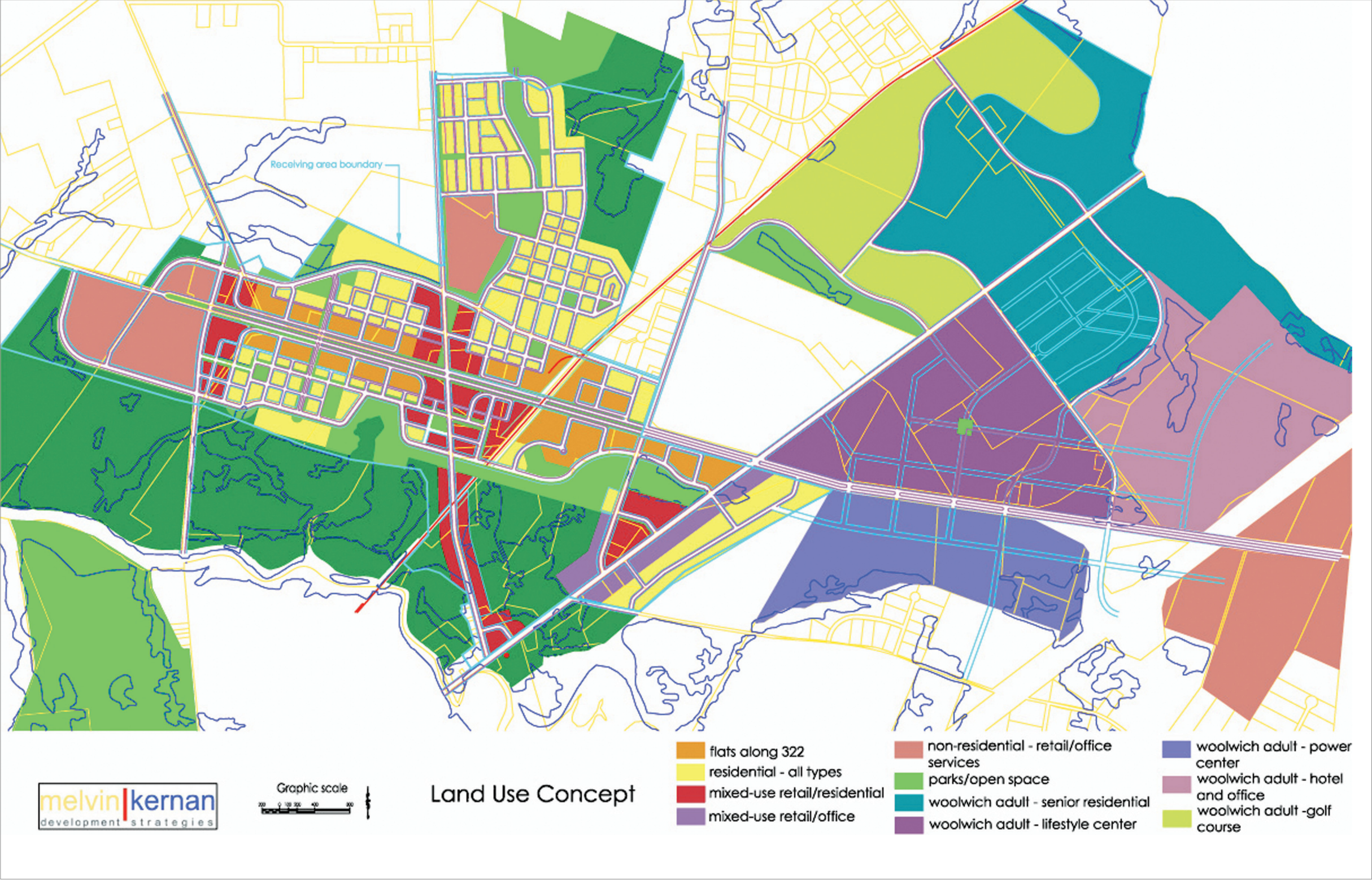
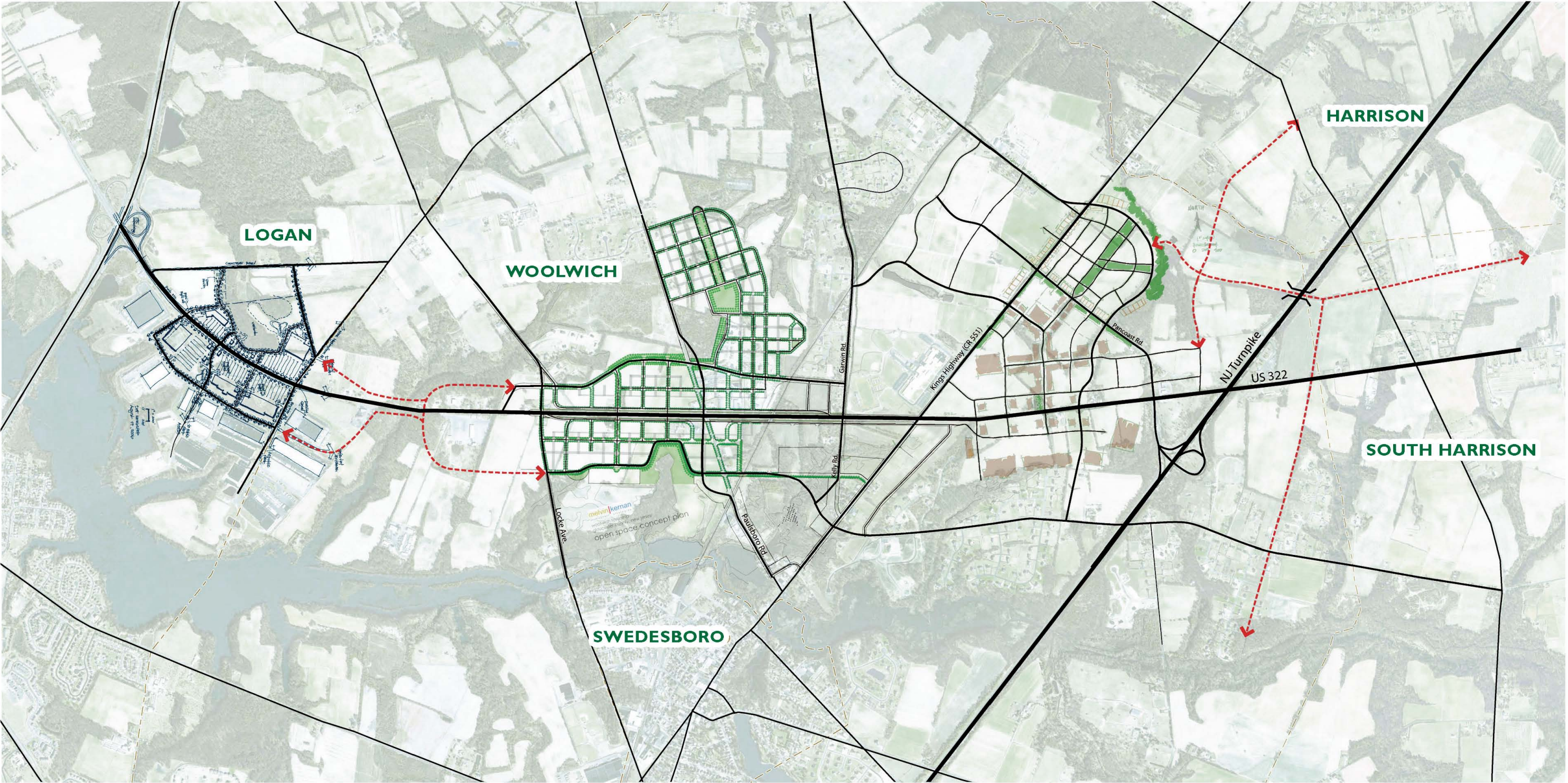
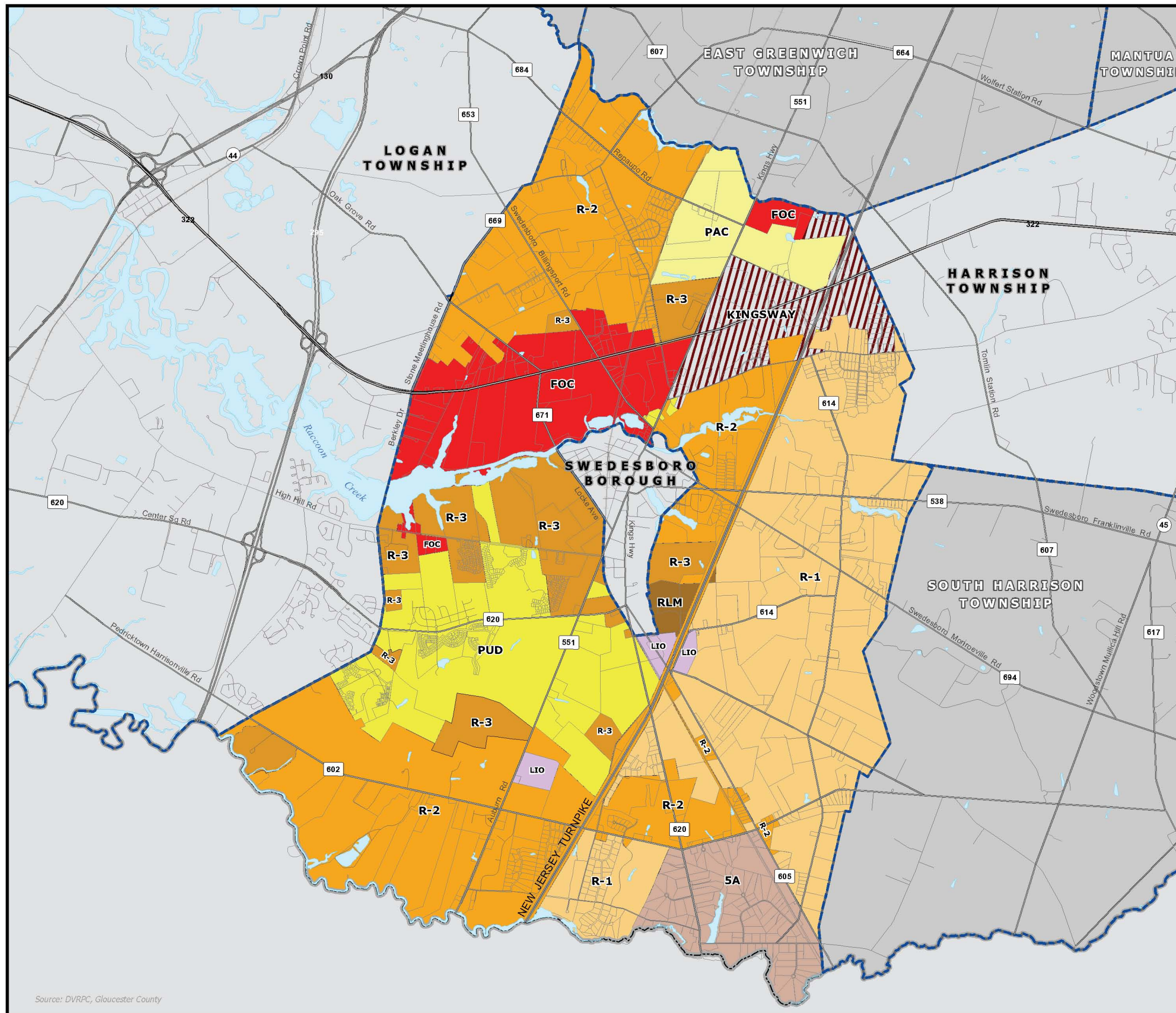


FIGURE 22: WOOLWICH TOWNSHIP ALTERNATIVE ROADWAY NETWORK



source: Urban Engineers for NJDOT

AUGUST 2006



Zoning

- FOC(Flexible Office Commercial)
- Kingsway(Kingsway Zoning Overlay)
- LIO(Light Industrial Office)
- PAC(Planned Adult Community)
- PUD(Planned Unit Development)
- 5A(Residential [0.2 du/acre])
- R-1(Residential [0.5 du/acre])
- R-2(Residential [0.7 du/acre])
- R-3(Residential [2.0 du/acre])
- RLM(Residential Low/Moderate)

0 0.5 1
Miles

DELAWARE VALLEY
REGIONAL PLANNING COMMISSION
JANUARY 2007

Map 6: Woolwich Township Existing Zoning

Source: DVRPC, Gloucester County

planned that connect the shopping areas with adjoining area towns -Woolwich, Mullica Hill, and downtown Swedesboro. These transit stops should be planned as part of Growing with Places in Mind. A portion of the new parking lots for the commercial development should be designated as a park and ride facility as an option for commuters. Pedestrian amenities should be provided.

With these two potential future developments along US 322 occurring on both sides of I-295 in Logan Township, NJDOT and local officials may need to investigate the feasibility of upgrading the I-295/US 322 interchange to include all movements and should work closely with developers on these upgrades to accommodate potential future traffic. Currently, there is no existing off-ramp from I-295 South to US 322 West or on-ramp from US 322 East to I-295 North. With the potential of new development, there may be more of a demand to access the area directly from I-295 rather than using US 130.

WOOLWICH TOWNSHIP

Woolwich Township was the fastest growing municipality in the Delaware Valley region between 2000 and 2003. Despite this statistic, the US 322 corridor through Woolwich Township is largely undeveloped because of the lack of water and sewer infrastructure. Planning efforts by municipal officials are working to have portions of adjacent land on US 322 re-designated as “growth areas” where infrastructure can be put into place that will be able to support the large planned residential population and commercial expansion. Woolwich Township will be implementing a Transfer Development Right (TDR) ordinance which would designate land along US 322 as “receiving areas” for new growth. The TDR program will allow Woolwich to maintain its rural character as well as accommodate new growth. Figure 21 illustrates the future land use concept for the Towne Center development, Woolwich Adult Housing and proposed parallel road network for Woolwich Township. The receiving area boundary line is marked around the new development parallel to US 322. In addition to the new Towne Center, Woolwich township is planning for a lifestyle center and adult housing on the northern side of US 322 between the NJ Turnpike and Kings Highway (CR 551). Figure 22 also illustrates the different

uses that will be accommodated such as residential, retail, office, and a new golf course.

Municipal officials have been working with the New Jersey Department of Transportation and Office of Smart Growth on the planning concepts that would promote sustainability – largely an alternative transportation network and higher densities for residential developments. This new sustainable development allows for the possibility of future transit service for this corridor. Figure 23 illustrates the alternative road network that has been developed for Woolwich Township, as well as a portion of Logan Township. Notice the new network that can be created as well as the connection to the existing local and county road system. The red dotted lines illustrate future possible connections to adjacent municipalities. Recommendations for a specific area of Woolwich Township have not been included, particularly because of the extensive planning on-going within the Township. Map 6 shows the existing zoning for Woolwich Township. New zoning criteria will be established through their planning process and the TDR program. While planning efforts within the Township have made great strides to implement smart growth techniques, the following is also recommended:

1. Work with the NJ Turnpike Authority to improve the NJ Turnpike entrance to a full interchange with controlled turning movements and a park and ride facility.
2. Work with Logan Township officials to ensure that the commercial development located at Stone Meetinghouse Road will be able to be connected to the new proposed street network within Woolwich.

HARRISON TOWNSHIP

The agricultural landscape that once dominated Harrison Township will continue to be developed based on current zoning and development pressures. The Township almost doubled in population from 1990 to 2000 and by the Year 2030 it is estimated that the population could double again. The development that is taking place will have a tremendous impact on US 322 as well as the internal road network, particularly alternate east-west routes through Gloucester County. A future challenge for Harrison Township will be to



Tomlin Station Road, Harrison Township

balance the preservation of its rural village character in areas such as Mullica Hill with future employment and large big-box commercial development. Currently, US 322 is a 2-lane configuration in this area and is operating at a Level of Service (LOS) F at several intersections in the Richwood and Mullica Hill areas. While the Mullica Hill area of the Township is not part of our study area, recommendations for two specific areas of Harrison Township – Tomlin Station Road (CR 607) intersection and the Richwood Area – are described below. These recommendations cover transportation and land use issues such as access, connectivity, zoning improvements and future transit access.

Tomlin Station Road (CR 607) Intersection

This location is in the beginning stages of development. Currently, there is an existing single family property on the northeast corner and two newer commercial properties on the



Intersection of US 322 and Tomlin Station Road, Harrison Township

northwest corner. The south side of this intersection is used for agricultural purposes. However, based on the zoning build out analysis completed in Phase I and feedback from the study advisory committee, development may increase and this intersection will play a vital role as a key east-west connection through Gloucester County. Vehicles from US 322 can utilize Tomlin Station Road (CR 607) to head south to Swedesboro-Franklinville Road (CR 538), which is a viable option to serve east-west traffic. In order to make sure this intersection can sustain such an increase in volume and movements, the following concepts are recommended and illustrated in Figure 23:

- 1.** Signalize the intersection of US 322 at Tomlin Station Road (CR 607).
- 2.** Add left turn lanes on all four legs of the intersection.
- 3.** Add a right turn lane on eastbound US 322 to Tomlin Station Road southbound.

In order to implement these concepts and to provide sustainable growth, the following land use change is also proposed:

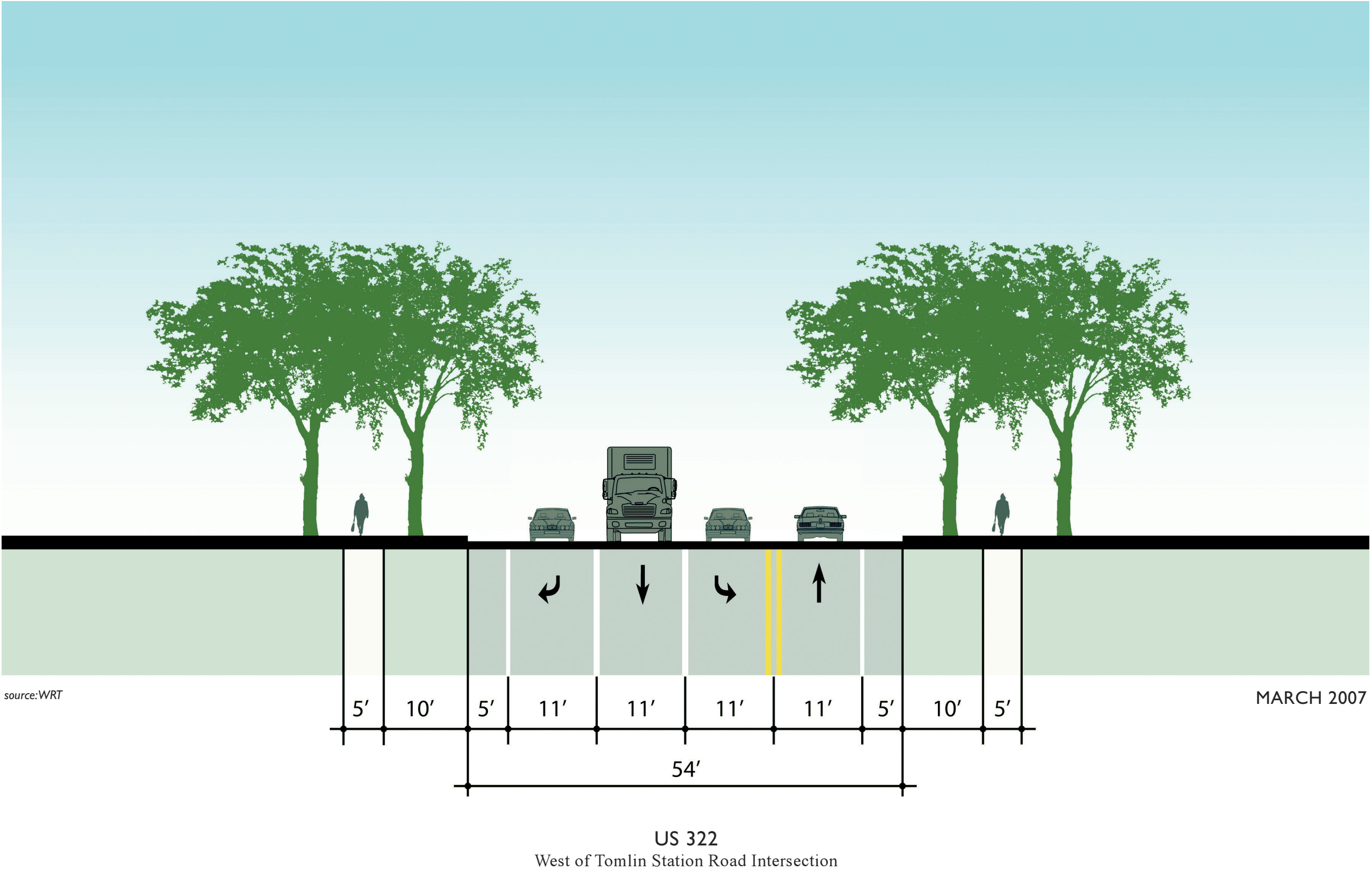
An alternate transportation network for this area may be able to relieve the traffic impact of existing and new development. This network ...should be planned with municipal officials to ensure its sustainability.

- 4.** Change the C-55 commercial district near Tomlin Station Road (CR 607) to a mixed-use zone to accommodate future development plans of a business park. This type of development will add more traffic to the existing 2-lane configuration of US 322. A cross section of US 322 just west of the intersection is provided in Figure 24 that illustrates how additional turn lanes can be accommodated. Additional right-of-way should be dedicated for these improvements prior to any new development.

FIGURE 23:TOMLIN STATION INTERSECTION IMPROVEMENTS



FIGURE 24: CROSS SECTION OF TOMLIN STATION ROAD



Richwood Area

The Richwood area of Harrison Township is located at the eastern edge of the Township and provides direct access to NJ 55. The interchange located near this village has increased the demand for new development as access from a regional highway has been provided. In addition, this area is a crossing point for residents moving north and south trying to gain access to US 322. Previous transportation studies such as the US 322 Concept Development Study completed in 2002 by Urban Engineers for NJDOT, have identified improvements for this area focusing on two congested intersections: US 322 at Barnesboro - Richwood Road (CR 609) / Harrisonville Road (CR 618) and US 322 at Lambs Road (CR 635) / Aura Road (CR 667). Listed below are the proposed improvements that NJDOT is currently investigating. Harrison Township should work with developers within this geographic area to ensure that these improvements are part of any proposed development plans. Any proposed road improvements should be coordinated with NJDOT to ensure compliance with the Transportation and Smart Growth Design Template.

1. Signal optimization for all traffic lights.
2. Revise signal timing at US 322 at Lambs Road (CR 635) / Aura Road (CR 667) to provide a lead left from US 322 onto Lambs Road (CR 635).
3. Redesign both intersections to provide left turn lanes on all approaches.
4. Provide widening, where available, between the two intersections to allow for left turn lanes.
5. Investigate the redesign of Harrisonville Road (CR 618) to be a one-way exiting intersection and the corresponding construction of a connector road between Harrisonville Road (CR 618) and Barnesboro - Richwood Road (CR 609).
6. Extend the lane drop west of Lambs Road (CR 635) / Aura Road (CR 667). Recently, Harrison Township completed a draft Traffic Study as part of the Harrison Township Traffic Circulation Plan, which is an element of the Township's Master Plan. The plan documents existing and

projected traffic at thirty intersections throughout the Township. The plan's intent is to document needed traffic improvements that may be implemented through developer contributions. Two of the intersections examined in the study are located in Richwood along US 322 at Barnesboro - Richwood Road (CR 609) / Harrisonville Road (CR 618) and US 322 at Lambs Road (CR 635) / Aura Road (CR 667). The plan recommends that US 322 be widened to provide two through lanes in each direction and left turn lanes at the intersections (totaling four lanes). A southbound left turn lane on Lambs Road (CR 635) should be added along with a northbound right turn lane on Aura Road (CR 667).

While both of the previous effort's improvements will provide needed relief to US 322 for the existing congested conditions, it is still important to provide recommendations for the Richwood area as a whole as development occurs in the future. An alternate transportation network for this area may be able to relieve the traffic impact of existing and new development. This network would be part of a larger parallel network for US 322 and should be planned with municipal officials to ensure its sustainability. The alternative network not only proposes transportation linkages, but also incorporates smarter land uses such as utilizing mixed use areas to limit the number of local trips made by vehicles. Figure 25 is an illustration of the area that includes a new grid street pattern as well as new residential, civic, commercial, and recreational uses in a village center setting. This new road network would also provide for a true "downtown" of the Richwood Area Village Center. By implementing this new network, in addition to needed improvements to US 322,



Five-point intersection, Harrison Township



Open field next to NJ 55, Harrison Township

traffic can be better managed to limit the impact of large suburban center development on the US 322 corridor and surrounding local and county roads. This new street grid creates a more walkable environment that not only helps distribute traffic, but will create a sense of place within Harrison Township.

As traffic congestion increases along US 322 and other main arterials within the county, the road network that runs through the heart of Swedesboro... may become more heavily used by local trip makers.

Lambs Road is shown as the main boulevard that provides for better access between signalized intersections and better distribution of vehicles onto US 322. A ring road concept has also been created that would enable better flow of traffic to move across US 322. Also shown is the possibility of traffic circles in lieu of lights, as well as integration for multi-purpose trails for walking, biking, and other Richwood Towne Center recreational uses. Figure 26 is the proposed Village Center by Canuso Communities. This plan illustrates a mix of uses that include main street style retail, housing, and a new school. While this plan includes many smart growth elements such as higher densities and mixed uses, further improvements should be made to better connect the

development on both sides of US 322 with additional cross streets, as illustrated in Figure 26. Any development that occurs in the Richwood area must also consider needed improvements to US 322 and the impact of additional traffic to this area.

LAND USE AND ZONING RECOMMENDATIONS

Map 7 proposed new zoning districts for the Richwood Area and Tomlin Station Area within Harrison Township. The following land use and zoning recommendations are based on this map.

1. Keep the large commercial districts near NJ 55 to keep regional traffic from moving through local residential streets.
2. Amend one acre residential districts to provide for higher density. This should be increased to at least four dwelling units per acre (medium density) in town center type settings.
3. Rural Residential districts should include cluster zoning and lot averaging to provide for open space, higher densities, and developer flexibility.
4. Change the zoning of protected lands to reflect environmental features along US 322 such as farmland and wetlands.
5. Create a municipally-owned bank of possible sites for future development and redevelopment.
6. Professional office uses should be mixed with the commercial and residential uses within the village center. The separate zone along US 322 for professional uses should be eliminated.
7. Designate a portion of the new parking facilities for commercial development as a park and ride location for those who wish to take transit into Philadelphia. This parking lot can also be used as commercial customer parking in the evening and weekend hours.

SWEDESBORO

The Borough of Swedesboro is the smallest municipality included in the study area. Completely surrounded by

Woolwich Township, the borough is a historic village that offers small-scale commercial in a downtown setting with a mix of housing types. Because the Borough is virtually built out, they are expected to only grow by eleven percent by 2030. A majority of this growth will come in the form of higher density housing. While Swedesboro Borough does not front directly on US 322, the growth potential that is forecasted for the corridor will impact Swedesboro in terms of its economic vitality and road capacity. The Borough has invested in streetscape improvements for Kings Highway to maintain its historic character. The Borough has also developed a Planned Unit Development (PUD) ordinance for future residential development. Municipal officials in Swedesboro recognize that an increase in traffic through the main downtown area will occur. In an effort to maintain the character of Swedesboro, the Borough Master Plan has identified a southwest-northeast bypass around the Borough to take traffic which is purely regional out of the central business district. Study and discussion has focused on Locke Avenue as the best route for this concept, however, increased development to the north may eliminate this route as the preferred alternative. Further consideration should be given to a regional through street for east-west traffic through the Borough.

As traffic congestion increases along US 322 and other main arterials within the county, the road network that runs through the heart of Swedesboro – Glen Echo Road /Swedesboro-Franklinville Road (CR 538), Locke Avenue (CR 671), Hill Road (CR 662) and Center Square Road (CR 620) / Kings Highway (CR 605) – may become more heavily used by local trip makers. The Borough of Swedesboro should concentrate on the following key network connections in anticipation of future traffic.

LOCKE AVENUE (CR 671) – AUBURN ROAD (CR 551)

As large residential development continues within Woolwich and areas south of US 322, traffic heading towards these developments may use Locke Avenue as a route of travel to get to and from US 322. If this occurs, then the intersection of Locke Avenue and Auburn Road will become vital to the network within Gloucester County. In order to accommodate this future growth and capacity of the road network, the



Kings Highway, Swedesboro Borough

intersection may need to be reconfigured so that Locke Avenue meets Auburn Road at a right angle. By redesigning the intersection to improve its geometry, a gateway into Swedesboro may be created. Gateway improvements should be added that mirror the streetscape improvements that have been implemented for the downtown and to maintain the walkable character of the Borough of Swedesboro. Figure 27 illustrates the proposed gateway treatment through the southern portion of Swedesboro. The treatment includes the reconfiguration of the Locke Avenue and Auburn Road intersection as well as new sidewalks, street trees, and pedestrian lighting. In the future, additional engineering analysis at this location may be needed to determine whether a traffic signal or dedicated left turn lanes may be warranted. On-street parking should be continued through the southern part of Swedesboro and commercial uses concentrated along the main street. Figure 28 shows the details of the



Intersection of Auburn Road and Locke Avenue, Swedesboro Borough



Existing business at Auburn Road and Locke Avenue, Swedesboro Borough

Swedesboro gateway. Existing commercial uses are accommodated and a pedestrian environment is maintained through the use of medians, raised pavements, dedicated sidewalks and direct connections to downtown Swedesboro.

HIGH HILL ROAD (CR 662) – AUBURN ROAD (CR 551)

Another intersection that may play a role in providing increased traffic into Swedesboro is High Hill Road at Auburn Road. This is located about a quarter mile south of Locke Avenue at the Woolwich township line. High Hill Road is a two lane county road that runs east-west from Swedesboro to US 130 in Logan Township. It provides a direct connection to the residential developments in Woolwich Township and the Pureland Industrial Park in Logan Township.

Logan Township has expressed interest to NJDOT that they would like to examine the feasibility of providing additional interchange ramps from I-295 to both High Hill Road and Harrisonville Road (CR 602). This would provide additional access to Pureland and help to eliminate existing congestion on Center Square Road (CR 620) within Logan Township. If this were to come to fruition, High Hill Road has the potential to serve as a direct connection from I-295 to the industrial park. Future improvements at this intersection may be warranted as increased traffic may use High Hill Road

LAKE AVENUE (CR 694)

In the center of Swedesboro, recent improvements at the Kings Highway/Auburn Road/ Lake Avenue intersection have corrected the inadequate configuration of the intersection.

Plans are in the works to design a new traffic signal system at the intersection. The Lake Avenue leg of this intersection is an east-west road that travels through heavily developed residential neighborhoods. This road should be used by local residents. In order to maintain the residential neighborhood, traffic calming measures should be considered to deter regional east-west through traffic.

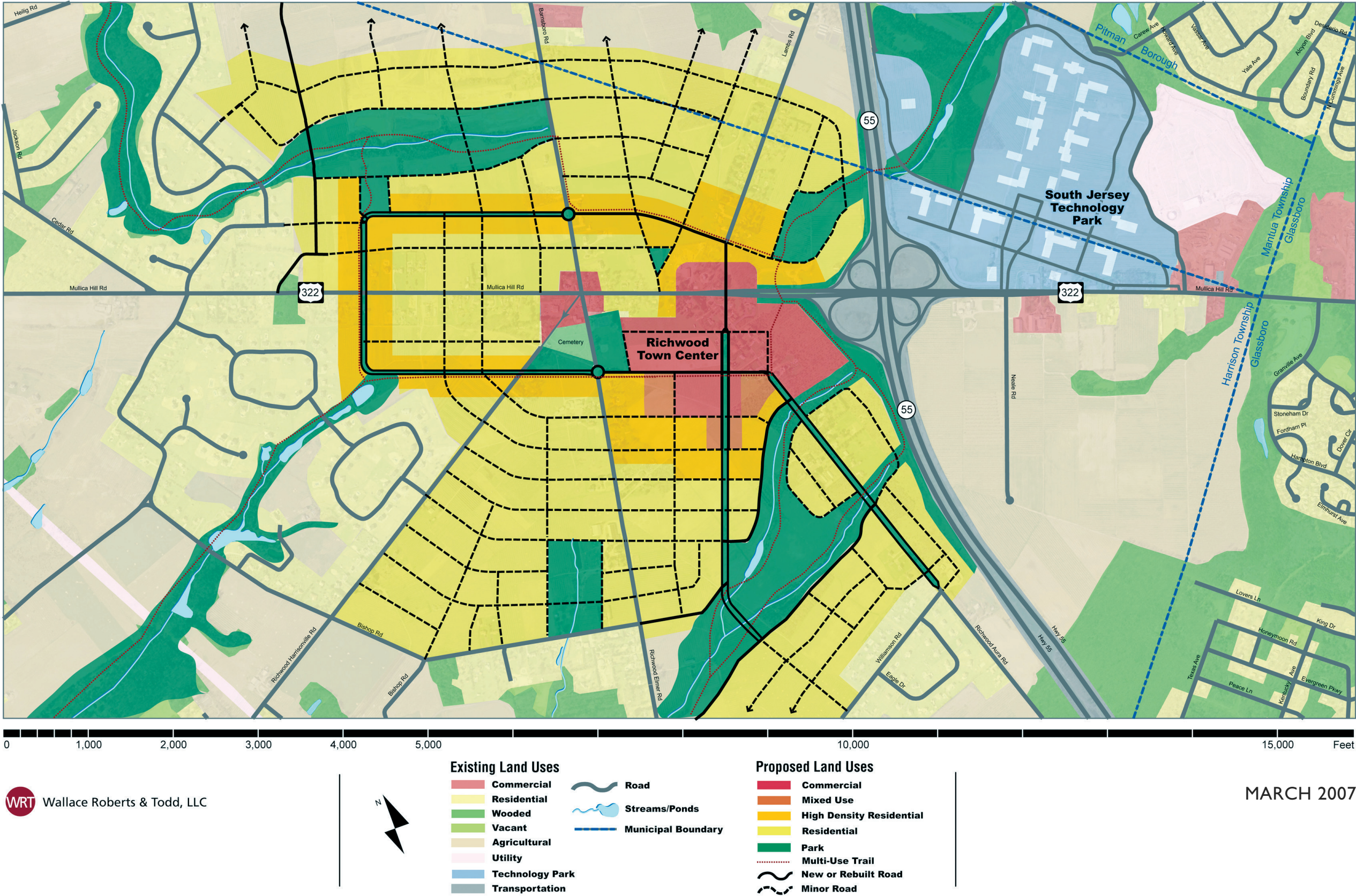
GLEN ECHO ROAD (CR 538) - KINGS HIGHWAY (CR 551)

In recent years, Glen Echo Road has seen a big increase in traffic, especially during the summer when residents are heading to the shore. On top of the shore traffic, the growth of Woolwich had also strained the intersection. Recognizing that local residents utilize this intersection to avoid US 322 and Mullica Hill, this intersection has been upgraded by the County with a new traffic signal to accommodate turning movements from Kings Highway onto Glen Echo Road (CR 538). Additional improvements may be warranted if traffic continues to increase. Careful consideration of future road improvements should be given to the residential neighborhoods and environmental features that may be negatively impacted. Glen Echo Road (CR 538) eventually becomes Swedesboro-Franklinville Road (CR 538), but this is not the preferred alternative route for regional traffic. Further discussion of the Swedesboro-Franklinville Road (CR 538) preferred alternative route is provided later in this chapter.

CENTER SQUARE ROAD (CR 620) - KINGS HIGHWAY (CR 605)

Center Square Road (CR 620) is another east-west road that runs from Swedesboro to Woolwich and Logan Townships providing a direct connection to both I-295 and US 130. Currently there is significant residential, commercial and industrial development occurring on Center Square Road to the west of Swedesboro. This increased development has made Center Square Road a more heavily traveled east-west route. The development outside of Swedesboro may have negative impacts on the intersection at Center Square Road (CR 620) and Kings Highway (CR 605). Currently, this is a five-point unsignalized intersection. As development increases in the southern portions of Woolwich Township and Gloucester County, signalization and geometric improvements to the intersection may be needed.

FIGURE 25: RICHWOOD TOWN CENTER



WRT Wallace Roberts & Todd, LLC

MARCH 2007

FIGURE 26: RICHWOOD CONCEPTUAL PLAN



source: Canuso Communities / Camco Management

JANUARY 2007

FIGURE 27: PROPOSED SWEDESBORO GATEWAY

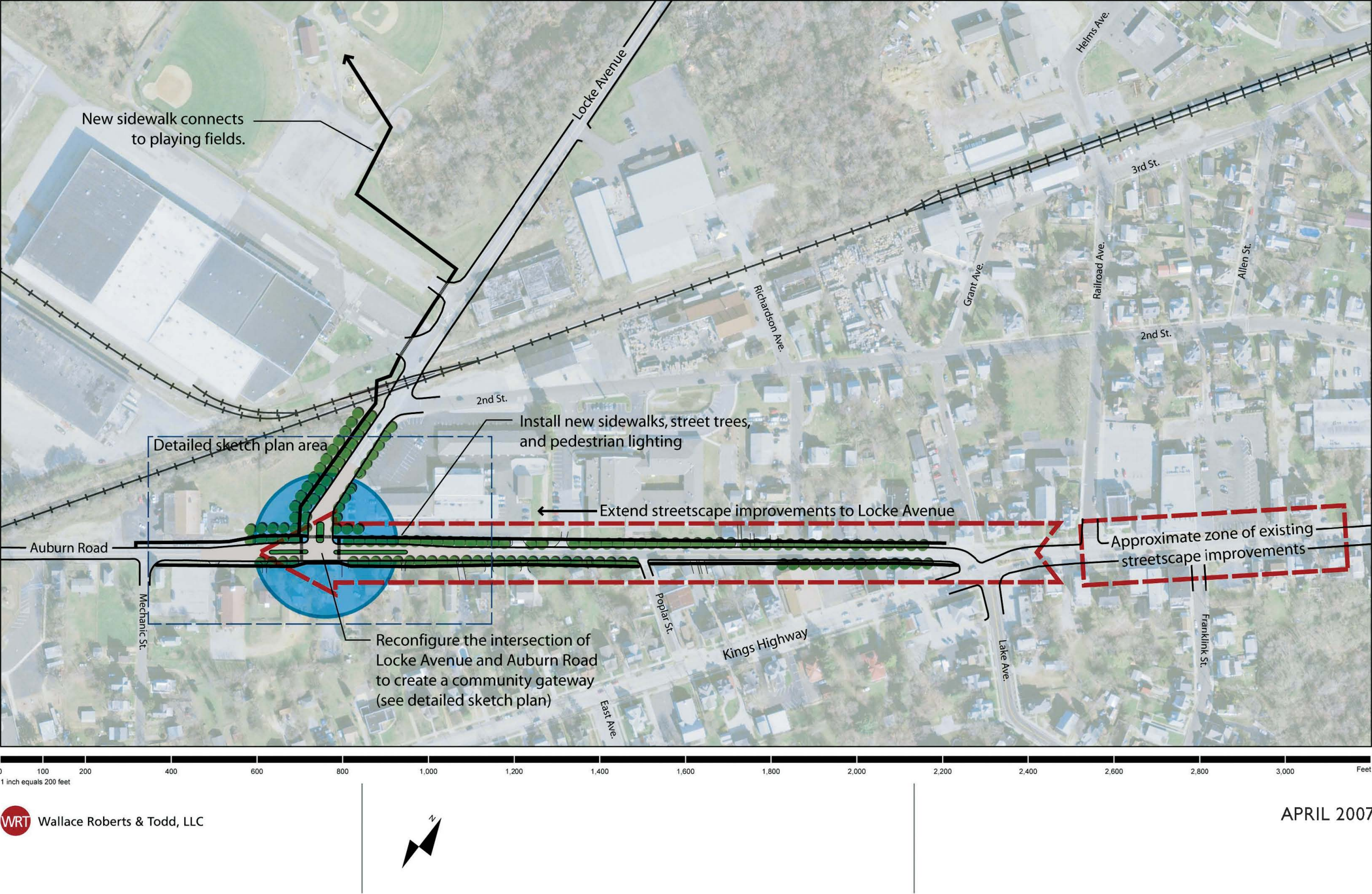
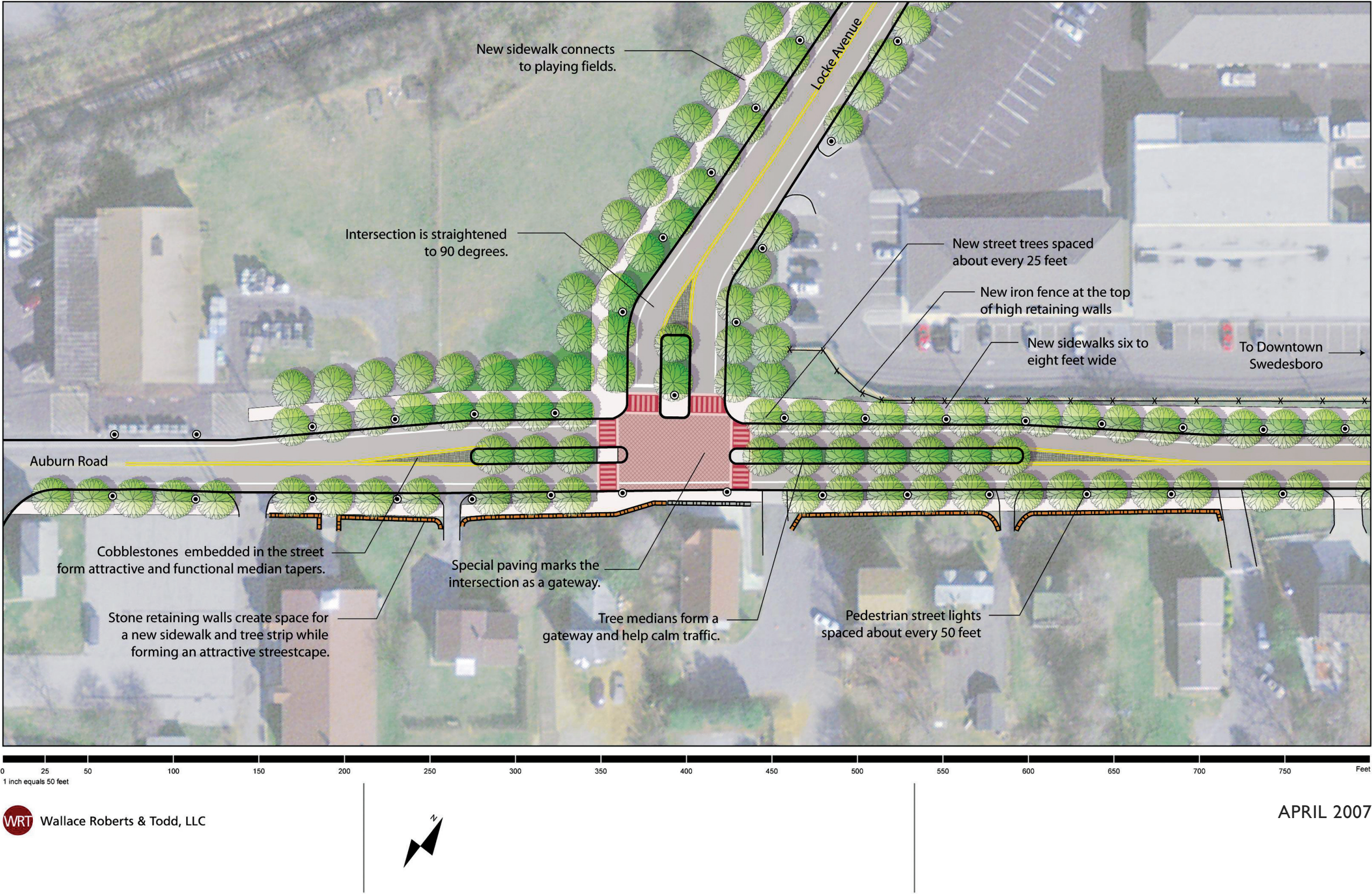


FIGURE 28: GATEWAY TREATMENTS



APRIL 2007

LAND USE AND ZONING RECOMMENDATIONS

Proposed zoning changes are shown on Map 8. The following land use and zoning recommendations are based on this map.

1. Residential-3 zones (R3) in the southern portion of the Borough should be revised to reflect the continuity of commercial uses along Kings Highway as well as to remain consistent with the mix of uses in downtown Swedesboro.
2. The redevelopment district along the Raccoon Creek should be changed to provide for mixed use or higher density housing with public access to the waterfront.
3. Commercial zones within the Borough should be modified to encourage mixed use for high density commercial and housing types.
4. Identify future roadway improvements to Locke Avenue in anticipation of Woolwich Towne Center along Paulsboro Road.
5. In order to help fund any future roadway improvements, the borough should explore the use of a traffic impact fee system or create a Transportation Development District (TDD). In addition to road improvements, pedestrian and bicycle improvements should also be added to encourage alternative transportation modes for the Borough.
6. Work with Woolwich Township to enable a bypass road system around the core of Swedesboro to maintain local trips through the core of the downtown and keep regional trips outside. As new development occurs in Woolwich, Logan, and Harrison townships, municipal officials should coordinate additional capacity and network connections that may be made using the existing road network.
7. Designate an existing parking lot downtown as a park and ride lot for commuters who wish to take transit to Philadelphia or to new commercial areas along US 322. This lot can be used for commercial customer parking during the evening and weekend hours.

COUNTY AND LOCAL ROAD NETWORK

With the increased development within not only the study corridor but in southern Gloucester County as a whole, it is important to recognize that a connected county road system exists and offers many alternatives for east-west travel through the county. It is important to encourage local traffic to use the county and local road network in order to maximize use of highways such as US 322 for through traffic. This improves mobility for local residents and can help reduce congestion on major roads. To support such an effort, neighboring municipalities should work together to develop local circulation plans. Development in one municipality can have spillover effects on other municipalities. Such a coordinated effort should seek to promote proper access management, local road connectivity, and the development of a network of pedestrian and bicycle facilities that link residential, employment, shopping, schools, recreation and transit. Other issues to be considered are improving bottleneck and substandard design elements and other physical limitations that reduce capacity.

PREFERRED EAST-WEST ALTERNATIVE ROUTE

In 1997, DVPRC in cooperation with Gloucester County conducted the Gloucester County East-West Corridor Traffic Study. The objective of this effort was to identify a combination of improvements along selected state, county and municipal roads that would serve as an interconnected network of facilities to improve east-west travel across the county and to disperse traffic over a network to reduce the load on US 322. The study focused on finding an attractive east-west option that would have fewer congestion points, be easy to follow, minimize impacts on sensitive areas and offer travel time savings. The recommend east-west route begins at the intersection of US 322 and Tomlin Station Road (CR 607) and utilizes Swedesboro-Franklinville Road (CR 538). The route follows Tomlin Station Road (CR 607) south for 2.2 miles to Swedesboro-Franklinville Road (CR 538) and then eastward along Swedesboro-Franklinville Road (CR 538) for 9.3 miles to Buck Road (CR 553). From there, a left turn puts travelers a half-mile from NJ 55. This route allows traffic to avoid the congested areas of Swedesboro, Mullica Hill, and Richwood. The majority of this route falls outside

of the current study area, so there may be a need for Gloucester County to conduct an outreach effort to coordinate with officials from South Harrison and Elk Townships to discuss and gain support for the preferred east-west route.

As previously documented, shore traffic throughout the US 322 corridor continues to be a problem, and this route would help to alleviate some of the congestion by providing another option for east-west travel through Gloucester County between the Commodore Barry Bridge and NJ 55. This route is a possible option to help handle the traffic along US 322 during the influx of seasonal shore traffic.

The study recommended several potential improvements along Tomlin Station Road (CR 607) and Swedesboro-Franklinville Road (CR 538) that may be needed to sustain additional traffic. In the past, this east-west route failed to earn sufficient support to implement all the recommended improvements. In recent years, several improvements have been made at many intersections along this route. At the intersections located on Tomlin Station Road (CR 607) at both Woodland Avenue and Swedesboro-Franklinville Road (CR 538), traffic control devices have been upgraded from stop signs to flashing beacons. Similar improvements have been made on Swedesboro-Franklinville Road (CR 538) at Commissioners Pike (CR 581) and Ferrell Road (CR 641). In addition vegetation has been removed to improve sight lines and overall safety. At the Swedesboro-Franklinville Road (CR 538) / Route 45 intersection, plans have recently been approved to upgrade the existing flashing beacon to a fully functional traffic signal and widen the intersection. As development and traffic in South Jersey continue, future traffic signalization at other major intersections may also be warranted if heavier volumes occur.

CORRIDOR WIDE RECOMMENDATIONS

Each of the municipalities within the study area has their own character that must be maintained. Specific recommendations within each community have been addressed. *However, to implement the framework plan for the entire corridor, each of the study area municipalities should strive for the following:*

- ◆ All communities should adopt proposed land uses as shown on Map 9.
- ◆ Ensure that all corridor communities meet their “fair share” obligation of housing choices that are affordable to all.
- ◆ All communities along US 322 should adopt a Corridor Access Management Overlay District (CAMO) to help control future development and provide for better traffic flow along US 322. A sample CAMO is provided in Appendix I.
- ◆ Incorporate appropriate access management measures in all new developments projects.
- ◆ Work with the NJDOT on implementing new transportation and smart growth guidelines for future roadway improvements.
- ◆ Continue to work with adjacent municipalities on the continuity of the county and local road network.
- ◆ Work with NJ Transit to identify appropriate areas for possible transit-oriented development districts (TOD). Communities should encourage transit-supportive development in these locations. A sample TOD ordinance is provided in Appendix II.
- ◆ Continue to plan for higher densities to provide for future transit (see transit score map).
- ◆ Work with developers and community leaders to incorporate the recommended Gloucester County multi-use trail through various parts of the US 322 corridor communities.
- ◆ Promote the development of a network of pedestrian and bicycle facilities that link residential, employment, shopping, schools and recreation centers.
- ◆ Designate park and ride locations.
- ◆ Continue to work with other state agencies to improve

the NJ Turnpike interchange and incorporate a park and ride facility at this location.

- ◆ Work with developers and NJDOT on additional intersection improvements that may be needed to accommodate potential future traffic.
- ◆ Incorporate the Congestion Management Process recommendations (see below) for corridors within the study area municipalities.
- ◆ Keep all capital plans and programs as up to date as possible to ensure that all future infrastructure is adequate for the large amount of planned growth.
- ◆ Consider adopting traffic impact fee ordinances in areas where new roads or improvements to existing roads may be needed.
- ◆ Explore adopting a transfer of development rights (TDR) program in order to encourage higher density development and preserve open space either individually or through a multi-municipal program.
- ◆ Strive to remain consistent with county, regional and state plans. ❖



VII



Implementation

This study has provided recommendations for linking land use and transportation along US 322. By addressing the corridor as a whole, this study has created a framework that allows local projects to fit into a larger land use and transportation strategy. However, without implementation at the local level, the recommendations provided in Chapter 6 will have no effect and the goals of the study will not be met. This chapter provides a matrix of key strategies recommended in this study. Each strategy has been given a priority – immediate (I), short-term (S) or long-term (L) - and an appropriate implementing agency.

Following is an explanation of the various strategies and a list of funding opportunities.

IMPLEMENTATION STRATEGIES

The strategies for the framework plan have been assigned a priority depending on their importance and ease of implementation. Immediate strategies are intended to address issues of great concern and can be implemented within a one to two year period. Short-term strategies may require a higher degree of preliminary examination and may take three to five years to implement. Long-term strategies can be implemented within five to ten years and often require more collaboration and large amounts of money to be implemented. These strategies are generic planning techniques that may or

may not be appropriate for particular municipalities to adopt, but should be considered as options. Many of these strategies may also benefit the communities as a whole if implemented beyond just the US 322 corridor.

Access Management Provisions improve safety and efficiency on roadways by limiting and controlling access points. Access management tools are significant to the improvement of traffic flow along US 322. As described in this study, access management tools involve shared driveways, improved signage, parallel road networks and other similar techniques. A Corridor Access Management Overlay District (CAMO) is one specific access management tool. Municipalities along the US 322 corridor should consider adopting such a district, as controlling access points along the highway is a high priority. A sample modified Corridor Access Management Overlay District is included in this report in Appendix II.

Capital Improvement Plans and Programs (CIP) are official documents that set out a municipality's plans for future capital improvements, such as roads and other public facilities. The range and scope of these vary, but most cover an immediate 5-6 year period and can be scoped for up to 20 years. A successful CIP should include a schedule of implementation

with a projected budget. If a municipality's CIP is consistent with the master plan and zoning ordinance, they can be useful tools, allowing the municipality to plan ahead for future growth and improvements and lowering costs by anticipating the future demands of the municipal infrastructure system. The CIP can also provide developers and the public with more certainty concerning future public improvements, thereby improving opportunities for participation and increasing accountability. The adoption and updating of the CIP is no small task, but should be considered an immediate priority for municipalities.

Community Impact Assessments are a process by which municipalities can evaluate the effects of a transportation (infrastructure) action on a community and the quality of life for its residents. This type of assessment should be done when large scale development will be taking place within a community or as part of a large transportation improvement. This assessment can help the municipality integrate land use, economics, and transportation to achieve common goals as well as bringing all federal and state agencies to agreement on the sustainable choice of improvement.

TABLE 3: IMPLEMENTATION STRATEGIES MATRIX

STRATEGIES	NJDOT	COUNTY	MUNICIPALITY	DEVELOPER	TIMEFRAME
ADOPT ACCESS MANAGEMENT OVERLAY ZONE			X		I
DESIGNATE PARK AND RIDE LOCATIONS	X	X	X		I
UPDATE CIRCULATION PLANS		X	X		S
PROVIDE PEDESTRIAN AND BIKEWAY AMENITIES ALONG US 322 AND OTHER NETWORK ROADS	X	X	X		S
IDENTIFY APPROPRIATE AREAS FOR POSSIBLE TRANSIT-ORIENTED DEVELOPMENT (TOD) DISTRICTS	X				S
ENSURE THERE IS SUFFICIENT RIGHT-OF-WAY FOR FUTURE IMPROVEMENTS	X	X	X		S
PROMOTE LOCAL ROAD CONNECTIVITY		X	X	X	L
CREATE INTERNAL GRID NETWORKS FOR BETTER CIRCULATION		X	X	X	L
PROVIDE A GREATER VARIETY OF STREET TYPES				X	L
CONTINUE TO PLAN FOR HIGHER DENSITIES TO PROVIDE FOR FUTURE TRANSIT			X	X	L
ESTABLISH CRITERIA FOR TRADITIONAL NEIGHBORHOOD DEVELOPMENT			X		I
DEVELOP CONSERVATION AREAS AND LAND TRUSTS		X	X		I
IDENTIFY HISTORIC FEATURES		X	X		I
CONDUCT COMMUNITY IMPACT ASSESSMENTS	X		X	X	I
ADOPT ORDINANCES THAT PROMOTE CLUSTER DEVELOPMENT AND PRESERVATION OF OPEN SPACES			X		S
ADOPT IMPACT FEE AND/OR FEES-IN-LIEU ORDINANCES			X		S
DEVELOPMENT A TRANSFER OF DEVELOPMENT RIGHTS PROGRAM		X	X		S
PROVIDE ECONOMIC DEVELOPMENT INCENTIVES FOR FUTURE BUSINESSES		X			S
PROVIDE FOR A VARIETY OF HOUSING TYPES			X	X	S
WORK COOPERATIVELY WITH ADJACENT COMMUNITIES ON LARGE DEVELOPMENT PROPOSALS		X	X	X	S
IMPLEMENT CONGESTION MANAGEMENT PROCESS STRATEGIES	X	X	X		S

Source: DVRPC, 2007

Congestion Management Process (CMP) is a region-wide analysis of identified congested corridors. Information is provided on transportation system performance and strategies are identified to help minimize congestion and enhance mobility. A wide range of techniques are utilized through the CMP, such as safety improvements, pedestrian improvements, signage, signal upgrades, access management, marketing, and smart growth. The CMP is identified at the regional level while CMP strategies can be implemented through revisions to local zoning ordinances and master plans.

Conservation Easements and Local Land Trusts can assist local governments in conserving natural areas and farmland. Conservation easements are legal documents that restrict activity on a particular parcel of land and conserve natural features. Local land trusts often involve the purchase of land. Conservation easements can be an effective way to preserve open space, as they limit development and are less of a fiscal burden on the municipality. While many of the municipalities along the US 322 corridor have adopted open space plans, the preservation of farmlands should be an immediate priority to help limit sprawl and traffic congestion. The municipal planning board can adopt conservation easements and identify land for preservation through the open space element of the Master Plan.

Historic Preservation Planning allows municipalities to identify goals, collect data, and formulate and implement strategies for historic properties. Municipalities can create historic districts which also require the creation of a historical commission. By identifying these important buildings in the municipality, the character and quality of life can be preserved. To help ensure that the visual characteristics of these unique districts are conserved, historic district design standards should be developed. They can be a useful tool if adopted as part of a Historic Preservation Ordinance or in a Local Historic Overlay District. Communities with these important resources should consider this strategy.

Park and Ride Programs encourage the use of transit and lower congestion on roadways by providing parking areas near transit stops. Park and rides are often located in the parking lots of business, schools or other private/public institutions and are based on negotiations between the

municipality, transit provider and property owner. This should become a priority for the corridor utilizing existing NJ Transit Bus service connecting to Philadelphia in Camden. There is one NJ Transit park and ride lot for area residents on NJ 45. Additional park and ride lots have been recommended for Swedesboro Borough, Woolwich, Harrison and Logan Townships

Traditional Neighborhood Development applies historic development patterns to new development projects which encourage compactness and a mix of uses in a pedestrian-friendly, village type setting. Adopting traditional neighborhood development guidelines should be a high priority for growing communities and can be undertaken immediately through modifications to the master plan and zoning ordinance.

Economic Development Incentives include a broad range of actions or processes designed to promote local business that often take the form of grants or loans. Corridor communities should work together to promote local businesses and offer incentives such as tax abatements.

Fair Share Analyses determine whether a municipality is providing its “fair share” of affordable housing. A Council on Affordable Housing (COAH) approved housing plan should be completed to protect the municipality from exclusionary zoning lawsuits as well as help provide a mix of housing choices for residents with a range of income levels. Changes to the master plan and zoning ordinance will be required.

Impact Fees are a means to help finance a variety of needed services and facilities that result from growth. This type of revenue provides a better quality of life for residents by financing the infrastructure needed to support additional population, employment and development. It ultimately reduces the need to impose higher taxes on existing residents to finance additional facilities. An impact fee ordinance requires modification to the master plan and subdivision and zoning codes.

Incentive (Bonus) Zoning is a technique by which developers are encouraged to provide amenities such as parks, additional landscaping, plazas and streetscape improvements. In return

for the developer's investment in public improvements, the municipality then allows a higher density or intensity of development of a particular site. Municipalities can use this to reduce development costs as well as encourage affordable housing choices.

Open Space/Cluster Development allows residential units to be concentrated on a small portion of a parcel rather than spread evenly over a large amount of land. This type of development can preserve natural areas, farmland, and scenic views and result in lower environmental impacts and infrastructure requirements. Other similar techniques, such as lot averaging provide more flexibility in subdivision design and have the same result as cluster development. Implementing cluster development requires modifications to the master plan and amendments to the subdivision and zoning codes.

Overlay Zoning Districts are special purpose districts that are superimposed over existing zoning districts. They are designated to provide additional standards and regulations for specific areas based on conditions such as environmental factors, historical features, or neighborhood preservation. Overlay districts can be used for particular sites or as a multi-municipal overlay district.

Parkland Dedications/Fees-in-Lieu requires a developer to provide open space within their development or to contribute fees-in-lieu to improve or preserve open space elsewhere. Fees-in-lieu should be outlined in the zoning and municipal subdivision code for the municipality. They are often based on the number of automobile trips that a particular development will incur.

Pedestrian and Bikeway Design standards can make roadways more hospitable places for bicyclists and pedestrians as well as reduce reliance on vehicles. Pedestrian and bikeway standards can be implemented by amending the municipal subdivision and zoning code.

Performance Zoning provides a means of regulating development based on the specific impacts of the development rather than the specific types of uses. For example, performance zoning for an industrial development

might consider impacts such as vehicle traffic, air pollution, and noise and lot coverage, but does not regulate what types of industry can locate on a specific site. Performance zoning standards provide municipalities with more control over the impacts of development while giving developers more flexibility in types of permitted uses. Modifications to the municipal master plan and subdivision and zoning codes will be necessary.

Revenue Allocation District (RAD) Financing otherwise known as Tax Increment Financing, can lead to the economic revitalization of critical areas within a municipality as well as lead to the creation and retention of jobs within a specific district that is targeted for redevelopment. RAD is the pledging of anticipated future tax revenues to finance current development projects. The anticipated future tax revenues are derived from the anticipated tax increase in the tax revenues in the proposed district that has been established.

Right of Way Preservation allows municipalities to reduce future costs of transportation improvements by limiting development in the right-of-way of existing and future roads. Modifications to the municipal subdivision and zoning codes will be necessary as well as drafting a new official map for the municipalities and county.

Suburban Center Zoning directs growth into identified centers which contain a mix of uses – retail, commercial, office, residential and recreation – thereby creating community focal points and centers of activity. Suburban center zoning requires amendments to the municipal subdivision and zoning code as well as the municipal master plan.

Traffic Calming techniques can be used to modify the behavior of traffic, enhance traffic and pedestrian safety and preserve neighborhood character and livability. Implementing traffic calming techniques often results in a reduction of speed and traffic volume and increased driver awareness and safety. The New Jersey Department of Transportation (NJDOT) has design requirements that can be found in their roadway design manual. Funding for traffic calming has been embraced through the Local Technical Assistance Program.

Traffic Impact Fee Ordinances allow municipalities to levy fees on developers to help pay for improvements to the transportation system that will be necessary after growth. According to law, there must be a “rational nexus” – or clear linkage – between the new development and the need for transportation improvements for traffic impact fees to be feasible. Impact fees can help offset public improvement costs that are needed for private development and can be based on the number of trips that a particular development will incur.

Transfer of Development Rights is a land development option that directs growth into designated areas, allowing conservation of natural or rural areas. Under this option, the rights to develop land are separated from the title of the land, and these rights can be sold to landowners in “receiving areas,” or areas designated for growth. This allows for denser development in receiving areas, while providing for land conservation. TDRs are an important but complex planning technique. The Township of Woolwich has already begun a TDR program through the Office of Smart Growth and this is encouraged for Logan and Harrison Township’s as well.

Transit-Oriented Development (TOD) sometimes called “transit villages,” shape development through the relationship of a fixed transit station, whether it is rail or bus, to its surrounding land. Elements such as land use, density, mix of uses, and building orientation are developed to reduce the dependency on the automobile and contribute to a higher quality of life. TODs can be developed with new construction or through redevelopment and work to increase transit ridership.

Transportation Development Districts allow property owners or cooperating municipalities to establish specific areas or districts where specific fees can be assessed onto the developer for transportation improvements, including state roads and public transportation facilities. This type of district is passed by ordinance.

Visual Preference Studies (VPS) are a tool that can be used to aid the visioning process. VPS uses graphics or images of comparable places which may be appropriate for the municipality. The graphics or images are evaluated by the

public and the evaluations are then calculated and rated. This technique provides the opportunity for community input into the planning process and helps foster cooperation among regional partners.

Growth Boundaries are geographic boundaries which separate land into two categories: areas where growth is appropriate such as urban or suburban centers and areas where growth is not appropriate such as rural or natural areas. These are most effective when done on a regional scale and often take a long time to implement.

Trip Reduction Ordinances are used to manage transportation demand and are typically designed to reduce traffic at peak hours by challenging the driving habits of commuters. Trip reduction ordinances require businesses to reduce trips-to-work during peak periods among their employees. Through employee subsidies for the use of transit, flex-time, and e-commuting, these measures can be added to the municipal zoning and subdivision code.

FUNDING OPPORTUNITIES

The recommendations in this report may involve changes to planning documents, economic development strategies, and transportation infrastructure. While some recommendations may be relatively inexpensive to implement, other recommendations, such as intersection improvements, may be more costly for municipalities. Below is a representative list of possible funding sources to help in the implementation of the framework strategies and recommendations. Funding information can be found on the following webpages: the Department of Community Affairs (www.state.nj.us/dca), the Office of Smart Growth (www.state.nj.us/osg), the NJ Department of Environmental Protection (www.dep.state.nj.us), the New Jersey Economic Development Authority (www.njeda.com) and the Department of Transportation (www.state.nj.us/dot).

COUNT Grants

Type of Assistance: Planning/Technical Assistance

Description: Funding to study, facilitate, develop or establish new shared and regional services.

Program Sponsor: NJ Department of Community Affairs

Discretionary Aid Program

Type of Assistance: Implementation

Description: Funding for emergency or regional needs. Any county of municipality may apply at any time. These funds can be used for improvements to public transportation and bicycle and pedestrian facilities.

Program Sponsor: NJ Department of Transportation

Green Acres

Type of Assistance: Implementation

Description: Funds to acquire or develop municipal land for public recreation and conservation.

Program Sponsor: NJ Department of Environmental Protection

Fund for Community Economic Development

Type of Assistance: Implementation

Description: Funds for feasibility studies or other predevelopment activities.

Program Sponsor: NJ Economic Development Authority

Local Bicycle/Pedestrian Planning Assistance

Type of Assistance: Planning/Technical Assistance

Description: Provision of technical assistance to municipalities for local circulation plans, access management plans and bicycle/pedestrian plans in a partnership agreement.

Program Sponsor: NJ Department of Transportation

Locally Initiated Bicycle/Pedestrian Projects

Type of Assistance: Financial

Description: Funding to enhance pedestrian and bicycle access and safety.

Program Sponsor: NJ Department of Transportation

Municipal Aid Program, Bicycle and Pedestrian Projects

Type of Assistance: Implementation/Financing

Description: Municipal aid given to support projects that will result in the creation of new independent bicycle facilities, making an existing roadway bicycle compatible, or making an environment safer for pedestrians.

Program Sponsor: NJ Department of Transportation

Municipal Acquisition and Construction Program (MAC)

Type of Assistance: Implementation/Financing

Description: Aid given to municipalities to help meet their affordable housing goals established by the Council on Affordable Housing (COAH)

Program Sponsor: NJ Department of Community Affairs

Municipal Stormwater Regulation Program

Type of Assistance: Implementation/Financing

Description: Provides funds for the implementation of certain activities required by the New Jersey Pollutant Discharge System (NJPDES) Municipal Stormwater Regulation Program.

Program Sponsor: NJ Department of Environmental Protection

Share Available Resources Efficiently (SHARE) Grants

Type of Assistance: Implementation

Description: To streamline government operations, reduce costs and property taxes, and increase fiscal and operational efficiency.

Program Sponsor: NJ Department of Community Affairs

Small Cities Community Development Block Grant

Type of Assistance: Implementation/Financing

Description: To fund economic development, housing rehabilitation, community revitalization and public facilities for low and moderate income residents.

Program Sponsor: NJ Department of Community Affairs

Smart Growth Planning Grants

Type of Assistance: Planning

Description: Provides funding to promote comprehensive urban redevelopment as well as efficient investment in public infrastructure, affordable housing, environmental, natural, historic and cultural resource protection and farmland preservation.

Program Sponsor: NJ Department of Community Affairs

Special Improvement District

Type of Assistance: Planning/Technical Assistance

Description: Provides assistance to support economic and community development and management for New Jersey's business community.

Program Sponsor: NJ Department of Community Affairs

Transportation Enhancements (TE)

Type of Assistance: Implementation/Financing

Description: Provides grants for transportation-related projects.

Program Sponsor: NJ Department of Transportation

Safe Routes to School (SRS)

Type of Assistance: Implementation/Financing

Description: Provides grants to enable safer and more appealing transportation alternatives for healthier lifestyles.

Program Sponsor: NJ Department of Transportation

STUDY CONCLUSION AND NEXT STEPS

The purpose of this report is to address the land use and transportation issues within the US 322 corridor.

As sections of the study area are undergoing significant development, it is important to find strategies that will help to preserve and maintain the quality of life that has been attracting so many.

DVRPC and its local, regional and state partners will continue promoting multi-modal transportation options to help alleviate congestion and forecasted growth; furthering the goals of coordinated land use and transportation between municipalities and along multi-municipal corridors; determining a policy rationale for future priority transportation improvements; encouraging Smart Growth principles for future development; and implementing the goals of the State Development and Redevelopment Plan, the adopted DVRPC long-range plan, Destination 2030, and the Gloucester County Master Plan. ❖

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Woolwich Township Zoning Ordinance

Zoning Ordinance for the Township of Logan

CORRIDOR ACCESS MANAGEMENT OVERLAY DISTRICT (CAMO)

This sample Corridor Access Management Overlay District ordinance has been adapted from the DVRPC study, Route 202 Section 100 Land Use Strategies Study, November 2001. To enact such an ordinance, there needs to be a coordinated effort by a local government and the New Jersey Department of Transportation in accordance with the State Highway Access Management Code.

Section 00: Purpose. *The Corridor Access Management Overlay District is designed to provide additional regulation of the use, development, and highway access of lands located along the frontage of US 322 in order to accomplish the following specific purposes:*

- ◆ To enhance the overall function and appearance of US 322 as a gateway and a principal arterial highway through the community.
- ◆ To minimize hazardous traffic flow conditions and confusion for drivers along US 322.
- ◆ To make the transition between the high-speed, free-flowing driving experience of US 322 and the lower-speed, more restrictive driving conditions encountered on the intersecting roads, access points, and driveways as smooth as possible for highway users.
- ◆ To promote the orderly and coordinated development of land along US 322 and to avoid the adverse effects that uncoordinated development can have on the highway.
- ◆ To provide for safe, understandable and convenient access to abutting uses without causing traffic flow problems.
- ◆ To promote channeled and coordinated access along US 322 in order to limit conflicting turning movements, traffic congestion and other potential vehicle hazards.
- ◆ To encourage reverse-frontage and other design techniques for proposed development to be located along US 322 in order to minimize the need for additional

access or intersecting roadways.

- ◆ To require, as part of the development review process, related traffic control improvements (such as acceleration and deceleration lanes, traffic signalization, marginal access roads, service roads, loop roads, jug handles, turning or stacking lanes, and similar low-capital intensive improvements) and public transit enhancements (such as bus pullouts and stops) in order to minimize the effects of new development on traffic flow along US 322.
- ◆ To provide setbacks for both principal and accessory uses, including signs and off-street parking and loading areas in order to facilitate potential widening or related access improvements to primary arterials should future traffic volumes warrant such improvements.
- ◆ To require, where feasible, natural features preservation in conjunction with man-made buffering in order to preserve special scenic visual environment along US 322.
- ◆ To combine other zoning requirements as an overlay to place limitations and additional requirements upon the underlying zoning districts in order to accomplish the specific purposes described in this article to further improve the general welfare of all users of US 322.

Section 01: District Coverage. *The CAMO is defined and established as follows:*

1.1 Primary Arterial Corridor Impact Area. The area extending for a distance of 200 linear feet from the centerline of the right-of-way along each side of US 322 shall be considered the impact area.

1.2 Secondary Highway Corridor Impact Area. Where the primary arterial corridor impact area is intersected by another highway of arterial classification that is not otherwise included in the CAMO district, the following Secondary

Highway Corridor Impact Area shall be defined and added to the area of the Primary Arterial Corridor Impact Area:

A. From the centerline of the intersecting road, the area extending for a distance of two hundred (200) linear feet along each side of the intersecting road for a distance of one-eighth (660 linear feet) along said road.

B. For regulatory purposes, where the component defined in subsection 1.2 occurs, all those portions of the Secondary Highway Corridor Impact Area which extend beyond the boundaries of the Primary Arterial Corridor Impact Area shall be included within the boundaries of the CAMO District. In all cases, the distances and areas defined in this section shall be plotted so as to include the maximum possible area consistent with the boundary definition.

Section 02: District Mapping. *The Corridor Access Management Overlay District (CAMO) shall be delineated on the official Zoning Map as follows:*

1.1 Those areas defined in Section 01 shall be plotted on the Zoning Map to indicate the boundaries of the CAMO. The Zoning Map shall be available in the municipal building for inspection by the public.

1.2 Any subsequent changes in the boundaries of the CAMO District as a result of new construction, revisions to official plans or for any other reason, shall be plotted on the Zoning Map as amendments thereto, following consideration of the proposed revisions in the usual manner prescribed for amending the Zoning Ordinance.

Section 03: Corridor Access Management Overlay

District Concept. *The CAMO District shall be deemed to be an overlay on any zoning district(s) now or hereafter to regulate the use of land in the municipality.*

A. The CAMO District shall have no effect on the permitted uses in the underlying zoning district(s), except where said uses are intended to be located within the boundaries of the CAMO District, as defined herein, and the uses are in conflict with the requirements and specific intent of this article.

B. In those areas of the municipality where the CAMO

District applies, the requirements of the CAMO District shall supersede the requirements of the underlying zoning district(s), unless those requirements are more stringent than the requirements of this Article.

C. Should the CAMO District boundaries be revised, the zoning requirements applicable to the area in question shall revert to the requirements of the underlying zoning district(s) without consideration of this article.

D. Should the zoning classification(s) of any parcel or any part thereof on which the CAMO District applied be changed, such change(s) in classification shall not affect the boundaries of the CAMO District or its application to said parcel(s) part of the proceedings from which the changes originated.

Section 04: Boundary Interpretation and Appeals

Procedure. *An initial determination as to whether or not the requirements of the CAMO District apply to a given parcel shall be made by the Zoning Officer.*

4.1 Any party aggrieved by the decision of the Zoning Officer, either because of interpretation of the exact location of the CAMO District boundaries or because of the effect of the District on the development of the parcel(s) in question, may appeal said decision to the Zoning Board, as provided for in Section 14 of this Article.

4.2 The burden of proving the incorrectness of the Zoning Officer's decision shall be on the applicant.

Section 05: Uses Permitted in the Corridor Access

Management Overlay District. *The following uses shall be permitted in the CAMO District:*

5.1 Any limited access or arterial highway located within the boundaries of the Corridor Access Management Overlay District, as defined in Section 01, and the appurtenant rights-of-way, including the interchange access ramps, service roads, and any informational signs erected therein.

5.2 Those portions of existing roads of a lower classification than arterial, as defined on the municipality's official map, or existing access driveways which are located within the boundaries of the CAMO, as defined in Section 01. Any

improvements to these roads should comply with the requirements of this article.

5.3 Cultivation and harvesting of crops according to recognized soil conservation practices.

5.4 Pasturing and grazing of animals according to recognized soil conservation practices.

5.4 Public and private open space and recreation areas, including biking, hiking, and equestrian trails, but excluding structural development, except that which is in accordance with section 6.6 and 6.7 of this Article.

5.6 Outdoor plant nursery, orchard, woodland preservation, arboretum and similar conservation uses, according to recognized soil conservation practices.

5.7 Forestry, lumbering, and reforestation, according to natural resources conservation practices.

5.8 Those portions of a lot in combination with contiguous lands located beyond the boundaries of the CAMO District in order to meet the yard and area requirements of the underlying zoning district(s), when uses not permitted within the CAMO District are to be located on such contiguous lands.

5.9 Subsurface utility lines.

5.10 Fences of wood, wire, or any other material, provided they are located so as to maintain a clear sight triangle at any intersection or access point along US 322 within the CAMO District.

5.11 Sidewalk, crosswalk, or passenger stop or shelter for public transportation.

5.12 Any other non-structural, principal, or accessory use permitted in the underlying zoning district(s) but excluding any extractive uses, parking and loading areas and outdoor storage areas.

5.13 Those uses permitted by right or accessory uses in the underlying zoning district (s) and existing uses made nonconforming by the adoption of this article.

Section 06: Restricted Uses Permitted by Special

Exception. *The following restricted uses shall be permitted only as a special exception in the Corridor Access Overlay*

District (CAMO), except those uses expressly prohibited.

6.1 Above-ground utility lines.

6.2 Off-street parking areas associated with passenger stop or shelter or related public transportation facilities.

6.3 Proposed public and private roads or access driveways that are inconsistent with the development guidelines specified in Section 08.

6.4 Parking and loading areas, including above-grade, structured parking facilities.

6.5 Temporary structures, including signs and buildings, whether principal or accessory.

6.6 Permanent, freestanding structures including advertising devices or signs not exempted, with a surface of 100 square feet or less, and accessory buildings permitted in the underlying zoning district with ground coverage of no more than 150 square feet. No such uses located within the CAMO District shall exceed a height of 35 feet.

6.7 Expansion of a use rendered nonconforming by the adoption of this article.

6.8 Any other use, not specifically listed herein, which may contribute to a hazardous traffic condition or visual intrusion along US 322 or any other intersecting road within the CAMO District.

6.9 Those uses permitted by special exception or as conditional uses in the underlying zoning district(s).

Section 07: Prohibited Uses. *The following uses shall not be permitted within the boundaries of the CAMO District.*

7.1 Junkyards, scrapyards, or similar outdoor storage uses.

7.2 Billboards or similar advertising devices or signs that exceed a surface area of 100 square feet.

7.3 Flashing signs or other advertising devices of any type or configuration.

7.4 Subdivisions and land developments composed of uses permitted in accordance with the underlying zoning district(s) that do not comply with the development regulations specified herein.

Section 08: Guidelines for Subdivisions, Land Developments, and Individual Uses within the Corridor Access Management Overlay District. *For any subdivision, land development or individual uses proposed to be located within the CAMO District, the following guidelines shall apply.*

8.1 Access Controls. Direct residential or nonresidential driveway access to US 322 or intersecting roads within the CAMO District from either a subdivision or land development or an individual use shall not be permitted, unless the following alternative development techniques are demonstrated by the applicant to be infeasible on other than purely economic grounds. The application for these techniques shall be governed by the requirements of the municipality's Subdivision Ordinance. The following alternatives are presented according to their priority in meeting the Declaration of Legislative Intent of this article.

A. Access Road: Where direct driveway access is to a residential or access road parallel to US 322 or an intersecting road within the CAMO District, every effort should be made to minimize the number of intersections from marginal access roads within the CAMO District.

B. Reverse frontage development: Where direct driveway access is to a residential or feeder road and the only access to US 322 or an intersecting road within the CAMO District is from one or more of said residential or feeder roads (either existing or new construction), every effort should be made to minimize the number of intersections from new roads within the CAMO District.

C. Joint access, where direct driveway access from a lot or development to US 322 or an intersecting road within the CAMO District is provided jointly with other lots or parcels created as part of the same subdivision or land development, or with adjacent lots or parcels not part of the same subdivision of land development, a turnaround area or similar technique shall be provided on the lot.

D. The minimum spacing between the centerline of new and existing roads along US 322 or an intersecting road within the CAMO District shall be no less than 600 feet.

No new access to US 322 shall be located closer than 100 feet to the point of an intersection of an intersecting road.

E. Where direct driveway access to US 322 or an intersecting road within the CAMO District is unavoidable the minimum spacing between the centerline of such access driveways shall be no less than 200 feet.

8.2 Development Regulations.

A. The minimum setback for any proposed use within the CAMO District shall be 100 feet measured from the ultimate right-of-way line of US 322 and 75 feet from the ultimate right-of-way line of an intersecting road within the CAMO District.

B. The minimum lot width within the CAMO District shall be 100 feet.

C. No sign, except a traffic safety or directional sign, shall be located closer than 25 feet to the right-of-way line along US 322 or other intersecting road located within the CAMO District.

D. No parking, loading, or other storage area shall be located closer than 25 feet to the ultimate right-of-way of US 322 or other intersecting road located within the CAMO District.

Section 09: Application Requirement for Use Permitted by Special Exception. *An applicant proposing to locate a use(s) specified in Section 06 of this Article within the CAMO District shall submit the following additional information to the Zoning Board to accompany an application for a special exception.*

9.1 A plan(s) delineating the necessary information to be shown on a preliminary plan in accordance with the pertinent requirements of the municipal Subdivision Ordinance.

9.2 A written statement justifying the need for the requested special exception.

9.3 A landscaping plan in accordance with Section 13 of this article; or

9.4 A plan showing existing features, vegetation and topography, where pertinent, to justify a full or partial modification of the landscaping requirements of Section 13 of this article.

Section 10: Justification Statement for Special Exception

Use(s). *An application for a special exception shall be accompanied by a written statement justifying the requested modifications from the requirements of this article, the materials required by Section 13, as well as pertinent supplementary materials. The narrative description shall contain, as a minimum, the following information:*

10.1 The relationship of the proposed action(s) to the Declaration of Legislative Intent of this article.

10.2 A general description and map of the proposed action(s), including any proposed modifications from the standards of this article.

10.3 A description and map of the existing natural features, vegetation, and topography of the site and their relationship to the proposed action(s).

10.4 A general description of the alternatives considered by the applicant prior to requesting the proposed course(s) of action and proposed modification(s).

Section 11: Guidelines for Approval of Uses by Special

Exception. *In considering an application for a special exception, the Zoning board shall use the following guidelines.*

11.1 The consistency of the proposed special exception with the Declaration of Legislative Intent of this Article,

11.2 The relationship of the proposed special exception to the possible functional effects on existing and proposed traffic flow, the number and location of curb cuts, and visual character of US 322 and any intersecting roads located within the boundaries of the CAMO District.

11.3 The relationship of the proposed special exception to the existing topography, vegetation, and other natural features, as well as the degree to which the applicant has incorporated such features in the overall development plan.

11.4 The degree to which the applicant's proposed mitigating actions, in accordance with the guidelines specified in Section 13 of this article, will minimize visual intrusions, traffic flow disruptions and the number and spacing of curb cuts along US 322 or intersecting road(s) located in the CAMO District.

Section 12: Guidelines for Mitigating Actions within the Corridor Access Management Overlay District.

The following mitigating actions shall be incorporated with the site development plan for a use proposed to be located within the CAMO District in order to minimize visual intrusions, traffic flow disruptions and the number and spacing of curb cuts along US 322 or intersecting road(s) located in the CAMO District. These actions may be separate from or in combination with existing natural features, vegetation or topography on the site in question. However, applicants are encouraged to incorporate existing site features as part of any necessary mitigating actions, wherever such an approach is feasible, in order to retain the natural character of the landscape.

12.1 Landscaped Areas.

A. The applicant shall submit a landscape plan with the application showing all pertinent information, including the existing or proposed topography and the location, size, and species of those individual trees and shrubs to be preserved or planted, or alternatively, the general characteristics of existing vegetation masses which are to be preserved.

B. Planted Areas. Along the right-of-way of US 322 and the intersecting road(s) located within the CAMO District, the applicant shall provide a single row of deciduous trees, at least 8 feet in height when planted and at least 40 feet in height at maturity, which a spacing of not more than 40 feet on center wherever necessary for adequate site distance.

C. Mounding. Mounding is encouraged as a means of reducing visual encroachment along US 322 or intersecting roads within the CAMO District provided that such mounding shall not exceed a slope of 3:1 or interfere with sight lines.

D. Shrubs and Grass. Coniferous and deciduous shrubs and grass shall be provided, as needed, to complete the landscaped area. The width of such area as measured from the ultimate right-of-way line shall not be less than 15 feet.

E. Buffer Maintenance. All vegetation shall be

permanently maintained and, should be guaranteed for a period of two years.

F. Architecture and Site Design. The applicant may demonstrate, through the submission of pertinent plans, renderings or models, that the development of the proposed structure(s), building(s), parking area(s), or sign(s) will be accomplished in a manner that will be compatible with the US 322 corridor and its surroundings and that they will minimize the visual effects on both highway users and the users of the proposed development.

12.2 Traffic Flow and Access Study. For any non-residential uses and any residential use involving more than five dwelling units, a traffic analysis and access study shall be prepared. The study shall describe and map the present and projected traffic flow patterns both with and without the proposed development based upon existing and 20-year projections. Particular attention shall be placed upon the relationships of the proposed access to US 322 or other intersecting roads located within the CAMO District. The source(s) for all traffic flow data, turning movements, and projects shall be clearly labeled in the submitted study. The study shall include the rationale for the access chosen as well as any alternatives rejected by the applicant.

12.2 Driveway Spacing. Driveways should be spaced a minimum of 200 feet apart or shared with an adjacent property unless rigid adherence to this standard is determined to be wither impractical or infeasible upon the written request of their applicant with the concurrence of the Township Engineer. The minimum distance of 50 feet shall be provided between an access driveway and the intersection of a public road with US 322. Any such minimum corner clearance access shall be restricted through their design to right turns in and out.

12.3 Sight Distance. Adequate sight distance shall be provided at every access point and intersecting road upon review and determination by the Township Engineer.

Section 13: Uses or Structures rendered Nonconforming by the Adoption of this Article.

Following the adoption of this Article, any use or structure which is situated within the boundaries of the CAMO District and which does not conform to the permitted uses in Section 05 herein, shall become a nonconforming use or structure, regardless of its conformance with the requirements of the Zoning District(s) in which it is located.

13.1 The expansion or continuance of a nonconforming use or structure shall be governed by the requirements of article --, Section -- of this Ordinance. The Zoning Board shall ensure that the standards contained in Section 12, herein are applied to the expansion or continuance of said nonconforming use or structure.

13.2 The expansion of a nonconforming use or structure which is rendered nonconforming due to the adoption of this article shall be governed by the standards contained in Section 09, herein. The Zoning Board shall ensure that these standards are enforced.

Section 14: Appeals. *A property owner of a lot of record, as of the date of the enactment of this article, who contends that the strict enforcement of this article would create undue hardship by denying a reasonable use of an existing lot situated wholly or partially within the CAMO District, or who contends that the Zoning Officer's interpretation of the effects or boundaries of the CAMO District on said lot are incorrect may seek relief by applying for a variance.*

14.1 The Zoning Board of Adjustment, after deciding upon the merits of the appeal, may permit the applicant to make some reasonable use of the property in question, while ensuring that such use will not violate the Declaration of Legislative Intent of this article.

14.2 A use(s) permitted by variance shall represent the minimum relief possible to overcome the proven hardship, and the location of said use(s) within the CAMO District shall be conditioned upon the corporation of pertinent mitigating activities, as set forth in Section 13 of this article, in order to minimize the effects of encroachment along US 322. ❖

TRANSIT ORIENTED DEVELOPMENT (TOD) DISTRICT

This sample Transit-Oriented Development (TOD) District ordinance has been adapted from the DVRPC study, Transit Village Design in Burlington County, March 2002. . To enact such an ordinance, there needs to be a coordinated effort by a local government and the New Jersey Department of Transportation in accordance with the State Highway Access Management Code.

Section 00: Purpose. *The intent of this article with respect to TOD- Transit Oriented Development District(s) is to:*

◆ Encourage the development of land within and adjacent to planned transit service stops, corridors, and existing or future station areas for a variety of higher density and intensity, individual and mixed uses, so that these uses can support a more transit-oriented development pattern at select locations along the US 322 corridor.

- ◆ Encourage increased public transit ridership as an alternative to total reliance on automobiles for a variety of trip purposes.
- ◆ Reduce traffic congestion and potential safety problems along the US 322 corridor and at intersecting roads along the corridor.
- ◆ Promote more compact development patterns and mixed uses to reduce unnecessary vehicular trips and to promote a more pedestrian-oriented scale of development
- ◆ Promote greater community identity among the growing municipalities along the US 322 corridor.
- ◆ Provide development incentives for those plans which include design features, support facilities, and/or amenities that reinforce implementation of the TOD District's goals and its relationship to the surrounding community(s).

Section 01: District Coverage. *To implement the purpose defined in Section 00, the following criteria shall be used to establish the boundaries of the TOD District as an overlay of existing zoning districts:*

1.1 Bus TOD: Where applicable, for an existing or proposed bus stop location along or adjacent to the US 322 corridor, the TOD District boundaries shall include the stop location; any ancillary facilities; and those contiguous tracts of land within one-quarter mile (1/4) radius (1,320 feet) of the bus stop location.

1.2 Bus Service Corridor: Where two or more bus stops occur in a concentrated pattern along an arterial highway corridor, the municipality may elect to establish a Bus Service Corridor. The boundaries of the corridor shall include the boundaries of the individual Bus TOD and connecting lines between each Bus TOD, parallel to each side of the arterial highway for a distance of one-quarter (1/4) mile (660 feet), yielding a corridor one-half (1/2) mile wide (2,640 feet).

1.3 Rail Station TOD: Where applicable, for existing or proposed rail station areas, the TOD district boundaries shall include the station, all parking areas, access and related ancillary facilities as well as those contiguous tracts of land within a one-quarter (1/4) mile radius of the station site.

1.4 A Rail Station TOD, Bus TOD and/or Bus Service Corridor may be combined into a single area at the discretion of the municipality. The separate bus and rail standards of the District shall apply within the different components of the overall area created.

1.5 Where a tract of land held in single ownership is divided by the application of the overlay criteria described in Subsections 1.1 and 1.2, only that portion within the overlay area shall be eligible for the incentives provided by the TOD District.

Section 02: Development Plan Modifications and

Flexibility. *It is the intent of the TOD District to provide for flexibility in the review and execution of the proposed subdivision and land development plans in order to accomplish the overall intent of the TOD District. The Municipality will work closely with the applicant to implement the proposed TOD development. Should design waivers or modifications from the strict interpretation of the area bulk and dimensional requirements of this article and/or those of the underlying Zoning District(s) be necessary or desirable to achieve the intent of the TOD District, the following procedure shall be followed.*

2.1 Any such waivers or modifications shall be specifically shown and/or noted on the proposed development plan and in accompanying documents submitted with the proposed development plan.

2.2 The applicant shall specifically request the waivers and/or modifications sought in a letter to the municipality, citing the benefits gained in terms of better meeting the specific intent of the TOD District, and any mitigation efforts to overcome or minimize possible impacts resulting from implementation of the requested waivers and/or modifications

2.3 The Municipality shall act on the disposition of the request of the waivers and/or modifications in conjunction with the approval or disapproval of the overall development plan for the proposed development

2.4 Notwithstanding this procedural approach, an applicant may also seek relief from the Zoning Board from either a decision of the governing body or any provision of the TOD District.

Section 03: Permitted Uses. *The permitted uses in the TOD District shall be as follows.*

3.1 Those uses in the underlying zoning district(s) which are not inconsistent with the overall purpose of this article.

3.2 The following uses, by right, as pertinent to the Rail Station, Bus Stop, and Bus Serviced Corridor components of the overall TOD District.

A. Bus stop location, including a bus pull-off area, pad,

shelter, surface or structured parking areas and similar uses.

B. Rail station and supporting facilities, including surface or structured parking areas, taxi stand, bus shelter, and similar uses.

C. Single family detached dwellings in only the Rail Station TOD with shared access to US 322.

D. Attached dwelling units, in any configuration, not to exceed eight units in a row.

E. Multi-family dwellings, not to exceed six stories in height for mid-rise developments.

F. Day care facilities, post office, information centers, and other civic facilities and uses.

G. Retail and office uses which are oriented to personal services and professional activities.

H. Financial institutions, medical/dental office and educational institutions.

I. Telecommuting center and similar computer or communications technology facilities, excluding transmission towers and relay stations.

J. High employment density office facilities, not to exceed four stories in height.

K. Shopping centers, office parks and similar mixed use concentration of the above permitted uses in accordance with the overall development plan.

L. Active/passive recreational areas, including bicycle or hiking trails.

M. Accessory uses located on the same tract and customarily incidental to any permitted or conditional use as specified herein.

3.3 Prohibited Uses. The following uses are not permitted with the TOD District(s), regardless of the requirements of the underlying zoning district(s).

A. Single family detached dwelling units.

B. Low employment density uses, such as warehouses, truck distribution centers, research centers, and similar uses.

C. Free standing indoor recreation uses, entertainment centers and restaurants, when not developed in conjunction

with a mixed use development project.

D. Hotel or motel, when not developed in conjunction with a mixed use development project.

3.4 Conditional Uses. The following conditional uses are permitted following approval by the Zoning Board of Adjustment.

A. Housing for the elderly, retirement community, or assisted living arrangement.

B. Gasoline Station and auto service center, including auto repair service.

C. Any other use that does not qualify as a permitted use, but can be demonstrated to further the overall purpose and the District.

Section 04: Development Requirements. *Within the TOD District, the following regulations shall apply:*

4.1 The tract of land to be developed shall be under single ownership, or shall be the subject of an application filed jointly by the owners of the entire tract.

4.2 The tract of land shall be served by public sewer and centralized water facilities deemed acceptable by the Township engineer.

4.3 The development of a tract carried out in either a single phase or in stages, showing the detailed use of each area in the entire tract.

4.4 The development of a tract carried out in either a single phase or in stages, shall be executed in accordance with a development agreement.

Section 05: Development Regulations. *The following development regulations shall apply, regardless of the regulations of the underlying zoning district(s):*

5.1 Density. The following densities shall apply.

A. The maximum permitted density in a Bus TOD or Bus Service Corridor shall not exceed 18 dwelling units per acre. The minimum density in a Bus TOD or Bus Service Corridor shall be no less than 10 dwelling units per acre.

B. The maximum permitted density in a Rail Station TOD shall not exceed 18 dwelling units per acre. The minimum

density in a Rail Station TOD shall be no less than 10 dwelling units per acre.

C. All tract sizes and density calculations shall exclude rights-of-way of existing public roads.

D. The maximum permitted floor area for any nonresidential use in the TOD District shall be equal to the maximum permitted for the individual uses, as defined elsewhere in the Township Zoning Ordinance or in the underlying zoning district(s).

5.2 Tract Size. The following minimum tract size shall apply.

A. The minimum tract size for a single use shall be one acre.

B. The minimum tract size for a mixed use development, involving two or more of the permitted uses within the same building or multiple buildings on the same site, shall be one acre.

5.3 Frontage. The minimum frontage in the TOD District shall be 125 feet, measured along the street line

5.4 Building Setbacks. There shall be no minimum building setbacks in the TOD District, but all development proposals in which the buildings are closer than 50 feet from the right-of-way or any adjoining property line shall be subject to design review.

5.5 Building Orientation. In order to relate the transit and other uses in the TOD District, the location of buildings shall be appropriately oriented toward the stop or station, transit customer parking areas and pedestrian ways and away from vehicular driveways, loading areas and employee parking areas. Wherever possible, buildings shall be clustered around station facilities to encourage convenience, pedestrian access and to minimize walking distances.

5.6 Parking Setbacks. Parking areas shall be located to the side or rear of the overall property. Shared parking and access are encouraged whenever possible in a TOD District. No parking area shall be located closer than 25 feet to any side or rear property line, unless there is a shared parking agreement.

5.7 Building Coverage. Building coverage shall not exceed 35 percent of the tract area for a single or mixed use residential development and 45 percent for a non residential or mixed use development.

5.8 Impervious Coverage. The total paved area of a tract shall not exceed 65 percent for a single or mixed residential development and 75 percent for a nonresidential or mixed use development.

5.9 Height. The maximum height for residential uses shall be 60 feet or six stories, whichever is lower. The maximum height for non residential uses shall be 40 feet.

5.10 Public Space. Total area of the tract devoted to active or passive recreation areas, open space, pedestrian ways, trails and other areas for public use, excluding roads, access driveways and parking areas, shall be a minimum of 20 percent.

5.11 Highway Access. Every effort shall be made to minimize the curb cuts and access serving the TOD District.

5.12 Parking. For proposed developments in the TOD District, including transit customer parking, the following shall apply.

A. Shared Parking. Arrangements between two or more property owners along a common lot line are encouraged. Development plans involving a shared parking arrangement shall show the parking layout, shared access and internal circulation pattern. Approval of a shared parking arrangement is subject to review by the planning commission.

B. Parking Reserve Areas. Within the TOD District, a development may construct up to 75% of the required parking spaces initially, while preserving the balance of the area usually required for planted and landscaped green space. Within one year from the completion of the project, the Township Engineer shall certify whether or not the unbuilt spaces are needed. Should spaces be required, the developer shall install such spaces within six months, otherwise, the spaces shall remain open space.

C. Transit customer parking. The following standards shall be applied: (1) Standard perpendicular parking stalls shall be 9 by 20 feet with an accompanying 24 foot aisle for two way traffic circulation. Major access aisles shall be no more than 28 feet wide and sufficient end of row turning radii shall be provided for bus and emergency vehicle maneuvering.

D. Handicap parking. Handicap spaces shall be 10 feet by 20 feet with a 5 foot access aisle. A shared aisle may be used when two or more stalls adjoin. Handicap stalls shall be constructed and installed according to ADA requirements.

E. Ingress and Egress. All ingress and egresses shall be no less than 12 feet wide. Combined ingress and egress shall be no less than 24 feet wide.

5.13 Storm Drainage. Stormwater management practices shall be in accordance with the applicable municipal ordinances and state law.

5.14 Lighting. Light fixtures should stand no higher than 30 feet and be directed downward with no filaments exposed. The poles and fixtures shall be placed to achieve a minimum average illumination of two footcandles.

5.15 Pedestrian Access. Sidewalks and walkways shall be provided to insure pedestrian safety. Sidewalks should be at least five feet wide and protected from vehicles. Every effort should be made to provide a direct connection to the station/stop from the proposed development.

5.16 Landscaping. Transit customer parking lots shall be landscaped with trees and shrubs to reduce the visual impact of glare and headlights, to delineate all driving lanes and to distinguish rows of parking.

5.17 Other Development Standards. Any other development standards of the Township not specifically noted in the TOD District shall remain in effect.

Section 06: Development Initiatives. *Proposed developments which provide rail or transit facilities, transit customer parking areas, bus pull-offs, pedestrian paths to a station or stop, shelters, bicycle lockers and racks, amenities and related services or facilities may be entitled to a development incentive of up to ten percent additional density or up to ten percent additional floor areas above the permitted TOD District. The proposed transit-oriented amenities shall be specified in writing at the time of development approval, shown on the development plan and incorporated in the development agreement. ❖*

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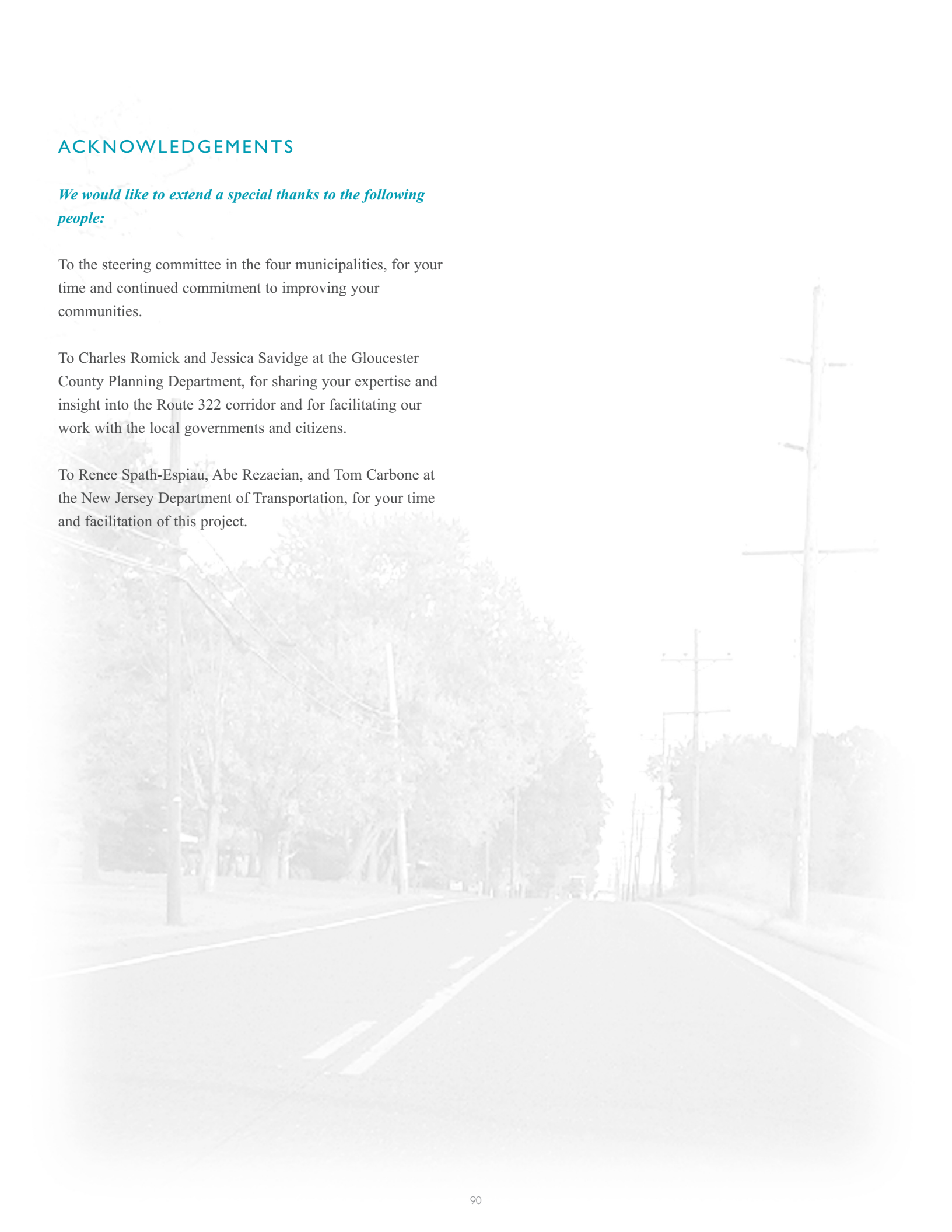
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PUBLICATION ABSTRACT

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Abstract: This document is the second phase of an 18-month two-volume study. Completed in June 2006, Volume One: Baseline Conditions incorporated baseline information including demographics, land use and development, and transportation conditions. A municipal and corridor-wide zoning build-out analysis was also completed. Building upon the conditions identified in Volume I, this second volume provides the rationale for the US 322 Corridor Framework Plan. Within Volume 2 is a general introduction of the framework plan process and growth within the US 322 corridor; different perspectives of each corridor community and a proposed corridor-wide vision; two different future perspectives of growth for US 322 that include illustrations; an outline of land use, development, and access management principles; development and transportation goals for the US 322 corridor; detailed municipal and corridor-wide transportation and land use recommendations; implementation tools; and sample zoning ordinances for the study area municipalities.



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